

9. Landscape and Visual

9.1 Introduction

- 9.1.1 This chapter of the Environmental Statement (ES) assesses the likely significant effects of the Proposed Development with reference to landscape and visual effects. The chapter should be read in conjunction with **Chapter 2: Description of the Proposed Development** and with reference to relevant parts of other chapters, namely **Chapter 7: Noise and Vibration**, **Chapter 8: Air Quality**, **Chapter 14: Historic Environment** and **Chapter 16: Human Health** where common receptors have been considered and where there is an overlap or relationship between the assessment of effects.
- 9.1.2 The Landscape and Visual Impact Assessment (LVIA) has been undertaken in accordance with relevant guidance for undertaking landscape and visual assessments in the UK that is provided by the *Guidelines for Landscape and Visual Impact Assessment Third Edition*¹ (hereafter referred to as 'GLVIA3').
- 9.1.3 The European Landscape Convention Treaty², which was ratified in the UK in 2007, defines landscape as:
"an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors."
- 9.1.4 GLVIA3¹, provides the following definitions of landscape effects:
"An assessment of landscape effects deals with the effects of change and development on landscape as a resource. The concern is with how the proposal will affect the elements that make up the landscape, the aesthetic and perceptual aspects of the landscape and its distinctive character."
- 9.1.5 This includes direct effects upon the landscape elements within the application site and direct and indirect effects upon landscape character and landscape designations within the LVIA study area.
- 9.1.6 GLVIA3¹, provides the following definitions of visual effects:
"An assessment of visual effects deals with the change and development on views available to people and their visual amenity."
- 9.1.7 The term 'visual receptors' is used in this assessment and includes people with views from their residential properties, local communities, transportation routes (including 'A' and 'B' roads, key local routes and cycle routes); along with people undertaking outdoor formal and informal recreational activities ranging from walking along public rights of way or in open access areas to visiting country parks to people fishing or playing golf. Specific effects will arise from changes in the constituent factors in a visual receptor's view.

9.2 Limitations of this assessment

- 9.2.1 No limitations that affect the robustness of the assessment of landscape and visual effects resulting from the Proposed Development have been identified.

¹ The Landscape Institute and Institute of Environmental Management and Assessment, (2013). *Guidelines for Landscape and Visual Impact Assessment*. 3rd edition. London. Routledge.

² Council of Europe, (2000). *European Landscape Convention*.

9.3 Relevant legislation, planning policy and technical guidance

Legislative context

9.3.1 The following legislation is relevant to the assessment of effects on landscape and visual receptors:

- *Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (SI No 517)*³: requires that the EIA identifies, describes and assesses in an appropriate manner the direct and indirect significant effects of the Proposed Development on factors including landscape; and
- *The European Landscape Convention*².

Planning policy context

9.3.2 There are several policies and guidance documents at the national and local level that are relevant to the Proposed Development. In addition to policy referenced in **Chapter 5: Legislative and Policy Overview**, **Table 9.1** lists policy documents which are relevant to the assessment.

Table 9.1 Relevant policies to the LVIA

| Policy reference | Implications |
|---|---|
| National Planning Policy Framework (NPPF) ⁴ | |
| Paragraph 109 | The planning system should contribute to and enhance the natural and local environment, protecting and enhancing the valued landscapes. . |
| Paragraph 115 | The planning system should give great weight to conserving landscape and scenic beauty in Areas of Outstanding Natural Beauty (AONB)). The closest boundary section of the Mendip Hills AONB is located 2.9km from the boundary of Bristol Airport. |
| North Somerset Council (NSC) Core Strategy January 2017 ⁵ | |
| CS5: Landscape | For landscape character Policy CS5 requires that <i>"The character, distinctiveness, diversity and quality of North Somerset's landscape ... will be protected and enhanced by the careful, sensitive management and design of development. Close regard will be paid to the character of National Character Areas in North Somerset and particularly that of the 11 landscape types and 31 landscape character areas identified in the North Somerset Landscape Character Assessment."</i> Reference to relevant North Somerset landscape character areas should be included in the landscape assessment. For landscape designations Policy CS5 requires that <i>"The Mendip Hills AONB will be protected by ensuring that development proposals conserve and enhance its natural beauty and respect its character, taking into account the economic and social well-being of the area."</i> Effects upon the Mendip Hills AONB will be considered in the landscape assessment. |
| CS23: Bristol Airport | This policy requires that <i>"proposals for development at Bristol Airport ... demonstrate the satisfactory resolution of environmental issues, including the impact of growth on surrounding communities ..."</i> . Effects upon the visual amenity of nearby communities will be considered in the visual assessment. |

³ The Stationary Office (2017). The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, [online]. Available at: www.legislation.gov.uk/ukxi/2017/572/pdfs/ukxiem_20170572_en.pdf [Checked 13/08/18]

⁴ Ministry of Housing, Communities and Local Government (2018). National Planning Policy Framework, [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf [Checked 12/03/2018].

⁵ North Somerset Council (2017). Core Strategy, [online]. Available at: <https://www.n-somerset.gov.uk/wp-content/uploads/2015/11/Core-Strategy-adopted-version.pdf> [Checked 16/04/18].

| Policy reference | Implications |
|---|---|
| North Somerset Development Management Policies Sites and Policies Plan Part 1. Adopted July 2016⁶ | |
| DM9 - Trees and woodland | There is some potential for the Proposed Development to affect a small number of trees within the development site. However, tree planting will form part of a landscaping strategy associated with the Proposed Development. Policy DM9 requires that development proposals affecting trees show that <i>"the retention, protection and enhancement of the tree canopy cover has been considered throughout the design"</i> and evaluate the impacts that the Proposed Development may have on existing trees. Such an evaluation can be interpreted as requiring any loss of existing tree cover and any proposed additions to tree cover to be considered within the landscape (landscape character areas) and visual assessments (specific visual receptors' views and visual amenity). |
| DM10 - Landscape | Strong links with CS5: Landscape, with the need to demonstrate that the Proposed Development would not have <i>"an unacceptable adverse impact on the designated landscape character of the district as defined in the Landscape Character Assessment Supplementary Planning Document (2005)."</i> Policy DM10 also emphasises the need for the landscape assessment to consider how the Proposed Development responds to local character; reflects <i>"the identity of the local surroundings"</i> ; respects <i>"the tranquillity of an area"</i> ; respects the character of the historic landscape including features such as <i>"stone walls, hedgerows and field patterns"</i> ; and to consider how the lighting for the Proposed Development impacts upon any dark skies. The justification for Policy DM10 requires that <i>"photomontages or other similar visuals"</i> should be provided to show how the Proposed Development has taken regard of the local landscape. |
| DM11 - Mendip Hills Area of Outstanding Natural Beauty (AONB) | Strong links with CS5: Landscape, with an overarching aim <i>"to ensure that development would not harm the natural beauty of the AONB ..."</i> . The landscape assessment must assess if the Proposed Development would have <i>"an adverse impact upon the landscape, setting and scenic beauty of the Mendip Hills AONB, including views in and out of the AONB ..."</i> . In undertaking the assessment of landscape effects upon the Mendip Hills AONB <i>"particular attention"</i> will need to be given to <i>"the siting, scale, size, character, design, materials and landscaping of the Proposed Development and views to and from the AONB"</i> . The landscape assessment baseline will identify if <i>"dark skies are an important feature"</i> of the parts of the AONB closest to Bristol Airport. |
| DM12 - Development within the green belt | Some of the Proposed Development is sited within the Green Belt. The LVIA will not assess how this Proposed Development impacts upon the functions of the Green Belt in this location. However, the landscape and visual assessment can contribute to the understanding of how the relevant components of the Proposed Development impact upon the <i>"visual character of the site and surroundings"</i> as well as effects on <i>"the open and rural character of the area in general, prominence, visual and physical impact (including the impact of lighting) ..."</i> |
| DM50 - Bristol Airport | Policy DM50 states that <i>"development within the Green Belt inset at Lulsgate will be permitted provided that ... it is suitably sited, designed and landscaped so as not to harm the surrounding landscape."</i> The landscape assessment will assess how the components of the Proposed Development located within the Green Belt inset impact upon the surrounding landscape as represented by the defined landscape character areas. |
| North Somerset Supplementary Planning Documents | |
| North Somerset Landscape Character Assessment Supplementary Planning Document. Adopted December 2005 ⁷ | Defines Landscape Character Types (LCTs) and the more detailed and location specific landscape character areas (LCAs) that will be used within the landscape assessment component of the LVIA. |
| Mendip Hills Area of Outstanding Natural Beauty (AONB) Management Plan 2014-19⁸ | |
| Introduction to the Management Plan | As set out in paragraph 1.2.8 <i>"what happens in the countryside adjacent to the boundary or within the view of the AONB is also of significance."</i> The landscape assessment will consider effects upon the AONB and the visual assessment will include any AONB visual |

⁶ North Somerset Council (2016). Development Management Policies, Sites and Policies Plan Part 1, [online]. Available at: <http://www.n-somerset.gov.uk/wp-content/uploads/2015/11/Sites-and-Policies-Plan-Part-1-Development-Management-Policies-July-2016.pdf> [Checked 16/04/18].

⁷ Land Use Consultants (on behalf of North Somerset Council), 2005. North Somerset Landscape Character Assessment, Supplementary Planning Document, [online]. Available at: <http://www.n-somerset.gov.uk/wp-content/uploads/2015/11/landscape-character-assessment-supplementary-planning-document.pdf> [Checked 16/04/18].

⁸ Landscapes for life (2013). Mendip Hills area of Outstanding Natural Beauty (AONB) Management Plan 2014-19, [online] Available at: <http://www.mendiphillsaonb.org.uk/wp-content/uploads/2012/12/Mendip-Hills-AONB-Management-Plan-Nov-2013.pdf> [Checked 16/04/18].

| Policy reference | Implications |
|--|--|
| Statement of Significance – The AONB’s special qualities | receptors that are within the Zone of Theoretical Visibility (ZTV) for the Proposed Development. The AONB Management Plan identifies and summarises 12 special qualities. The landscape assessment will consider the potential for the Proposed Development to impact upon these special qualities. The AONB Management Plan states that “ <i>particular combinations of these special qualities form 11 distinctive landscape areas identified in the Mendip Hills AONB Landscape Character Assessment.</i> ” Those LCAs with potential to sustain effects as a result of the Proposed Development will be included in the landscape assessment. |

Technical guidance

9.3.3 **Table 9.2** lists guidance documents which are relevant to the LVIA.

Table 9.2 Technical guidance relevant to the LVIA

| Guidance | Relevance |
|---|--|
| Guidelines for Landscape and Visual Impact Assessment (GVL3) | This guidance has informed the scope of the LVIA, the establishment of the landscape and visual baseline, the design of mitigation, the assessment of landscape effects and the assessment of visual effects. |
| Photography and photomontage in landscape and visual impact assessment – Advice Note 01/11⁹ | This advice note has informed the approach taken to baseline photography and the presentation of visualisations. |
| Tranquillity – An overview. Technical Information Note 01/2017 (revised) | This technical information note has informed the approach taken to the consideration of tranquillity within the assessment of landscape effects. |
| Visual representation of development proposals. Technical Guidance Note 02/17 | This technical guidance note has informed the approach taken to the specification and presentation of visualisations. |
| Visual Representation of Windfarms Version 2.2¹⁰ | This guidance has informed the approach taken to the specification and presentation of visualisations. Although the guidance is specifically intended for use in relation to on-shore wind farms, much of its content is applicable to all types of large-scale development. |

9.4 Data gathering methodology

Study area

9.4.1 The LVIA study area (the ‘study area’) for the Proposed Development is shown in **Figure 9.1** and extends 5km from the application site boundary, with additions as described in paragraph 9.4.2. This study area has been used for the purposes of data collection and the subsequent assessment and has been defined to ensure that the LVIA concentrates upon receptors that are most likely to be significantly affected by the Proposed Development. It is derived from a review of the 2009

⁹ The Landscape Institute (2011). Photography and photomontage in landscape and visual impact assessment – Advice Note 01/11. Landscape Institute. London.

¹⁰ Scottish Natural Heritage (2017). Visual Representation of Wind Farms Version 2.2, [online]. Available at: [https://www.nature.scot/sites/default/files/2017 \[Checked 02/04/2018\]](https://www.nature.scot/sites/default/files/2017%20Checked%2002%2F04%2F2018)

L VIA¹¹ and the assessors' experience of undertaking LV IAs for other airport developments. The study area accords with best practice, as set out in Sections 5.2 and 6.2 in GLVIA³, as well as the principle of proportionality set out in paragraph 3.16:

"The level of detail provided should be that which is reasonably required to assess the likely significant effects. It should be appropriate and proportional to the scale and type of development and the type and significance of the landscape and visual effects likely to occur."

- 9.4.2 The 5km study area is extended to a 10km offset to the south-east, south and south-west. This extension is required to encompass the closest parts of the Mendip Hills AONB. This is a nationally designated landscape and has a particularly high sensitivity to development beyond its boundaries, as evidenced in the review of the current Mendip Hills AONB Management Plan¹².

Desk study

- 9.4.3 A summary of the data obtained during the desk study, together with the nature of that data is as follows:
- The following Ordnance Survey (OS) 1:25,000 scale mapping was used to identify the locations of built form, roads, Public Rights of Way (PRoW), recreational routes, tourist attractions, woodland and topography:
 - ▶ Explorer 154 - Bristol West and Portishead;
 - ▶ Explorer 155 - Bristol and Bath;
 - ▶ Explorer 141 - Cheddar Gorge and Mendips Hill West; and
 - ▶ Explorer 142 - Shepton Mallet and Mendip Hills East.
 - OS Terrain 5 digital terrain model (DTM), which provides 5m resolution digital terrain data, was obtained to facilitate understanding of topography;
 - The following Natural England (NE) publications were used to provide a broad overview of key features, characteristics and sensitivities of the landscape of the site and study area:
 - ▶ National Character Area profile: 118. Bristol, Avon Valleys and Ridges¹³; and
 - ▶ National Character Area profile: 141. Mendip Hills¹⁴.
 - North Somerset Council's (NSC) Landscape Character Update March 2018¹⁵ was used to gain a detailed understanding of key features, characteristics and sensitivities of the landscape of the site and the northern, central and south-western parts of the study area;.
 - Bath and North East Somerset Council's Rural Landscapes of Bath and North East Somerset: Landscape Character Assessment Supplementary Planning Guidance (adopted April 2003)¹⁶ was

¹¹ Entec UK Ltd for Bristol International Airport Limited, (2009). *Volume 8: Landscape and Visual Assessment. Environmental Statement for the Development and Enhancement of Bristol Airport.*

¹² Landscapes for Life (2013). Mendip Hills Area of Outstanding Natural Beauty (AONB) Management Plan 2014-19, [online]. Available at: <http://www.mendiphillsaonb.org.uk/wp-content/uploads/2012/12/Mendip-Hills-AONB-Management-Plan-Nov-2013.pdf> [Checked 16/04/18].

¹³ Natural England (2014). National Character Area profile: 118. Bristol, Avon Valleys and Ridges, [online]. Available at: www.naturalengland.org.uk [Checked 13/03/18].

¹⁴ Natural England, (2014). National Character Area profile: 141. Mendip Hills, [online]. Available at: www.naturalengland.org.uk [Checked 14/08/18].

¹⁵ Wardell Armstrong for North Somerset Council, (2018). North Somerset Council Landscape Character Assessment Update March 2018.

¹⁶ Bath and North East Somerset Planning Services, (2003). Rural Landscapes of Bath and North East Somerset: A Landscape Character Assessment Supplementary Planning Guidance. Adopted April 2003.

used to gain a detailed understanding of key features, characteristics and sensitivities of the landscape of the south-eastern part of the study area;

- Mendip Hills AONB Management Plan 2014-19⁸ from the AONB Partnership was used to gain a detailed understanding of key features, characteristics and sensitivities of the landscape of the southern part of the study area within the AONB;
- Multi-Agency Geographic Information website (MAGIC)¹⁷ for information on national cycle routes, national trails, open access areas and registered parks and gardens;
- Campaign for the Preservation of Rural England's (CPRE) Tranquillity mapping¹⁸ and Light Pollution and Dark Skies mapping¹⁹;
- Aerial photography – imagery dated 17 June 2017 from Google Earth Pro; and
- PRow data available under Open Government Licence²⁰.

Zone of theoretical visibility

- 9.4.4 Zone of Theoretical Visibility (ZTV) is defined in *GLVIA 3*¹ as "a map, usually digitally produced, showing areas of land within which a development is theoretically visible" and represents the desktop component of the visibility analysis.
- 9.4.5 In addition to the sources of data listed in paragraph 9.4.3, ZTV maps have been prepared for the following two 'scenario's': current Bristol Airport infrastructure combined with the permitted development under the 10 million passengers per annum (mppa) development commencing prior to November 2018 (refer to **Table 2.1**) and for the Proposed Development (for 12mppa). OS Terrain 5DTM data was used to calculate intervisibility between areas within the study area and the relevant scenario. The DTM data is not amended to include areas of woodland and built form and consequently, the ZTVs calculated show a worst-case scenario for visibility of existing and proposed infrastructure at Bristol Airport. They therefore form an appropriate baseline for undertaking the visual assessment.
- 9.4.6 The suite of ZTVs which accompanies this assessment are shown in **Figures 9.2 - 9.4** and include the following:
- ZTV: existing infrastructure and infrastructure approved under the 10 mppa permission that has been constructed or is under construction by November 2018 (**Figure 9.2**);
 - ZTV: proposed infrastructure to be provided by the 12 mppa development only (**Figure 9.3**); and
 - Comparative ZTV: existing infrastructure, infrastructure approved under the 10 mppa permission that has been constructed or is under construction by November 2018 and all Proposed Development (12 mppa) infrastructure (**Figure 9.4**).
- 9.4.7 The existing plus approved 10mppa infrastructure ZTV in **Figure 9.2** is calculated using the following components and height parameters:
- Terminal building at a height of 13.0m above ground level (AGL);

¹⁷ Department for Environment, Food and Rural Affairs (2018). MAGIC, [online]. Available at: www.magic.gov.uk [Checked 08/03/18].

¹⁸ Campaign to Protect Rural England, (2007). Tranquil Places, [online]. Available at: www.cpre.org.uk/resources/countryside/tranquil-places [Checked 12/03/18].

¹⁹ Campaign to Protect Rural England, (2016). England's Light Pollution and Dark Skies – Map, [online]. Available at: www.cpre.org.uk/nightblight/maps [Checked 12/03/18].

²⁰ <http://www.rowmaps.com/datasets/> [Checked 13/08/18].

- Western walkway at a height of 11.25m AGL;
- Air traffic control (ATC) tower at a height of 28.9m AGL;
- Hotel at a height of 14.0m AGL;
- Transport interchange at a height of 9.6m AGL;
- Phase 1a and 1b multi-storey carpark (MSCP) at a height of 16.0m AGL;
- Fire station at a height of 8.5m AGL;
- Hangars in the southern area at a height of 13.0m AGL;
- Carparking in northern area and Silver Zone plus Silver Zone car park extension (Phase 1) in southern area with assumed vehicle heights of 2.0m AGL;
- Tail fins on aircraft at stands on the west, east and south aprons with a height of 14.0m AGL; and
- Permitted administration building with a height of 16.0m AGL.

9.4.8 The Proposed Development ZTV in **Figure 9.3** is calculated using the following components:

- Terminal building west extension at a height of 13.5m AGL;
- Terminal building south extension at a height of 9.5m AGL;
- Terminal building new canopy at a height of 12.5m AGL;
- New MSCP (Phase 3) at a height of 16.0 AGL;
- Eastern walkway and east pier at a height of 12.5m AGL; and
- Carparking at Silver Zone car park extension (Phase 2) with assumed vehicle heights of 2.0m AGL.

9.4.9 The comparative ZTV in **Figure 9.4** is calculated using all parameters as set out in paragraphs 9.4.7 and 9.4.8.

9.4.10 The following scenarios are not modelled as part of the ZTVs:

- The slender form of the proposed turbines on the upper storey of Phase 3 MSCP is such that they will only be readily noticeable to close distance receptors. Here, they will appear as similar in scale to existing lighting columns in parts of the northern area of Bristol Airport. The inclusion of the turbines in the ZTVs would therefore be likely to give rise to a false impression of the extent of visibility of the Proposed Development; the turbines have been excluded from the ZTVs on this basis;
- The 10 mppa developments that have not commenced by November 2018 as set out in **Table 2.1**; and
- Modelling aircraft in the air would result in the entire study area being included in the ZTV, which would not aid the assessment. It is also not considered likely that the additional numbers of overflying of aircraft as a result of the Proposed Development could give rise to significant visual effects due to the intermittent, transitory and small-scale nature of the changes that would arise in views. The same principles apply for aircraft moving along the runway whereby the intermittent and transitory nature of this change alone is unlikely to lead to significant visual effects.

Survey work

- 9.4.11 Field surveys were carried out between June 2017 and July 2018 by Chartered Landscape Architects. The primary purposes of these field surveys were the capture of viewpoint photography and to view landscape features identified from desk-based sources. Publicly accessible locations within the study area were visited and comprehensive notes and photographs were taken.
- 9.4.12 The schedule and primary purposes of LVIA site visits are set out below:
- 15 June 2017 – preliminary site visit;
 - 4 April 2018 – review of existing development and planting in northern area;
 - 26 April 2018 – viewpoint photography across study area under winter conditions to capture minimal leaf growth on deciduous vegetation;
 - 31 June 2018 – detailed review of visual baseline in Lulsgate Bottom, Oatfield, Hyatt Wood Road, Downside and A38 areas; and
 - 30-31 July 2018 – follow up day time and night time viewpoint photography following review of scoping responses. Review of night time tranquillity and dark skies baseline in AONB and close to the application site.
- 9.4.13 All photographs included in this LVIA were recorded with a digital SLR camera set to produce photographs equivalent to that of a manual 35mm SLR camera with a 50mm focal length lens. The photographs from the viewpoint are then digitally joined (using Autopano Giga software) to form a panorama and the resultant annotated panoramic photographs are presented at a 30cm viewing distance in accordance with best practice guidelines set out in the Landscape Institute's *Advice Note 01/11, Photography and photomontage in landscape and visual impact assessment*²¹ and Scottish Natural Heritage's (SNH) *Visual Representation of Wind Farms Version 2.2*²². Whilst the SNH guidance is specifically intended for use in relation to on-shore wind farms, much of its content is applicable to all types of large-scale development. Annotated baseline daytime photography is presented in **Figures 9.7 - 9.21**, whilst annotated night time photography is shown in **Figures 9.22 - 9.25**.

Viewpoint selection

- 9.4.14 The Scoping Report (**Appendix 1A**) identified ten viewpoints which were selected from review of the viewpoints included in the 2009 LVIA¹¹ and from the preliminary site visit in June 2017. The scoping responses from the Mendip Hills AONB Partnership and NSC identified an additional ten viewpoints for inclusion, resulting in a final viewpoint schedule of 20 locations. The scoping responses also required that night time photography be provided from five of these 20 viewpoints. The viewpoint schedule is set out in **Table 9.3** and includes the rationale for the selection of each location alongside the type of viewpoint (as defined in paragraph 6.19 of *GLVIA3*¹) as follows:
- Representative viewpoints, selected to represent the experience of different categories of visual receptor, where large numbers of viewpoints cannot all be included individually and where significant effects are unlikely to differ;
 - Specific viewpoints, chosen because they are key and sometimes promoted viewpoints within the landscape; and

²¹ The Landscape Institute (2011). *Photography and photomontage in landscape and visual impact assessment – Advice Note 01/11*. Landscape Institute. London.

²² Scottish Natural Heritage (2017). *Visual Representation of Wind Farms Version 2.2*, [online]. Available at: [https://www.nature.scot/sites/default/files/2017 \[Checked 02/04/2018\]](https://www.nature.scot/sites/default/files/2017%20Checked%2002%2F04%2F2018)

- Illustrative viewpoints, chosen specifically to demonstrate a particular effect or specific issues which may include that a Proposed Development cannot be seen.

9.4.15 Viewpoint locations are shown on **Figure 9.5** and **Figure 9.6**.

Table 9.3 Final selection of photographic viewpoints

| Viewpoint reference | Viewpoint name | Grid reference | Reason for selection | Night Time photograph | Photomontage provided | Type of viewpoint (GLVIA3) |
|---------------------|--|----------------|---|-----------------------|-----------------------|----------------------------|
| 1 | Downside Road opposite Lime Kiln Cottage | 349925, 165917 | Representative of close distance views available to residential visual receptors in Downside and vehicular receptors travelling on Downside Road. | No | Yes | Representative |
| 2 | PRoW east of Oatfield, Backwell | 350776, 166025 | Representative of close distance views available to residential receptors in Hyatt Wood Road/Oatfield and recreational visual receptors using local PRoWs (grouped together as network K in the baseline and Figure 9.36). | No | No | Representative |
| 3 | PRoW Oatfield Farm – Yewtree Farm, Potters Hill | 351106, 166340 | Close distance, panoramic view from one of the most elevated, publicly accessible locations close to Bristol Airport. | Yes | Yes | Specific |
| 4 | PRoW at Stanshall's Close, Felton | 352058, 165702 | Illustrative of the close distance views available to some residential receptors on western side of Felton and recreational visual receptors using local PRoWs (grouped together as network H in the baseline and Figure 9.36). | No | No | Illustrative |
| 5 | South-western edge of Felton Common Open Access Area | 351660, 164948 | Representation of the most open close distance views available to recreational visual receptors visiting a popular recreational destination. | No | No | Representative |
| 6 | A38 south of main Airport entrance | 351355, 165276 | Illustrative of the limited views available from this section of A38. Scoping response request. | No | No | Illustrative |
| 7 | A38 north of Silver Zone entrance | 351236, 164814 | Illustrative of the limited views available from this section of A38. Scoping response request. | Yes | Yes | Illustrative |
| 8 | Winters Lane south of Goblin Combe Farm | 349710, 164073 | Illustrative of the influence of plateau topography upon the availability of close distance southern views including the Silver Zone car park extension (Phase 1 & 2). | No | No | Illustrative |

| Viewpoint reference | Viewpoint name | Grid reference | Reason for selection | Night Time photograph | Photomontage provided | Type of viewpoint (GLVIA3) |
|---------------------|--|----------------|---|-----------------------|-----------------------|----------------------------|
| 9 | Right angle on Winters Lane north of Highfield | 349539, 164858 | Short section of Winters Lane that provides the only publicly available close distance views of Silver Zone car park extension (Phase 1). Scoping response request. | No | Yes | Specific |
| 10 | Informal aircraft viewing area on Winters Lane | 349373, 164892 | Popular location providing most open, publicly available views from Bristol Airport's perimeter. Scoping response request. | No | No | Specific |
| 11 | South End of Cook's Bridle Path/Winters Lane | 349646, 165306 | Illustrative of the limited views available of the main built elements in northern and southern areas from this section of Bristol Airport's perimeter. Scoping response request. | No | No | Illustrative |
| 12 | Central section of Cook's Bridle Path | 349810, 165753 | Representative of the well-screened views available to receptors living close to or using this popular route. Scoping response request. | No | No | Representative |
| 13 | PRoW between Downside and Oatfield Farm | 350180, 166280 | Illustrative of the influence of topography on the availability of close distance north-western views. Scoping response request. | No | No | Illustrative |
| 14 | Hyatt Wood Road at Oatfield Batch | 350494, 166491 | Specific view available from short elevated section of minor road to the north of the Airport. Scoping response request. | Yes | Yes | Specific |
| 15 | Blagdon picnic area AONB | 349849, 158603 | Representative of views from closest elevated part of AONB. | No | No | Representative |
| 16 | Burrington Ham AONB | 348590, 158386 | Representative of views from elevated Open Access Area in AONB. Scoping response request. | Yes | Yes | Representative |
| 17 | Beacon Batch Trig Point AONB | 348463, 157274 | Highest point in AONB and within Open Access Area. | Yes | Yes | Specific |
| 18 | Doleberry Warren Iron Age fort ramparts AONB | 345237, 159028 | Representative of views from elevated Open Access Area in AONB. Scoping response request. | No | No | Representative |
| 19 | Wrangle crossroads AONB | 354029, 156091 | Representative of long distance views available to recreational visual receptors in this part of the AONB. | No | No | Representative |
| 20 | Burlidge Common AONB | 358413, 158592 | Illustrative of occasional, long distance views available to recreational visual receptors in this part of the AONB. | No | No | Illustrative |

9.5 Overall baseline

Current baseline

Landscape baseline – landscape elements within Bristol Airport

- 9.5.1 Bristol Airport occupies approximately 196ha of land. The runway is orientated east to west and is towards the centre of the application site. Aircraft stands, taxiways and apron surround the runway area. The fuel farm is located in the centre of the northern edge of the apron. Built development is concentrated on the northern side of the runway and includes the airport terminal, hotel, control tower, car parking including Phase 1a MSCP and the current administrative building with facilities linked by the North Side Road. Aircraft ancillary areas, including the southern apron, Bristol Flying Centre, Bristol and Wessex Flying Club, helicopter areas and associated hangars, the Silver Zone car park and Silver Zone car park extension (Phase 1), are located on the southern side of the runway. The new administration building is to be sited in the southern area and its construction has commenced, as shown in **Table 2.2**. Other components of the 10 mppa planning permission that have been completed or commenced construction by November 2018 are shown in **Table 2.1** in **Chapter 2: Description of the Proposed Development**. The tallest built element is the air traffic control tower at 28.9m.
- 9.5.2 Bristol Airport is located on the Broadfield Down Plateau with the runway and its southern side at elevations of between 196m and 183m Above Ordnance Datum (AOD), with the most elevated area being sited on the south-western boundary. Its northern area has more topographical variation being at elevations between 185m and 165m AOD with the lower elevations at the northern boundary.
- 9.5.3 Operational requirements dictate that in the proximity of the runway vegetation cover is restricted to grassland. There are lengths of recent and well-established hedgerows in the southern part, most of which are trimmed low, although some are overgrown. Tree and shrub cover is limited, except for belts along some sections of the boundary. These are concentrated around the south-eastern carpark area and extensive belts alongside Downside Road on the northern boundary. The latter provide a screening function for residents in properties sited along the eastern section of Downside Road. Away from the boundaries, tree cover is mainly restricted to small groups of trees and rows of trees alongside sections of North Side Road. Boundary tree and shrub cover along the sections of the A38 close to the principal entrance to Bristol Airport provide good levels of screening from the A38.

Topography and drainage

- 9.5.4 Bristol Airport is sited on one of the most elevated plateau ridge locations in the surrounding area, which is characterised by rolling ridge and valley topography with a general east to west grain. There are only a small number of locations with a similar or greater elevation. These include Felton Common (191m AOD) to the east; Oatfield Hill (206m AOD) to the north; and Dundry Down (233m AOD) further to the north-east. The area to the south descends unevenly to the River Yeo Valley at elevations below 20m AOD around Wrington before rising steeply with the north slopes of the Mendip Hills with a maximum elevation in the study area of 325m AOD at Beacon Batch. The ridgelines and plateaux also descend rapidly to the west and north-west so that these edges of the study area are also at low elevations.
- 9.5.5 North of Bristol Airport, combes (seasonally dry valleys) and valleys dissect the plateau creating an undulating series of ridges and shallow valleys on an east to west alignment. Similarly, coombes and valleys, including Goblin Combe, also dissect the Broadfield Down Plateau to the south which

gradually descends to the River Yeo Valley. Overall the study area is topographically complex. The topography of the study area is illustrated in **Figure 9.33**.

Vegetation and land use

- 9.5.6 The land-use pattern in the study area is predominantly rural away from the larger settlements listed in paragraph 9.5.8 and Bristol Airport itself. In broad terms, the principal cropping type in the lower lying parts of the study area is a mixture of pastoral and arable, whilst on the slopes of the plateaux and ridgelines pastoral cropping predominates. The pastoral agriculture is often undertaken in fields with retained, albeit sometimes gappy, hedgerow boundaries and a moderate number of hedgerow trees. The highest density of tree and woodland cover is to the west of Bristol Airport extending to the A370 where there are extensive coniferous and mixed woodland plantations including Ball Wood, Kings Wood, Wrington Warren and Brockley Wood. Large coniferous and mixed woodland plantations are also located in two areas on the northern slopes of the Mendip Hills: around Rowberrow to the west and south of Ubley to the east.
- 9.5.7 Across the remainder of the study area, tree and woodland cover is generally restricted to a combination of small woodlands, field corner copses, grown out lengths of hedgerow trees and remnant hedgerow trees with some parkland style planting and local variations such as trees in Tall Pines Golf Club to the north-west of Bristol Airport. The density of tree cover varies but other than the woodlands to the west, tree cover is also relatively high in the area south of Bristol Airport between Wrington and Redhill and on the elevated area to the north of Bristol Airport around Oatfield Hill. The different tree cover types can coalesce to filter, frame and screen views and give the visual impression of a well-treed landscape character in several parts of the study area.

Settlement pattern

- 9.5.8 The settlement pattern is characterised by dispersed and isolated small villages, hamlets and farmsteads. Their distribution is often concentrated at the base of the ridgelines or plateaux. Many of these settlements are not spatially well defined with a dispersed morphology allowing them to merge into one another. A good example of this phenomenon is the manner that Potters Hill, Lulsgate Bottom and Downside merge into one another. Settlements avoid locations at the bottom of the River Yeo Valley and are only infrequently located on the steepest sections of the plateau and ridgeline slopes. Within the study area the largest settlement is the small town of Nailsea, although only its south-eastern half is within the study area. Other settlements include Wrington, Redhill, Cleeve, Claverham, Backwell, Felton and Winford as well as the eastern fringes of Yatton and Congresbury, although as shown in **Figures 9.2 – 9.4**, most of these settlements are sited well outside the ZTVs.
- 9.5.9 Close to Bristol Airport, settlement is concentrated to the north (Downside, Lulsgate Bottom and a small residential estate on Hyatt Wood Road and Oatfield), north-east (Potters Hill, Felton and Felton Hill) with a smaller number of isolated residential properties sited close to Cook's Bridle Path. To the south-east, south and south-west there are only scattered, isolated residential properties, generally associated with farms plus the settlement of Redhill which is located at a lower elevation midway down the southern slope that descends to the River Yeo Valley. Other than the aforementioned properties close to Cooks Bridle Path, there are no settlements or isolated residential properties close to the west of Bristol Airport due the presence of the extensive areas of woodland as noted in paragraph 9.5.6. The settlement pattern close to Bristol Airport is shown in **Figure 9.34**.

Transport network

- 9.5.10 The study area is characterised by a relatively dense road network. A high proportion of these roads are minor roads linking the dispersed settlements, often following indirect routes. The site

visits (refer to paragraph 9.4.11) and use of Google Earth Pro has demonstrated that these minor roads are often bounded by tall hedgerows.

- 9.5.11 The principal routes are the A370, A368 and A38. The latter is routed alongside the eastern side of Bristol Airport where it has been realigned to facilitate an earlier eastward extension of the runway. The A368 is routed through the series of settlements at the foot of the northern Mendips slope linking the other two 'A' roads with Bath. Larger settlements listed in paragraph 9.5.8 are sometimes linked by 'B' roads, however there are no 'B' roads routed within approximately 2.5km of Bristol Airport.
- 9.5.12 The main railway line between Bristol and Exeter traverses the northern part of the study area.

Recreational use

- 9.5.13 There are a limited number of outdoor recreational destinations located in the study area, principally associated with the watersports and fishing at Blagdon and Chew Valley Lakes. There are several campsites and caravan parks located in the River Yeo Valley. These facilities are a minimum of 3km from Bristol Airport. The Tall Pines Golf Club is much closer, being located west of Cook's Bridle Path to the immediate north-west of Bristol Airport as shown on **Figure 9.36**. The Mendip Snow sport Centre is a 100ha facility including an outdoor ski slope and alpine lodges. It is located south of the A368 between Sandford and Churchill, 8km to the south-west of the application site.
- 9.5.14 Three registered parks and gardens with public access are located entirely or partly within the study area, however, they are sited at least 2km from the boundary of Bristol Airport. These are:
- Barrow Court;
 - Barley Wood; and
 - Tyntesfield.

Long distance footpaths and cycle routes

- 9.5.15 The following regionally and locally promoted long distance trails have sections that pass through the study area:
- Monarch's Way: this is a 990km long distance path that runs from Worcester to Brighton via Bristol and Yeovil. An estimated 18km of the Monarch's Way is routed north – south across the eastern part of the study area;
 - Limestone Link: this is a 58km long distance path that links the Mendip Hills and the Cotswolds. It starts between Churchill and Rowberrow i.e. in the study area and is routed eastwards along the lower northern slopes of the Mendip Hills for approximately 16km to West Harptree where it exits the study area;
 - West Mendip Way: this is a 48km long distance path routed between Wells and Uphill on the Bristol Channel. It has an undulating route across approximately 7km some of the upper northern slopes of the Mendip Hills around Shiphams in the south-west of the study area;
 - Community Forest Path: this is a 72km circular path around Bristol developed with the Forest of Avon. Approximately 3km of the Path is routed in the north-eastern part of the study area at Dundry Hill;
 - Two Rivers Way: this is a 32km long footpath between Congresbury to Keynsham that follows the River Yeo and River Chew. The initial 16km of the Way is routed at low level along the River Yeo valley west to east across the study area; and

- Strawberry Line: this is a 16km traffic free route that follows the route of the dismantled Cheddar Valley Railway. An estimated 6km of the route at a low level between Winscombe and Congresbury is on the south-western edge of the study area.

9.5.16 The following Sustrans Regional Cycle Network (RCN) and National Cycle Network (NCN) routes have sections that pass through the study area:

- Regional Route 410 (also known as the Avon Cycleway): this RCN links Chew Valley Lake with southern Bristol via Clevedon. The southern half of the RCN is routed south-east to north-west across the centre of the study area with the closest section to Bristol Airport routed along Downside Road;
- National Route 334: a 21km mainly on-road route running south from Bristol to Felton where it joins Regional Route 410 and National Route 3;
- National Route 3: a 540km route from Land's End to Bristol of which an estimated 14km is routed through the south-eastern part of the study area;
- National Route 33: a 115km route with the first section routed between Bristol and Nailsea. The 6km section between Long Ashton and Nailsea passes through the northern part of the study area at a low elevation; and
- National Route 26: a 131km route between Portishead and the Isle of Portland. The short section that is routed through the south-western edge of the study area follows the same route as Strawberry Line (see paragraph 9.5.15).

9.5.17 The distribution of long distance footpaths and cycle routes within the study area is shown in **Figure 9.35**.

Open access land

9.5.18 There are a limited number of areas designated as open access land within the study area. The closest is Felton Common Open Access Area which covers an estimated 40ha²³ to the immediate east of Bristol Airport. The most extensive open access areas are located in the Mendip Hills AONB between 5.5km and 8.5km to the south of Bristol Airport. These are:

- Black Down Open Access Area;
- Burrington Ham Open Access Area; and
- Dolebury Warren Open Access Area.

9.5.19 The location of these open access areas is shown in **Figure 9.35**.

Public Rights of Way

9.5.20 Across the study area there are wide variations in the density of the PRoW networks, with an overall moderate density. There is a lower network density in the section of the Yeo Valley between Wrington and Blagdon Lake. There is a higher density of PRoWs on the northern slopes of the Mendip Hills AONB, a proportion of which are located within the three areas of open access land listed in paragraph 9.5.18.

9.5.21 In the immediate vicinity of Bristol Airport, i.e. within 1.5km, there is a similar diversity in the density of the PRoW network (**Figure 9.36**). To the south and west there is a moderate density of PRoWs, a proportion of which are sited within the extensive woodland plantation. There are more dense

²³ <https://www.winfordpc.org.uk/felton/felton-common> [checked 20/08/2018].

networks of PRowS in some areas to the north and east including around and within the dispersed settlements of Lulsgate Bottom and Downside linking them with outlying farmsteads and hamlets; around Potters Hill; around and traversing Felton Common Open Access Area; and south of Butcombe Court. These PRowS have been grouped together as 12 PRow network groups based upon their interconnectivity and following the precedent that was applied in the 2009 LVIA¹¹. These network groups are defined on **Figure 9.36**.

Tranquillity

- 9.5.22 **Figure 9.40** illustrates the results of CPRE's Tranquillity Mapping, which shows the likelihood of finding tranquillity in any given locality and is relative on a regional level (i.e. South-West England). This is based on a methodology which was developed by Northumbria University on behalf of CPRE and the then Countryside Agency (now Natural England) in 2007. The data is subject to the limitations inherent in many large-scale desk-based studies and should only form an initial indication of the relative levels of tranquillity that are experienced in the study area. More detailed observations have been obtained through the field survey work.
- 9.5.23 **Figure 9.40** indicates that the highest levels of tranquillity within the study area are associated with the more elevated parts of the Mendip Hills AONB that are located away from the B3134. Relatively high levels of tranquillity are also associated with Chew Valley Lake, on the southern slopes of Dundry Hill; the low-lying area between Congresbury and Sandford; and the extensive plantation woodlands to the west of Bristol Airport. High levels of tranquillity are likely to be due to the presence of limited built form and a general absence of road and rail infrastructure allied with high levels of openness of the landscape (apart from the woodland area) and perceived naturalness. The areas with lower levels of tranquillity are associated with the larger settlements and the 'A' and 'B' roads, including the A38. The greatest concentration of low levels of tranquillity is in the northern part of the study area close to the south-western edge of Bristol and settlements such as Long Ashton and Nailsea as well as the A370. Away from Bristol, low levels of tranquillity are associated with Congresbury and the settlements alongside the A386 and A38 in the south-western study area.
- 9.5.24 Bristol Airport displays moderate to moderate-low levels of tranquillity. The central and western part of Bristol Airport displays moderate levels of tranquillity which are lower than all the areas immediately surrounding the application. As already noted, the area to the west associated with the extensive plantation woodlands displays low to moderate-low levels of tranquillity, whilst areas alongside Downside Road and A38, apart from Felton Common, display slightly lower levels of tranquillity than areas within Bristol Airport. This is probably due to the importance that the methodology places on the presence of and proximity to urban developments and busy roads.

Dark skies

- 9.5.25 **Figure 9.41** illustrates 'Night Blight' mapping which maps England's light pollution and dark skies; it is based on satellite imagery gathered in September 2015. Further field survey work including night-time photography has been undertaken as part of the landscape and visual baseline collection (see annotated night-time viewpoint photography in **Figures 9.22 – 9.25**).
- 9.5.26 **Figure 9.41** indicates that the brightest levels of radiance are found at Bristol Airport with relatively high levels of radiance limited to Barrow Gurney, Langford, Congresbury, Flax Bourton and Backwell. The influence of the Bristol urban area is largely excluded from the study area, although it just enters the north-eastern edge. The exclusion of the influence of Bristol is due to the methodology that was used to produce the mapping. The mapping reflects data derived from satellite observations i.e. light sources as directly viewed from above. The mapping does not take any account of phenomena such as a sky glow above settlements or light sources when viewed horizontally from other ground level locations at night time. Consequently, as observed during the

night time site visits and shown on the night time viewpoint photography, the Bristol urban area (and other urban areas alongside the Bristol Channel) does generate a considerable influence on night time views where these are available across the study area, including within the Mendip Hills AONB.

- 9.5.27 Levels of radiance decrease away from the main settlements and are lowest in the southern and south-eastern parts of the study area. This distribution accords with the presence of the Mendip Hills AONB. The levels of radiance close to Bristol Airport decrease more rapidly to the south, south-west and north-west where within approximately 1km radiance levels are within the third lowest radiance category.

Landscape character – National Character Areas

- 9.5.28 At the national scale of Natural England's 159 National Character Areas (NCAs), Bristol Airport and a large majority of the study area are within NCA 118: Bristol, Avon Valleys and Ridges¹³. The distribution of NCAs in the study area is shown on **Figure 9.37**. NCA 118 is a large NCA that extends from the foot of the northern slopes of the Mendip Hills across the city of Bristol and up the M5 corridor. The southern edge of the study area is within NCA 141: Mendip Hills¹⁴. The presence of Bristol Airport is noted in the introductory summary of NCA 118 and is listed as one of the developments that is a key characteristic of the NCA. Bristol Airport is described as dominating the "hilltop along from Dundry", the NCA description further notes that "*the planned expansion of Bristol Airport may significantly impact on the tranquillity and traffic of this NCA*". In the section on ecosystem service analysis, the description of the current state of tranquillity in the NCA notes that disturbance is high alongside the A38 and that Bristol Airport "*significantly impacts upon tranquillity south of Bristol ...*"¹³
- 9.5.29 Key characteristics of NCA 118 and NCA 141 that are pertinent to the study area are set out in **Appendix 9C**.

Landscape character – District Landscape Character Areas

- 9.5.30 At a district scale, the landscape character of the study area has been defined in three landscape character assessments:
- NSC¹⁴;
 - Bath and North East Somerset Council¹⁶; and
 - Mendip Hills AONB Partnership²⁴²⁵.
- 9.5.31 The distribution of the LCAs defined in these landscape character assessments is shown in **Figures 9.38** and **9.39**. There is some overlap between the areas included within the Mendip Hills AONB Partnership landscape and the North Somerset and Bath and North East Somerset landscape character assessments.
- 9.5.32 Bristol Airport is within the area incorporated in the recently updated NSC landscape character assessment¹⁴ and is sited in the Settled Limestone Plateau Landscape Character Type (LCT) and within the G1: Broadfield Down Settled Limestone Plateau LCA. G1: Broadfield Down Settled Limestone Plateau LCA's key characteristics that are of relevance are:
- Flat to gently undulating elevated broad plateau;

²⁴ Chris Blandford Associates for the Countryside Commission. (1998). The Mendip Hills Landscape. Countryside Commission.

²⁵ Chris Blandford Associates for the Countryside Commission. (1996). Landscape Assessment of the Mendip Hills from Steep Holme to Frome. Countryside Commission.

- Open and exposed landscape with distant views to lowland and wooded ridges;
- Mixed and coniferous woodland belts and clumps, the most substantial of which are to the north of the LCA i.e. north of Bristol Airport;
- Large rectilinear fields enclosed by low hedgerows;
- Bristol Airport and the associated terminal building and infrastructure dominate the central section of the LCA;
- Settlement is limited to isolated farmsteads, nucleated villages and, along the A38, development of a more urban character;
- Low levels of accessibility away from the A38 with a more urban feel in parts of the LCA close to Bristol Airport; and
- Rural character and night skies are impacted by increased lighting levels at Bristol Airport.

9.5.33 The Broadfield Down Settled Limestone Plateau LCA states that Bristol Airport has a "*profound influence*" on the character of the LCA. It notes the contrast between the strong sense of exposure created by the runway and taxiways and the concentration of buildings and activity on the northern area. Bristol Airport is described as having an urbanising effect upon Lulsgate Bottom. Away from Bristol Airport, the LCA is described as pastoral with the edges of the LCA becoming more rural and remote with increased tree cover. The influence of the A38 is also noted regarding noise, movement, road side development and signage clutter.

9.5.34 The Broadfield Down Settled Limestone Plateau LCA is assessed as possessing moderate strength of character with the presence of Bristol Airport noted as a disruptive influence. The landscape character assessment concludes that whilst the LCA exhibits a number of the characteristics of the Settled Limestone Plateau LCT, the LCA lacks unity or a distinct pattern of features. The landscape character assessment judges that the Broadfield Down Settled Limestone LCA has a declining condition "*due to the poor management of its field boundaries and the effects of the pressure on the area from airport infrastructure.*" Amongst the landscape guidelines that are advocated for the LCA is the use of design guidance and appropriate land management to minimise the visual impacts generated by the airport and associated development and infrastructure.

9.5.35 Other LCAs defined in the three landscape character assessments within the study area are set out in **Tables 9.4 -9.6.**

Table 9.4 North Somerset landscape character areas within the study area

| Landscape character assessment | Landscape Character Type | Landscape Character Area |
|--------------------------------|-----------------------------|---|
| NSC ¹⁴ | Moors | A1: Kingston Seymour and Puxton Moors |
| | Moors | A3: Kenn and Tickenham Moors |
| | River Flood Plains | B1: Land Yeo and Kenn River Floodplain |
| | Limestone Ridges and Combes | E1: Mendip Ridges and Combes |
| | Limestone Ridges and Combes | E5: Tickenham Ridge |
| | Limestone Ridges and Combes | E6: Cleeve Ridge |
| | Settled Limestone Plateau | G1: Broadfield Down Settled Limestone Plateau |

| Landscape character assessment | Landscape Character Type | Landscape Character Area |
|--------------------------------|---------------------------|---|
| | Settled Limestone Plateau | G2: Failand Settled Limestone Plateau |
| | Settled Hills | H1: Dundry Settled Hill |
| | Rolling Valley Farmland | J2: River Yeo Rolling Valley Farmland |
| | Rolling Valley Farmland | J3: Chew Rolling Valley Farmland |
| | Rolling Valley Farmland | J4: Colliters Brook Rolling Valley Farmland |
| | Rolling Valley Farmland | J5: Land Yeo and Kenn Rolling Valley Farmland |
| | Farmed Coal Measures | K1: Nailsea Farmed Coal Measures |

Table 9.5 North East Somerset and Bath landscape character areas within the study area

| Landscape character assessment | Landscape Character Area |
|--|--|
| North East Somerset and Bath Council ¹⁶ | 1: Thrubwell Farm Plateau |
| | 2: Chew Valley |
| | 3: Mendip Hills |
| | 4: Upper Chew and Yeo Valleys |
| | 5: Dundry Plateau |
| | 6: Hinton Blewett and Newton St. Loe Plateau Lands |

Table 9.6 Mendip Hills landscape character areas within the study area

| Landscape character assessment | Character Area |
|---------------------------------|---------------------------------------|
| Mendip Hills AONB ²⁴ | The Northern Slopes Character Area |
| | Blagdon-Compton Martin Character Area |
| | The Plateau Character Area |
| | The South-Western Slopes |
| | The Lox Yeo Valley and Winscombe Vale |
| | The Harptree - Chewton Edge |
| | The Chew Lowlands |
| | Crook Peak to Callow Hill |
| | Banwell Head to Towerhead |

- 9.5.36 The key characteristics of the LCAs that are closest to Bristol Airport or which due to their topography are most likely to have a visual relationship with Bristol Airport as determined by the combined baseline and proposed ZTV in **Figure 9.4**, are set out in **Appendix 9D**.

Landscape designations – national

- 9.5.37 The Mendip Hills AONB is a national landscape designation, whose primary designation purpose is to conserve and enhance an area's natural beauty. As shown in **Figure 9.1**, the closest point of the AONB, which is south of Butcombe, is located 2.9km to the south of the boundary of Bristol Airport. The AONB has an area of 198km², of which 80km² i.e. 40%, is located within the study area.

- 9.5.38 The AONB's current Management Plan¹² contains the Statement of Significance which defines the AONB's 12 special qualities and includes cross references to the landscape character areas listed in **Table 9.6**. These special qualities are:

- 1 - the distinctive limestone ridge with windswept plateau punctuated by spectacular dry valleys and gorges, ancient sinkholes and depressions, and impressive rocky outcrops. Cheddar Gorge probably the most widely known limestone karst feature in Britain;
- 2 - views towards the Mendip Hills from Exmoor, Quantocks, the Somerset Levels and Moors and Chew Valley. The views out including across the Severn Estuary to Wales and the Somerset Levels to Glastonbury Tor and the Somerset coast;
- 3 - a sparsely populated plateau, with settlements of Mendip stone largely confined to the spring line, retaining dark skies and a sense of tranquillity;
- 4 - the diverse and visible geology that ranges from Devonian to Jurassic in a relatively small area making it one of the best areas in the country to appreciate the relationships between geology, landscape and natural history;
- 5 - caves, for their wildlife, geological and archaeological importance, including Avelines Hole, the oldest burial site in Britain, and Goughs Cave, one of the most important Palaeolithic sites in Europe that provides a breeding site for Lesser and Greater Horseshoe bats;
- 6 - the limestone aquifer feeding the reservoirs of Cheddar, Chew Valley and Blagdon lakes providing habitats of local and international importance for birds with Chew Valley Lake designated a Special Protection Area (SPA) for bird species;
- 7 - the Chew Valley -a rich farmed landscape with fields divided by hedges;
- 8 - dry stone walls that criss-cross the plateau farmland grazed by sheep, beef and dairy cattle;
- 9 - steep south-facing slopes of flower rich limestone grasslands and the area known as the Strawberry Belt of horticultural activity producing soft fruits;
- 10 - ancient woodland combs on the north and south slopes offering varied habitats of national and international importance for a wide diversity of wildlife including dormouse and bats;
- 11 - evidence of human settlement dating back 500,000 years. Henge monuments, barrows and hillforts through to World War Two sites are prominent features on the plateau as are remnants of Roman and Victorian lead mining; and
- 12 - a landscape enjoyed by large numbers of people for a wide range of interests and outdoor pursuits including caving, climbing, cycling and quieter activities including bird watching and walking due to areas of tranquillity.

- 9.5.39 The AONB Management Plan sets out eight themes to achieve the vision for the AONB and within each theme issues and objectives are identified. Within the theme of land quality, issues of potential relevance include:
- Development pressures;
 - Increases in road traffic and recreation; and
 - The loss of dark skies.
- 9.5.40 The theme of development and transport does not specifically list Bristol Airport amongst the issues that affect or could affect the AONB. Nevertheless, as noted in paragraph 3.7.12 of the AONB Management Plan, one of the issues is the impact of lighting upon dark skies and tranquillity with the shrinking area of dark skies being noted and a requirement to minimise the impact of lighting.

Landscape designations – local

- 9.5.41 There are no local landscape designations in the study area.

Future baseline

Overview

- 9.5.42 Landscape change is an ongoing and inevitable process and would continue across the study area irrespective of whether the Proposed Development proceeds and which will arise under the components of the 10 mppa planning permission that have been completed or commenced prior to November 2018 as set out in **Table 2.1** in **Chapter 2: Description of the Proposed Development**. As described in **Section 9.7**, the future baseline will influence the assessments of landscape and visual effects undertaken in relation to Operation Phase Year 1 and Operation Phase Year 15. Whilst changes resulting from the 10 mppa planning permission that have been completed or commenced prior to November 2018, along with Bristol Airport's ongoing operations and development to be progressed under general permitted development orders (GPDO) that has commenced by November 2018 (refer to **Table 2.2**) are likely to be most pertinent to the assessment of landscape and visual effects arising from the Proposed Development, other factors are also likely to change the future baseline. Change can arise through natural processes (e.g. the maturity of woodlands) and natural systems (e.g. river erosion) or, as is often the case, occurs due to human activity, land use, management or neglect.

Wider landscape change

- 9.5.43 **Ash dieback** - Chalara dieback of ash - became established in the UK in 2012 with the consequence that the future of common ash (*Fraxinus excelsior*) as a woodland, hedgerow and urban tree species became threatened. Reference to the Forestry Commission's map of confirmed infection sites²⁶ for the UK indicates that the OS 10km grid squares which cover the study area all report confirmed infections of ash trees within a natural environment. Resultant impacts on the landscape are likely to develop relatively slowly, starting with the decline of young trees and only becoming fully apparent if mature trees are felled. This tree loss may open up views for visual receptors and alter the structure of existing woodlands.
- 9.5.44 **North Somerset and Bath and North East Somerset landscape character areas** – the North Somerset Landscape Character Assessment Update¹⁴ sets out the forces for change that have been

²⁶ <http://chlaramap.fera.defra.uk> [Checked 22/08/2018].

identified for each LCA. These have been reviewed for the LCAs within the study area with an emphasis on the host LCA (G1: Broadfield Down Settled Limestone Plateau) and adjacent LCA (E6: Cleeve Ridge). The Bath and North East Somerset Landscape Character Assessment¹⁶ summarises landscape change and condition which has been reviewed for the adjacent LCA (Thrubwell Farm Plateau). The relevant forces for change that could impact the future baseline during the period of operation of Bristol Airport under the Proposed Development are:

- Proliferation of development associated with Bristol Airport, including buildings, infrastructure, signage and lighting;
- Mechanical management of hedgerows resulting in reductions in visual amenity and biodiversity with a proportion of hedgerows becoming “gappy”;
- Lack of management of distinctive landscape features such as mixed woodland blocks, ancient woodlands and hedgerows;
- Encroachment of development around settlements;
- Increasing use of rural roads resulting in them becoming more urbanised and increased noise levels reducing tranquillity; and
- Increased levels of leisure use leading to diversification of land-uses and “wear and tear” on some habitats and facilities such as PROWs.

9.5.45

Mendip Hills AONB – Section 2 of the current AONB Management Plan¹² lists “drivers for change” in the AONB and lists issues which together provide an indication of future baseline conditions in the southern part of the study area.

- Increased visitor numbers with visitors undertaking a wider range of leisure and outdoor recreational activities potentially leading to footpath erosion and habitat deterioration;
- Increases in road traffic resulting in adverse effects upon visual amenity and tranquillity;
- Continuation of the reduction in the area of Dark Skies due to increases in lighting levels; and
- Risk from chalara.

Climate change

9.5.46

The climate change trends and embedded resilience measures projected for Bristol Airport are described in the Design and Access Statement (DAS) and summarised in **Chapter 2: Description of the Proposed Development**. Climate change in the study area, and the south-west of England in general, is predicted to result in warmer drier summers, warmer wetter winters and higher sea levels. This in turn may result in the following land use changes which are of relevance to landscape and visual issues:

- Drier summers could lead to drought-stress for semi-natural habitats and agricultural crops. This could lead to degradation and loss of certain habitats and species;
- Hotter and drier summers, milder winters and changes in seasonal rainfall patterns could lead to changes in species composition of some habitats with changes to tree productivity;
- Potential for double cropping and/or growing of different crops; and
- Increased prevalence of pest and diseases, such as oak decline, may result in changes to the composition and the visual role of ancient woodlands and mature, ancient and veteran trees.

9.6 Consultation

- 9.6.1 **Table 9.7** provides a summary of the issues about the Proposed Development that have been raised by consultees and the responses given.

Table 9.7 Summary of issues raised during consultation regarding landscape and visual

| Issue raised | Consultee(s) | Response and how considered in this chapter | Section Ref |
|--|--|--|--------------------------------|
| Inclusion of additional day time viewpoints | NSC Section 106 Officer | LVIA contains a further eight viewpoints in proximity to Bristol Airport at locations suggested by the Section 106 Officer in addition to the ten that were proposed in the Scoping Report (Appendix 1A). These are Viewpoints 6, 7, 9, 10, 11, 12, 13 and 14 and their location is shown on Figure 9.6 . Annotated day time photographs from these viewpoints are shown in Figures 9.12, 9.13, 9.15, 9.16, 9.17 and 9.18 . The viewpoints and the associated photography are referenced where relevant in the landscape and visual assessments. | Sections 9.10 and 9.11. |
| Inclusion of additional day time viewpoints | Mendip Hills AONB Planning Liaison Officer | <p>LVIA contains two additional viewpoints in the AONB at locations suggested by the AONB Planning Liaison Officer in addition to the four viewpoints in the AONB that were proposed in the Scoping Report (Appendix 1A). These are Viewpoints 16 and 18 and their location is shown on Figure 9.5. Annotated day time photographs from these viewpoints are shown in Figures 9.19 and 9.20. The viewpoints and the associated photography are referenced where relevant in the landscape and visual assessments.</p> <p>The Chew Valley Neighbourhood Plan²⁷ was subsequently reviewed and it was determined that none of the Important Long Views defined in the Plan adequately illustrated the baseline view from this part of the AONB towards Bristol Airport. It was concluded that Viewpoint 20, which is located in the Chew Valley and the AONB, is a more suitable viewpoint to represent views from this part of the AONB as this viewpoint was chosen with the express purpose of illustrating the visual relationship between the AONB and Bristol Airport. The baseline view from Viewpoint 20 is shown in Figure 9.21.</p> | Sections 9.10 and 9.11. |
| Inclusion of night time viewpoints and viewpoint baseline photography | NSC Section 106 Officer and Mendip Hills AONB Planning Liaison Officer | LVIA contains night time baseline photography from five of the 20 viewpoints. These are Viewpoints 3, 7, 14, 16 and 17 and their location is shown on Figure 9.5 . Annotated night time photographs from these viewpoints are shown in Figures 9.22-9.25 . The viewpoints and the associated photography are referenced where relevant in the landscape and visual assessments. | Sections 9.10 and 9.11 |
| Selection of viewpoints for photomontage production | NSC Section 106 Officer and Mendip Hills AONB Planning Liaison Officer | Day time photomontages for the Proposed Development are provided from seven of the 20 viewpoints. The selected viewpoints were agreed with the consultees. These are | Sections 9.10 and 9.11 |

²⁷ Chew Valley Neighbourhood Plan Referendum Version. (November 2016). Available at: <http://cvnp.co.uk> [Checked 17/07/2018].

| Issue raised | Consultee(s) | Response and how considered in this chapter | Section Ref |
|---|---|--|---|
| | | Viewpoints 1, 3, 7, 9, 14, 16 and 19 and their location is shown on Figure 9.5 . Daytime photomontages are shown in Figures 9.26-9.32 . | |
| Assessment of landscape effects upon Mendip Hills AONB should concentrate upon key defined special qualities | Mendip Hills AONB Planning Liaison Officer and Natural England | Assessment will concentrate upon the key special qualities concerning effects on outward views, effects on lighting including upon dark skies, and effects upon tranquillity including the role of traffic. The tranquillity baseline is shown on Figure 9.40 and the comparative lighting pollution levels are shown on Figure 9.41 . AONB special qualities are listed in Section 9.5.38 . | Sections 9.5, 9.10 and 9.11. |
| Reference should be made to National Character Area 141: Mendip Hills | Mendip Hills AONB Planning Liaison Officer and Natural England | NCA 141 has been included in the baseline. It is shown on Figure 9.37 and its key characteristics are set out in Section 9.5.29 . | Paragraph 9.5.29 and Section 9.7 |
| Impacts upon dark skies using night time viewpoints baseline photography | NSC Section 106 Officer, Mendip Hills AONB Planning Liaison Officer and Backwell Parish Council | Landscape and visual impact assessments for LCAs and visual receptors located at or close to these five viewpoints draw upon the baseline photography and on-site observations made during the night time site work (see paragraph 9.4.11) as well as the Environmental Lighting Impact Assessment ²⁸ to ensure that impacts upon dark skies at these locations are incorporated into the overall assessments on these receptors and to determine if further mitigation can be applied. | Sections 9.10 and 9.11 |
| Inclusion of the settlements of Cleeve, Claverham and Backwell as community receptors in the visual assessment | Wroughton Parish Council | These settlements were scoped out of the visual assessment because they are well outside the comparative ZTV as shown in Figure 9.4 . As there has been no change to this situation these three settlements are not included in the visual assessment as no residents will sustain any changes to their existing views. | Section 9.7 |
| Inclusion of A370 in the baseline and its users included as vehicular visual receptors | Wroughton Parish Council | Baseline has been amended to include A370 as a principal route in the study area. Reference to the Comparative ZTV in Figure 9.4 shows that the A370 is almost entirely outside the Comparative ZTV and consequently will have no views of the existing Bristol Airport or the Proposed Development. Consequently, they remain scoped out of the visual assessment. | Section 9.7 |
| Existing levels of tranquillity in Wroughton Parish | Wroughton Parish Council | Information about the baseline levels of tranquillity in Wroughton and factors that serve to reduce tranquillity are noted. This information is utilised in the landscape assessment for LCA E6: Cleeve Ridge which extends across the northern part of the parish. | Section 9.10 |

²⁸ Hydrock. (2018). Bristol Airport 12MPPA Extension Lighting Impact Assessment.

| Issue raised | Consultee(s) | Response and how considered in this chapter | Section Ref |
|--|-------------------------|--|---|
| Potential for landscape and visual assessments to be extended to cover Operation years 5 and 10. | Wrighton Parish Council | Landscape and visual assessments to be restricted to Operation Phase Year 1 and Operation Year 15 as these represent the worst case for landscape and visual effects from the Proposed Development (Year 1) and when the landscape and visual mitigation planting will be fully established. | Not Applicable |
| Full assessment of the proposed MSCP and gyratory road | Backwell Parish Council | These components of the Proposed Development are highlighted in the assessments for the relevant landscape and visual receptors. They are illustrated in the photomontages provided at consultee requested viewpoints with photomontages from Viewpoints 1, 3 and 14 being the most relevant. These photomontages are shown in Figures 9.26, 9.27 and 9.29. | Sections 9.10 and 9.11 |
| Full assessment of the proposed Silver Zone car park extension | Backwell Parish Council | This component of the Proposed Development is highlighted in the assessments for the relevant landscape and visual receptors. It is illustrated in the photomontage provided from the most relevant viewpoint: Viewpoint 9. The photomontage is shown in Figure 9.28. | Sections 9.10 and 9.11 |
| Full assessment of the potential impacts of the Proposed Development upon local landscape character | NE | As set out in the Scoping Report (Appendix 1A) and the methodology in Section 9.9 the landscape assessment uses a methodology based upon GLVIA3 ¹ . The complete suite of landscape character areas in the study area is shown in Figures 9.38 and 9.39 and listed in Tables 9.3- 9.5. | Sections 9.5 and 9.9 |
| Use of GLVIA3¹ as basis for LVIA | NE | As set out in the Introduction and in Section 9.9 the methodology is based upon GLVIA3 ¹ . | Sections 9.1 and 9.9 |
| Information upon design details and consideration of alternatives | NE | Design details and the evolution of the design are explained in the Design and Access Statement (DAS). The consideration of alternatives is discussed in Chapter 3: Scheme Need and Alternatives. | Chapter 3: Scheme Need and Alternatives |
| Cumulative effects | NE | Inter-related cumulative effects and inter-project cumulative effects are assessed in Chapter 18: Cumulative Effect Assessment. | Section 9.12 and Chapter 18: Cumulative Effects Assessment |

9.7 Scope of the assessment

Spatial scope

- 9.7.1 The spatial scope of the assessment of landscape and visual impacts covers the area of the Proposed Development, together with the ZTVs that have formed the basis of the study area, as described in **Section 9.4**.
- 9.7.2 The study area for the Proposed Development is shown in **Figure 9.1**. It is based upon a study area extending 5km from the application site boundaries in all directions except to the south-east, south and south-west. In these directions the study area is extended to a 10km radius offset to encompass the closest parts of the Mendip Hills AONB.

Temporal scope

- 9.7.3 The temporal scope of the assessment of landscape and visual impacts reflects the wider range of operational activities that are ongoing at Bristol Airport. It also accounts for construction activities associated with certain components of the 10 mppa development being built out simultaneously. The temporal scope therefore covers two stages in the operational phase.
- 9.7.4 An assessment of the landscape and visual effects for the construction phase, as defined in **Chapter 2: Description of the Proposed Development**, has been scoped out as per paragraph 8.6.29 in the Scoping Report (**Appendix 1A**). This is because the worst-case scenario for potential landscape and visual effects will be when all components of the Proposed Development are completed and operational i.e. Operational Phase Year 1, which would be in 2026.
- 9.7.5 Under the worst-case scenario, mitigation measures which involve screen planting at specific locations around the boundary of Bristol Airport would not be undertaken until the end of the construction period. These measures are shown in the integrated/embedded mitigation masterplan. Hence, any additional screen planting would not be fully until Operational Phase Year 15 i.e. 2041. The division of an LVIA into two operational periods using the winter months at these periods is established best practice.
- 9.7.6 The landscape and visual assessments will therefore be undertaken for the first winter following the commencement of operations of all the principal components of the Proposed Development i.e. winter 2026. Winter will allow the assessments to take account of any increase in visibility due to seasonal leaf loss. The assessment for landscape and visual receptors where the magnitude of change sustained could potentially be changed by the maturation of the proposed mitigation planting e.g. potentially around the perimeter of the extension to the Silver Zone car park extension (Phase 2), will also include an assessment of effects at winter 15 years after the commencement of operation of the Proposed Development i.e. Winter 2041.
- 9.7.7 Landscape and visual assessments for Operational Phase Year 1 relate to changes that may arise as a result of the Proposed Development in the context of a future baseline. These will include components of the 10 mppa development, upon which construction work has commenced prior to November 2018. Assessments for Operational Phase Year 15 concern any additional changes that may arise as a result of the Proposed Development by 2041 (i.e. fully operational plus 15 years).. Current and future baselines are described in overview in **Section 9.5** and in relation to individual landscape and visual receptors in **Sections 9.10** and **9.11**.

Potential receptors

Potential landscape receptors

9.7.8 There are three broad types of landscape receptors as follows:

- The first relates to the landscape elements that are located within the application site. Most components of the Proposed Development will be located such that no existing landscape elements will be lost. The exceptions are:
 - ▶ The new gyratory road and internal surface car parking will lead to the loss of the soft landscape features that are currently present in existing car parking areas located in the northern area; and
 - ▶ The Silver Zone car park extension (Phase 2) will lead to the loss of a field that is presently used as pasture for grazing.
- The second relates to landscape character which in the study area are defined at national, regional and local level through the definition of NCAs and LCAs. In accordance with paragraph 5.14 of GLVIA3¹, the LCAs have been taken forward as landscape receptors on the basis that they represent smaller, discrete areas that are more appropriate for use as landscape character receptors in this LVIA than the far more spatially extensive NCAs. It is acknowledged that in some parts of the study area the North Somerset and Bath and North East Somerset LCAs are coterminous with the Mendip Hills AONB LCAs but where this overlap occurs both LCAs have been included to ensure that potential significant landscape effects upon the AONB are appropriately assessed. Landscape sensitivity assessments have been undertaken to determine landscape value and susceptibility to the type of development proposed in accordance with GLVIA3¹. The sensitivity assessments are presented in **Appendix 9B**.
- The third are the landscape designations. As the local authorities in the study area have not defined any local landscape designations, the only landscape designation of relevance to this assessment is the Mendip Hills AONB. This is a national landscape designation with a corresponding high sensitivity.

Potential visual receptors

9.7.9 The ZTVs illustrated in **Figures 9.2-9.4** show the locations in the study area from which views of the present components, components of the 10 mppa development that have been completed or commenced prior November 2018 and the Proposed Development may theoretically be available to visual receptors. The following visual receptors are those most likely to experience views of the Proposed Development:

- Residential and recreational visual receptors in settlements within, or in proximity to, the comparative ZTV;
- Residential visual receptors in individual or small groups of residential properties outside settlements within, or in proximity to, the comparative ZTV;
- Recreational visual receptors using long distance trails within the study area that have a section(s) that are within the comparative ZTV;
- Recreational visual receptors using Sustrans Regional and National Cycle Routes within the study area that have a section(s) that are within the comparative ZTV;
- Recreational visual receptors using Open Access Areas that are within the comparative ZTV;

- Recreational visual receptors using PROWs and outdoor recreational facilities where enjoyment of views might be considered a key aspect of the activity being undertaken that are within the comparative ZTV; and
- Vehicular visual receptors (drivers and their passengers) using the local road network that have a section(s) that are within the comparative ZTV.

Likely significant effects

9.7.10 The landscape receptors that have been taken forward for further assessment are:

- Landscape character areas (LCAs):
 - ▶ E1: Mendip Ridges and Combes LCA. This LCA is included due to its location against the northern boundary of the Mendip Hills AONB and consequently contributes to the AONB's setting. Some of the LCA, which has moderate to high levels of tranquillity, is covered by the comparative ZTV, hence potentially providing a visual effects pathway. This LCA was included in the 2009 LVIA¹¹;
 - ▶ E6: Cleeve Ridge LCA. This LCA is included due to its proximity to the north, south and especially the west of Bristol Airport. Hence there is increased potential for impacts upon the LCA's key characteristics, as listed in **Appendix 9D**. The LCA's proximity and relative elevation result in several fragments of the comparative ZTV being located within it, providing a potential effects pathway. This LCA was included in the 2009 LVIA¹¹;
 - ▶ G1: Broadfield Down Settled Limestone Plateau LCA. This is the host LCA and will therefore sustain some direct impacts upon existing landscape elements and new landscape elements will be introduced; with potential effects upon defined key characteristics. A high proportion of the LCA is within the comparative ZTV;
 - ▶ H1: Dundry Settled Hill LCA. This LCA is at the same or a higher elevation as Bristol Airport and wide views are one of its key characteristics as listed in **Appendix 9D**. Its elevation ensures that a high proportion of the LCA is within the comparative ZTV. This LCA was included in the 2009 LVIA¹¹;
 - ▶ J3: Chew Rolling Valley Farmland LCA. Although only limited small areas of the comparative ZTV extend into this relatively low lying LCA, its north-western part is located less than 1km from the eastern boundary of Bristol Airport. Therefore, there is potential for perceptual impacts upon the LCA's "*peaceful rural ambiance*" and "*remote and rural nature*". This LCA was included in the 2009 LVIA¹¹;
 - ▶ 1: Thrubwell Farm Plateau LCA. Several fragments of the comparative ZTV extend into this LCA. It is a compact LCA completely located within 2km of the south-eastern boundary of Bristol Airport and outward views are available. This LCA was included in the 2009 LVIA¹¹;
 - ▶ 2: Chew Valley LCA. Several fragments of the comparative ZTV extend into this LCA. The LCA is adjacent to the Mendip Hills AONB and will form part of its setting. One of the LCA's key characteristics is the presence of extensive outward views;
 - ▶ 4: Mendip Slopes LCA. A small proportion of this LCA is located within the comparative ZTV. This LCA is adjacent to the Mendip Hills AONB and will form part of its setting. One of the LCA's key characteristics is the availability of extensive views across the Chew Valley;
 - ▶ The Northern Slopes LCA. This relatively compact LCA has extensive coverage by the comparative ZTV;

- ▶ The Blagdon-Compton Martin LCA. This relatively compact LCA has extensive coverage by the comparative ZTV; and
- ▶ The Plateau LCA. This LCA has some coverage by the comparative ZTV.
- National landscape designations:
 - ▶ Mendip Hills AONB.

9.7.11

The visual receptors that have been taken forward for assessment are:

- Residential and recreational visual receptors in settlements within, or in proximity to, the comparative ZTV, as shown in **Figure 9.34**:
 - ▶ Lulsgate Bottom;
 - ▶ Hyatt Wood Road/Oatfield;
 - ▶ Downside – east of Cook’s Bridle Path;
 - ▶ Downside – west of Cook’s Bridle Path;
 - ▶ Potters Hill;
 - ▶ Felton and Long Cross;
 - ▶ Felton Hill;
 - ▶ Redhill; and
 - ▶ Blagdon.
- Residential visual receptors in individual or small groups of residential properties outside settlements within, or in proximity to, the comparative ZTV as shown in **Figure 9.34**:
 - ▶ Cook’s Farm;
 - ▶ Edson’s Farm;
 - ▶ Oatfield Farm;
 - ▶ Downside House Farm;
 - ▶ Properties on Long Lane;
 - ▶ Properties around Hunter’s Hall;
 - ▶ Properties around Butcombe Court;
 - ▶ Properties around Hailstones Farm and the A38;
 - ▶ Properties around Winters Lane;
 - ▶ Properties along Cook’s Bridle Path; and
 - ▶ Downside Farm.
- Recreational visual receptors using long distance trails within the study area that have a section(s) that are within the comparative ZTV, as shown on **Figure 9.35**:
 - ▶ Monarch’s Way;
 - ▶ Limestone Link;

- ▶ West Mendip Way; and
- ▶ Community Forest Path.
- Recreational visual receptors using Sustrans Regional and National Cycle Routes within the study area that have a section(s) that are within the comparative ZTV, as shown on **Figure 9.35**:
 - ▶ Regional Route 410;
 - ▶ National Route 334; and
 - ▶ National Route 3.
- Recreational visual receptors using Open Access Areas that are within the comparative ZTV, as shown on **Figure 9.35**:
 - ▶ Felton Common;
 - ▶ Black Down;
 - ▶ Burrington; and
 - ▶ Dolebury Warren.
- Vehicular visual receptors (drivers and their passengers) using the local road network that have a section(s) that are within the comparative ZTV:
 - ▶ A38 southbound;
 - ▶ A38 northbound; and
 - ▶ Downside Road.
- Recreational visual receptors using PRowS and outdoor recreational facilities where enjoyment of views is considered a key aspect of the activity being undertaken that are within the comparative ZTV. The baseline site survey and review of the 2009 LVIA11 concluded that only recreational receptors using PRowS within 1.5km of the boundary of the application site be scoped into the assessment, as this separation distance accords with the extents of the main part of the comparative ZTV. Beyond 1.5km, the ZTV becomes more fragmentary and is largely confined to the periphery of the study area. As shown in **Figure 9.36**, the density of PRowS necessitates that they are combined into 12 networks:
 - ▶ A – Wrington Warren network;
 - ▶ B – East of Redhill network;
 - ▶ C – West and north of Redhill network;
 - ▶ D – Hailstones Farm and Cottages;
 - ▶ E – Hunters Hall bridlepath;
 - ▶ F – Felton Common and environs network;
 - ▶ G – South side of Felton network;
 - ▶ H – West side of Felton network;
 - ▶ I – North side of Felton network;
 - ▶ J – North-west of Potters Hill network;
 - ▶ K – Lulsgate Bottom footpath; and

► L – North of Downside network.

- 9.7.12 In addition to these twelve PRow networks, golfers at Tall Pines Golf Club are also considered in the recreational visual assessment. Visitors to the Mendip Snow sport Centre have been scoped out of the visual assessment due to a separation distance of at least 8km from Bristol Airport and most activities being conducted within extensive woodland that limits the availability of outward views.
- 9.7.13 Landscape receptors that have been scoped out from being subject to further assessment because the potential effects are not considered likely to be significant are discussed in **Appendix 9E**.
- 9.7.14 All visual receptors that are located outside the comparative ZTV (refer to **Figure 9.4**) have been scoped out from being subject to further assessment because the potential effects are considered unlikely to be significant. As described in paragraph 9.4.5, all ZTVs were generated without taking account of screening provided by vegetation cover and built development. Consequently, they represent a worst-case with regard the potential visibility of the Proposed Development.
- 9.7.15 This worst- case approach is also pertinent to the scoping out of a high proportion of visual receptors located in the fragments of the comparative ZTV present in the peripheral parts of the study area at separation distances of 3-10km. Experience gained in undertaking the 2009 LVIA¹¹ and in the site visits listed in paragraph 9.4.11 demonstrates that from these parts of the study area, views to Bristol Airport are often not available due to screening from built development and, more frequently, nearby vegetation cover. Where open or framed views are available, for example, from more elevated locations, the built development, infrastructure and aircraft on the ground at Bristol Airport are difficult to distinguish, even in optimal day time visual conditions. This observation is verified by reference to the baseline photographs provided from Viewpoints 15-20 (**Figures 9.19 – 9.21**). In these circumstances it is considered that significant visual effects are unlikely to be sustained by the relatively limited number of visual receptors located in these more distant fragments of the ZTV, who are mainly recreational receptors using PRowS, residential receptors in small isolated properties and vehicular receptors travelling along minor roads.

9.8 Environmental measures embedded into the development proposals

- 9.8.1 A range of environmental measures have been embedded into the development proposals as outlined in **Section 2.3**. **Table 9.8** outlines how these embedded measures will influence the landscape and visual assessment. These measures were developed with **Chapter 11: Biodiversity** and in consultation with operations managers at Bristol Airport.

Table 9.8 Summary of the embedded environmental measures

| Receptor | Changes and effects | Embedded measures |
|---|---|--|
| Landscape elements: trees within the site boundaries | <p>Potential loss or damage to valued vegetation (including tree roots due to construction activity) and screening elements.</p> <p>Reinforcement of existing boundary planting around northern area.</p> | <p>Vegetation /tree survey and protection plans considered as part of the design process.</p> <p>Construction activities to be carried out in accordance with <i>BS 5837: 2012 Trees in relation to design, demolition and construction</i>.²⁹ Recommendations to</p> |

²⁹ BSI Standards Publication. (2012). BS 5837:2012 Trees in relation to design demolition and construction – Recommendations. British Standards Institution.

| Receptor | Changes and effects | Embedded measures |
|--|--|---|
| | | <p>protect trees and other vegetation which is to be retained.</p> <p>New tree planting to be undertaken to replace that lost and to reinforce existing high levels of tree cover along the relevant lengths of the boundary of Bristol Airport. The design of new planting has been located to deliver screening and softening of large-scale built form with particular regard to the MSCP and is proposed close to the Downside Road entrance and alongside the boundary with Cook's Farm where it will reinforce the existing tall hedgerow providing increased longer-term screening for some visual receptors in Downside and Cook's Bridle Path.</p> <p>Parkland planting is proposed alongside the northern boundary close to the residential properties on the southern side of Downside Road. Although the primary purpose of this planting is habitat enhancement for horseshoe bats, it will establish to provide longer-term enhancement of the existing screening of the closest parts of the northern area surface carpark and the proposed gyratory road for these residents</p> <p>New planting on the northern side of the proposed extended terminal building and canopy in the style of the present ornamental and street tree planting. This planting will break up the mass of the extended terminal building in occasional close distance views that are available to visual receptors from elevated locations to the north on the Oatfield Ridge</p> <p>Replacement hedgerow and tree planting alongside sections of the proposed gyratory road.</p> <p>Typical proposed species are likely to be native and non-berrying so as to reduce bird attraction. All planting will be in line with climate change planting in the biodiversity assessment (Chapter 4).</p> |
| Landscape elements: extension of bund around Silver Zone car park extension (Phase 2) | Reinforcement of existing high levels of screening for the Silver Zone car park extension (Phase 1) and landscape character enhancement. Ecological benefits from habitat enhancement set out in Table 9.12 . | Perimeter bund around the western, southern and eastern boundary of the Silver Zone car park extension (Phase 2) to be designed and planted to replicate the design of the bund sited around the Silver Zone car park extension (Phase 1). |
| Landscape character | Direct or indirect effects on valued characteristics, special qualities and character of LCAs and Mendip Hills AONB. | <p>Incorporation of enhanced landscape/architectural design, the provision of an integrated/embedded landscape, visual and ecology mitigation masterplan and landscape management to reduce effects of landscape character and ensure that the nature of these effects is neutral or positive as far as possible. The use of building materials, detailing and finish for the roofs and facades of proposed buildings that respond in a positive way to the existing landscape context as described in the Design and Access Statement.</p> <p>In terms of overflying and the potential effects on tranquillity, the noise mitigation strategy has been</p> |

| Receptor | Changes and effects | Embedded measures |
|---|--|--|
| | | <p>developed in line with the CAP 1520: Draft Airspace Design Guidance³⁰.</p> <p>In terms of potential impacts generated by the lighting required for some of the components of the Proposed Development, the lighting design strategy²⁸ has been developed in accordance with the guidance published by the Institute of Lighting Professional (ILP)³¹ with Bristol Airport and its surrounding area being classified as Environmental Zone 2 (Rural). Paragraph 4.1 in the Lighting Impact Assessment²⁸ states that external lighting components should be compliant with the Environmental Zone 2 setting of the Proposed Development and accord with Dark Skies requirements by meeting CIE Guidelines for Minimising Skyglow³²</p> |
| All visual receptors overlapped by the ZTV within the study area | <p>Changes to existing views, visual amenity and scenic quality:</p> <ol style="list-style-type: none"> 1. Introduction of new large-scale features to the view; 2. Alteration to the landscape character of the view; 3. Loss of or disruption to existing views of skylines; 4. Changes to perceptions if movement through increased traffic (including HGV) and air movements; and 5. Visual effects resulting from changes in baseline lighting levels. | <p>The provision of a series of enhancement measures to vegetation within the area of ownership of Bristol Airport, principally reinforcement of boundary screen planting, as detailed on the integrated/embedded landscape, visual and ecology mitigation masterplan.</p> <p>High quality design of the most prominent of the buildings including the extensions to the terminal building, the MSCP and the east walkway and pier with design treatment, detailing and materials used to mitigate the apparent scale of the buildings and integrate them with existing built development in the northern area.</p> <p>These measures will reduce the visual role of the components of the Proposed Development, minimise the disruption to existing views of skylines, principally the tree covered Oatfield Ridge and reinforce some of the key landscape elements within the Bristol Airport site and key characteristics of the landscape character in the views of some visual receptors.</p> |

9.9 Assessment methodology

- 9.9.1 The generic impact assessment methodology is set out in **Chapter 4: Approach to Preparing the Environmental Statement**, specifically in **Sections 4.5 to 4.7**. However, whilst this has informed the approach that has been used in this assessment, it is necessary to set out how this methodology has been applied, and adapted as appropriate, to address the specific needs of this LVIA/CLVIA.

³⁰ Civil Aviation Authority. (March 2017). CAP1520: Draft airspace design guidance.

³¹ Institute of Lighting Professionals (2013). Professional Lighting Guide 04: Guidance on undertaking environmental lighting impact assessments. ILP.

³² International Commission on Illumination. (1997). Guidelines for Minimizing Skyglow CIE 126-1997.

Methodology for predicted landscape and visual effects

- 9.9.2 The LVIA and CLVIA has been undertaken in accordance with the methodology set out in **Appendix 9A** and conforms to the GLVIA3¹ which is widely accepted throughout the UK as the appropriate approach to use.

Significance evaluation methodology

- 9.9.3 The level of landscape and visual effects is determined with reference to landscape or visual sensitivity and the magnitude of landscape or visual change experienced. For each receptor, the evaluation process is informed by use of a matrix, as in **Table 9.9**, that sets out the level of effects and whether this is significant or not significant.

Table 9.9 Matrix of EIA Significance

| Magnitude of Change | Sensitivity of Receptor | | |
|---------------------|------------------------------------|------------------------------------|------------------------------------|
| | High | Medium | Low |
| High | Major (Significant) | Major (Significant) | Moderate (Possibly Significant) |
| Medium | Major (Significant) | Moderate (Possibly Significant) | Minor (Not significant) |
| Low | Moderate (Possibly Significant) | Minor (Not significant) | Negligible (Not significant) |
| Negligible | Minor (Not significant) | Negligible (Not significant) | Negligible (Not significant) |

- 9.9.4 In line with the emphasis placed in GLVIA3¹ upon application of professional judgement, the adoption of an overly mechanistic approach through reliance upon a matrix as presented in **Table 9.9** is avoided. This is achieved by the provision of clear and accessible narrative explanations of the rationale underlying the assessment made for each landscape and visual receptor. Such narrative assessments provide a level of detail over and above the outline assessment provided by use of the matrix alone. Wherever possible cross references are made to baseline figures and/or to photomontage visualisations to support the rationale.
- 9.9.5 The landscape and visual assessments also identify receptors where no landscape or visual change is predicted. For these receptors, 'No Change' has been inserted into the magnitude of change column of the assessment tables and the resulting level of effect identified as 'None'.

9.10 Assessment of effects: landscape designations

Baseline conditions

Current baseline

- 9.10.1 The current baseline for the Mendip Hills AONB is derived from a review of the current Management Plan¹², the two landscape character assessments compiled in the 1990s^{24,25} and the

descriptions provided in the profile for NCA 141¹⁴. These are set out in paragraphs 9.5.37 – 9.5.40 and **Appendix 9C**. The key consideration is the 12 special qualities of the AONB that are defined in the Management Plan¹² and are referenced in paragraph 9.5.38. The potential effects of the Proposed Development upon each of these special qualities is assessed in **Table 9.10**, however the special qualities that are the most vulnerable to any changes generated by the operation of the Proposed Development are:

- Views out including across the Severn Estuary to Wales and the Somerset Levels and the Somerset coast;
- The retention of dark skies and a sense of tranquillity; and
- A landscape enjoyed by large numbers of people for a wide range of interest and outdoor pursuits that benefit from areas of tranquillity.

- 9.10.2 The consultation process (refer to **Table 9.7**) identified six viewpoints that are located within the AONB and within the comparative ZTV (**Figure 9.5**). The presentation of annotated day time photographs from these viewpoints (Viewpoints 15-20) provides an understanding of the influence of Bristol Airport in day time views out of the northern part of the AONB. These baseline views are shown in **Figures 9.19 – 9.21**.
- 9.10.3 It is important to note that, apart from Viewpoint 20, these viewpoints are at locations chosen specifically to show a worst-case scenario in which open, elevated northern views are readily available. The comparative ZTV is also illustrating a worst-case scenario for the availability of outward views, as it is based upon bare earth digital data. This makes no allowance for the screening of outward views that is provided by tree cover within and behind trees and woodland, such as Rowberrow Warren. An example of how screening from tree cover sited close to a location within the comparative ZTV in the AONB does not allow any views out towards Bristol Airport is provided at Viewpoint 20 and shown in **Figure 9.21**. Within this scenario, the baseline ZTV for the existing and completed permitted 10 mppa development at Bristol Airport is potentially visible from approximately 14% of the 40% of the AONB within the study area.
- 9.10.4 The annotated day time views show that from nearly all locations within the AONB where views out to the north are available, Bristol Airport built components are difficult to identify. At Viewpoints 15, 16, 18 and 19, the site visits demonstrated that no components at Bristol Airport could be identified even when carefully searched for in the view. Careful examination, often involving watching the flight path of a landing aircraft, allowed some indication of built components of Bristol Airport to be identified, though it is not possible to differentiate between different built components. The only exception is the most elevated viewpoint; Viewpoint 17 at Beacon Batch and its immediate surrounding environs. In this small part of the AONB, which is over 100m higher in elevation than Bristol Airport, the difference in elevation means that the colour contrast between the generally grey tones of built development at Bristol Airport and the brown, green and ochre tones of the surrounding and intervening landscape allows the location of Bristol Airport to be identified. In clear atmospheric conditions some individual elements such as the Air Traffic Control (ATC) tower can be defined in the northern view.
- 9.10.5 In summary, the baseline pertaining to the AONB's special quality of outward views with regard to Bristol Airport is that its components are rarely visible in the limited number of locations where views out to the north are available. Bristol Airport is only readily identifiable in views from a small area within the AONB centred upon the most elevated part around Beacon Batch. It should also be noted that even when it is visible, Bristol Airport is not seen in the same angle of view as any of the regional geographic features specially listed in the relevant special quality, i.e. the Severn Estuary, Welsh and Somerset coast, and the Somerset Levels.

- 9.10.6 An understanding of baseline for dark skies is provided by the recently produced survey of light pollution levels or “*night blight*” undertaken in 2015 by CPRE¹⁹. The results for the study area and the AONB are shown in **Figure 9.41**, which indicates that light pollution as measured by levels of radiance are low within the AONB. The night time site visit confirmed this situation with few light sources identified within the part of the AONB located in the study area. Night time views out of the AONB from Viewpoints 16 and 18 (**Figure 9.25**) give an indication of the influence of light sources located outside the AONB upon dark skies within the AONB. This allows for an understanding to be gained of the role of the different light sources, including Bristol Airport. Bristol Airport is the most prominent lighting source in the northern view from Viewpoint 16 at Burrington Ham. At the more elevated Viewpoint 18, at Beacon Batch located further inside the AONB, lighting at Bristol Airport is visible in the same field of view as more distant but equally bright light sources within the city of Bristol and at the Severn Bridge. Bristol Airport’s contributory baseline role is therefore reduced in the more elevated parts of the AONB. In these parts of the AONB, lighting sources in other towns are also visible in other directions which further reduces the relative role of lighting at Bristol Airport. The night time photographs and the night time site visit show that these light sources are always perceived to be outside the AONB whose approximate extents are indicated by the dark areas of the view. Whilst skyglow is visible above a section of the northern horizon, it does not extend to the section of the sky directly above the part of the AONB within the study area.
- 9.10.7 Dark skies and light pollution are contributory factors to tranquillity which is mentioned in two of the 12 special qualities of the AONB. The relative regional levels of tranquillity across the AONB are shown on **Figure 9.40** which is derived from work undertaken on behalf of CPRE¹⁸. This shows that there is considerable variation in levels of tranquillity, even within the part of the AONB located within the study area. The primary influence appears to be proximity to ‘A’ and ‘B’ roads i.e. A38, A368 and B3134. The more remote parts of the AONB around Beacon Batch and Mendip Forest that are located away from ‘A’ and ‘B’ roads are the most tranquil parts.
- 9.10.8 The infrequent and limited visual role that is played by built components at Bristol Airport means that they have minimal impacts upon the varying levels of tranquillity within the AONB. Perceptual influences upon tranquillity can also be impacted by the movement of aircraft taking off and landing at Bristol Airport. The effect pathways are visual and aural i.e. seeing and hearing aircraft. The site visits confirm that aircraft movements are visible in northern views from some open locations within the AONB. It was also observed that during the day time, the movements of aircraft landing and taking off could not be heard within the AONB. During the night time site visit to the AONB, no aircraft movements were observed or heard. Review of the current Operations Monitoring Report³³ shows that only aircraft movements on one of the three easterly flight routes are routed above the AONB. The Report shows that easterly flight routes only account for twenty percent of the aircraft movements at Bristol Airport. Hence it is deduced that aircraft movements associated with the operation of Bristol Airport have only a limited impact upon levels of tranquillity within the part of the AONB within the study area. This deduction is supported by the absence of any mention of an adverse influence upon tranquillity being played by the presence and operation of Bristol Airport in the current AONB Management Plan¹² or in the Dark Skies in the Mendip Hills AONB statement³⁴.

Predicted future baseline

- 9.10.9 The current AONB Management Plan’s¹² “*drivers for change*” provides an indication of the future baseline. Issues relevant to the part of the AONB within the study area include:

³³ Bristol Airport, (2017). 2017 Operations Monitoring Report.

³⁴ Mendip Hills AONB Partnership, (undated). Dark Skies in the Mendip Hills AONB.

- Increased visitor numbers;
- Increases in road traffic;
- Reduction in the area of dark skies; and
- Risk from chalara.

9.10.10 Future baseline conditions could also be affected by climate change (paragraph 9.5.46) and by large scale felling and replanting of coniferous plantations such as Rowberrow Warren or woodland south of Ubley.

Predicted effects and their significance

9.10.11 The assessment of effects upon the Mendip Hills AONB for Operation Phase Years 1 and 15 is set out in **Table 9F.1** in **Appendix 9F** and summarised in paragraph 9.10.12.

9.10.12 The landscape assessment concludes that the operation of the Proposed Development has the potential to have adverse effects upon three of the AONB's 12 special qualities at either Operation Phase Year 1 or Year 15. Any potential changes to the composition of outward views; dark skies and levels of tranquillity will be small-scale and incremental and, as such, are unlikely to be discernible. The effects pathways identified will result in any changes being sustained for a small proportion of the part of the AONB in the study area which is only 40% of the total area of the AONB. As a nationally designated landscape, the AONB is accorded a high landscape sensitivity but the assessment concludes that the magnitude of change across most of the AONB will be none with a negligible magnitude of change in some of the more open and elevated parts. In accordance with the approach to significance evaluation set out in **Table 9.9**, a negligible magnitude of change combined with a high sensitivity receptor results in a conclusion of a **minor** level of landscape effect which, although adverse, will be **not significant** at either Operation Phase Year 1 or Year 15

9.11 Assessment of effects: landscape character

North Somerset LCA G1: Broadfield Down Settled Limestone Plateau

Baseline conditions - current baseline

9.11.1 The key characteristics of the host LCA are set out in paragraphs 9.5.32 - 9.5.34 and **Appendix 9B** whilst the LCA's extents are shown in **Figure 9.38**. **Table 9B.3** in **Appendix 9B** concludes that LCA G1 possesses low landscape character sensitivity, as its overall value is deemed to be medium - low and overall susceptibility is deemed to be low. Review of the tranquillity mapping (**Figure 9.40**) shows that LCA G1 has relatively low levels of tranquillity, apart from its more isolated south-western extension. The parts of the LCA with lower levels of tranquillity correspond to the distribution of the main settlements and the route of the A38. Tranquillity is not identified as one of the LCA's key characteristics. The part occupied by Bristol Airport is not amongst the least tranquil parts of the LCA, although the LCA description notes that Bristol Airport has a "*profound influence*" upon LCA G1.

9.11.2 Review of the comparative light pollution levels (**Figure 9.41**) shows that, apart from LCA G1's south-western extension, light pollution levels are moderate to high. The highest light pollution levels are concentrated upon the central and northern areas within Bristol Airport.

9.11.3 An indication of the role of Bristol Airport in LCA G1 plus the composition and condition of landscape elements can be gained by review of the baseline photography provided for Viewpoints

1-12 and 14 that are located within the LCA. Annotated baseline photography is shown in **Figures 9.7 – 9.18**.

Baseline conditions - future baseline

- 9.11.4 The principal influences and changes for the future baseline are set out in paragraphs 9.5.42 – 9.5.44. As the host LCA, LCA G1 will continue to be subject to the strong influence of the operation of Bristol Airport as the range of developments commenced by November 2018 (set in **Tables 2.1 and 2.2**) under the 10mppa permission and that will take place under GPDO are realised. The 10mppa planning permission will result in approximately 10, 420 additional flights per annum.

Predicted effects and their significance

- 9.11.5 The assessment of effects upon the host LCA for Operation Phase Years 1 and 15 is set out in **Table 9F.2** in **Appendix 9.F**. The landscape assessment concludes that by Operation Phase Year 1, the Proposed Development will result in an incremental increase in the already prominent or dominant role of the operation of Bristol Airport in the host LCA but it will not introduce new landscape characteristics or modify existing landscape characteristics, nor will it spatially extend the proportion of the LCA indirectly affected by the operation of Bristol Airport. By Operation Phase Year 15 there will be no change to the magnitude of landscape change as a consequence of the full establishment of the landscape and visual components in the integrated/embedded mitigation masterplan and hence to the level of effect assessed for Operation Phase Year 1. On this basis, the magnitude of landscape change on this low sensitivity receptor will be **low**, the level of effect will be **negligible** and the effect will be **not significant**.

North Somerset LCA E1: Mendip Ridges and Combes

Baseline conditions - current baseline

- 9.11.6 The key characteristics of LCA E1 are set out in **Appendices 9B** and **9D**, whilst the LCA's extents are shown on **Figure 9.38**. **Table 9B.1** in **Appendix 9B** concludes that LCA E1 possesses high landscape character sensitivity, as its overall value is deemed to be high as it is mostly within the AONB and its overall susceptibility is deemed to be high-medium. Only the eastern-most of the four parts of this LCA is located within the study area. Review of the tranquillity mapping (**Figure 9.40**) shows that the eastern-most part of LCA E1 has relatively low levels of tranquillity, despite being sited within the Mendip Hills AONB. The areas of the eastern-most part of the LCA with lower levels of tranquillity correspond to the route of the A38, A368 and B3134. The most tranquil area is around Dolebury Warren and Burrington Ham as confirmed by the night time site visit to these two locations. The presence of Bristol Airport to the north is not noted in the LCA's key characteristics, forces for changes or landscape guidelines; nor are outward views from the LCA noted as a key characteristic. Site visits to locations in LCA E1 demonstrate that under day time conditions the existing built development at Bristol Airport is difficult to discern. Its presence is periodically indicated by the landing and taking-off of aircraft.
- 9.11.7 Review of the comparative light pollution levels (**Figure 9.41**) shows that, apart from the western area in the easternmost part of LCA E1 light pollution levels are low. The small proportion of LCA E1 close to the junction of the A38 and A368 close to Sandford has a moderate level of light pollution. In night-time northern views from Dolebury Warren and Burrington Ham: two of the most elevated and open locations in the eastern-most part of LCA E1, lighting at Bristol Airport is the main source of light in this direction of view with headlights on southbound vehicles on the A38 also being visible. The night time view from Burrington Ham, which is Viewpoint 16, is shown in **Figure 9.25**.

- 9.11.8 An indication of the minimal role of Bristol Airport in LCA E1, plus the composition and condition of landscape elements can be gained by review of the baseline photography provided for Viewpoints 16 and 18 that are located within the LCA. Annotated baseline photography is shown in **Figures 9.19 and 9.20**.

Baseline conditions - future baseline

- 9.11.9 The principal influences and changes for the future baseline are set out in paragraphs 9.5.42 – 9.5.44, many of which are applicable to the eastern-most part of LCA E1. The completion of components of the 10 mppa development under construction and other GPDO development will not alter the minimal landscape role of Bristol Airport on LCA E1 observed under the current baseline. It is noted that as shown in **Figure 18.1**, there is likely to be an increase in the amount of residential development immediately adjacent to the LCA at Sandford and Churchill.

Predicted effects and their significance

- 9.11.10 The assessment of effects upon the LCA E1: Mendip Ridges and Combes is set out in **Table 9F.3** in **Appendix 9F**. In summary, by Operation Phase Year 1 the Proposed Development will not result in any changes to the negligible level of effects generated by the presence of built components and car parking at Bristol Airport that are currently and will continue to be experienced via a visual effects pathway, should the Proposed Development not be consented. There may be minor incremental changes to some perceptual characteristics from additional aircraft movements (landing and taking-off) and, at night time, from a minor incremental increase in the sources of light within the existing horizontal angle of view occupied by Bristol Airport's northern area. These minor changes are assessed as not having the potential to significantly affect any of the key characteristics of the eastern-most part of LCA E1 or at the more extensive scale of the entire LCA.
- 9.11.11 By Operation Phase Year 15, it is assessed that there would be no change in comparison to Operation Phase Year 1. The limited amount of reinforcement planting at key locations on and close to the boundary of Bristol Airport would be fully established, but their presence would have no impact upon the small number of perceptual effects pathways via which any landscape effects would be experienced in the eastern-most part of LCA E1. The magnitude of landscape change on this high sensitivity receptor will be **negligible**, the level of effect will be **minor** and therefore **not significant**.

North Somerset LCA E6: Cleeve Ridge

Baseline conditions - current baseline

- 9.11.12 The key characteristics of LCA E6 are set out in **Appendices 9B** and **9D** whilst the LCA's extents are shown on **Figure 9.38**. **Table 9B.2** in **Appendix 9B** concludes that LCA E6 possesses high landscape character sensitivity as its overall value is deemed to be high due to scenic quality and conservation interest and its overall susceptibility is deemed to be high. The LCA wraps around the north, west and south of Bristol Airport and the host LCA at minimum separation distances of between 300m and 2.6km. Review of the tranquillity mapping (**Figure 9.40**) shows that there is a wide variation in the levels of tranquillity present in LCA E6. In some western parts close to Bristol Airport, principally the extensive woodland including Wrington Warren, tranquillity levels are relatively high. In other parts close to the A38 and the longer section of the A370 these roads and the neighbouring settlements result in relatively low levels of tranquillity. The presence of Bristol Airport is not noted in the LCA's key characteristics, forces for changes or landscape guidelines. Site visits to locations in LCA E6 demonstrate that under day time conditions the existing built development at Bristol Airport is only occasionally visible due to the topography of ridgeline and steep escarpment slopes and combes, combined with the high level of tree cover present across

much of LCA E6. The operation of Bristol Airport is periodically indicated by the views and sound of aircraft landing on western flight routes and, more rarely, taking-off on eastern flight routes³³.

- 9.11.13 Review of the comparative light pollution levels (**Figure 9.41**) shows that across the majority of LCA E6, light pollution levels are moderate due to the presence of Bristol Airport combined with the presence of the A38 and A370 and their associated settlements being more localised contributory factors. Light pollution levels are comparatively low in the more remote parts of the LCA E6 such as Wrington Warren. The night time site visit demonstrated that direct views of the lighting sources within Bristol Airport are rarely available from locations within LCA E6.
- 9.11.14 An indication of the limited contribution made by Bristol Airport in forming the character of LCA E6 can be gained by review of the baseline photograph provided for Viewpoint 13 (**Figure 9.18**). This is the only viewpoint located within LCA E6, which is indicative of the limited visual role played by Bristol Airport, and demonstrates that even in the closer parts of LCA E6, the characteristic topographic variation can screen most, if not all, of Bristol Airport's built development including that in the northern area.

Baseline conditions - future baseline

- 9.11.15 The principal influences and changes for the future baseline are set out in paragraphs 9.5.42 – 9.5.44, many of which are applicable to LCA E6. The completion of components of the 10 mppa development currently under construction and other GPDO development will not alter the minimal landscape role of Bristol Airport on LCA E6 observed under the current baseline. The extensive presence of woodland and field boundary tree cover and the proximity to larger settlements on the south-western fringe of Bristol plus Nailsea and Clevedon has the consequence that important future changes are likely to include:
- Lack of management of distinctive landscape features such as mixed woodland blocks, ancient woodlands and hedgerows;
 - Increasing use of rural roads resulting in them becoming more urbanised and increased noise levels reducing tranquillity; and
 - Effects of chalara on the population of ash trees.

Predicted effects and their significance

- 9.11.16 The assessment of effects upon the LCA E6: Cleeve Ridge is set out in **Table 9F.4** in **Appendix 9F**. By Operation Phase Year 1, the Proposed Development will result in minimal changes to the negligible level of effects that are currently and will continue to be generated by 2026. There may be minor incremental changes to some perceptual characteristics from additional aircraft movements (landing and taking-off) in addition to the changes resulting from gradual establishment of the 10 mppa operational programme and, possibly from small increases in the vehicle numbers on main roads in some parts of LCA E6 (refer to **Chapter 6: Traffic and Transport**). It is assessed that incremental changes to the baseline lighting at night-time, will not be discernible across the LCA. These minor changes are assessed as not having the potential to significantly affect any of the key characteristics of LCA E6 despite the high value attributed to the LCA in the sensitivity assessment. By Operation Phase Year 15, it is assessed that there would be no change compared to Operation Phase Year 1. The limited amount of reinforcement planting at key locations on and close to the boundary of Bristol Airport would be fully established, but their presence would have no impact upon the perceptual effects pathways via which any landscape effects will be experienced in LCA E6. The magnitude of landscape change on this high sensitivity LCA will be **negligible**, the level of effect will be **minor** and therefore **not significant**.

North Somerset LCA H1: Dundry Settled Hill

Baseline conditions - current baseline

- 9.11.17 The key characteristics of LCA H1 are set out in **Appendices 9B** and **9D** whilst the LCA's extents are shown in **Figure 9.38**. The LCA is located to the north-east of Bristol Airport at a minimum separation distance of 2.8km. Only the western third of the LCA is located within the study area. **Table 9B.4** in **Appendix 9B** concludes that LCA H1 possesses medium landscape character sensitivity, as its overall value is deemed to be medium and its overall susceptibility is deemed to be medium.
- 9.11.18 Review of the tranquillity mapping (**Figure 9.40**) shows that there is variation in the levels of tranquillity present in the western part of LCA H1. On the western and south-western slopes of Dundry Hill, tranquillity levels are relatively low, possibly due to the relationship with the city of Bristol and the presence of several prominent transmitter masts. On the southern slopes towards Chew Magna, tranquillity levels are relatively high due to the absence of roads and settlements. The presence of Bristol Airport is not noted in the LCA's key characteristics, forces for changes or landscape guidelines. Site visits to locations in LCA H1 demonstrate that under day time conditions, the existing built development at Bristol Airport is only infrequently visible. This is due to the plateau topography at the top of Dundry Hill around the settlement of Dundry and the presence of tall hedgerows alongside most of the minor roads that cross the western part of LCA H1. Where outward views are available they are more often long-distance views to the Mendips to the south or across the city of Bristol to the north. The operation of Bristol Airport is periodically indicated by the views and sound of aircraft landing on western flight routes and, more rarely, taking-off on eastern flight routes³³.
- 9.11.19 Review of the comparative light pollution levels (**Figure 9.41**) shows that across the western part of the LCA, light pollution levels are moderate to low on the western and southern side of Dundry Hill. To the north, on the edge of the study area, light pollution levels increase rapidly due to the proximity of the south-western edge of the city of Bristol. The night time site visit demonstrated that direct views of the lighting sources within Bristol Airport are rarely available from locations within LCA H1.

Baseline conditions - future baseline

- 9.11.20 The principal influences and changes for the future baseline are set out in paragraphs 9.5.42 – 9.5.44, many of which are applicable to LCA H1. The completion of components of the 10 mppa development under construction and other GPDO development will not alter the landscape role of Bristol Airport on LCA H1, as observed under the current baseline. The nearby presence of the south-western fringe of Bristol has the consequence that important future changes are likely to include:
- Encroachment of development around settlements and increases in the amount of visual clutter (e.g. the proposed garden village at Backwell);
 - Increasing use of rural roads resulting in them becoming more urbanised and increased noise levels reducing tranquillity; and
 - Continued demand for tall vertical structures such as communication masts and “*industrial type*” farm buildings which are visually prominent over large areas.

Predicted effects and their significance

- 9.11.21 The assessment of effects upon the LCA H1: Dundry Settled Hill is set out in **Table 9F.5** in **Appendix 9F**. The landscape assessment concludes that by Operation Phase Year 1, the Proposed

Development will result in minimal changes to the low level of effects currently generated by the presence of built components and car parking at Bristol Airport that are currently experienced and will continue to be experienced at 2026 via a visual effects pathway. There may be minor incremental changes to some perceptual characteristics from additional aircraft movements (landing and taking-off) in addition to the changes resulting from gradual establishment of the 10 mppa operational programme. At night-time it is assessed that incremental changes to the baseline lighting will be confined to an area already characterised by light sources and should be assessed in the context of many other lighting sources, including the city of Bristol. These minor changes are assessed as not having the potential to significantly affect any of the key characteristics of LCA H1. By Operation Phase Year 15 there would be no change in comparison to Operation Phase Year 1 due to the full establishment of the landscape and visual planting included within the integrated/embedded mitigation masterplan. The magnitude of landscape change on this medium sensitivity LCA will be **negligible**, the level of effect will be **negligible** and therefore **not significant**.

North Somerset LCA J3: Chew Rolling Valley Farmland

Baseline conditions - current baseline

- 9.11.22 The key characteristics of LCA J3 are set out in **Appendices 9B** and **9D**, whilst the LCA's extents are shown in **Figure 9.38**. **Table 9B.5** in **Appendix 9B** concludes that LCA J3 possesses medium landscape character sensitivity, as its overall value is deemed to be medium and its overall susceptibility is deemed to be medium. The LCA is located to the east and south-east of Bristol Airport at a minimum separation distance of 400m for the spur of the LCA sited south of Felton. The entire LCA is located within the study area.
- 9.11.23 Review of the tranquillity mapping (**Figure 9.40**) shows that there is limited variation in the levels of tranquillity present across LCA J3. Overall tranquillity levels are moderate with the slightly higher levels being found towards the east and south-east i.e. further way from Bristol Airport (and from the main settlements of Winford and Felton, the latter being outside the LCA). The LCA is described as "*peaceful*" in the current landscape character assessment.¹⁵ The presence of Bristol Airport is not noted in the LCA's key characteristics, forces for changes or landscape guidelines. Site visits to locations in LCA J3 demonstrate that under day time conditions, the existing built development at Bristol Airport is rarely visible due to characteristic rolling topography, often combined with characteristic thick hedgerows that contain large numbers of trees. A good example of the absence of Bristol Airport in many views from even the closest part of LCA J3 is provided by the baseline photograph from Viewpoint 4 (**Figure 9.10**). Viewpoint 4 is located on the north-western boundary of LCA J3 i.e. at the LCA's closest point to Bristol Airport, however local intervening topography is sufficient to screen all the ground level components.
- 9.11.24 Review of the comparative light pollution levels (**Figure 9.41**) shows that in the northern part of LCA J3 light pollution levels are moderate to low and that they decline to low in the LCA's southern part.

Baseline conditions - future baseline

- 9.11.25 The principal influences and changes for the future baseline are set out in paragraphs 9.5.42 – 9.5.44, many of which are applicable to LCA J3. The completion of components of the 10 mppa development under construction and other GPDO development will not alter the landscape role of Bristol Airport on LCA J3, as observed under the current baseline. The predominance of rural characteristics has the consequence that important future changes are likely to include:

- Mechanical management of hedgerows resulting in reductions in visual amenity and biodiversity and a failure to replant new hedgerows;
- Changes in land use especially around settlements with more horse paddocks and large industrial type buildings;
- Encroachment of development around settlements, especially Winford with associated clutter and visual intrusion; and
- Risk of chalara impacting upon hedgerow trees.

Predicted effects and their significance

9.11.26 The assessment of effects upon the LCA J3: Chew Valley Rolling Farmland is set out in **Table 9F.6** in **Appendix 9F**. The landscape assessment concludes that by Operation Phase Year 1, taking into account the changes identified in the future baseline, the Proposed Development will result in no changes to the negligible level of effects which are sustained in LCA J3. There may be minor incremental changes to some perceptual characteristics from additional aircraft movements (landing and taking-off) in addition to the changes resulting from gradual establishment of the 10 mppa operational programme. It is assessed that any potential incremental changes to the baseline night-time lighting will be limited to skyglow, but these will be minimised by the embedded mitigation within the lighting design strategy. These minimal changes are assessed as not having the potential to significantly affect any of the key characteristics of LCA J3 such as the small-medium scale of the landscape and intermittent views to enclosing wooded ridges. At Operation Phase Year 15, there would be no change in comparison to Operation Phase Year 1. Whilst the identified future changes may result in some localised changes or incremental changes to some key characteristics of LCA J3, the majority of its key characteristics will be unchanged. Similarly, separation distance will ensure that whilst the proposed landscape and visual mitigation planting will be fully established, it will have no impacts upon the limited effects pathways by which the operation of the Proposed Development could impact upon LCA J3 by Operation Phase Year 15. The magnitude of landscape change for this medium sensitivity LCA will be **negligible**, the level of effect will be **negligible** and therefore **not significant**.

Bath and North East Somerset LCA 1: Thrubwell Farm Plateau

Baseline conditions - current baseline

9.11.27 The key characteristics of the small LCA 1 (with an area of just over 1km²) are set out in **Appendices 9B** and **9D**, whilst the LCA's extents are shown in **Figure 9.38**. **Table 9B.6** in **Appendix 9B** concludes that LCA 1 possesses medium landscape character sensitivity, as its overall value is deemed to be medium and its overall susceptibility is deemed to be medium. LCA 1 is located to the south-east of Bristol Airport at a minimum separation distance of 0.3km. LCA 1 is entirely located within the study area and protrudes into the more extensive host LCA G1: Broadfield Down Settled Limestone Plateau.

9.11.28 Review of the tranquillity mapping (**Figure 9.40**) shows that the level of tranquillity within LCA 1 is moderate to low, with the low levels prevailing in its northern part i.e. closer to Bristol Airport. The presence of Bristol Airport is noted in the LCA's introduction but is not included in the summary of landscape character, nor amongst its landscape characteristics. Site visits to locations in LCA 1 demonstrate that under day time conditions, the existing built development at Bristol Airport is not visible due to the plateau topography combined with the coalesce of hedgerow, field boundary and parkland tree and hedgerows which provide good levels of screening even in winter months. Where outward views are available they are usually long-distance views to the Mendips to the south. These views are noted as a landscape characteristic. The operation of Bristol Airport is

periodically indicated by the views and sound of aircraft landing on western flight routes and, more rarely, taking-off on eastern flight routes.

- 9.11.29 Review of the comparative light pollution levels (**Figure 9.41**) shows that across LCA 1, light pollution levels are low; rising to moderate-low on the northern boundary. To the north-west, light pollution levels increase rapidly due to the presence of Bristol Airport. The night time site visit indicated that direct views of the lighting sources within Bristol Airport are only available from a small number of locations at the northern boundary of LCA 1.

Baseline conditions - future baseline

- 9.11.30 The completion of components of the 10 mppa development under construction and other GPDO development will not alter the landscape role of Bristol Airport on LCA 1, as observed under the current baseline. As the small LCA is almost completely given over to agriculture and contains no settlements important future changes are likely to include:
- Mechanical management of hedgerows resulting in reductions in visual amenity and biodiversity with a proportion of hedgerows becoming “gappy”;
 - Lack of management of distinctive landscape features such as hedgerows and rows of parkland trees; and
 - Loss of ash trees due to chalara.

Predicted effects and their significance

- 9.11.31 The assessment of effects upon the LCA 1: Thrubwell Farm Plateau is set out in **Table 9F.7** in **Appendix 9F**. The landscape assessment concludes that by Operation Phase Year 1, taking into account the changes identified in the future baseline, the Proposed Development will result in minimal changes to the negligible level of effects currently generated by the presence of built components and car parking at Bristol Airport that are experienced via a visual effects pathway and which will continue to be experienced in this LCA unless there is extensive loss of hedgerows to open up views. There may however be minor incremental changes to some perceptual characteristics from additional aircraft movements (landing and taking-off) in addition to the changes resulting from gradual establishment of the 10 mppa operational programme. At night-time it is assessed that incremental changes to the baseline lighting will be confined to the northern edge of this small LCA where some lighting sources within Bristol Airport may already be visible. The Lighting Impact Assessment²⁸ demonstrates that the incremental increases in lighting associated with the closest components of the Proposed Development such as the East Pier and the east taxiway will not exceed lighting levels appropriate to a rural area i.e. Environmental Zone E2 as defined in ILP guidance³¹. These minor changes are assessed as not having the potential to significantly affect any of the key characteristics of LCA 1 under the current and future baseline such as the rectilinear field pattern and parkland at Butcombe Court. At Operation Phase Year 15 there would be no change in comparison to Operation Phase Year 1. The identified future changes may result in some localised changes and/or incremental changes to some key characteristics of LCA 1, the majority of its key characteristics will be unchanged. Large scale loss of hedgerows, hedgerow trees and parkland trees from chalara or natural loss, resulting in more open outward views, could result in a low magnitude of landscape changes by 2041 (i.e. full operation plus 15 years) given the small size of LCA 1.
- 9.11.32 At Operation Year 1 the magnitude of landscape change for this medium sensitivity LCA will be **negligible** and the effect will be **not significant**. At Operation Year 15 the worst-case magnitude of landscape change could be **low**, the level of effect will be **minor** and therefore **not significant**.

Bath and North East Somerset LCA 2: Chew Valley

Baseline conditions - current baseline

- 9.11.33 The key characteristics of LCA 2 are set out in **Appendices 9B** and **9D** and its extents are shown in **Figure 9.38**. **Table 9B.7** in **Appendix 9B** concludes that LCA 2 possesses medium landscape character sensitivity as its overall value is deemed to be medium and its overall susceptibility is deemed to be medium. LCA 2 is extensive, possessing a sinuous shape in the study area, though only its western third is located within the study area. The north-western spur of LCA 2 has a minimum separation distance of 1.6km from Bristol Airport.
- 9.11.34 Review of the tranquillity mapping (**Figure 9.40**) shows that the level of tranquillity within the western third of LCA 2 is diverse, ranging from moderate-low to moderate high. The moderate-low areas tend to relate to the B3114, B3130 and the settlement of Chew Stoke. The presence of Bristol Airport is not noted anywhere in the defining landscape character assessment¹⁶. Site visits to locations in LCA 2 demonstrate that under day time conditions the existing built development at Bristol Airport is not visible due to the undulating topography combined with high levels of tree cover. The way that tree cover filters views, even from elevated locations where views to Bristol Airport are theoretically available, is illustrated by the photographic panorama from Viewpoint 20 (**Figure 9.21**). Where outward views are available they are usually long-distance views to the Mendips to the south or to Dundry Hill to the north. These views are noted as a landscape characteristic. The operation of Bristol Airport is periodically indicated by the views and sound of aircraft landing on western flight routes and, more rarely, taking-off on eastern flight routes, although these routes are generally some distance to the north of LCA 2.
- 9.11.35 Review of the comparative light pollution levels (**Figure 9.41**) shows that across the western third of the LCA, light pollution levels are low. The night time site visit indicated that direct views of the lighting sources within Bristol Airport are not possible within LCA 2.

Baseline conditions - future baseline

- 9.11.36 The principal influences and changes for the future baseline are set out in Section 9.5, some of which are applicable to LCA 2. The completion of the components of the 10 mppa development currently under construction and other GPDO development will not alter the landscape role of Bristol Airport on LCA 2 observed under the current baseline. As the extensive LCA is mostly given over to pastoral agriculture and contains few settlements important future changes are likely to include:
- Mechanical management of hedgerows resulting in reductions in visual amenity and biodiversity with a proportion of hedgerows becoming “gappy” and some field amalgamation;
 - Continued loss of orchards within and close to settlements; and
 - Continued loss of hedgerow and parkland trees, including of ash trees due to chalara, with lost trees not being replaced in similar numbers.

Predicted effects and their significance

- 9.11.37 The assessment of effects upon the LCA 2: Chew Valley is set out in **Table 9F.8** in **Appendix 9F**. The landscape assessment concludes that by Operation Phase Year 1, taking into account the changes identified in the future baseline, the Proposed Development will result in minimal changes to the negligible level of effects currently generated by the presence of built components and car parking at Bristol Airport that are experienced via a visual effects pathway. There may be minor incremental changes to some perceptual characteristics from additional aircraft movements (landing and taking-off) in addition to the changes resulting from gradual establishment of the 10

mppa operational programme. At night-time it is assessed that incremental changes to the baseline lighting will likewise be negligible. Under the current and future baselines these minor changes are assessed as not having the potential to significantly affect any of the key characteristics of LCA 2 such as views across the Chew and Yeo Valleys and over the Blagdon and Chew Valley Lakes, particularly given that the comparative ZTV only extends across a small proportion of LCA 2. Review of the future baseline likely to be prevalent by Operation Phase Year 15, primarily a potential reduction in tree cover, leads to the assessment that there would be no change in comparison to Operation Year 1. This assessment is supported by small proportion of the LCA within the ZTV for the Proposed Development which has been calculated without the digital terrain model being modified to include for vegetation cover i.e. it takes no account of the current baseline tree cover's screening role. At Operation Phase Year 1 and Year 15 the magnitude of landscape change for this medium sensitivity LCA will be **negligible**, the level of effect will be **negligible** and therefore **not significant**.

Bath and North East Somerset LCA 4: Mendip Slopes

Baseline conditions - current baseline

- 9.11.38 The key characteristics of LCA 4 are set out **Appendices 9B** and **9D**. **Table 9B.8** in **Appendix 9B** concludes that LCA 4 possesses high landscape character sensitivity, as its overall value is deemed to be high due to its location in the AONB and its overall susceptibility is deemed to be medium. The LCA's extents are shown in **Figure 9.38**, noting that the LCA is relatively compact and its south-eastern third is located outside the study area. The north-western edge of LCA 4 has a minimum separation distance of 6.0km from Bristol Airport. It is entirely located within the Mendip Hills AONB and the LCA accords with the steep, north-east facing scarp slope of the Mendip Hills.
- 9.11.39 Review of the tranquillity mapping (**Figure 9.40**) shows that the level of tranquillity within LCA 4 is moderate to moderate-low. The moderate-low areas tend to relate to the route of the A368 and southern peripheries of the spring line settlements (which are sited outside LCA 4). The presence of Bristol Airport is not noted anywhere in the defining landscape character assessment¹⁶. Site visits to locations in LCA 4 demonstrate that under day time conditions, the existing built development at Bristol Airport is difficult to discern due to the separation distance, even where the requisite extensive north-western views are available. This observation is demonstrated in the panoramic photograph taken from Viewpoint 19 located in the elevated south-western part of LCA 4. This is shown in **Figure 9.21**. Whilst extensive views across the Chew Valley to the north and north-east are noted in the summary of landscape character, and are listed as a key characteristic, availability of these views is restricted by other key characteristics including tall hedgerows and woodland blocks.
- 9.11.40 The operation of Bristol Airport is periodically indicated by the views of aircraft landing on western flight routes and, more rarely, taking-off on eastern flight routes³³. although these routes are generally some distance to the north of the LCA.
- 9.11.41 Review of the comparative light pollution levels (**Figure 9.41**) shows that across LCA 4, light pollution levels are low. The night time site visit indicated that direct views of the lighting sources within Bristol Airport are sometimes available within LCA 4, principally from its more elevated south-western edge. In such views, the lighting at Bristol Airport is prominent, with few other sources of lighting visible in the same direction of view. Bristol Airport's contribution to the skyglow that is visible above the northern horizon in some conditions is difficult to ascertain as substantial contributions are made by the city of Bristol and its outlying settlements.

Baseline conditions - future baseline

- 9.11.42 The completion of components of the 10 mppa development under construction and other GPDO development will not alter the landscape role of Bristol Airport on LCA 4, as observed under the current baseline. As the LCA is mostly given over to pastoral agriculture, contains few settlements and is sited within the AONB, important future changes are likely to include:
- Encroachment of development of the southern area of the spring line settlements such as Blagdon, Ubley and Compton Martin;
 - Increasing use of rural roads resulting in them becoming more urbanised and increased noise levels reducing tranquillity;
 - Increased levels of leisure use leading to diversification of land-uses and “wear and tear” on some habitats and facilities such as PROWs;
 - Continuation of the reduction of the area of Dark Skies due to increases in lighting levels; and
 - Risk of tree loss due to chalara.

Predicted effects and their significance

- 9.11.43 The assessment of effects upon the LCA 4: Mendip Slopes is set out in **Table 9F.9** in **Appendix 9F**. The landscape assessment accounting for the changes identified in the future baseline, concludes that by Operation Phase Year 1, the Proposed Development will result in minimal changes to the negligible level of effects generated by the presence of Bristol Airport that are currently and will continue to be experienced via a visual effects pathway. The potential for changes to perceptual characteristics from additional aircraft movements (landing and taking-off) in addition to the changes resulting from gradual establishment of the 10 mppa operational programme is assessed as highly unlikely. At night-time it is assessed that incremental changes to the baseline lighting will likewise be negligible. Despite the high value attributed to the LCA in the sensitivity assessment, these negligible changes are assessed as not having the potential to significantly affect any of the key characteristics of LCA 4. At Operation Phase Year 15 there would be no change in comparison to Operation Phase Year 1. Established landscape and visual planting would not be discernible at this separation distance and negligible magnitude of change from the Proposed Development is unlikely to combine with changes to the future baseline by 2041 to increase the overall magnitude of landscape change across LCA 4. This high sensitivity LCA’s magnitude of landscape change will be **negligible**, the level of effect will be **minor** and as such **not significant**.

Mendip Hills AONB LCA: Blagdon - Compton Martin Slopes

Baseline conditions - current baseline

- 9.11.44 The key characteristics of the Blagdon - Compton Martin Slopes LCA are set out in **Appendices 9B** and **9D**. **Table 9B.10** in **Appendix 9B** concludes that Blagdon - Compton Martin Slopes LCA possesses high landscape character sensitivity, as its overall value is deemed to be high due to its location in the AONB and its overall susceptibility is deemed to be medium. The LCA’s extents (**Figure 9.39**) note that it is relatively compact and is partly coterminous with Bath and North East Somerset LCA 4. The northern edge of the Blagdon - Compton Martin Slopes LCA has a minimum separation distance of 4.1km from Bristol Airport. This LCA is entirely located within the Mendip Hills AONB and accords with a section of the steep, north-east facing scarp slope of the Mendip Hills.
- 9.11.45 Review of the tranquillity mapping (**Figure 9.40**) shows that the level of tranquillity within the Blagdon - Compton Martin Slopes LCA is moderate to moderate-low. The moderate-low areas

tend to relate to the route of the A368 and the spring line settlements. The presence of Bristol Airport is not noted within the defining landscape character assessment²⁴. Site visits to locations in the Blagdon - Compton Martin Slopes LCA demonstrate that under day time conditions, the existing built development at Bristol Airport is difficult to discern due to the separation distance. This observation is verified by reference to the panoramic photograph taken from Viewpoint 15: the picnic area on the southern, elevated side of Blagdon (shown in **Figure 9.19**). The availability of similar views northwards is often restricted by the presence of unmanaged hedgerows and the tree cover on the “well-wooded” slopes.

- 9.11.46 The operation of Bristol Airport is periodically indicated by the views of aircraft landing on western flight routes and, more rarely, taking-off on eastern flight routes³³ although these routes are generally some distance to the north of the LCA.
- 9.11.47 Review of the comparative light pollution levels (**Figure 9.41**) shows that across the Blagdon - Compton Martin Slopes LCA, light pollution levels are low. The night time site visit indicated that direct views of the lighting sources within Bristol Airport are sometimes available within the LCA, principally from its more elevated south-western parts, lighting is not a constant presence. In such views the lighting at Bristol Airport is prominent with few other sources of lighting visible in the same direction of view, although in some locations foreground lighting is provided by the spring line settlements such as Blagdon.

Baseline conditions - future baseline

- 9.11.48 The principal influences and changes for the future baseline are set out in paragraph 9.5.42 – 9.5.45, some of which are applicable to the Blagdon - Compton Martin Slopes LCA. The completion of components of the 10 mppa development under construction and other GPDO development will not alter the landscape role of Bristol Airport on Blagdon – Compton Martin Slopes LCA, as observed under the current baseline. As the LCA is mostly given over to a land use mosaic formed by “piecemeal” field patterns and woodland, contains a section of the A368 and is sited within the AONB, important future changes are likely to include:

- Encroachment of development on the southern side of the spring line settlements;
- Increases in road traffic resulting in adverse effects upon visual amenity and tranquillity;
- Increased levels of leisure use leading to diversification of land-uses and “wear and tear” on some habitats and facilities such as PROWs;
- Continuation of the reduction of the area of Dark Skies due to increases in lighting levels; and
- Risk of tree loss due to chalara.

Predicted effects and their significance

- 9.11.49 The assessment of effects upon the Blagdon - Compton Martin Slopes LCA is set out in **Table 9F.10** in **Appendix 9F**. The landscape assessment accounting for the changes identified in the future baseline for this LCA, concludes that by Operation Phase Year 1, the Proposed Development will result in minimal changes to the negligible level of effects currently generated and which will continue to be generated by the presence of Bristol Airport that are experienced via a visual effects pathway. The potential for changes to perceptual characteristics from additional aircraft movements (landing and taking-off) in addition to the changes resulting from gradual establishment of the 10 mppa operational programme is assessed as minimal. At night-time it is assessed that incremental changes to the baseline lighting will be negligible. Despite the high value attributed to the LCA in the sensitivity assessment, these negligible changes are assessed as not having the potential to significantly affect any of the key characteristics of the Blagdon -

Compton Martin Slopes LCA under the current and future baseline which are all related to physical attributes present within the LCA such as ancient woodland and absence of settlement on the slopes. At Operation Phase Year 15, there would be no change in comparison to Operation Phase Year 1. The negligible magnitude of change generated by the operation of the Proposed Development is unlikely to combine with the changes to the LCA's future baseline by 2041 to increase the overall magnitude of landscape change across the LCA. This high sensitivity LCA's magnitude of landscape change will be **negligible**, the level of effect will be **minor** and as such will be **not significant**.

Mendip Hills AONB LCA: The Northern Slopes

Baseline conditions - current baseline

- 9.11.50 The key characteristics of the Northern Slopes LCA are set out in **Appendices 9B** and **9D**. **Table 9B.9** in **Appendix 9B** concludes that Northern Slopes LCA possesses high landscape character sensitivity, as its overall value is deemed to be high due to its location in the AONB and its overall susceptibility is deemed to be high due to high levels of tranquillity, remoteness and time depth. The LCA's extents are shown in **Figure 9.39** noting that the LCA is completely within the study area and is partly coterminous with North Somerset LCA E1: Mendip Ridges and Combes. The northern edge of the Northern Slopes LCA has a minimum separation distance of 5.1km from the application site. It is entirely located within the Mendip Hills AONB and the LCA's distribution accords with a section of the steep, north facing scarp slope of the Mendip Hills that contains extensive, elevated open access areas at Dolebury Warren and Burrington Ham as well as an extensive coniferous plantation at Rowberrow Warren.
- 9.11.51 Review of the tranquillity mapping (**Figure 9.40**) shows that the level of tranquillity within the Northern Slopes LCA has wide variations: the less accessible central and eastern parts have moderate-high levels of tranquillity whilst the A38 corridor and western part have moderate to moderate-low levels of tranquillity. This variance reflects the presence of a short section of the A38 and the A368 and the proximity to settlements at Churchill and Sandford. The presence of Bristol Airport is not noted within the defining landscape character assessment²⁴, although one key characteristic is the availability of wide views to surrounding "*cultivated landscapes*" and the coast. Site visits to locations in the Northern Slopes LCA demonstrate that under day time conditions, even from elevated, open locations, the existing built development at Bristol Airport is difficult to discern due to the separation distance. This observation is verified by reference to the panoramic photographs taken from Viewpoint 16: Burrington Ham and Viewpoint 18: Dolebury Warren (**Figures 9.19** and **9.20**).
- 9.11.52 The operation of Bristol Airport is periodically indicated by the views of aircraft landing and taking off on western flight routes and, more rarely, landing and taking-off on eastern flight routes³³; although these routes are generally some distance to the north of the LCA.
- 9.11.53 Review of the comparative light pollution levels (**Figure 9.41**) shows that across much of the Northern Slopes LCA, light pollution levels are low, however they increase to low-moderate in the parts of the LCA close to the A38 and A368. The night time site visit indicated that direct views of the lighting sources within Bristol Airport are available from the open and elevated parts of the LCA, however the lighting at Bristol Airport is not a constant presence within the LCA. In such views the lighting at Bristol Airport is prominent with few other sources of lighting visible in the same direction of view, although in locations where the characteristic wide views are available, lighting in towns such as Clevedon, Weston-super-Mare and Portishead as well as towns in south-east Wales is visible. An indication of the worst-case role of lighting at Bristol Airport within this LCA is provided by the night time baseline panoramic photograph from Viewpoint 16 at Burrington Ham (**Figure 9.25**).

Baseline conditions - future baseline

- 9.11.54 The completion of components of the 10 mppa development under construction and other GPDO development will not alter the landscape role of Bristol Airport on Northern Slopes LCA, as observed under the current baseline. As the LCA is mostly given over to a land use mosaic formed by agricultural land uses, summit moorland and woodland, contains a section of the A38 and A368 and is sited within the AONB, important future changes are likely to include:
- Encroachment of development located just outside the LCA (and AONB);
 - Increases in road traffic resulting in adverse effects upon visual amenity and tranquillity
 - Increased levels of leisure use leading to diversification of land-uses and “wear and tear” on some habitats and facilities such as PROWs.
 - Continuation of the reduction of the area of Dark Skies due to increases in lighting levels;
 - Possible felling and replanting of coups within Rowberrow Warren as a commercial coniferous forestry plantation; and
 - Risk of ash tree loss due to chalara.

Predicted effects and their significance

- 9.11.55 The assessment of effects upon the Northern Slopes LCA is set out in **Table 9F.11** in **Appendix 9F**. In summary, by Operation Phase Year 1, accounting for the changes identified in the future baseline for this LCA, the Proposed Development will result in minimal changes to the negligible level of effects currently generated and which will continue to be generated by the presence of Bristol Airport that are experienced via a visual effects pathway. This is shown in the photomontage prepared from Viewpoint 16 (**Figure 9.32**) which is one of the most open, elevated and closest locations within the LCA. The potential for changes to perceptual characteristics from additional aircraft movements (landing and taking-off) is assessed as minimal. It is assessed that incremental changes to the baseline lighting at night will be negligible. Despite the high value attributed to the LCA in the sensitivity assessment, these negligible changes are assessed as not having the potential to significantly affect any of the key characteristics of the Northern Slope LCA under the current and future baseline which are mostly related to its physical attributes. At Operation Phase Year 15, there would be no change in comparison to Operation Phase Year 1. The negligible magnitude of change generated by the operation of the Proposed Development is unlikely to combine with changes to the LCA’s future baseline by 2041 to increase the overall magnitude of landscape change across the LCA. This high sensitivity LCA’s magnitude of landscape change will be **negligible**, the level of effect will be **minor** and as such **not significant**.

Mendip Hills AONB LCA: The Plateau

Baseline conditions - current baseline

- 9.11.56 The key characteristics of the Plateau LCA are set out in **Appendices 9B** and **9D**. **Table 9B.11** in **Appendix 9B** concludes that Plateau LCA possesses high landscape character sensitivity, as its overall value is deemed to be high due to its location in the AONB and its overall susceptibility is deemed to be high - medium. The LCA’s extents are shown in **Figure 9.39** noting that only the northern-most third of this extensive LCA lies within the study area. The northern most point of the Plateau LCA has a separation distance of 5.7km from the Bristol Airport site. It is entirely located within the Mendip Hills AONB. As the LCA’s title implies it is characterised by an undulating plateau topography incised with periodic dry valleys. A strong sense of openness and limited tree cover are key characteristics, but there are also areas of conifer plantation such as that located

south of Ubley. The availability of extensive views from the plateau edge, especially to the west, is another key characteristic.

- 9.11.57 Review of the tranquillity mapping (**Figure 9.40**) shows that the level of tranquillity within the plateau LCA is generally moderate to moderate-high. The exception is alongside the B3134 corridor where tranquillity levels decline to moderate-low. The presence of Bristol Airport is not noted within the defining landscape character assessment²⁴. Site visits to locations in the Plateau LCA demonstrate that under day time conditions even from elevated, open locations the existing built development at Bristol Airport is generally difficult to discern due to the separation distance. This observation is verified by reference to the panoramic photograph taken from Viewpoint 16: Burrington Ham at an elevation of 207m AOD (which is on the boundary with the Northern Slopes LCA) (**Figure 9.19**). The second viewpoint, also located on the boundary with the Northern Slopes LCA is at Beacon Batch which is the highest point in the LCA (and the Mendip Hills AONB) at an elevation of 325m AOD. As shown in **Figure 9.20**, at this elevation, the angle of view to Bristol Airport (which is at elevations of between 196m and 183m AOD), in combination with favourable lighting conditions, allows for the built components and the runways to be visible, although individual built components other than the ATC tower are difficult to identify at a separation distance of at least 7.4km.
- 9.11.58 The operation of Bristol Airport is periodically indicated by the views of aircraft landing and taking off on both eastern and western flight routes³³; although these routes are generally some distance to the north of the LCA.
- 9.11.59 Review of the comparative light pollution levels (**Figure 9.41**) shows that across the entire Plateau LCA, light pollution levels are low. The night time site visit indicated that direct views of the lighting sources within Bristol Airport are available from the open and elevated parts of the LCA that are within the study area, however the lighting at Bristol Airport is not a constant presence within the LCA. In such views the lighting at Bristol Airport is prominent from the moderately elevated parts of the LCA where northern views are available as evidenced in the night time panoramic photograph from Viewpoint 16 (**Figure 9.25**) in which there are few other light sources visible in the same field of view. The night-time panoramic photograph from the more elevated Viewpoint 18 (**Figure 9.25**) shows that a consequence of the increased elevation is that the relative role of the lighting at Bristol Airport is diminished. This is because the greater elevation extends the northern view to include lighting in the city of Bristol and the highly illuminated Severn Bridge. These three lighting sources combine to form a single lighting source across an extended horizontal angle of view. The extensive 360° views from around Beacon Batch also include numerous lighting sources from settlements to the north-west, west and south-west. One of the transmitter towers in the north-eastern part of the LCA has night-time red navigation lights placed along its entire length which provide a strong contrast in a section of the available views within which there are few other light sources.

Baseline conditions - future baseline

- 9.11.60 The completion of components of the 10 mppa development under construction and other GPDO development will not alter the landscape role of Bristol Airport on Plateau LCA, as observed under the current baseline. As the LCA is mostly given over to a land use dominated by moorland and is sited within the AONB, important future changes are likely to include:
- Increases in road traffic resulting in adverse effects upon visual amenity and tranquillity;
 - Increased visitor numbers with visitors undertaking a wider range of leisure and outdoor recreational activities potentially leading to footpath erosion and habitat deterioration; and.
 - Continuation of the reduction of the area of Dark Skies due to increases in lighting levels.

Predicted effects and their significance

- 9.11.61 The assessment of effects upon the Plateau LCA is set out in **Table 9F.12**. The landscape assessment, accounting for the changes identified in the future baseline for this LCA, concludes that by Operation Phase Year 1, the Proposed Development will result in minimal changes to the level of effects currently generated by the presence of Bristol Airport that are experienced and that will continue to be sustained via a visual effects pathway. This is shown in the photomontage in **Figure 9.32** that has been prepared for the most open and elevated location within the LCA. The potential for changes to perceptual characteristics from additional aircraft movements (landing and taking-off) in addition to the changes resulting from gradual establishment of the 10 mppa operational programme is assessed as minimal. It is assessed that incremental changes to the baseline night-time lighting will be negligible. Despite the high value attributed to the LCA in the sensitivity assessment, under either the current or future baseline these negligible changes are assessed as not having the potential to significantly affect any of the key characteristics of the Plateau LCA such as openness, remoteness and the availability of long views. At Operation Phase Year 15, there would be no change in comparison to Operation Phase Year 1 even when long-term changes to the future baseline are considered. This is due to the separation distance between the Plateau LCA and the Proposed Development, providing a limited primary visual effects pathway. The magnitude of landscape change for this high sensitivity LCA will be **negligible**, the level of effect will be **minor** and as such **not significant**.
- 9.11.62 A summary of the results of the assessment of the landscape effects is provided in **Table 9.10**

Table 9.10 Summary of significance of adverse landscape effects

| Receptor and summary of predicted effects | Sensitivity/ importance/ value of receptor ¹ | Magnitude of change ² | Significance ³ | Summary rationale |
|--|---|----------------------------------|---------------------------|---|
| Mendip Hills AONB Potential for incremental changes to three of the AONB's 12 special qualities as defined in the current AONB Management Plan. Incremental changes relate to views out, dark skies and tranquillity levels. | High | Negligible | Minor & Not Significant | <p>The Proposed Development could only potentially be seen in views out from approximately 14% of the 40% of the AONB that is within the study area. Site visits and baseline viewpoint photography demonstrate that views are available from a smaller proportion of the AONB and that in most views out Bristol Airport cannot be readily identified. The Proposed Development will be confined to the existing development footprint (with the minor exception of the Silver Zone car park extension (Phase 2)) and is of a similar height and scale as existing development. It is highly unlikely to be visible in views out of the AONB.</p> <p>The highly limited nature of the proposed changes to baseline lighting levels as set out in the Lighting Impact Assessment²⁸ and the adoption of a lighting strategy and design that prevents any upward lighting and minimises any light spillage will minimise the potential for changes to Bristol Airport's baseline contribution to lighting in the northern part of the AONB including dark skies within the AONB.</p> <p>Tranquillity levels have the potential to be adversely impacted by the increased presence of aircraft movements over and close to the AONB as well as by the potential increased visual role of Bristol Airport. The proportion of aircraft movements that pass over the AONB is small and it is assessed that the limited proportionate increase will be insufficient to significantly adversely impact upon the varying baseline tranquillity levels. Many of the factors that contribute to tranquillity within the AONB will be unaffected by the Proposed Development.</p> <p>No variation in effects between Operation Phase Year 1 and Year 15.</p> |
| North Somerset LCA G1: Broadfield Down Settled Limestone Plateau Direct and indirect changes to key characteristics of the host LCA. | Low | Low | Minor & Not Significant | <p>The Proposed Development will result in an incremental increase in the already prominent or dominant role of the operation of Bristol Airport in the host LCA. It will not introduce new landscape characteristics nor modify existing landscape characteristics, nor will it spatially extend the proportion of the LCA indirectly affected by the operation of Bristol Airport.</p> |

| Receptor and summary of predicted effects | Sensitivity/ importance/ value of receptor ¹ | Magnitude of change ² | Significance ³ | Summary rationale |
|---|--|-------------------------------------|------------------------------|--|
| | | | | Minimal variation in effects between Operation Phase Year 1 and Year 15 with the full establishment of the proposed reinforcement planting in the integrated /embedded mitigation management in some boundary locations. |
| North Somerset LCA E1: Mendip Ridges and Combes Small-scale indirect changes to some key characteristics in the eastern part of extensive, scattered LCA within AONB. | High | Negligible | Minor & Not Significant | The Proposed Development will not result in any changes to the negligible level of effects generated by the presence of built components and car parking at Bristol Airport that are currently experienced via a visual effects pathway. There may be minor incremental changes to some perceptual characteristics from additional aircraft movements (landing and taking-off) and, at night time, from a minor incremental increase in the sources of light within the existing horizontal angle of view occupied by Bristol Airport's northern area. These minor changes are assessed as not having the potential to significantly impact upon any of the key characteristics of the eastern-most part of LCA E1 or at the more extensive scale of the entire LCA. Other parts of the LCA will be unaffected. No variation in effects between Operation Phase Year 1 and Year 15. |
| North Somerset LCA E6: Cleve Ridge Small-scale indirect changes to some key characteristics, primarily via perceptual effects pathway. | High | Negligible | Minor & Not Significant | The Proposed Development will result in minimal changes to the negligible level of effects generated by the presence of built components and car parking at Bristol Airport that are currently experienced via a visual effects pathway. There may be minor incremental changes to some perceptual characteristics from additional aircraft movements (landing and taking-off) and, possibly from small increases in the vehicle numbers on main roads in some parts of LCA E6. At night-time it is assessed that incremental changes to the baseline lighting will not be discernible across the LCA. These minor changes are assessed as not having the potential to significantly impact upon any of the key characteristics of LCA E6. No variation in effects between Operation Phase Year 1 and Year 15. |
| North Somerset LCA H1: Dundry Settled Hill Small-scale indirect changes to some key characteristics via perceptual and visual effects pathways. | Medium | Negligible | Negligible & Not Significant | The Proposed Development will result in minimal changes to the low level of effects generated by the presence of built components and car parking at Bristol Airport that are currently experienced via a visual effects pathway. There may be minor incremental changes to some perceptual characteristics from additional aircraft movements (landing and taking-off). At night-time it is assessed that incremental changes to the |

| Receptor and summary of predicted effects | Sensitivity/ importance/ value of receptor ¹ | Magnitude of change ² | Significance ³ | Summary rationale |
|--|--|-------------------------------------|------------------------------|--|
| | | | | <p>baseline lighting will be confined to an area already characterised by light sources and should be assessed in the context of many other lighting sources, including the city of Bristol. These minor changes are assessed as not having the potential to significantly impact upon any of the key characteristics of LCA H1 with some parts unaffected.</p> <p>No variation in effects between Operation Phase Year 1 and Year 15.</p> |
| <p>North Somerset LCA J3: Chew Rolling Valley Farmland</p> <p>Minimal indirect changes to some key perceptual characteristics as very few views to Bristol Airport available.</p> | Medium | Negligible | Negligible & Not Significant | <p>The Proposed Development will result in no changes to the negligible level of effects generated by the presence of built components and car parking at Bristol Airport currently sustained in LCA J3. There may be minor incremental changes to some perceptual characteristics from additional aircraft movements (landing and taking-off). At night-time it is assessed that any potential incremental changes to the baseline lighting will be limited to skyglow although embedded mitigation measures regarding the design of the lighting for the Proposed Development will minimise upward light escape²⁸. These minimal changes are assessed as not having the potential to significantly impact upon any of the key characteristics of LCA J3.</p> <p>No variation in effects between Operation Phase Year 1 and Year 15</p> |
| <p>Bath and North East Somerset LCA 1: Thrubwell Farm Plateau</p> <p>Small-scale indirect changes to some key characteristics in small LCA with few key characteristics.</p> | Medium | Negligible | Negligible & Not Significant | <p>The Proposed Development will result in minimal changes to the negligible level of effects generated by the presence of built components and car parking at Bristol Airport that are currently experienced via a visual effects pathway. There may be minor incremental changes to some perceptual characteristics from additional aircraft movements (landing and taking-off). At night-time it is assessed that incremental changes to the baseline lighting will be confined to the northern edge of this small LCA where some lighting sources within Bristol Airport may already be visible. These minor changes are assessed as not having the potential to significantly impact upon any of the key characteristics of LCA 1.</p> <p>Possible variation in effects between Operation Phase Year 1 and Year 15 with magnitude of change increasing to low and level of effect to minor in Operational Year 15. This will occur if there is a substantial loss of tree cover by 2041, in line with future pressures identified on this small LCA..</p> |

| Receptor and summary of predicted effects | Sensitivity/ importance/ value of receptor ¹ | Magnitude of change ² | Significance ³ | Summary rationale |
|--|--|-------------------------------------|------------------------------|--|
| Bath and North East Somerset LCA 2: Chew Valley Minimal indirect changes to some key perceptual characteristics in extensive LCA only partly in study area. | Medium | Negligible | Negligible & Not Significant | <p>The Proposed Development will result in minimal changes to the negligible level of effects generated by the presence of built components and car parking at Bristol Airport that are currently experienced via a visual effects pathway. There may be minor incremental changes to some perceptual characteristics from additional aircraft movements (landing and taking-off). At night-time it is assessed that incremental changes to the baseline lighting will likewise be negligible. These minor changes are assessed as not having the potential to significantly impact upon any of the key characteristics of LCA 2 with large parts unaffected.</p> <p>No variation in effects between Operation Phase Year 1 and Year 15.</p> |
| Bath and North East Somerset LCA 4: Mendip Slopes Minimal indirect changes via potential visual and perceptual effects pathways to some key characteristics an LCA located within the AONB. | High | Negligible | Minor & Not Significant | <p>The Proposed Development will result in minimal changes to the negligible level of effects currently generated by the presence of Bristol Airport that are experienced via a visual effects pathway. The potential for changes to perceptual characteristics from additional aircraft movements (landing and taking-off) is assessed as highly unlikely. At night-time it is assessed that incremental changes to the baseline lighting will likewise be negligible. Despite the high value attributed to the LCA in the sensitivity assessment, these negligible changes are assessed as not having the potential to significantly impact upon any of the key characteristics of LCA 4.</p> <p>No variation in effects between Operation Phase Year 1 and Year 15.</p> |
| Mendip Hills AONB LCA: Blagdon – Compton Martin Slopes Minimal indirect changes via potential visual and perceptual effects pathways to a small proportion of key characteristics of an LCA located within the AONB. | High | Negligible | Minor & Not Significant | <p>The Proposed Development will result in minimal changes to the negligible level of effects currently generated by the presence of Bristol Airport that are experienced via a visual effects pathway. The potential for changes to perceptual characteristics from additional aircraft movements (landing and taking-off) is assessed as minimal. At night-time it is assessed that incremental changes to the baseline lighting will be negligible. Despite the high value attributed to the LCA in the sensitivity assessment, these negligible changes are assessed as not having the potential to significantly impact upon any of the key characteristics of the Blagdon – Compton Martin Slopes LCA which are all related to physical attributes present within the Blagdon – Compton Martin LCA.</p> <p>No variation in effects between Operation Phase Year 1 and Year 15.</p> |

| Receptor and summary of predicted effects | Sensitivity/ importance/ value of receptor ¹ | Magnitude of change ² | Significance ³ | Summary rationale |
|---|--|-------------------------------------|---------------------------|--|
| Mendip Hills AONB LCA: The Northern Slopes Minimal indirect changes via potential visual and perceptual effects pathways to a small proportion of key characteristics of an LCA located within the AONB. | High | Negligible | Minor & Not Significant | <p>The Proposed Development will result in minimal changes to the negligible level of effects currently generated by the presence of Bristol Airport that are experienced via a visual effects pathway. This is shown in the photomontage that has been prepared for one of the most open, elevated and closest locations within the LCA. The potential for changes to perceptual characteristics from additional aircraft movements (landing and taking-off) is assessed as minimal. At night-time it is assessed that incremental changes to the baseline lighting will be negligible. Despite the high value attributed to the LCA in the sensitivity assessment, these negligible changes are assessed as not having the potential to significantly impact upon any of the key characteristics of the Northern LCA which are mostly related to physical attributes present within the Northern Slope LCA.</p> <p>No variation in effects between Operation Phase Year 1 and Year 15.</p> |
| Mendip Hills AONB LCA: The Plateau Minimal indirect changes via potential visual and perceptual effects pathways to some key characteristics only potentially impacting upon small parts of an extensive LCA located within the AONB. | High | Negligible | Minor & Not Significant | <p>The Proposed Development will result in minimal changes to the level of effects currently generated by the presence of Bristol Airport that are experienced via a visual effects pathway. This is shown in the photomontage that has been prepared for the most open and elevated location within the LCA in Figure 9.32. The potential for changes to perceptual characteristics from additional aircraft movements (landing and taking-off) is assessed as minimal. At night-time it is assessed that incremental changes to the baseline lighting will be negligible. Despite the high value attributed to the LCA in the sensitivity assessment, these negligible changes are assessed as not having the potential to significantly impact upon any of the key characteristics of the Plateau LCA.</p> <p>No variation in effects between Operation Phase Year 1 and Year 15.</p> |

1. The sensitivity/importance/value of a receptor is defined using the criteria set out in **Appendix 9A** above and is defined as low, medium and high.
2. The magnitude of change on a receptor resulting from activities relating to the development is defined using the criteria set out in **Appendix 9A** above and is defined as negligible, low, medium and high
3. The significance of the environmental effects is based on the combination of the sensitivity/importance/value of a receptor and the magnitude of change and is expressed as major (significant), moderate (possibly significant) or minor/negligible (not significant), subject to the evaluation methodology outlined in **Section 9 9**.

9.12 Assessment of effects – visual effects upon visual receptors in communities

- 9.12.1 The sensitivity of residential visual receptors is high since they possess a high susceptibility, according with GLVIA3. Additionally, there is a high likelihood that these receptors attach medium or high value to the views that are available from the windows and curtilage of their properties.
- 9.12.2 The visual assessment for visual receptors located in communities combines the assessments for Operation Phase Year 1 and Operation Phase Year 15. A preliminary review of the visual assessment demonstrates that for a large majority of this category of visual receptors, the changes that will arise between the two operational periods, due to the establishment of the proposed landscape, visual and ecological mitigation planting, will not result in a variation in the magnitude of visual change. Any exceptions to this situation will be highlighted in the commentary section of the assessment table for the relevant community visual receptor that are contained in Appendix 9G and is explained in paragraph 9.12.3. The baseline conditions for the nine communities resulting from the full implementation of components of the 10 mppa planning permission and GDPO development commencing prior to November 2018 (**Tables 2.1** and **2.2**) are considered under the future baseline, and compared with the present baseline. Where this does not result in changes to the magnitude of visual change assessed for the Proposed Development, the entry under future baseline is given as no material change. For any community visual receptors where permitted changes may result in a material change in the baseline at Operation Phase Year 1 or Year 15 for the visual assessment, these changes are set out in this section.

Visual receptors at properties in Lulsgate Bottom

Baseline conditions - current baseline

- 9.12.3 Residential visual receptors in the community of Lulsgate Bottom are located at properties that are either sited in a sub-group to the east of the A38; a sub-group to the south of the eastern section of Downside Road; or a sub-group along the north side of the eastern section of Downside Road and off the cul-de-sac of Coombe Dale. A majority of the latter two sub-groups reside at properties that are orientated on an east-west axis so that residential visual receptors' front or rear views are south towards the north-eastern boundary of Bristol Airport. Properties are a mixture of one and two storey houses. The density of development is moderate with most properties having a garden and some tree cover within curtilages. The properties are generally at slightly lower elevations (170m AOD to 175m AOD) than Bristol Airport. The closest components within the northern area of Bristol Airport are surface car parking areas in the north-east.
- 9.12.4 Views south to Bristol Airport for sub-groups along Downside Road are substantially screened by the perimeter bunding and the dense belt of woodland planting along the northern boundary of Bristol Airport. Site visits in summer months to the rear of the line of properties on the southern side of Downside Road confirm that only partial, heavily filtered views through the belt of trees are available when the vegetation is in leaf. Vehicle movements within the closest parts of the surface carpark area are sometimes apparent. For residents in the sub-group east of the A38 there are framed and filtered views of traffic using the closest section of the A38. Apart from the residents in the 11 properties in the sub-group to the south of Downside Road or those in properties in the eastern sub-group that front onto the A38, all views in directions towards Bristol Airport are partly framed and screened by intervening properties in this group. None of the buildings in the northern area of the Airport can be seen from publicly accessible locations in Lulsgate Bottom in summer months. Paragraph 4.3.1 in the Lighting Impact Assessment²⁸, which describes the night-time baseline conditions as observed and measured along this section of Downside Road, states that the

visual receptor sub-group along the north of Downside Road have minimal views of lighting within the northern area at Bristol Airport. Paragraph 4.3.2²⁸ describes the night-time baseline for the visual receptor sub-group to the east of the A38 and concludes that this section of the A38 is illuminated to the British Standard appropriate for this type of road."

Baseline conditions - future baseline

- 9.12.5 No material changes have been identified in comparison with the current baseline as a consequence of the completion of the 10 mppa and GPDO developments commenced prior to November 2018. Should the parkland tree planting proposed for the grassland area located to the south of properties on the southern side of Downside Road (Item 3 on the integrated/embedded mitigation masterplan) be implemented early in the construction period, additional filtering will be provided in the southern views of residents in this visual receptor sub-group.

Predicted effects and their significance

- 9.12.6 The assessment of effects upon the visual receptors in Lulsgate Bottom is set out in **Table 9G.1** in **Appendix 9G**. The visual assessment concludes that, at Operation Phase Years 1 and 15, the Proposed Development will result in a negligible magnitude of visual change for the residential visual receptors located in the community of Lulsgate Bottom. The difference in elevation between these properties and the northern area of Bristol Airport and the high level of existing mature vegetation screening combine to minimise views of built development, car parking and vehicular movement in Bristol Airport and on the A38. It is assessed that this situation will experience minimal change as a result of the Proposed Development.
- 9.12.7 A proportion of the residents in two sub-groups: in properties to the north of Downside Road; and residents in properties south of Downside Road, will experience filtered views of the new gyratory road and internal surface car parking, especially in winter months, as per the baseline for northern area surface car parking. Some residents in the latter sub-group may benefit from additional screening (the proposed parkland tree planting), especially by Operation Phase Year 1 when it will be certain to be fully established. The construction of the proposed works on the A38 will temporarily result in low magnitudes of visual change for residential visual receptors in approximately six properties, but these changes will not extend into the Operation Phase. Throughout the Operation Phase the lighting regime will remain as that under the current baseline. At Operation Phase Year 1 and Year 15 these high sensitivity visual receptors will sustain an overall assessment of a **negligible** magnitude of visual change and a resultant **minor** level of effect that is **not significant**.

Visual receptors at properties on Hyatt Wood Road/Oatfield

Baseline conditions - current baseline

- 9.12.8 Residential visual receptors are clustered on the crescent formed by Oatfield, with some properties fronting onto the north-south aligned Hyatt Wood Road including the outlying property called the Coppice to the south. Properties are mostly two storey properties with the majority being semi-detached, with properties on the eastern edge being single storey. Alignments vary, with a proportion on a north-south axis so that their residents' principal views are to the east or west, as opposed to south towards Bristol Airport. The density of development is medium-high, most properties have small gardens with trees. There is, however, a high density of hedgerow trees alongside the section of Hyatt Wood Road, south of Oatfield to its junction with Downside Road. The partial screening that these hedgerow trees provide necessitates that the viewpoint (Viewpoint 2) that represents these residential visual receptors is located on a PRoW slightly to the east of the community to allow a more open southern view (refer to **Figure 9.8**). The properties are

generally at slightly lower elevations (170m AOD to 178m AOD) than Bristol Airport. The closest components within the northern area of Bristol Airport are surface car parking and MSCP Phase 1A and MSCP 1B.

- 9.12.9 Views south to Bristol Airport are well screened by the perimeter bunding and the dense belt of woodland planting along the northern boundary of Bristol Airport, as well as by moderate levels of intervening tree cover including that alongside Hyatt Wood Road and the closest section of the northern side of Downside Road. The upper parts of some of the tallest built elements in the northern area of Bristol Airport are visible where framed and filtered views are available through the intervening tree cover. In some locations the upper section of the ATC tower, terminal building and the western walkway are visible, whilst in other locations there are partial views of the hotel and some of the tail fins of aircraft parked at stands. There are no views of any ground level components including the surface car parking.

Baseline conditions - future baseline

- 9.12.10 No material changes have been identified in comparison with the current baseline as a consequence of the completion of the 10 mppa and GPDO developments commencing prior to November 2018.

Predicted effects and their significance

- 9.12.11 The assessment of effects upon the visual receptors at Hyatt Wood Road/Oatfield is set out in **Table 9G.2 in Appendix 9G**. The visual assessment concludes that some of the taller components of the Proposed Development will be visible within the visual context of the taller existing built development in the northern area. These new components will not extend the horizontal angle of view affected by the existing development and the proposed Phase 3 MSCP could screen the hotel, whose window design makes it a relatively prominent component in some residents' views. It is unlikely that any residential visual receptors in this community, who currently have no views of Bristol Airport due to screening and/or their properties' orientation, will have views of the Proposed Development. A good proportion of residential visual receptors in this community will continue to have no views, or just partial oblique views, of the taller components at Bristol Airport from their properties' windows or from within their curtilage. There will be no views of any ground level components of the Proposed Development. At Operation Phase Year 1 and Year 15 these high sensitivity visual receptors will sustain a visual assessment in which the magnitude of visual change will be **negligible** resulting in a **minor** level of effect that will be **not significant**.

Visual receptors at properties in Downside, east of Cook's Bridle Path

Baseline conditions - current baseline

- 9.12.12 Residential visual receptors are located at properties along the northern side of this section of Downside Road. Most properties are two storeys high and set slightly back from Downside Road on an east-west or south-east to north-west alignment, so that residents' principal views from the front of their properties are to the south or south-west. Most of the properties are sited in medium to large gardens with some trees in their curtilage, whilst much of the length of the boundaries of these gardens with Downside Road is formed by tall, maintained hedgerows. Some sections of hedgerow in front of the properties has been removed or maintained at a lower height to allow access and/or outward views. The properties are generally at slightly lower elevations (162m AOD in the east to 155m AOD in the west) than Bristol Airport. The closest components within the northern area of Bristol Airport to the south-east are areas of the surface car parking, some of which is within the footprint of the proposed Phase 3 MSCP. To the south, across the pasture fields around Cook's Farm, the closest component is the west apron and its surrounding acoustic wall.

- 9.12.13 Views south-east to the northern area of Bristol Airport are oblique from all but the eastern-most two properties. Views of the ground level components and movement of vehicles are screened by the intervening hedgerows close to Cook's Farm and the taller hedgerow along the western boundary of the northern area. These hedgerows and the limited number of hedgerow trees that they contain filter some oblique views of the central and upper sections of the built development in the northern area as shown in the photograph from Viewpoint 1 (**Figure 9.7**).
- 9.12.14 The rising topography to the south, in the more direct southern views available to most residential visual receptors, prevents views of the west apron and the taxiway beyond. It also screens more distant southern views. A short section of the acoustic wall and lighting columns are visible on this section of the horizon. Tail fins of aircraft at some western stands are also periodically visible in the same field of view. Otherwise the western end of the western walkway is the end of the built development at Bristol Airport in these residential visual receptors' views. The most prominent building is the ATC tower and the most distinctive, due to its mass and window pattern, is the hotel. The terminal building is visible above a short section of the south-eastern horizon which is partly formed by the western walkway. Cumulatively the visible built development in the western part of the northern area form a prominent component in the south-eastern or southern views available to residential visual receptors in this community, but most of Bristol Airport is not visible and there is a sense of visual separation and containment.

Baseline conditions - future baseline

- 9.12.15 Components of the permitted 10 mppa scheme commenced prior to November 2018, in the form of Phase 1b MSCP will be partly visible in oblique south-eastern views from the front windows and front gardens at many properties incrementally increasing the height of the baseline Phase 1a MSCP to 16m AGL. The completed Phase 1 MSCP will have a similar height and scale as the hotel and will slightly increase the role of and extend the length of the horizontal angle of view occupied by, the built development at Bristol Airport within some residential visual receptors' views. Of relevance to the future baseline for residents at Melody Cottage, the immature tree and shrub planting on the outer face and top of the western end of the northern boundary bund will have become more established by Operation Phase Year 1 and fully established by Operation Year 15.

Predicted effects and their significance

- 9.12.16 The assessment of effects upon the visual receptors in the community of Downside, east of Cook's Bridle Path, is set out in **Table 9G.3** in **Appendix 9G**. The visual assessment concludes that the Proposed Development will result in a small-scale intensification in the visual role of the built development in the northern area of Bristol Airport in residential visual receptors', often oblique, south-eastern views. Once the completed Phase 1 MSCP become operational, the Proposed Development will not extend the horizontal angle of view occupied by built development. There will be small-scale changes to the composition of the horizon within this horizontal angle of view, however the ATC tower will retain its prominence. Where residential visual receptors have open or framed and usually oblique framed views the magnitude of change will vary between low and negligible.
- 9.12.17 A low magnitude of change will be sustained by residential visual receptors at properties at the eastern end of this section of Downside Road, principally at Melody Cottage due to the presence of Phase 3 MSCP. The magnitude of visual change experienced by these high sensitivity residential visual receptors will be **low** with a moderate level of effect which **Table 9.9** indicates is possibly significant. It is considered effects will be **significant** at the closest property (Melody Cottage) and **not significant** at the other properties at the eastern end of this section of Downside Road.
- 9.12.18 This assessment for the residents at Melody Cottage takes into account the completion of Phase 1 MSCP under the 10 mppa permission and the reinforcement of the existing moderate level of

screen planting proposed (refer to Item 1 and 2 in the integrated/embedded mitigation masterplan). These measures include a high proportion of tree species in the planting closest to the southern frontage of Melody Cottage which is unlikely to be fully established and effective by Operation Phase Year 1. Nevertheless, to maximise the potential for this planting to assume a screening role, a high proportion of the trees in the closest planting areas will be extra heavy standard trees. When the current baseline planting and the proposed mitigation planting becomes established by Operation Phase Year 15, the assessment concludes that filtered views will still be available of the western part of Phase 3 MSCP over a minimum separation distance of ~100m. The existing and proposed mitigation planting on and close to the north-western corner of the application site will reduce the scale and mass of Phase 3 MSCP sufficiently in residents' southern views to ensure that, although the magnitude of change will remain low, the low level of effect will become not significant. Other factors that have been considered in deriving the conclusion that the visual effect will be not significant by Operation Phase Year 15 are:

- Residents' views are likely to be mainly available only in winter months when deciduous vegetation will not be in leaf;
- Residents' views will be substantially restricted to views from the two first floor windows in the Cottage's southern elevation. These windows are likely to be bedroom windows i.e. from rooms that not likely to be occupied in waking or daylight hours thereby reducing the residents' visual susceptibility in accordance to paragraph 6.36 in the GLVIA.
- The Cottage's garden is mostly located on the northern side of the Cottage and is surrounded by tall vegetation, even along the section fronting onto Downside Road. The tall vegetation and the Cottage itself will therefore provide at least moderate additional screening to the residents when they are in the Cottage's curtilage.

9.12.19 A **negligible** magnitude of change will be sustained by most of the high sensitivity residential visual receptors in this community due to the partial views of the proposed western terminal extension, the western end of Phase 3 MSCP in the context of the completed Phase 1 and associated wind turbines and, to a lesser extent, the slight increase in the number of aircraft tail fins periodically visible. At Operation Phase Year 1 and Year 15 these receptors will experience a **minor** level of effect which will be **not significant**.

Visual receptors at properties in Downside, west of Cook's Bridle Path

Baseline conditions - current baseline

9.12.20 Residential visual receptors are located at properties along the northern side of this section of Downside Road, with some sited close to the road and others set back (north) by up to 150m. Most properties are two storeys high and most have a south-east to north-west alignment, so that residents' principal views from the front of their properties are to the south or south-west towards the Tall Pines Golf Club, as opposed to towards Bristol Airport's northern area to the south-east. Most of the properties are sited in medium to large gardens with mature trees in their curtilage, whilst much of the length of the boundaries of these gardens with Downside Road is formed by broken lines of hedgerow and garden trees on the north side and a tall maintained hedge on the southern (golf course) side. The properties are generally at lower elevations (155m AOD in the east to 140m AOD in the west) than Bristol Airport. The closest components within the northern area of Bristol Airport to the south-east are areas of the surface car parking, some of which is within the footprint of the proposed Phase 3 MSCP. To the south, across the Tall Pines Golf Club, the closest component is the western end of Runway 09 and taxiway GOLF.

9.12.21 Site visits and use of Google Earth Pro confirm that there are no views of any of the components in the northern area of Bristol Airport from ground level locations in this community. Potential views

to the south-east are screened by the coalescence of intervening tree cover, including the mature trees alongside Cook's Bridle Path, and the high number of trees within the community, especially alongside the Batch; a narrow lane (PRoW) that provides access to the properties set further back from Downside Road. Partial, oblique and filtered views may be available from upper storey south and east-facing windows. Ground level views south from properties facing onto Downside Road are foreshortened by the 2m-3m high hedgerow on the southern side of Downside Road. First floor views, south over the hedgerow, are unlikely to extend to the runway, taxiway and boundary fencing at Bristol Airport due to the screening provided by the coalescence of the tree cover present around the fairways in the Tall Pines Golf Club.

Baseline conditions - future baseline

- 9.12.22 The completion of Phase 1 MSCP may result in the upper section of the MSCP's western façade being visible to some resident's oblique south-eastern views, above the existing and reinforced screen planting on the north-western boundary of Bristol Airport ,alongside a section of North Side Road.

Predicted effects and their significance

- 9.12.23 The assessment of effects upon the visual receptors in the community of Downside, west of Cook's Bridle Path, is set out in **Table 9G.4** in **Appendix 9G**. The visual assessment concludes that the Proposed Development will not be visible to residential visual receptors in this community from any ground level locations within and around properties. There is the slight possibility that a small proportion of residential visual receptors will have partial, seasonal and/or heavily filtered views of Phase 3 MSCP and/or the western terminal extension. At Operation Phase Year 1 and Year 15 any such views of these proposed components available to these high sensitivity residential visual receptors would result in a **negligible** magnitude of change and a **minor** level of effect that will be **not significant**.

Visual receptors at properties in Potters Hill

Baseline conditions - current baseline

- 9.12.24 Residential visual receptors at properties in Potters Hill are sited to the east and west of the A38, which dominates the settlement. Most of the built development on the western side of the A38 is commercial, including a garage and airport car parking, with a small number of two storey residential properties orientated to face the A38. The built development to the east of the A38 is mainly park homes (Hillview Park Homes), with a small number of single and two storey properties sited on the southern side of the community off Currell's Lane. With the exception of the latter properties, properties have small or no gardens; there is a moderate amount of mature tree cover close to the A38 and on the settlement's boundaries. Yewtree Farm is an outlying property to the north-west of Potters Hill. Potters Hill is sited on the eastern end of the Oatfield Ridge with properties at elevations of 187m AOD-185m AOD. These are comparable with elevations in the closest part of Bristol Airport occupied by the north-eastern parts of the surface car parking.
- 9.12.25 Potential views towards Bristol Airport are restricted to residential visual receptors at properties on the southern edge of Potters Hill. Properties in the northern part have an aspect that favours views to the north and north-east, whilst the density of the park homes and their layout minimises the availability of outward views toward the Proposed Development. Site visits and Google Earth Pro show that built development and the eastern part of Bristol Airport are rarely visible to residential visual receptors from the southern edge of this community. Outward views are partly screened and filtered by the hedgerows and hedgerow trees alongside and south of Currell's Lane, with more extensive intervening vegetation cover sited close to West Lane, around the extensive off-site

airport car parking operation to the south-west of Potters Hill, in the boundaries of the small-scale field network north of Downside Road and the woodland block at the junction of Downside Road and the A38. Additional screening is provided by the high mature woodland planting on the northern bund and eastern sides on the surface car parking in the northern area of Bristol Airport. This hedgerow and tree cover combines to screen views of the built development such as the terminal building in the northern area of Bristol Airport. Where southern views are available, they are more focused to the south over Felton Common. Yewtree Farm possesses several mature trees in its southern curtilage and is orientated so that its residents' principal views are likely to be to the east and west.

Baseline conditions - future baseline

- 9.12.26 No material changes have been identified in comparison with the current baseline as a consequence of the completion of the 10 mppa and GPDO developments commenced prior to November 2018.

Predicted effects and their significance

- 9.12.27 The assessment of effects upon the visual receptors in the community of Potters Hill is set out in **Table 9G.5 in Appendix 9G**. The visual assessment concludes that, the Proposed Development will result in an incremental change to the minor role played by components in the eastern part of Bristol Airport in the rarely available southern views. These views are only available to a small proportion of residential visual receptors in Potters Hill. Most residential visual receptors will sustain no changes to their baseline views from any component of the Proposed Development. There are unlikely to be any change to the views available to residents at Yewtree Farm. At Operation Phase Year 1 and Year 15 for these high sensitivity residential visual receptors the magnitude of change will be **negligible** with a **minor** level of effect that will be **not significant**.

Visual receptors at properties in Felton and Long Cross

Baseline conditions - current baseline

- 9.12.28 Felton is a nucleated settlement with limited ribbon development extending to the north-west and south, with the smaller settlement of Long Cross sited to its south-east. The mixture of one and two storey properties generally have a medium density and possess no dominant alignment pattern. Most of the properties are sited in small to medium gardens. Felton has a moderate number of trees within the settlement with a higher concentration on its western side around the Vicarage. Long Cross has few trees sited within it.
- 9.12.29 Both settlements are sited on the south-western slopes of a ridgeline as it descends to a valley bottom and have a notable aspect that favours views to the south and south-west. Both settlements occupy elevations lower than that of Bristol Airport. Felton's elevation varies from 168m AOD on its northern edge to 145m AOD at its southern edge. Long Cross is less elevated at 150m AOD to 140m AOD. It is likely that many of the residential visual receptors have their most extensive outward views to the south towards Felton Common. The closest components within the northern area of Bristol Airport, to the south-west, are the main entrance and the north-eastern areas of the surface car parking.
- 9.12.30 The dense morphology and aspect of the settlements result in western and south-western views towards Bristol Airport only potentially being available to residential visual receptors at properties on the western and south-western edges of Felton on Stanshall's Lane and Stanshall's Close. The most open publicly accessible view on the western edge is Viewpoint 4, at the western end of Stanshall's Close (**Figure 9.10**). Viewpoint 4 shows that rising topography to the west prevents any

views to Bristol Airport on the Broadfield Down Plateau. The screening effect of the rising topography is complimented by moderate amounts of tree cover and tall hedgerows on the eastern edge of Lulsgate Bottom. The rising topography towards Felton Common and Felton Hill to the south-west prevents any views extending as far as the southern area of Bristol Airport. These factors are applicable to western and south-western views from the western edge of Long Cross. The potential that the tallest components, especially the ATC tower, may be visible above the topography and through the intervening tree cover in views from west facing first floor windows in properties close to the western edges of the two settlements cannot be fully discounted.

Baseline conditions - future baseline

- 9.12.31 No material changes have been identified in comparison with the current baseline as a consequence of the completion of the 10 mppa and GPDO developments commenced prior to November 2018.

Predicted effects and their significance

- 9.12.32 The assessment of effects upon the visual receptors in the community of Felton and Long Cross is set out in **Table 9G.6** in **Appendix 9G**. The visual assessment concludes that the intervening topography and vegetation cover screens potential views of the existing taller components in the northern and southern areas of Bristol Airport. As the principal components of the Proposed Development will be sited alongside these existing components, they will likewise not be visible to residential visual receptors in Felton and Long Cross where outward western or south-western views are available. At Operation Phase Year 1 and Year 15 the magnitude of visual change will be **no change** which will be **not significant**.

Visual receptors at properties in Felton Hill

Baseline conditions - current baseline

- 9.12.33 Felton Hill is a settlement with a linear morphology sited alongside Felton Street on the north-facing slope between the southern edge of Felton at West Lane and the northern edge of Felton Common Open Access Area. Felton Hill is located at a lower elevation than Bristol Airport and has a 30m variation in elevation from 175m AOD at its southern end to 145m AOD at its northern end with the consequence that it is orientated so that residential visual receptors in properties generally have views away from Bristol Airport sited to the west and south-west. One and two storey high properties are sited east and west of Felton Street, with limited amounts of tree cover in their narrow curtilages. There is an increased level of tree cover in the hedgerows of the fields to the immediate west of Felton Hill. The ZTV for the existing and permitted development at Bristol Airport (**Figure 9.2**) shows that without the intervening tree cover, the topographical variation between Bristol Airport and Felton Hill and the latter's aspect would place all the properties in Felton Hill outside the ZTV, except for a small number on the more elevated southern edge. Site visits confirm that no views of existing components at Bristol Airport are available along Felton Street and from the ground level locations outside the frontages of the small number of properties on the southern edge next to Felton Common.

Baseline conditions - future baseline

- 9.12.34 No material changes have been identified in comparison with the current baseline as a consequence of the completion of the 10 mppa and GPDO developments commenced prior to November 2018.

Predicted effects and their significance

- 9.12.35 The assessment of effects upon the visual receptors in the community of Felton Hill is set out in **Table 9G.7** in **Appendix 9G**. The visual assessment concludes that the detailed topography between the eastern part of Bristol Airport and Felton Hill, supported by existing screening from vegetation cover and built development, will ensure that the Proposed Development will not be visible from any location within Felton Hill. At Operation Phase Year 1 and Year 15 the magnitude of visual change will be **no change** which will be **not significant**.

Visual receptors at properties in Redhill

Baseline conditions - current baseline

- 9.12.36 Redhill is a small settlement focused upon one and two storey properties sited alongside Church Road and Winters Lane and is located on the upper, south-facing slopes of the Yeo Valley. The eastern-most properties are sited alongside the A38. The southern aspect is reflected in the variation in elevation from 146m AOD at the northern edge to 119m AOD at its south-western edge. This compares with an elevation of 185m AOD at the southern edge of the Silver Zone car park extension (Phase 1) which is the closest component of Bristol Airport under the current baseline. The variation in elevation and intervening topography means that, as shown in **Figure 9.2**, the entire settlement of Redhill and its environs is outside the ZTV for the existing and started permitted 10 mppa components of Bristol Airport. Notwithstanding the absence of any views due to the topographical variation, intervening tree cover provided by hedgerow trees and copses provides additional screening of northern views available to residential visual receptors within Redhill. The principal and most valued views are likely to be the extensive, long distance views to the south over the Yeo Valley to the Mendip Hills.

Baseline conditions - future baseline

- 9.12.37 No material changes have been identified in comparison with the current baseline as a consequence of the completion of the 10 mppa and GPDO developments commenced prior to November 2018.

Predicted effects and their significance

- 9.12.38 The assessment of effects upon the visual receptors in Redhill is set out in **Table 9G.8** in **Appendix 9G**. The visual assessment concludes that the intervening slope topography between the southern part of Bristol Airport and Redhill will ensure that the Proposed Development will not be visible from any location within Redhill. At Operation Phase Year 1 and Year 15 the magnitude of visual change will be **no change** which will be **not significant**.

Visual receptors at properties in Blagdon

Baseline conditions - current baseline

- 9.12.39 Blagdon is a dispersed settlement on the lower slopes of the north-facing scarp of the Mendip Hills and is located within the Mendip Hills AONB. It has a high density of built development consisting mostly of two storey properties which reduces the availability of open, outward views for a high proportion of its residential visual receptors from within properties and their curtilages. There are moderate amounts of tree cover within the dispersed parts of Blagdon and within the undeveloped land between the parts of the settlement. Blagdon is located at lower elevations than Bristol Airport and its northern aspect is reflected in the variation in elevations from 150m AOD in the south to 75m AOD at the northern edge.

- 9.12.40 When open, northern views are available to residential visual receptors, such as at the picnic area on the southern edge selected as Viewpoint 15 (**Figure 9.19**), the extensive views extend across the Yeo Valley and Blagdon Lake as far as Dundry Hill. The wooded Oatfield Ridge to the north of Bristol Airport forms a short section of the wooded, slightly elevated northern horizon. Settlements such as Wrington, Redhill, Butcombe and Winford can be identified, but are not visually prominent. During the day time the built development, runway and aircraft at Bristol Airport are not readily discernible, but the cumulative mass of the built development in the northern area and the more brightly liveried aircraft can be identified when looking at the view in a more studied manner. At night-time the lighting within Bristol Airport forms one of the most prominent elements in such views.

Baseline conditions - future baseline

- 9.12.41 No material changes have been identified in comparison with the current baseline as a consequence of the completion of the 10 mppa and GPDO developments commenced prior to November 2018.

Predicted effects and their significance

- 9.12.42 The assessment of effects upon the visual receptors in the community of Blagdon is set out in **Table 9G.9 in Appendix 9G**. The visual assessment concludes that some of the components of the Proposed Development will be visible in the established visual context of Bristol Airport. Nevertheless, a minimum separation distance of 5km, the slightly lower elevation of Blagdon and the design of the components to minimise any potential visual contrast with existing built components at Bristol Airport will combine such that the Proposed Development will not alter the minimal baseline day time visual role played by Bristol Airport. At these separation distances, the limited planting proposed within and around Gruffy's Field (Items 10 and 13) and around the perimeter of the silver zone carpark extension (Phase 2) (Items 14 & 15) will not be individually visible even when fully established by Operation Phase Year 15. At Operation Phase Year 1 and Year 15 for these high sensitivity visual receptors the magnitude of change will be **negligible** with a **minor** level of effect that will be **not significant**.

9.13 Assessment of effects – visual effects upon visual receptors in individual or small groups of properties

- 9.13.1 The sensitivity of those in individual or small groups of properties is high as they possess a high susceptibility, according with GLVIA3 guidance. Additionally, it is likely that these receptors in individual or small groups of properties attach a medium or high value to the views that are available from the windows and curtilage of their properties.

Visual receptors at Cook's Farm

Baseline conditions - current baseline

- 9.13.2 Cook's Farm is a two-storey property on an east-west alignment at an elevation of 165m AOD, lower than that of Bristol Airport. There is a small garden against its northern elevation and agricultural buildings to its south and east. There is one tree within the curtilage of the Farm and a couple of hedgerow trees close to the east.
- 9.13.3 The western boundary of the northern area of Bristol Airport is sited 200m to the east, separated by a single field at the same elevation. This boundary is marked by an overgrown hedgerow with some hedgerow trees. The edge of the west apron is sited 260m to the south separated by a single

field and is at an elevation of 180m AOD. It is formed by an overgrown hedgerow with some hedgerow trees.

- 9.13.4 Built components in the northern area are visible to the south-east anti-clockwise around to the north-east in a 90° angle of view. These built components include the western end of the western walkway, the MT building, the upper section of the ATC tower, the western end of the terminal building, the western end of the hotel and the western end of Phase 1a MSCP, as well as several lighting columns. Residential receptors are likely to have glimpsed and seasonal filtered views of the closest ground level facilities and activities on the western side of the northern area, such as traffic movement on North Side Road. In addition, the tail fins of aircraft using the west apron are likely to be visible above a section of the elevated southern horizon. Cumulatively built development at Bristol Airport is likely to be considered by residential visual receptors to be the dominant elements in southern and eastern views from windows and the Farm's curtilage, although Bristol Airport has no presence in western or northern views.

Baseline conditions - future baseline

- 9.13.5 The completion of MSCP Phase 1b under the permitted 10 mppa development will incrementally increase the height and mass of the MSCP in resident's eastern views.

Predicted effects and their significance

- 9.13.6 The assessment of effects upon the visual receptors at Cook's Farm is set out in **Table 9G.10** in **Appendix 9G**. The cumulative changes to the western extent of the northern area of Bristol Airport will increase the baseline visual role of the largest built components in the southern and eastern views available to residential visual receptors at Cook's Farm. They will not represent a major change in the composition of the view, nor will they extend the angle of view occupied by built development at Bristol Airport, especially following the completion of the permitted 10 mppa Phase MSCP 1b. Residential visual receptors' northern and western views will remain unaffected. The reinforcement of the boundary hedgerow alongside North Side Road (proposed as item 1 in the integrated/embedded mitigation masterplan) will increase the effectiveness of the screening provided by the existing boundary hedgerow without increasing its height. Consequently, the upper floors and turbines positioned on the roof of MSCP Phase 3 will be visible in front of (and therefore screening) MSCP Phase 1. Both phases will be 16m AGL and have the same façade design minimising the changes resulting from the presence of Phase 3.

It is assessed that for this high sensitivity visual receptor, the magnitude of change will be **low** and the level of effect will be **moderate**. Under the significance criteria set out in **Table 9.9**, a moderate level of effect is possibly significant. Application of professional judgement for the residential visual receptors at Cook's Farm concludes that visual effects will be **not significant**. This judgement is due to the retention of the unaffected views and the dominance of the existing Bristol Airport in other views with the consequence that its presence and operation are already visually significant for residential visual receptors at Cook's Farm. There will be no variation between Operation Phase Year 1 and Year 15.

Visual receptors at Edson's Farm

Baseline conditions - current baseline

- 9.13.7 Edson's Farm is an isolated farmhouse sited amongst large agricultural buildings and substantial vegetation cover at an elevation of 140m AOD, approximately 40m lower than that of Bristol Airport. These combine to partly screen and frame the residential visual receptors' views to the south and south-east. The Farm is sited at the bottom of a dry, west-orientated valley between the

Oatfield Ridge and the Broadfield Down Plateau and is consequently about 20m lower than the least elevated and closest part of Bristol Airport sited 770m to the south-east. Topography rises steadily to the south-east foreshortening views in this direction. Additional screening in this direction is provided by a block of woodland within 150m of the farm on this rising valley side. An indication of how the rising topography screens many, if not all, components at Bristol Airport is provided in the photograph from nearby Viewpoint 13 (**Figure 9.18**) in which all components, except the top of the ATC tower, are screened by rising foreground topography. Residential visual receptors at Edson's Farm have no views of any existing components at Bristol Airport under current baseline conditions.

Baseline conditions - future baseline

- 9.13.8 No material changes have been identified in comparison with the current baseline as a consequence of the completion of the 10 mppa and GPDO developments commenced prior to November 2018.

Predicted effects and their significance

- 9.13.9 The assessment of effects upon the visual receptors at Edson's Farm is set out in **Table 9G.11** in **Appendix 9G**. The visual assessment concludes that the Proposed Development will not be visible in any views available to residential visual receptors at or close to Edson's Farm, due to intervening topography reinforced by nearby and intervening screening. At Operation Phase Years 1 and 15 the magnitude of change will be **no change** which will be **not significant**.

Visual receptors at Oatfield Farm

Baseline conditions - current baseline

- 9.13.10 Oatfield Farm is an isolated farmhouse sited at an elevation of 170m AOD (approximately 10m higher than the closest section of the northern boundary of Bristol Airport) on a south-west facing slope, descending to a shallow valley from the Oatfield Ridgeline. Oatfield Farm is sited 570m to the north of the closest section of Bristol Airport's northern boundary. The farmhouse is a two-storey property with a garden on its southern side. The location of the garden, adjacent agricultural buildings and aspect result in the likelihood that the residential visual receptors consider southern views to be their principal views. Some of the taller components at Bristol Airport, such as the top of the ATC tower, are visible above the southern horizon in views from around Oatfield Farm, but their visual role is reduced by the screening provided by hedgerow trees on the southern side of the shallow valley. The intervening topography screens views of all the lower and ground level components at Bristol Airport as shown in the baseline photograph (**Figure 9.18**) from Viewpoint 13, which is approximately 160m to the south-west of Oatfield Farm.

Baseline conditions - future baseline

- 9.13.11 No material changes have been identified in comparison with the current baseline as a consequence of the completion of the 10 mppa and GPDO developments commenced prior to November 2018.

Predicted effects and their significance

- 9.13.12 The assessment of effects upon the visual receptors at Oatfield Farm is set out in **Table 9G.12** in **Appendix 9G**. The visual assessment concludes that the upper parts of some components of the Proposed Development may be visible above a section of the southern horizon in the context of the limited role of some of the existing taller components at Bristol Airport. Visual changes will be

incremental and at least partly screened and/or filtered by intervening vegetation cover. At Operation Phase Years 1 and 15 this high sensitivity receptor will experience a magnitude of change that will be **negligible** and the level of effect will be **minor** that will be **not significant**.

Visual receptors at Downside House Farm

Baseline conditions - current baseline

- 9.13.13 Downside House Farm is an isolated group of buildings sited at an elevation of 135m AOD, approximately 25m to 35m lower than the northern boundary of Bristol Airport, on a north-west facing slope descending from the Broadfield Down Plateau. It is sited 1150m to the north-west of the closest section of Bristol Airport's western boundary of the northern area. Much of the intervening area consists of the fairways at the Tall Pines Golf Club. Residents' principal views are likely to be away from the Bristol Airport's northern area, based on a review of the orientation of the main buildings.
- 9.13.14 The ZTVs (**Figures 9.2 and 9.4**) show that Downside House Farm is sited on the edge of the ZTV for the existing and the started permitted 10 mppa development at Bristol Airport, although the ZTVs do not account for screening by vegetation. High levels of intervening tree cover, especially in the Tall Pines Golf Club and alongside Cook's Bridle Path, screen residential visual receptors' views of all the built components at Bristol Airport, with the possible exception of the 28.9m high ATC tower. Whilst the lack of public access prevented a site visit to the Farm, it was noted that the ATC tower could be seen between the intervening trees in the view from the entrance to the Farm on Downside Road, which is at the same elevation. No other components at Bristol Airport are visible from this location.

Baseline conditions - future baseline

- 9.13.15 No material changes have been identified in comparison with the current baseline as a consequence of the completion of the 10 mppa and GPDO developments commenced prior to November 2018.

Predicted effects and their significance

- 9.13.16 The assessment of effects upon the visual receptors at Downside House Farm is set out in **Table 9G.13** in **Appendix 9G**. The visual assessment concludes that even the tallest component (MSCP Phase 3) and the most elevated component (the terminal building extension) of the Proposed Development will be highly likely to be screened by a combination of differences in elevation, screening by existing development in the northern side and intervening tree cover. At Operation Phase Years 1 and 15 this high sensitivity residential visual receptor will sustain a magnitude of change that will be **negligible** and the level of effect will be **minor** that will be **not significant**.

Visual receptors at properties on Long Lane

Baseline conditions - current baseline

- 9.13.17 There are an estimated four properties sited alongside Long Lane at elevations of 185-190m AOD (a comparable elevation to the closest boundary of Bristol Airport) and separation distances from the closest section of the eastern boundary of 200m-400m. The two southerly properties are two storeys in height, with a north-south alignment. High levels of planting on their western boundary indicate that the principal views for residential visual receptors at these two properties are to the east. Although these properties are just within the ZTV for the existing and permitted

development, as shown on **Figure 9.2**, site visits show that screening from the garden boundary planting and tall hedges alongside the closest sections of intervening field boundaries minimises, if not completely screening, views of the hangars in the southern area, the runway, and the northern area of Bristol Airport for residential visual receptors at these two properties.

- 9.13.18 The two northerly properties (Hill House and Windmill House) are sited on the edge of Felton Common. They are both two storeys in height with the more northerly being a converted windmill. The latter property is surrounded by a thick 3-4m high hedgerow, which is likely to substantially screen views from ground level windows and its immediate curtilage. The former property is sited in a more open situation. It has a south-east to north-west orientation, with a large single storey outbuilding to its immediate north-west and its garden which extends to the south-east. It is likely that principal views for residential visual receptors are to the south-east.
- 9.13.19 The built development in the northern area, the eastern runway and taxiways, aircraft at stands on the east and west aprons and the three large hangars in the southern area, as well as the intervening section of A38, are all visible in available views to the north-west and west across an angle of view of approximately 80°. Cumulatively these features dominate views in this angle of view for the residential visual receptors at Hill House and Windmill House. There are no views of the Silver Zone car parking due to the screen bunding and planting alongside the A38.

Baseline conditions - future baseline

- 9.13.20 The implementation of ecological, landscape and visual mitigation, as described in the integrated/embedded mitigation masterplan, in the eastern part of Bristol Airport (Items 5, 6, 7, 8 & 9), including hedgerow reinforcement and enhancement between fields and alongside sections of the A38, will incrementally increase their visual prominence. Operational restrictions will necessitate that these hedgerows will not be permitted to grow taller to increase their screening role for residential visual receptors at Hill House and Windmill House. The completion of the three-storey high, new administration building to the south of the southern A38 traffic island will slightly increase the prominence of built development in views of the south-eastern part of Bristol Airport.

Predicted effects and their significance

- 9.13.21 The assessment of effects upon the visual receptors at properties on Long Lane is set out in **Table 9G.14 in Appendix 9G**. The visual assessment concludes that a proportion of the components of the Proposed Development have the potential to be visible to this small group of residential receptors. Variations in the locations and level of screening available to the residential visual receptors at southerly and northerly properties will result in differences in the visible changes within views. Residential visual receptors at the southerly properties have substantial nearby vegetation screening and will be highly unlikely to sustain any changes in their current and future baseline views, especially in summer months. They will sustain a negligible magnitude of change and a minor level of effect. Residential visual receptors at the northerly properties have open views towards Bristol Airport, especially from some first-floor windows. Some proposed components of the Proposed Development will be visible in these views, but they will always be seen in the existing context of extensive development and activities at Bristol Airport. They will not alter the balance and overall composition of north-western and western baseline views. At Operation Phase Years 1 and 15, these high sensitivity visual receptors will sustain a magnitude of visual change that will be **low** and the level of effect that will be **moderate**. This is possibly significant in accordance with **Table 9. 9**, but the application of professional judgement concludes that due to the baseline context provided by Bristol Airport, the visual changes that will be sustained must be assessed as **not significant** for the residential visual receptors at Hill House and Windmill House. This is due to the existing prominence of development and operational activities in the northern and southern areas at Bristol Airport.

Visual receptors at properties south of Hunters Hall

Baseline conditions - current baseline

- 9.13.22 There are an estimated nine properties sited alongside Old Barn Lane and New Road (including the Bungalow Inn) at elevations of 165m-175m AOD and separation distances from the closest section of the southern boundary (the south-eastern corner of the Silver Zone car park) of 550m-700m. The properties are sited on a gentle slope with a southern aspect, whilst Bristol Airport is sited on higher ground to the west and north-west.
- 9.13.23 The properties are two storeys in height, with varying alignments. All the properties have some mature trees sited within their curtilages and Old Barn Lane is bounded by tall hedgerows with some sections containing hedgerow trees. There is only limited intervening tree cover, with a shelterbelt, one field to the north-west of Hunters Hall, being a key vegetation feature. The eastern boundary of the Silver Zone car park is formed by a bund covered by a dense, mature belt of trees and understorey shrubs. These properties are within the ZTV for the existing and permitted development under the 10 mppa development that has commenced prior to November 2018, as shown on **Figure 9.2**. Site visits show that there is sufficient nearby and intervening vegetation cover to screen views of the upper sections of the taller built components in the northern area of Bristol Airport, where north-western views are available. No existing components in the southern area of Bristol Airport can be seen.

Baseline conditions - future baseline

- 9.13.24 The completion of the three-storey high, new administration building to the south of the southern A38 traffic island may slightly increase the prominence of built development in views of the south-eastern part of Bristol Airport. It is likely that this will be largely screened by the bunding and planting on the eastern side of the Silver Zone car parking. Further screening will be provided by the planting proposed as per the integrated/embedded mitigation masterplan, specifically item 9. .

Predicted effects and their significance

- 9.13.25 The assessment of effects upon the visual receptors at properties south of Hunters Hall is set out in **Table 9G.15** in **Appendix 9G**. The visual assessment concludes that the plateau and slope topography results in the area occupied by these properties being excluded from the ZTV for the Proposed Development. Any potential residual views from first floor windows will be screened or heavily filtered by nearby tree cover. At Operation Phase Years 1 and 15 the magnitude of change will be **no change** which will be **not significant**.

Visual receptors at properties around Butcombe Court

Baseline conditions - current baseline

- 9.13.26 There are an estimated eight properties sited alongside Thrubwell Lane and Row of Ashes Lane, as well as Butcombe Court at elevations of 170m-177m AOD and separation distances from the closest section of the southern boundary (the south-eastern corner of the Silver Zone car park) of 1050m-1500m. The properties are sited on a relatively broad terrace on a more extensive south-facing slope, whilst Bristol Airport is sited on higher ground to the north-west.
- 9.13.27 The properties are two storeys in height, with varying alignments and most are farmhouses with some nearby agricultural buildings and limited numbers of mature trees within their curtilages. In addition to a moderate number of hedgerow trees, tree cover is provided by a large copse to the

north-west of Butcombe Court i.e. in the line of view towards Bristol Airport, and a locally, visually prominent avenue of lime trees that extend to the north-east and south-west of Butcombe Court.

- 9.13.28 These properties are within the ZTV for the existing and permitted development as shown on **Figure 9.2**. The lower elevation of the area around Butcombe Court, allied with the plateau location of the northern area at Bristol Airport, means that potential views are restricted to the taller built components which are concentrated in the more distant northern area. Site visits show that there is sufficient nearby and intervening vegetation cover to screen potential views of the upper sections of the taller built components at Bristol Airport.

Baseline conditions - future baseline

- 9.13.29 The completion of the three-storey high, new administration building to the south of the southern A38 traffic island may slightly increase the prominence of built development in views of the south-eastern part of Bristol Airport. It is likely that this will be largely screened by the bunding and planting on the eastern side of the Silver Zone car parking. Further screening will be provided by the planting proposed as per the integrated/embedded mitigation masterplan, specifically item 9.

9.13.30

Predicted effects and their significance

- 9.13.31 The assessment of effects upon the visual receptors at properties around Butcombe Court is set out in **Table 9G.16** in **Appendix 9G**. The visual assessment concludes that separation distances of over 1km, combined with intervening topography and considerable amounts of nearby and intervening tree cover, will be likely to screen views of the Proposed Development as they combine to screen Bristol Airport in current and future baseline views. As the residential visual receptors are at properties that are within the ZTV for the Proposed Development, it is not possible to confidently assess that there will be no changes to baseline views. At Operation Phase Years 1 and 15, these high sensitivity visual receptors will sustain a magnitude of change that will be **negligible** and that the level of effect will be **minor** and as such **not significant**.

Visual receptors at properties around Hailstones Farm and the A38

Baseline conditions - current baseline

- 9.13.32 There are an estimated 14 properties sited close to the A38, close to its junction with Row of Ashes Lane, at elevations of 160m-170m AOD and separation distances from the closest section of the southern boundary (the southern edge of the Silver Zone car park) of 400m-980m. The properties are sited in a topographically complex area on a more extensive south-facing slope, whilst Bristol Airport is sited on the higher plateau to the north with an elevation of 180m AOD in its closest part.
- 9.13.33 The properties are mostly two storeys in height, with varying alignments and include six properties on the cul-de-sac of Ashford Road. Quarry Farm is surrounded by some business units, whilst the southern-most property, Apple Tree House, has a large commercial garage to its immediate north-east. Some of the properties, such as Quarry Farm, have a limited amount of mature tree cover within their curtilages. Hedgerow boundaries are often overgrown and there is nearby extensive tree cover in High Wood to the north or north-west and more broken tree cover in Gruffy's Field to the immediate south of the Silver Zone car park. The car park is also screened by a perimeter bund covered with mature tree cover and understorey shrubs.
- 9.13.34 These properties are within the ZTV for the existing and permitted 10 mppa development started by November 2018 as shown on **Figure 9.2**. The lower elevation of the area, allied with the elevated plateau location of Bristol Airport, means that potential views are restricted to the built

components in the southern area. Site visits show that the visual coalescence of intervening trees and tall hedgerows combine with the vegetated perimeter bund to screen potential northern views of any built development or car parking in the southern area of Bristol Airport.

Baseline conditions - future baseline

- 9.13.35 The integrated/embedded mitigation masterplan includes several examples of reinforcement planting and amendments to the management of key vegetation elements to the immediate south of the Silver Zone car park, principally within and along the boundaries of Gruffy's Field (items 10-13). One long-term consequence (i.e. by Operation Phase Year 15) of the adoption of these measures will be to reinforce the screening role of tree cover and hedgerows in the area between this group of residential visual receptors and the southern area of Bristol Airport.

Predicted effects and their significance

- 9.13.36 The assessment of effects upon the visual receptors at properties around Hailstones Farm and the A38 is set out in **Table 9G.17** in **Appendix 9G**. The visual assessment concludes that it is highly likely that a combination of topography, extensive intervening tree cover and perimeter bunding around the southern boundary of Bristol Airport will screen all views of the Proposed Development at Operation Phase Years 1 and 15, as it does for the existing and permitted development in the southern and northern areas. As most of the properties are sited within the ZTV for the Proposed Development, it is not possible to confidently assess that there will be no changes to current and future baseline views. At Operation Phase Years 1 and 15, these high sensitivity visual receptors will sustain a magnitude of change that will be **negligible** and that the level of effect will be **minor** which will be **not significant**.

Visual receptors at properties around Winters Lane

Baseline conditions - current baseline

- 9.13.37 There are four properties sited close to the northern end of Winters Lane: Broadfield Farm; Goblin Combe Farm (with its extensive off-site car parking business), Springfields and the northerly property called Highfield. These properties' elevation varies from 172m AOD at Highfield to 155m AOD at Broadfield Farm, due to their position on the south facing scarp slope of Broadfield Down Plateau with Bristol Airport located on higher land to the north. Broadfield Farm is also in a slight hollow at the head of an un-named, west-facing combe. The bunded south-western corner of the Silver Zone car park extension (Phase 1) is sited 70m i.e. one field, to the east of Highfield, whilst Broadfield Farm is 450m to the south-west. The closest existing built development in the northern area of Bristol Airport is 1km to the north-east.
- 9.13.38 The properties, especially Springfields and Highfield have high levels of tree cover within their curtilages. Goblin Combe Farm has several large buildings to its immediate north i.e. on the same side as the closest part of the Silver Zone car park extension (Phase 1). There are also some hedgerow and parkland trees. An indication of the visual context and tree cover is provided in the baseline photography from nearby Viewpoints 8 and 9 (**Figures 9.14** and **9.15**). The strong southern aspect with views to the Mendip Hills and the way in which rising topography foreshortens views to the north has the consequence that it is likely that the principal views for residential visual receptors at these properties are to the south.
- 9.13.39 Three of these properties are within the ZTV for the existing and permitted development (refer to **Figure 9.2**). The lower elevation of Broadfield Farm results in it being outside this ZTV. Despite the relative proximity of Bristol Airport, the scarp and plateau topography allied with hedgerows and tree cover result in no views of the runway or the built development being available from this area.

This was confirmed in site visits when driving north along Winters Lane. The 2.5m high perimeter mesh fence is not visible above the horizon hedgerow in northern views from outside Highfields and views across the runway only become available where Winters Lane turns west to run alongside the Bristol Airport boundary i.e. at Viewpoint 9. Residential visual receptors in the three properties are unlikely to have any views of the built development in the northern area of Bristol Airport, nor of the smaller scale-built development in the eastern part of the southern area. The upper sections of the new fire station and the snow base may be visible from north-facing, first floor windows, although they cannot be seen from Winters Lane.

- 9.13.40 Silver Zone car park extension (Phase 1) is substantially screened by a combination of the 2m high planted perimeter bunds as well as by the mature vegetation cover and/or building within the curtilages of Highfield and Goblin Combe Farm. Goblin Combe Farm itself screens the potential view for residential visual receptors at Springfields. Nevertheless, it is likely that partial and filtered views are available of cars parked in some areas of the Silver Zone car park extension (Phase 1) in some eastern or north-eastern views available to residential visual receptors at suitably orientated first floor windows or within the curtilages of Goblin Combe Farm or Highfield.

Baseline conditions - future baseline

- 9.13.41 The proposed introduction of year-round parking in the Silver Zone car park extension (Phase 1) will extend the period when visual effects are experienced in the severely limited number of locations where views into the car park are available. The native shrub and tree planting that has been recently provided on the perimeter bunds will continue to establish and increase levels of screening in tandem with the perimeter bunds.
- 9.13.42 The integrated/embedded mitigation masterplan includes extending the recent planting on the perimeter bund to the proposed new bund around the proposed phase two extension (items 14 and 15 on the integrated/embedded mitigation masterplan). This planting will gradually become established and fulfil its screening role more effectively post 10 years after planting.

Predicted effects and their significance

- 9.13.43 The assessment of effects upon the visual receptors at properties around Winters Lane is set out in **Table 9G.18** in **Appendix 9G**. The visual assessment concludes that residential visual receptors at three properties have some potential to sustain small scale changes in a portion of their existing views due to the proposed Silver Zone car park extension (Phase 2) which incorporates a grasscrete surface and 2m high perimeter bunding. Available views will be partly screened and framed and will be within the context of existing car parking inside and outside Bristol Airport site's boundary being a readily visible component of the views. At Operation Phase Years 1 and 15, these high sensitivity visual receptors will sustain a magnitude of change that will be **negligible** and with a level of effect will be **minor** and consequently **not significant**. By Operation Phase Year 15, the full establishment of the proposed mitigation planting on the perimeter bund will serve to reinforce the negligible magnitude of change.

Visual receptors at properties alongside Cook's Bridle Path

Baseline conditions - current baseline

- 9.13.44 There are four properties on the eastern side of Cook's Bridle Path and four properties on the western side. These properties' elevation varies from 155m AOD at the northern end (three properties) to 175m AOD at the southern end (one property). The acoustic wall surrounding the west apron is only 90m to the east of the property at 175m AOD, whilst the western boundary of the northern area of Bristol Airport is 500m to the east of the northern properties. The properties

on the eastern side of Cook's Bridle Path are approximately a minimum of 100m further away from these respective boundaries. The three northern properties are single storey, the other five properties are two storeys high. The three northern properties are set in medium sized gardens that contain moderate amounts of mature tree cover. The single property sited on the eastern side of the southern end of Cook's Bridle Path is in an open location orientated so that the likely principal views for residential visual receptors are to the south towards the runway. Residential visual receptors' southern views are partly screened by an overgrown boundary hedgerow. The four properties on the western side of Cook's Bridle Path are sited within dense, mature tree cover.

- 9.13.45 The photograph from Viewpoint 12 on Cook's Bridle Path (**Figure 9.17**) is from the Path section where the clearest view towards Bristol Airport is available. It shows that the moderate level of tree and hedgerow cover in the field around Cook's Farm and, to a lesser extent on the western boundary of the northern area of Bristol Airport, is sufficient to screen most of the existing built components and all the ground level activities and movement. The ATC tower is readily visible above a section of the horizon and there are partial views of the western elevation of the hotel. Some of the lighting columns on the west apron can also be seen. The photograph from Viewpoint 1 (**Figure 9.7**) shows the hedgerow and tree cover in the gardens of the properties at the northern end of Cook's Bridle Path but does not show how this vegetation provides partial screening and filtering in the views available to residential visual receptors in these three properties.
- 9.13.46 The site visit demonstrated that elsewhere along Cook's Bridle Path even the ATC tower is often screened by intervening tree cover. It is concluded that existing development within the northern area of Bristol Airport has a low baseline visual presence for most of this group of residential visual receptors.

Baseline conditions - future baseline

- 9.13.47 The completed MSCP Phase 1, sited towards the western boundary of the northern area, will have a comparable visual presence to the hotel i.e. its western end will be partly visible in some views from these properties. No material changes have been identified in comparison with the current baseline as a consequence of the completion of the 10 mppa and GPDO developments commencing prior to November 2018.

Predicted effects and their significance

- 9.13.48 The assessment of effects upon the visual receptors at properties around Cook's Bridle Path is set out in **Table 9G.19** in **Appendix 9G**. The visual assessment concludes that residential visual receptors at the eight properties sited alongside Cook's Bridle Path have varying views of the existing and permitted developments and activities at Bristol Airport. This variation is primarily determined by separation distance and the amount of tree cover in their curtilages and intervening hedgerows. Visual changes generated by the Proposed Development relate to MSCP Phase 3, the terminal building and use of Stands 34-37. The same factors that apply to the baseline views will influence the magnitudes of change that will be sustained by residential visual receptors due to the Proposed Development. At Operation Phase Years 1 and 15 the magnitudes of change for these high sensitivity visual receptors will vary between **negligible** and **low** and the level of effect will vary between **minor** and **moderate**. Under the significance criteria set out in **Table 9.9** a moderate level of effect is possibly significant. Application of professional judgement for the residential visual receptors in the four affected properties on the eastern side of Cook's Bridle Path concludes that visual effects will be **not significant** throughout the Operation Phase. This is due to the design of MSCP Phase 3 and the terminal extension and canopy possessing the same scale, form and architectural principles as the permitted MSCP and existing terminal that are present in the residential visual receptors' baseline views. For the property close to Stands 33-36 the periodic and

partial presence of aircraft is a long-established component in the views available to the residential visual receptors.

Visual receptors at Downside Farm

Baseline conditions - current baseline

- 9.13.49 Downside Farm is a two-storey property with an east-west alignment at an elevation of 176m AOD, slightly higher than the northern boundary of Bristol Airport. There is a courtyard garden to the south of the farmhouse and agricultural buildings to its north and east. The Farm's layout means it is likely that principal views for residential visual receptors are to the south i.e. towards the northern area of Bristol Airport. There is no tree or vegetation cover between the Farm and the dense tree cover alongside Downside Road.
- 9.13.50 The hedgerow trees on the north side of Downside Road, especially the belt of woodland and understorey planting on the northern boundary perimeter bund on the south side of Downside Road, provide effective screening of ground level activities and the lower sections of built development in summer months. In winter months when most of the vegetation is without leaves views remain heavily filtered. With reference to the Viewpoint 2 baseline photograph (**Figure 9.8**), shows that residents have views over the canopy of this tree cover to the upper sections of the taller built components as well as the tail fins of aircraft at stands within the west and east aprons. Built components that are within residential visual receptors' southern view include: the ATC tower, the hotel, sections of the western walkway, the terminal building and the current administration building. These built components are likely to make Bristol Airport the most prominent visual element in residential visual receptors' views.

Baseline conditions - future baseline

- 9.13.51 It is likely that the upper section (Phase 1b) of the completed MSCP Phase 1 will be partly visible above the canopy of the intervening tree cover along Downside Road. It will partly screen the resident's current views of the hotel. No other material changes have been identified in comparison with the current baseline as a consequence of the completion of the 10 mppa and GPDO developments commenced prior to November 2018.

Predicted effects and their significance

- 9.13.52 The assessment of effects upon the visual receptors at Downside Farm is set out in **Table 9G.20** in **Appendix 9G**. The visual assessment concludes that the upper sections of built components of the Proposed Development that will be sited on the most elevated part of the northern area of Bristol Airport, will change the detailed composition of a proportion of the southern view that is available to this residential visual receptor. The proposed new and extended built components will reflect the height, scale, mass and appearance of the current and future baseline-built components in this view. Effective screening of the lower sections of these built components and the ground level components and operational activities will continue to be provided by the tree cover alongside Downside Road, especially on the northern perimeter bund. At Operation Phase Year 1 and 15, these high sensitivity visual receptors will sustain a magnitude of change that will be **low** and that the level of effect will be **moderate**. Under the significance criteria set out in **Table 9.9** a moderate level of effect is possibly significant. Application of professional judgement for the residential visual receptors at Downside Farm concludes that the long-standing baseline visual prominence of built components and aircraft at Bristol Airport in the residential visual receptors' likely principal view has the consequence that a limited intensification of built development that retains the visual characteristics of current and future baseline built development should be assessed as resulting in a visual effect that is **not significant**.

9.14 Assessment of effects – visual effects upon recreational visual receptors using long distance trails

- 9.14.1 The sensitivity of recreational visual receptors using long distance trails is high since these possess a high susceptibility, according with GLVIA3. Additionally, it is likely that these receptors attach medium or high value to the views, whose availability is likely to be one of the principal attractions of these long-distance trails.

Visual receptors using Monarch's Way

Baseline conditions - current baseline

- 9.14.2 Approximately 18km of Monarch's Way is routed through the eastern side of the study area from Long Ashton in the north to Compton Martin in the south. The closest section passes 2.8km to the east of Bristol Airport, at Winford. The ZTV (**Figure 9.2**) shows that potentially recreational visual receptors using two short sections of Monarch's Way have views of Bristol Airport. These are:
- For approximately 2.5km on the slopes of Dundry Hill between Dundry and Winford; and
 - For approximately 2.0km on the lower Mendip Hill scarp slope south of Compton Martin.
- 9.14.3 These sections are routed across relatively open, pastoral farmland. Site visits and references to the relevant landscape character assessments.²⁴ confirm that long distance views are available from these sections due to their relative elevation. Moderate to low levels of screening is provided by nearby hedgerows and tree cover. Bristol Airport is periodically visible in south-western, elevated views over a minimum separation distance of 2.8km from the section between Dundry and Winford, due to its contrast in colour with the surrounding agricultural and woodland land-uses. Within these views, the larger-scale built components within the airport can be identified. North-western views from the shorter section south of Compton Martin are over a minimum separation distance of 8.5km. As illustrated in the baseline photograph from Viewpoint 19 (**Figure 9.21**), which is sited close to the section of Monarch's Way south of Compton Martin, Bristol Airport is difficult to identify, even in the limited number of locations where north-western views are available.

Baseline conditions - future baseline

- 9.14.4 No material changes have been identified in comparison with the current baseline as a consequence of the completion of the 10 mppa and GPDO developments commenced prior to November 2018.

Predicted effects and their significance

- 9.14.5 The assessment of effects upon the recreational visual receptors using Monarch's Way is set out in **Table 9G.21** in **Appendix 9G**. The visual assessment concludes that the Proposed Development will potentially be visible to recreational visual receptors from two sections of Monarch's Way with a combined length of approximately 4km. The separation distances mean that Bristol Airport is highly likely to be screened by nearby vegetation cover where this is present. For short sections where open views are available the proposed built components will be difficult or impossible to identify against the baseline buildings, carparks, runways and taxiways. At Operation Phase Years 1 and 15, the magnitude of change will be **negligible** or **no change** with the level of effect being **none** or **minor** resulting in a visual effect that will be **not significant**.

Visual receptors using the Limestone Link

Baseline conditions - current baseline

- 9.14.6 Approximately 16km of the Limestone Link is routed through the southern side of the study area from its start at Shiphams to the south-west to West Harptree in the south-east. The closest section, south of Blagdon, passes 6.1km to the south of Bristol Airport. The ZTV (**Figure 9.2**) shows that potentially recreational visual receptors, using approximately 14km of the Limestone Link from Dolebury Warren eastwards, have views of Bristol Airport over separation distances of 6.1km to 10.0km.
- 9.14.7 This almost continuous section is routed across the middle and upper slopes of the Mendip Hills scarp slope. Most sub-sections cross open pasture, but others are routed through or alongside large woodland plantations such as the sub-section west of the Wrangle. When using the former sections, recreational visual receptors' northern views are generally unaffected by screening from nearby vegetation, but when they pass through or on the southern edge of woodland plantations northern views are screened.
- 9.14.8 Despite the relative elevation of most of this section of the Limestone Link, separation distances and comparable elevations make it difficult for recreational visual receptors to identify Bristol Airport in their extensive northern views. Individual built components, with the occasional exception of the ATC tower, are rarely visible and none extend above the northern horizon. This baseline situation was confirmed in site visits and in the photographs from the following viewpoints:
- Viewpoint 15 on the more elevated southern side of Blagdon (**Figure 9.19**);
 - Viewpoint 18 on Dolebury Warren (**Figure 9.20**); and
 - Viewpoint 19 close to the Wrangle (**Figure 9.21**).

Baseline conditions - future baseline

- 9.14.9 No material changes have been identified in comparison with the current baseline due to the completion of the 10 mppa and GPDO developments commenced prior to November 2018. The availability of longer distance northern views may be affected along some sections of the Limestone Link by felling of some coupes in the nearby forestry plantations.

Predicted effects and their significance

- 9.14.10 The assessment of effects upon the recreational visual receptors using the Limestone Link is set out in **Table 9G.22** in **Appendix 9G**. For Operation Phase Years 1 and 15 the visual assessment concludes that a combination of separation distances over 6km and the minimal visual role of Bristol Airport in the current and future baseline views, will result in the high sensitivity recreational visual receptors using the Limestone Link sustaining a **negligible** magnitude of change from the closest section of the Limestone Link and **no change** from other, more distant sections of the Link. The level of effect will be **minor** to **none** which will be **not significant**.

Visual receptors using the West Mendip Way

Baseline conditions - current baseline

- 9.14.11 Approximately 7km of the West Mendip Way is routed through the south-western study area, close to Shiphams and south of Black Down. The ZTV (**Figure 9.2**) shows that recreational visual

receptors using only a few hundred metres of the West Mendip Way east of Shipham have potential views of Bristol Airport at separation distances over 8.0km. As this section of the West Mendip Way is routed through Rowberrow Warren, an extensive coniferous plantation, no views will be available to recreational visual receptors.

Baseline conditions - future baseline

- 9.14.12 No material changes have been identified in comparison with the current baseline due to the completion of the 10 mppa and GPDO developments commenced prior to November 2018.

Predicted effects and their significance

- 9.14.13 The assessment of effects upon the recreational visual receptors using the West Mendip Way is set out in **Table 9G.23** in **Appendix 9G**. The visual assessment concludes that the Proposed Development is screened by the coniferous woodland in Rowberrow Warren, for Operation Years 1 and 15 it is therefore assessed that for this high sensitivity group of recreational visual receptors the magnitude of change will be **no change** and the level of effect will be **none** which will be **not significant**.

Visual receptors using the Community Forest Path

Baseline conditions - current baseline

- 9.14.14 Approximately 3km of the Community Forest Path is routed through the north-eastern study area, around the north-western slopes of Dundry Hill. The ZTV (**Figure 9.2**) shows that recreational visual receptors using only a few hundred metres of the Community Forest Path, west of Dundry, have potential views of Bristol Airport at separation distances over 4.0km. Glimpsed views of Bristol Airport may be available to recreational visual receptors from a small number of specific locations.

Baseline conditions - future baseline

- 9.14.15 No material changes have been identified in comparison with the current baseline due to the completion of the 10 mppa and GPDO developments commenced prior to November 2018.

Predicted effects and their significance

- 9.14.16 The assessment of effects upon the recreational visual receptors using the Community Forest Path is set out in **Table 9G.24** in **Appendix 9G**. The visual assessment concludes that potential views of Bristol Airport and the Proposed Development may be available from a couple of hundred metres of the 72km long Community Forest Path. Where and if views are available, under the current and future baseline, Bristol Airport is and will continue to be a minor visual element; the built components of the Proposed Development will generate an incremental change. At Operation Phase Years 1 and 15, the magnitude of change will be **negligible** and the level of effect will be **minor**, although there is a strong possibility that there will be no visual effects. Either outcome will be **not significant**.

9.15 Assessment of effects – visual effects upon recreational visual receptors using national and regional cycle routes

- 9.15.1 The sensitivity of this category is high due to recreational visual receptors using national or regional cycle routes being assessed as possessing high susceptibility, in accordance with GLVIA3.

Additionally, it is likely that they attach a medium or high value to the views, whose availability is likely to be one of the principal attractions of cycling these routes.

Visual receptors using Regional Cycle Route 410

Baseline conditions - current baseline

- 9.15.2 Approximately 17km of Regional Cycle Route (RCR) 410 is routed south-east to north-west across the central study area. It is routed along Downside Road and therefore alongside the northern boundary of Bristol Airport. The ZTV (**Figure 9.2**) shows that recreational visual receptors using the section of RCR 410 between Felton and Brockley Combe, that is approximately 6km long, have potential views of Bristol Airport.
- 9.15.3 Baseline views available to recreational visual receptors cycling along this 6km long section of RCR 410 can be sub-divided into five sub-sections:
- The western-most sub-section, 1km in length, is within the extensive woodland of Wrington Warren and Willis's Batch, with the result that no views east toward Bristol Airport are available;
 - The visual assessment for residential visual receptors in Downside, east of Cook's Bridle Path, in paragraphs 9.12.167 – 9.12.19 shows that from the sub-section of RCR 410 routed on Downside Road, east of Cook's Bridle Path, views of Bristol Airport are limited to periodic views of the ATC tower;
 - More open views of the principal, built components in the western half of the northern area of Bristol Airport, as shown in the baseline photograph from Viewpoint 1 (**Figure 9.7**), are available when cycling east along the 500m long sub-section of RCR 410 between Cook's Bridle Path and the north-western corner of the northern area of Bristol Airport;
 - The northern perimeter bund and its dense tree cover and understorey planting screen the close distance potential views from the 1km long sub-section alongside the northern boundary to the A38; and
 - Site visits show that none of the baseline built components at Bristol Airport can be seen from the sub-section of RCR 410 that is routed along West Lane between the A38 and the southern edge of Felton. This is due to the screening provided by the coalescence of intervening hedgerow and tree cover.
- 9.15.4 The reminder of RCR 410 between Felton and Chew Stoke is routed at a comparatively low elevation with the consequence that it is outside the ZTV for the existing and permitted development at Bristol Airport.

Baseline conditions - future baseline

- 9.15.5 The completion of MSCP Phase 1 on the north-west part of the northern area at Bristol Airport will slightly increase the visual role of built development at Bristol Airport in eastern views along the 500m long sub-section between Cook's Bridle Path and the north-western corner of the northern area of Bristol Airport.

Predicted effects and their significance

- 9.15.6 The assessment of effects upon the recreational visual receptors using RCR 410 is set out in **Table 9G.25** in **Appendix 9G**. The visual assessment concludes that the Proposed Development will be visible for approximately 500m of a 21km RCR. At Operation Phase Years 1 and 15 any changes to views will be transient and only available to cyclists travelling in one direction. They will also only

be visible in the visual context of current and future baseline built development at Bristol Airport in the same field of view. In the context of the entirety of RCR 410 whose users possess high sensitivity, it is assessed that the magnitude of change will be **negligible** and the level of effect will be **minor** which will be **not significant**.

Visual receptors using National Cycle Route 334

Baseline conditions - current baseline

- 9.15.7 Approximately 6.5km of the 21km long National Cycle Route (NCR) 334 is routed across the north-east of the study area. It is routed south of Felton (where it joins RCR 410) and then north to Long Ashton. The ZTV (**Figure 9.20**) shows that recreational visual receptors cycling a 1km long section of NCR 334, routed along Kingston Lane east of Felton, have potential views of Bristol Airport. Site visits show that screening from intervening tree cover results in no baseline views being available of the upper sections of the tallest built components in Bristol Airport.

Baseline conditions - future baseline

- 9.15.8 No material changes have been identified in comparison with the current baseline due to the completion of the 10 mppa and GPDO developments commenced prior to November 2018.

Predicted effects and their significance

- 9.15.9 The assessment of effects upon the recreational visual receptors using NCR 334 is set out in **Table 9G.26** in **Appendix 9G**. The visual assessment concludes that the Proposed Development would be potentially visible from the same 1km length of NCR 334 as the current components at Bristol Airport are potentially visible. The baseline review shows that no baseline built components at Bristol Airport, including the terminal building and the 28.9m high ATC tower, can be seen in western views due to screening from intervening vegetation. It is therefore highly unlikely that any of the proposed built components which have a maximum height of 16m will be visible in the short-lived, transient views available to recreational visual receptors cycling in a westerly direction. At Operation Phase Years 1 and 15, the magnitude of change will be **no change** and the level of effect will be **none** which will be **not significant**.

Visual receptors using National Cycle Route 3

Baseline conditions - current baseline

- 9.15.10 Approximately 15km of NCR 3 is routed across the south-east of the study area. It is routed north and west of Chew Valley Lake, climbs the Mendip Hills scarp slope close to the Wrangle and exits the southern edge of the study area in the Mendip Forest. The ZTV (**Figure 9.2**) shows that recreational visual receptors cycling a 2.5km long section of NCR 3, routed on the scarp slope north-east of the Wrangle, have potential views of Bristol Airport. This section has a minimum separation distance to Bristol Airport of approximately 8km. The minimal visual presence provided by Bristol Airport, where open northern views are available from close to the Wrangle, is illustrated in the baseline photograph from Viewpoint 19 (**Figure 9.21**).

Baseline conditions - future baseline

- 9.15.11 No material changes have been identified in comparison with the current baseline due to the completion of the 10 mppa and GPDO developments commenced prior to November 2018.

Predicted effects and their significance

- 9.15.12 The assessment of effects upon the recreational visual receptors using NCR 3 is set out in **Table 9G.27 in Appendix 9G**. The visual assessment concludes that the Proposed Development would be potentially visible from a slightly reduced length of NCR 3 to that shown on the ZTV, with the less elevated length of NCR 3 at the base of the scarp slope excluded. The baseline review shows that due to the separation distance of more than 8km, no current and future baseline-built components at Bristol Airport, including the terminal building and the ATC tower, can be readily identified in the limited number of locations where long-distance northern views are available. It is therefore highly unlikely that at Operation Phase Years 1 and 15 any of the proposed built components, that will be sited within the context of the existing built components in the northern area at Bristol Airport will be identifiable in the transient views available to high sensitivity recreational visual receptors cycling this approximately 2km long section of NCR 3. It is assessed that the magnitude of change will be **no change** and the level of effect will be **none** which will be **not significant**.

9.16 Assessment of effects – visual effects upon recreational visual receptors using open access areas

- 9.16.1 The sensitivity of recreational receptors using open access areas is high since they possess a high susceptibility, in accordance with GLVIA3. Additionally, it is likely that these receptors attach a medium or high value to the views, whose availability is likely to be one of the principal reasons for visiting an open access area.

Visual receptors using Felton Common Open Access Area

Baseline conditions - current baseline

- 9.16.2 Felton Common Open Access Area covers approximately 40ha to the east of Bristol Airport and the south and west of Felton Hill. It has a 191m AOD high point in its south-western corner and slopes gently to the north-east to 170m AOD at the boundary with Felton Hill and to the north to 160m AOD at West Lane and the A38 junction. The land-use on Felton Common is mainly rough grazing with a scattering of isolated shrubs and small trees in its southern and eastern parts. It is traversed by several PRoWs, as shown on **Figure 9.36**, supplemented by a higher density of informal paths.
- 9.16.3 The elevation and land-use provide extensive, open internal and outward views. Western and northern views are shown in the baseline photography from Viewpoint 5 (**Figure 9.11**), which is located close to the 191m AOD high spot. Review of the baseline photograph, allied with site visits, shows that the built development in the northern area at Bristol Airport is prominent and occupies an approximate 40° horizontal angle of view to the west or north-west. The most readily identifiable built components are the ATC tower and the current administration building, which extend above the level horizon that is formed by the terminal building. The predominant grey colouration of the built components reduces their visual presence.
- 9.16.4 There are few views of the runway or taxiways due to the similarity with the elevation of the central area of Bristol Airport which is between 183m AOD and 187m AOD. The direction of views from the open access area results in the often brightly coloured aircraft at stands, especially on the eastern apron, being prominent. Views of the hangar in the southern area are only available from some locations on the western edge of the open access area and there are no views of the Silver Zone car parks due to the screening on the eastern side of the southern area and around the southern entrance roundabout on the A38. The hedgerows bounding the fields between the open

access area and the A38 are kept low due to operational restrictions. These hedgerows therefore provide minimum screening in western or north-western views that are available to recreational visual receptors.

- 9.16.5 The visual role and prominence of ground level aircraft and built components at Bristol Airport decreases considerably in the northern and eastern parts of the open access area. It is also important to note that ground level aircraft and built components are absent from what are likely to be valued views towards Dundry Hill; the less elevated area to the east formed by the upper Chew Valley; and south towards the Mendip Hills.

Baseline conditions - future baseline

- 9.16.6 A new administration building with a 16m height will be provided close to the hangars and southern entrance roundabout in the southern area. Here, it will be substantially screened due to it being at a lower ground level than the A38 and the presence of the existing hedgerow alongside the closest section of the eastern boundary.

Predicted effects and their significance

- 9.16.7 The assessment of effects upon the recreational visual receptors using Felton Common Open Access Area is set out in **Table 9G.28** in **Appendix 9G**. The visual assessment concludes that aircraft on the ground and built components at the northern area of Bristol Airport are prominent baseline visual elements in some views available to recreational visual receptors from most, but not all, of the Felton Common Open Access Area. In this baseline context some components of the Proposed Development, principally the eastern walkway and east pier, will result in an intensification of built development and activity in part of the horizontal angle of view occupied by the northern area, but will screen other activities and built components. The implementation of the proposed mitigation measures set out in the integrated/embedded mitigation masterplan (principally items 5 – 9) will incrementally increase the screening available for some ground level components and activities. There will be no changes in the views available in which Bristol Airport currently has no visual role. At Operation Phase Years 1 and 15, the magnitude of change will vary from **low** in the southern and western parts of the open access area to **negligible** in northern and eastern parts and none at the northern and north-eastern edges. Consequently, the level of effect will not exceed **moderate**. Under the significance criteria set out in **Table 9.9** a **moderate** level of effect is possibly significant. Application of professional judgement for recreational visual receptors using Felton Common Open Access Area concludes that visual effects will be **not significant**. This is due to the extensive and long-established baseline context provided by Bristol Airport for the views available to recreational visual receptors using Felton Common Open Access Area and because it is likely that their most valued views are in directions away from the Airport.

Visual receptors using Black Down Open Access Area

Baseline conditions - current baseline

- 9.16.8 Black Down Open Access Area extends approximately 2.2km by 1.7km over an elevated part of the Mendip Hills. It includes Beacon Batch which at 325m AOD is the highest point in the Mendip Hills. The Open Access Area consists of unenclosed moor and rough grazing and is traversed by several PRowWs supplemented by numerous informal paths. Its northern boundary is partly formed by the Limestone Link.
- 9.16.9 As shown in the baseline photograph from Viewpoint 17 in **Figure 9.20**, the combination of elevation and minimal shrub and tree cover allow open, extensive outward views, including views towards Bristol Airport. A review of this photograph and site visits show the built development at

Bristol Airport to be visible in favourable weather and lighting conditions. Visibility is primarily due to the colour contrast between the pale colour palette of the built development in the northern and southern areas and the runways and taxiways in the central area, which contrasts with the darker shades of the surrounding fields and tree cover. Individual built components are difficult to identify and no components, including the ATC tower, extend above the horizon. The view from Beacon Batch is a worst-case scenario due to its elevation which is approximately 145m above that of Bristol Airport. In the lower parts of the open access area where relative elevation levels are more comparable, the visual role of Bristol Airport diminishes within the outward views.

Baseline conditions - future baseline

- 9.16.10 A new administration building with a 16m height will be provided close to the hangars and southern entrance roundabout in the southern area. This new building may be identifiable in optimal weather and lighting conditions. No other material changes have been identified in comparison with the current baseline due to the completion of the 10 mppa and GPDO developments commenced prior to November 2018.

Predicted effects and their significance

- 9.16.11 The assessment of effects upon the recreational visual receptors using Black Down Open Access Area is set out in **Table 9G.29** in **Appendix 9G**. The visual assessment concludes that some of the largest proposed components of the Proposed Development will sometimes be visible in the existing visual context of Bristol Airport. They will represent an incremental change within the existing, limited visual parameters of the built development at Bristol Airport and will not increase its vertical or horizontal extent. Any minor, incremental visual change will be identifiable only from the small proportion of the Black Down Open Access Area where the difference in comparative elevation is greatest. At Operation Phase Years 1 and 15, it is assessed that the incremental visual change will result in a **negligible** magnitude of change and a **minor** level of effect that will be **not significant**.

Visual receptors using Burrington Open Access Area

Baseline conditions - current baseline

- 9.16.12 Burrington Open Access Area is a northern, generally less elevated and smaller extension of the Black Down Open Access Area. Its more elevated south-eastern area attains a height of 214m AOD whilst its northern parts descends sharply down the Mendip Hills scarp slope to elevations of around 120m AOD. Burrington Open Access Area's land use consists of some moderately open areas of rough grazing in its south, with increasing levels of tree cover in its central and northern parts forming dense woodland in some areas.
- 9.16.13 The baseline photograph from Viewpoint 16 (**Figure 9.19**) is from one of the most open areas in the more elevated southern part of the open access area. It shows the level of tree cover within much of the open access area and how this frames and filters outward views, including northern outward views towards Bristol Airport. Built components at Bristol Airport cannot be readily identified where open views are available. This is primarily due to the relative similarity in elevation between Bristol Airport and Burrington Open Access Area. It is likely that views to the north-west that include the Severn Estuary and south-east Wales are more valued by recreational visual receptors' using the open access area.

Baseline conditions - future baseline

- 9.16.14 No material changes have been identified in comparison with the current baseline due to the completion of the 10 mppa and GPDO developments commenced prior to November 2018.

Predicted effects and their significance

- 9.16.15 The assessment of effects upon the recreational visual receptors using Burrington Open Access Area is set out in **Table 9G.30** in **Appendix 9G**. The visual assessment concludes that the Proposed Development will not be readily identifiable in the existing, minimal visual context of Bristol Airport. Any possible, incremental visual change will be identifiable only from a small proportion of the Burrington Open Access Area and recreational visual receptors using most of the open access area will continue to have no views of the built components at Bristol Airport. At Operation Phase Years 1 and 15, the incremental visual change will result in a **negligible** magnitude of change and a **minor** level of effect which will be **not significant**.

Visual receptors using Dolebury Warren Open Access Area

Baseline conditions - current baseline

- 9.16.16 Dolebury Warren Open Access Area is a compact open access area sited on the upper slopes and summit of an outlying hill at the base of the Mendip Hills scarp slope with a maximum height of 183m AOD. The steep slopes that surround the open access area are covered with mixed coniferous and deciduous woodland that restricts the availability of outward views in some directions. The site visit showed that the long-distance north-eastern views in which Bristol Airport may be visible are only available from a small proportion of Dolebury Warren Open Access Area, principally on some of the ramparts of the Iron Age fort that occupies the western part of upper slopes. The baseline photograph from Viewpoint 18 (**Figure 9. 20**) shows that over a separation distance of 7.4km and from a slightly lower elevation than Bristol Airport, it is not possible to readily identify any built components at Bristol Airport.

Baseline conditions - future baseline

- 9.16.17 No material changes have been identified in comparison with the current baseline due to the completion of the 10 mppa and GPDO developments commenced prior to November 2018.

Predicted effects and their significance

- 9.16.18 The assessment of effects upon the recreational visual receptors using Dolebury Warren Open Access Area is set out in **Table 9G.31** in **Appendix 9G**. The visual assessment concludes that the Proposed Development will not be readily identifiable in the existing, minimal visual context of Bristol Airport at Operation Phase Years 1 and 15. Any possible, incremental visual change will be identifiable only from a small proportion of the Dolebury Open Access Area and recreational visual receptors using most of the open access area will continue to have no views of the built components at Bristol Airport. The incremental visual change will result in a **negligible** magnitude of change and a **minor** level of effect which will be **not significant**.

9.17 Assessment of effects – visual effects upon transient visual receptors using roads

- 9.17.1 The sensitivity of this category of visual receptors is medium due to transient visual receptors being assessed as possessing medium susceptibility, in accordance with GLVIA3. Additionally, it is also

likely that these receptors attach medium or low value to the views that are available when travelling along roads, especially 'A' roads where journeys are more likely to be at higher speeds and in which appreciation of views is unlikely to be the receptors' primary purpose. It is also relevant that views are generally restricted to a narrower field of view within a travelling vehicle, particularly for the driver.

Visual receptors travelling southbound on the A38

Baseline conditions - current baseline

- 9.17.2 The A38 runs between Cornwall and Nottinghamshire, including the section between Bristol and Bridgwater that passes alongside the eastern boundary of Bristol Airport. The section that passes the eastern boundary between the northern and southern entrance islands was re-routed in 2001 to allow the runway extension. The comparative ZTV (**Figure 9.4**) shows that transient visual receptors in southbound vehicles potentially have forward looking views of the northern area at Bristol Airport from north of Potters Hill until the northern entrance island and then oblique views as they travel alongside the eastern boundary, around the southern entrance island and south of the south-eastern corner of the southern area. Any potential rear views cease before Redhill as the A38 descends the northern side of the Yeo Valley.
- 9.17.3 Site visits show that views are not available to transient receptors when passing through Potters Hill due to nearby and intervening vegetation and built development (refer to **Table 9G.5**). Partial filtered views only become available as the route approaches the northern entrance island. The associated infrastructure, such as: lighting columns, traffic lights, barriers and signage, have a relatively prominent, but short-lived, visual role along this section. There are filtered views of the eastern side of the northern surface carpark and some of the buildings to the east of the terminal, including the current administration building.
- 9.17.4 South of the northern entrance island there are some forward views of the larger hangars in the southern area and extensive oblique views across the runway and taxiways, that often include static and taxiing aircraft plus navigation equipment, the perimeter mesh fence and trimmed hedgerows. The taller perimeter planting and bund close to and south of the southern entrance island screen all views of car parking and built components in the southern area with the possible exception of the top of the new administration building under the future baseline, once the southbound transient visual receptors have passed south of the southern entrance island. The photograph from Viewpoint 6 (**Figure 9.12**) illustrates the view available from the A38, to the south of the northern entrance island, although the northern half of this view is only available if southbound transient visual receptors look 'over their shoulders' i.e. in the opposite direction to their direction of travel.

Baseline conditions - future baseline

- 9.17.5 A new administration building with a 16m height will be provided close to the hangars and southern entrance roundabout in the southern area. This is taking place under GPDO and will be completed by 2020. No other material changes have been identified in comparison with the current baseline due to the completion of the 10 mppa and GPDO developments commenced prior to November 2018.

Predicted effects and their significance

- 9.17.6 The assessment of effects upon the transient visual receptors using the southbound A38 is set out in **Table 9G.32** in **Appendix 9G**. The visual assessment concludes that forward and oblique views are and will be available for about 1km and are likely to last for 1-2 minutes when travelling southbound in a vehicle along the A38. The composition of the views briefly available will be

changed incrementally with some existing components being lost and some proposed components, mainly the eastern walkway and east pier, being partly visible in transient and filtered views. Items 8, 9 and 16 concerning site specific proposed reinforcement planting and changes to the management regime set out in the integrated/embedded mitigation masterplan will increase the effectiveness of the filtering by hedgerows and boundary planting. The proposed highway works along the A38 close to the Downside Road junction that will be completed by Operation Year 1 will not increase the locally prominent baseline visual role of the associated infrastructure, such as: lighting columns, traffic lights, barriers and signage. At Operation Phase Years 1 and 15, the magnitude of change will be **negligible**, and the level of effect will be **negligible** which will be **not significant**.

Visual receptors travelling northbound on the A38

Baseline conditions - current baseline

- 9.17.7 The comparative ZTV (refer to **Figure 9.4**) shows that transient visual receptors in northbound vehicles potentially have forward looking views of Bristol Airport from north of Redhill until the northern entrance island and then brief oblique views as they travel alongside the eastern boundary of the northern area. Any potential rear views cease north of Potters Hill.
- 9.17.8 Site visits show that views are not available to northbound transient receptors on the most southerly section, up to approximately 120m south of the southern entrance island, when the upper sections of the hangars in the southern area become visible above the reduced height boundary vegetation. Views from the section of the A38 further south are screened by the tall vegetation and bunding alongside the A38 and the eastern boundary of the southern area. Northbound views of the central and northern areas remain screened around, and to the immediate north of, the southern entrance island, becoming available when the boundary tree cover is replaced by trimmed hedgerow. The views available from this point northwards are shown in the baseline photograph from Viewpoint 7 (**Figure 9.13**).
- 9.17.9 The bright colours of many of the aircraft on stands in the east apron and, at greater separation distances, the west apron, make them more visually prominent than the built components in the northern area seen behind these aircraft. The flat roofline of taller built components, such as the terminal building, forms a section of the north-western horizon and the ATC tower is generally readily identifiable. The more distant, tree covered, Oatfield Ridgeline also forms a section of the horizon in the same angle of view. The built components in the northern area are not consistently visible due to the rock outcrop and slightly raised topography alongside this section of the A38. The trimmed hedgerows provide partial screening and filtering in views as does navigation equipment at Viewpoint 6 (**Figure 9.12**).
- 9.17.10 As northbound transient visual receptors approach the northern entrance island their views of the built components in the northern area become more oblique and the most prominent component is the current administration building. As they travel around the northern entrance island and alongside the northern area surface car parking, receptors' views into the northern area are more heavily filtered and framed by the taller boundary planting. All views of any components in the northern area cease as the receptors' vehicles travel north of the north-eastern corner of the northern area.

Baseline conditions - future baseline

- 9.17.11 A new administration building with a 16m height will be provided close to the hangars and southern entrance roundabout in the southern area. This is taking place under GPDO and will be

completed by 2020. The upper floor of the new administration building is likely to be also be partly visible in short-lived views in the future baseline approaching the southern A38 traffic island.

Predicted effects and their significance

- 9.17.12 The assessment of effects upon the transient visual receptors using the northbound A38 is set out in **Table 9G.33** in **Appendix 9G**. The visual assessment estimates that forward and oblique views are and will be available for about 1km and are likely to last for 1-2 minutes when travelling in a vehicle along the A38. The composition of the views briefly available will be slightly changed with some existing components being lost and some components of the Proposed Development, mainly the extended terminal building and eastern walkway and east pier and associated aircraft, being partly visible in transient and filtered views. An example of the changes in transient views is provided in the photomontage from Viewpoint 7 in **Figure 9.28**. Some of the proposed reinforcement planting and changes to the management regime will increase the effectiveness of the filtering by hedgerows and boundary planting by Operation Phase Year 1. The highway works along the A38 at the junction with Downside Road that will be completed by Operation Phase Year 1 will not increase the locally prominent baseline visual role of the associated infrastructure such as: lighting columns, traffic lights, barriers and signage. At Operation Phase Years 1 and 15, the magnitude of change will be **low** and the level of effect will be **minor** which will be **not significant**.

Visual receptors travelling along Downside Road

Baseline conditions - current baseline

- 9.17.13 Downside Road is approximately 5km in length and is frequently bounded by well-established hedgerows and some sub-sections benefit from dense roadside tree cover. The ZTV for the current development and approved components of the 10 mppa development commenced prior to November 2018 (refer to **Figure 9.2**) shows that transient visual receptors travelling along Downside Road currently potentially have views along approximately 3.5km of its route between its eastern end at the junction with the A38 and the western section that descends into Brockley Combe. Baseline views available to transient visual receptors travelling along this section of Downside Road can be sub-divided into four sub-sections:
- The western-most 1km on this sub-section is within the extensive woodland of Wrington Warren and Willis's Batch with the result that no views east toward Bristol Airport are available;
 - The visual assessment for residential visual receptors in Downside, west of Cook's Bridle Path, in paragraphs 9.12.16 - 9.12.19 shows that from the sub-section of Downside Road, west of Cook's Bridle Path, views of Bristol Airport are limited to periodic views of the ATC tower when travelling east;
 - More open views of the principal, built components in the western half of the northern area of Bristol Airport, as shown in the baseline photograph from Viewpoint 1 (**Figure 9.7**), are available when travelling east along the 500m long sub-section of Downside Road between Cook's Bridle Path and the north-western corner of the northern area of Bristol Airport; and
 - The northern perimeter bund and its dense tree cover and understorey planting screen the close distance potential views from the 1km long sub-section of Downside Road alongside the northern boundary to the junction with the A38.

Baseline conditions - future baseline

- 9.17.14 The completion of MSCP Phase 1 on the north-west part of the northern area at Bristol Airport will slightly increase the visual role of built development at Bristol Airport in eastern views along the third sub-section of Downside Road.

Predicted effects and their significance

- 9.17.15 The assessment of effects upon the transient visual receptors using Downside Road is set out in **Table 9G.34** in **Appendix 9G**. The visual assessment concludes that some components of the Proposed Development, principally the western façade of MSCP Phase 3 and, to a lesser extent, the western extension of the Terminal Building, will be visible for approximately 500m of the 5km total length of Downside Road. Any changes will be transient and largely restricted to transient visual receptors travelling in one direction (east). They will also only be visible in the visual context of existing built development at Bristol Airport in the same field of view. At Operation Phase Years 1 and 15, it is assessed that the magnitude of change will be **negligible** and the level of effect will be **negligible** which will be **not significant**.

9.18 Assessment of effects – visual effects upon recreational visual receptors using local Public Rights of Way networks

- 9.18.1 The sensitivity of recreational visual receptors using local Public Rights of Way (PRoW) networks is high due to recreational visual receptors walking, riding or cycling being assessed as possessing high susceptibility, in accordance with GLVIA3. Additionally, it is likely that these receptors attach medium or high value to the views, whose availability is likely to be a contributory reason for using the local PRoW network.

Visual receptors using the Wrington Warren network

Baseline conditions - current baseline

- 9.18.2 This network of public footpaths and bridleways is routed on the western slopes of the Broadfield Down Plateau at elevations that are at least 25m below those at the western end of Runway 09. The PRoW network (shown as Network A on **Figure 9.36**) is sited within the extensive coniferous plantation formed by Wrington Warren. The density of the tree cover screens all potential outward views including those towards Bristol Airport to the east. The sole exception is the bridleway (reference AX30/42/70³⁵) on the eastern boundary of the plantation between Abspit Pond and Spying Copse, however its low elevation in comparison with Bristol Airport ensures that recreational visual receptors have no views into and across Bristol Airport's central area nor to the Silver Zone car park extension (Phases 1 and 2).

Baseline conditions - future baseline

- 9.18.3 No material changes have been identified in comparison with the current baseline due to the completion of the 10 mppa and GPDO developments commenced prior to November 2018.

Predicted effects and their significance

- 9.18.4 The assessment of effects upon the recreational visual receptors using the Wrington Warren network of PRoWs (Network A) is set out in **Table 9G.35** in **Appendix 9G**. The visual assessment

³⁵ <http://map.n-somerset.gov.uk/dande.html>

concludes that as at Operation Phase Years 1 and 15 there will be no changes to the views available to high sensitivity recreational visual receptors using the Wrington Warren network of PRowS, the magnitude of change will be **no change** and the level of effect will be **none** which will be **not significant**.

Visual receptors using the east of Redhill network

Baseline conditions - current baseline

- 9.18.5 This network of public footpaths and bridleways (shown as Network B on **Figure 9.36**) is routed across gently undulating fields at elevations of 185m AOD to 160m AOD, with a generally southerly aspect. The baseline ZTV (refer to **Figure 9.2**) shows that no views are potentially available for recreational visual receptors using the southern part of the PRow network (shown as Network B on **Figure 9.36**), due to the difference in elevation with Bristol Airport. The PRow network crosses fields that frequently have moderate numbers of hedgerow trees and contain some field corner copses. In the eastern part of the network additional screening is provided by the avenues of trees extending from Butcombe Court. The closest sections of the eastern and southern boundaries of Bristol Airport are formed by bunds with well-established, dense vegetation cover that screen views into the southern area.
- 9.18.6 Site visits show that no built components at Bristol Airport can be seen when using the east of Redhill PRow network.

Baseline conditions - future baseline

- 9.18.7 No material changes have been identified in comparison with the current baseline due to the completion of the 10 mppa and GPDO developments commenced prior to November 2018.

Predicted effects and their significance

- 9.18.8 The assessment of effects upon the recreational visual receptors using the east of Redhill network of PRowS (Network B) is set out in **Table 9G.36** in **Appendix 9G**. At Operation Phase Years 1 and 15 the visual assessment concludes that as there will be minimal potential for any changes to the views available to high sensitivity recreational visual receptors using the east of Redhill (Network B) network of PRowS, the magnitude of change will be **negligible** and the level of effect will be **minor** which will be **not significant**.

Visual receptors using the west and north of Redhill network

Baseline conditions - current baseline

- 9.18.9 This network of public footpaths and bridleways (shown as Network C on **Figure 9.36**) links Networks A and B and is routed across undulating fields at elevations of 160m AOD to 140m AOD, with a generally south-westerly aspect. The ZTV for the current development and approved components of the 10 mppa development commenced prior to November 2018 (refer to **Figure 9.2**) shows that some views are periodically available for recreational visual receptors using PRow Network C, with the difference in elevation with Bristol Airport preventing views from less elevated sections of PRowS. The PRow network crosses fields that frequently have moderate numbers of hedgerow trees and sometimes contain numbers of parkland trees. There are several small mixed woodlands within the area covered by Network C. This tree cover coalesces to provide at least partial screening and heavily filtered views north towards the Silver Zone car park and the Phase 1

extension. The intervening plateau topography prevents any views extending to the built development in the northern zone.

- 9.18.10 Viewpoint 8 on Winters Lane is sited within Network C and the baseline view (**Figure 9.14**) illustrates the level of tree cover and that the Silver Zone car park extension (Phase 1) is not visible. Site visits show that no built components at Bristol Airport can be seen when using the west and north of Redhill PRow network due to the high degree of tree cover.

Baseline conditions - future baseline

- 9.18.11 No material changes have been identified in comparison with the current baseline due to the completion of the 10 mppa and GPDO developments commenced prior to November 2018. Predicted effects and their significance
- 9.18.12 The assessment of effects upon the recreational visual receptors using west and north of Redhill network of PRows (Network C) is set out in **Table 9G.37** in **Appendix 9G**. The visual assessment concludes that at Operation Phase Years 1 and 15 as there will be minimal potential for any changes to the views available to high sensitivity recreational visual receptors using the west and north of Redhill (Network C) network of PRows, the magnitude of change will be **no change** and the level of effect will be **none** which will be **not significant**.

Visual receptors using the Hailstones Farm PRow

Baseline conditions - current baseline

- 9.18.13 This is a single PRow (reference AX30/69/10³⁶) routed along the east-west aligned track that links New Road/A38 with Winters Lane following an elevation of 160m AOD to 150m AOD. The PRow (shown as Network D on **Figure 9.36**), follows the upper section of a small combe and is routed on the southern side of a thick hedgerow and through High Wood. The baseline ZTV (refer to **Figure 9.2**) shows that its route along the small combe results in the PRow being mostly outside the baseline ZTV. When the high amount of adjacent hedgerow and tree cover is taken into consideration, recreational visual receptors have no views of the southern area of Bristol Airport including the Silver Zone car park including the Phase 1 extension.

Baseline conditions - future baseline

- 9.18.14 No material changes have been identified in comparison with the current baseline due to the completion of the 10 mppa and GPDO developments commenced prior to November 2018.

Predicted effects and their significance

- 9.18.15 The assessment of effects upon the recreational visual receptors using the Hailstones Farm PRow (Network D) is set out in **Table 9G.38** in **Appendix 9G**. The visual assessment concludes that as there will be no changes to the views available to high sensitivity recreational visual receptors using the Hailstones Farm PRow at Operation Phase Years 1 and 15 i.e. no components at Bristol Airport will be visible, the magnitude of change will be **no change** and the level of effect will be **none** which will be **not significant**.

³⁶ <http://map.n-somerset.gov.uk/dande.html>

Visual receptors using the Hunters Hall PRoW

Baseline conditions - current baseline

- 9.18.16 This bridleway (Old Barn Lane) (shown as Network E on **Figure 9.36**), links New Road at 160m AOD with the northern end of Long Lane at 190m AOD. The ZTV for the current development and approved components of the 10 mppa development commenced prior to November 2018 (refer to **Figure 9.2**) shows that views of Bristol Airport are potentially available for recreational visual receptors along the entire length of this PRoW. Site visits show that at the southern end of the bridleway the western boundary hedgerow has grown out to heavily filter western views towards Bristol Airport. There are some hedgerow trees along the central section, whilst north of Hunters Hall the bridleway is enclosed by tall hedgerows and hedgerow trees. Buildings and more tree cover around Hunters Hall provide additional screening. Some heavily filtered views of ground level aircraft and the built development in the northern area are available from the northern-most section of the PRoW.

Baseline conditions - future baseline

- 9.18.17 No material changes have been identified in comparison with the current baseline due to the completion of the 10 mppa and GPDO developments commenced prior to November 2018.

Predicted effects and their significance

- 9.18.18 The assessment of effects upon the recreational visual receptors using the Hunters Hall PRoW (Network E) is set out in **Table 9G.39** in **Appendix 9G**. At Operation Phase Years 1 and 13 the visual assessment concludes that there will be minor changes to the filtered views available to high sensitivity recreational visual receptors using the northern section of the Hunters Hall PRoW (Network E), the magnitude of change will be **negligible** and the level of effect will be **minor** which will be **not significant**.

Visual receptors using the Felton Common and environs network

Baseline conditions - current baseline

- 9.18.19 Felton Common and environs is a dense network of PRoWs (shown as Network F on **Figure 9.36**), within and to the east of the Felton Common Open Access Area (see **Table 9G.28**). The western half of Network F on the Common is at elevations of 190m AOD to 160m AOD i.e. comparable to elevations in Bristol Airport to the west. The eastern half of Network F is on east and south-east facing slopes that descend to elevations of 140m AOD. The ZTV for the current development and approved components of the 10 mppa development commenced prior to November 2018 (refer to **Figure 9.2**) shows that most of the eastern half of Network F is outside the ZTV so that recreational visual receptors have no views of any built components at Bristol Airport to the west.
- 9.18.20 The land-use on Felton Common is mainly rough grazing with a scattering of isolated shrubs and small trees in its southern and eastern parts. The elevation and land-use in the western half provide extensive, open internal and outward views. Western and northern views are shown in the baseline photography from Viewpoint 5 (**Figure 9.11**), which is located close to the Common's 191m AOD high spot in the south-west. Review of the baseline photograph, allied with site visits, shows that the built development in the northern area at Bristol Airport is prominent and occupies an approximate 40° horizontal angle of view to the west or north-west. The most readily identifiable built components are the ATC tower and the current administration building, which extend above the level horizon that is formed by the terminal building. The predominant grey colouration of the built components reduces their visual presence.

- 9.18.21 There are only a limited number of locations from which there are views of the runway or taxiways due to the west of PRow Network F's similarity with the elevation of the central area of Bristol Airport which is between 183m AOD and 187m AOD. Brightly coloured aircraft at stands, especially on the eastern apron, are often prominent elements in the recreational visual receptors' western views from the PRow's closest to Bristol Airport. The hedgerows bounding the fields between the west of Felton Common and the A38 are low due to operational restrictions. They therefore provide minimum screening in western or north-western views available to these recreational visual receptors.

Baseline conditions - future baseline

- 9.18.22 A new 16m high administration building will be provided close to the hangars and southern entrance roundabout in the southern area. This is taking place under GPDO and will be completed by 2020.

Predicted effects and their significance

- 9.18.23 The assessment of effects upon the recreational visual receptors using the Felton Common and environs network of PRow's (Network F) is set out in **Table 9G.40** in **Appendix 9G**. The visual assessment concludes that aircraft on the ground and built components at the northern area of Bristol Airport are prominent current and future baseline visual elements in some views available to recreational visual receptors from most, but not all, of the western half of this extensive PRow network. In this baseline context some components of the Proposed Development, principally the eastern walkway and east pier, will result in an intensification of built development and activity in part of the horizontal angle of view occupied by the northern area, but they will screen other proposed activities and built components. There will be no changes to the views available in which Bristol Airport currently has no visual presence. There will also be no new views of Bristol Airport for high sensitivity recreational visual receptors using the PRow's in the eastern half of Network F. For Operation Phase Years 1 and 15, the magnitude of change will vary from **none** in the eastern half of Network F to **negligible** on northern parts of the western half of Network F and **low** for PRow's in Network F close to the western edge. Consequently, the level of effect will not exceed **moderate** and when aggregated for recreational visual receptors across Network F, the level of effect is assessed as **minor** and **not significant**.

Visual receptors using the south side of Felton network

Baseline conditions - current baseline

- 9.18.24 This compact network of PRow (shown as Network G on **Figure 9.36**) traverses the open fields that separate the areas of residential development on the southern and south-western edge of Felton from residential development at Long Cross. These fields have a gentle southern aspect and the ZTV for the current development and approved components of the 10 mppa development commenced prior to November 2018 (refer to **Figure 9.2**) shows that only the northern lengths of these PRow's offer their users theoretical views of Bristol Airport at least 900m away to west. In reality, these views are not available due to the screening that is provided by the residential properties sited alongside Stanhall's Lane close to the west and the coalescence of intervening tree cover.

Baseline conditions - future baseline

- 9.18.25 No material changes have been identified in comparison with the current baseline due to the completion of the 10 mppa and GPDO developments commenced prior to November 2018.

Predicted effects and their significance

- 9.18.26 The assessment of effects upon the recreational visual receptors using the south side of Felton network of PRowS (Network G) is set out in **Table 9G.41** in **Appendix 9G**. For Operation Phase Years 1 and 15, as there will be no potential for any changes to the views available to recreational visual receptors using the south of Felton (Network G) network of PRowS as the existing intervening built and vegetation screening will continue to screen all existing and proposed components at Bristol Airport in these visual receptors' western views. This group of visual receptors have high sensitivity, but the magnitude of change will be **no change** and the level of effect will be **none** which will be **not significant**.

Visual receptors using the west side of Felton network

Baseline conditions - current baseline

- 9.18.27 This network of public footpaths (shown as Network H on **Figure 9.36**) traverses the open fields that separate the areas of residential development on the western edge of Felton from Potters Hill, the quarry sited to its south and the A38. These fields have a pronounced southern aspect, are generally bounded by tall hedgerows and possess considerable tree cover around the Vicarage in the middle of Network H. The ZTV for the current development and approved components of the 10 mppa development commenced prior to at November 2018 (refer to **Figure 9.2**) shows that these PRowS offer their users potential views of Bristol Airport to the south-west. However, such views are rarely available due to the screening that is provided by the intervening tree cover allied with local topography. The absence of any baseline visual role for Bristol Airport is shown in the baseline photograph from Viewpoint 4 on a PRow on the western edge of Felton (**Figure 9.10**).

Baseline conditions - future baseline

- 9.18.28 No material changes have been identified in comparison with the current baseline due to the completion of the 10 mppa and GPDO developments commenced prior to November 2018.

Predicted effects and their significance

- 9.18.29 The assessment of effects upon the recreational visual receptors using the west side of Felton network of PRowS (Network H) is set out in **Table 9G.42** in **Appendix 9G**. The visual assessment concludes that for Operation Phase Years 1 and 15 that there will be limited potential for any changes to the views available to recreational visual receptors using the west of Felton (Network H) network of PRowS. This is due to the continued screening provided by the high level of intervening tree cover and local topography. For this group of high sensitivity recreational visual receptors, the magnitude of change will be **negligible** and the level of effect will be **minor** which will be **not significant**.

Visual receptors using the north side of Felton network

Baseline conditions - current baseline

- 9.18.30 This dispersed network of public footpaths (shown as Network I on **Figure 9.36**) traverses the open fields beyond residential development on the northern and north-eastern edge of Felton. The area covered by Network I has a slight north-eastern aspect and has elevations around 170m AOD to 160m AOD. The ZTV for the current development and approved components of the 10 mppa development commenced prior to November 2018 (refer to **Figure 9.2**) shows that most of these PRowS offer their users potential views of Bristol Airport to the south-west. However, such views are rarely available due to the screening that is provided by the intervening tree cover, allied with

the residential development in the intervening settlement of Felton. Site visits show that in the northern part of Network I residential visual receptors views do not extend as far as Felton and certainly not as far as the northern area of Bristol Airport.

Baseline conditions - future baseline

- 9.18.31 No material changes have been identified in comparison with the current baseline due to the completion of the 10 mppa and GPDO developments commenced prior to November 2018.

Predicted effects and their significance

- 9.18.32 The assessment of effects upon the recreational visual receptors using the north side of Felton network of PRoWs (Network I) is set out in **Table 9G.43** in **Appendix 9G**. The visual assessment concludes that for Operation Phase Years 1 and 15 there will be minimal potential for any changes to the views available to recreational visual receptors using the north of Felton (Network I) network of PRoWs. This is due to the continued screening role that is, and will continue to be, provided by intervening tree cover augmented by built development at Felton. For this group of high sensitivity recreational visual receptors, the magnitude of change will be **no change** and the level of effect will be **none** which will be **not significant**.

Visual receptors using the north-west of Potters Hill network

Baseline conditions - current baseline

- 9.18.33 This dispersed network of public footpaths, bridle ways and byways (shown as Network J on **Figure 9.36**) are routed between the top of the Oatfield Ridgeline and around Freemans Quarry on its north-facing slope and include PRoWs on the western edge of Potters Hill. Elevation varies from 206m AOD, close to the transmitter mast on the summit of the Ridgeline, to 167m AOD, on the northern side of Freemans Quarry. The ZTV for the current development and approved components of the 10 mppa development commenced prior to November 2018 (refer to **Figure 9.2**) shows that only the southern PRoWs, centred on Yewtree Farm and the Oatfield Ridgeline, offer their users potential views of Bristol Airport to the south and south-west.
- 9.18.34 Site visits show that tall hedgerows and tree cover severely restrict the availability of the southern and south-western views for recreational visual receptors using these PRoWs. The only clear southern view identified is a short section of the PRoW just to the south of the top of the Ridgeline, as the PRoW crosses an open field between Oatfield Wood to the west and a series of overgrown hedgerows to the east.
- 9.18.35 This elevated view across most of Bristol Airport in the middle ground to the distant Mendip Hills is shown in the baseline photograph from Viewpoint 3 (**Figure 9.9**). Many existing built components in the northern area of Bristol Airport are visible in detail, as well as: Runway 27, the eastern taxiways, east apron, hangars in the southern area and part of the Silver Zone car park, although its phase 1 extension is screened by the existing terminal building. The tree cover alongside the northern boundary partly screens and filters views of the surface car parking in the northern side. This view is only briefly available to recreational visual receptors along a 60m long section of PRoW due to the absence of nearby hedgerows.

Baseline conditions - future baseline

- 9.18.36 A new 16m high administration building will be provided close to the hangars and southern entrance roundabout in the southern area. This is taking place under GPDO and will be completed by 2020. The completed MSCP Phase 1 will partly visible in the same section of the view as the

hotel and the ATC tower. The future baseline changes will cumulatively be small-scale visual changes.

Predicted effects and their significance

- 9.18.37 The assessment of effects upon the recreational visual receptors using the north-west of Potters Hill network of PRowWs (Network J) is set out in **Table 9G.44** in **Appendix 9G** and the worst-case scenario which is at Viewpoint 3 is illustrated in the photomontage in **Figure 9.27**. The visual assessment concludes that the Proposed Development will only be seen by recreational visual receptors using a fraction of the length of the PRowWs in Network J. The open, elevated view available from Viewpoint 3 is only available for approximately 60m. Within that view the proposed eastern walkway, east pier, terminal extension and canopy and MSCP Phase 3 will be visible within the existing visual context of the overall built development in the northern area. They will contribute to a rationalisation of the appearance of the Airport's built development and therefore should not be assessed as an adverse visual change. At Operation Phase Years 1 and 15 in the short-lived key view available to high sensitivity recreational visual receptors, it is assessed that the magnitude of visual change will be **low** and the level of effect will be **moderate**. Application of the evaluation matrix in **Table 9.9** concludes that this effect will be possibly significant. Application of professional judgement based upon the design attributes of the eastern walkway, pier and canopy, allied to the absence of any visual change across a high proportion of Network J, lead to a conclusion that the proposed changes will be **not significant**. Recreational visual receptors using remainder of PRow Network J will have minimal, partial and short-lived views of the Proposed Development or no views throughout the operation period will sustain either a magnitude of visual change that will be **negligible** or no change. This will result in a **minor** level of effect or no effect that will also be **not significant**.

Visual receptors using the Lulsgate Bottom PRow

Baseline conditions - current baseline

- 9.18.38 This public footpath (shown as Network K on **Figure 9.36**) has an east-west alignment with an elevation of 177m AOD in the west declining to 169m AOD where it meets the A38 in the east. Its route crosses open fields with a southern aspect, some of which are bounded on their relevant southern sides by overgrown hedgerows. Some screening is provided by built development around Downside Farm and alongside Downside Road.
- 9.18.39 The hedgerow trees on the north side of Downside Road, and especially the belt of woodland and understorey planting on the northern boundary perimeter bund on the south side of Downside Road, provide effective screening of ground level activities and the lower sections of built development in the northern area of Bristol Airport in summer months. In winter months, when most of the vegetation is without leaves, views remain heavily filtered. Reference to the Viewpoint 2 baseline photograph (**Figure 9.8**) shows that recreational visual receptors using the PRow have views over the canopy of this tree cover to the upper sections of the taller built components, as well as the tail fins of aircraft at stands within the west and east aprons. Built components that are within residential visual receptors' southern view include the ATC tower, the hotel, sections of the western walkway, the terminal building and the current administration building. These built components are likely to make Bristol Airport the most prominent visual element in recreational visual receptors' views.

Baseline conditions - future baseline

- 9.18.40 It is likely upon completion of MSCP Phase 1 its upper floors will be at least partly visible through and above the canopy of the intervening trees. It will partly screen current baseline views of the hotel.

Predicted effects and their significance

- 9.18.41 The assessment of effects upon the recreational visual receptors using the Lulsgate Bottom PRow (Network K) is set out in **Table 9G.45** in **Appendix 9G**. The visual assessment concludes that the upper sections of built components of the Proposed Development that are sited on the most elevated part of the northern area of Bristol Airport will change the detailed composition of a proportion of the southern view that is available to recreational visual receptors using this PRow. The proposed new and extended built components will reflect the height, scale, mass and appearance of the current and future baseline built components receptors' views. Effective screening of the lower sections of these built components, the ground level components and operational activities will continue to be provided by the tree cover on the northern perimeter bund. At Operation Phase Years 1 and 15, the magnitude of change will vary between **negligible** and **low** (depending upon their precise location and seasonality) and that the level of effect will periodically be **moderate**. Under the significance criteria set out in **Table 9.9** a moderate level of effect is possibly significant. Application of professional judgement for the recreational visual receptors concludes that the long-standing baseline visual prominence of built components and aircraft at Bristol Airport has the consequence that a limited intensification of built development that retains the visual characteristics of current and future baseline built development should be assessed as resulting in a visual effect that is **not significant**.

Visual receptors using the north of Downside network

Baseline conditions - current baseline

- 9.18.42 This dense network of public footpaths (shown as Network L on **Figure 9.36**) is routed between Oatfield Farm, Edson's Farm and the western part of Downside at elevations of 195m AOD down to 125m AOD, with undulating topography. The PRows cross pasture fields and site visits indicate that some of them cannot easily be identified on the ground. The ZTV for the current development and approved components of the 10 mppa development commenced prior to November 2018 (refer to **Figure 9.2**) shows that recreational visual receptors using the majority of these PRows (with the exception of the restricted byway which follows Spinnings Drove (reference LA2/19/10³⁷)) potentially have views of Bristol Airport. Site visits, identified that in some of these views the only visible component at Bristol Airport is the 28.9m high ATC tower's upper section, as exemplified by the baseline photograph from Viewpoint 13 (**Figure 9.18**). A considerable amount of screening is provided by tree and hedgerow cover in field boundaries and copses.
- 9.18.43 A rare example of an open and elevated, framed view within the area covered by Network L is provided in the baseline photograph from Viewpoint 14 on Hyatt Wood Road. This is shown in **Figure 9.18** and illustrates an elevated view in which the western part of the northern side of Bristol Airport is visible in the middle ground against the backdrop of the Mendip Hills. Some existing built components are visible in detail, including: the ATC tower, the hotel, part of the terminal and the western walkway. The tree cover alongside the northern boundary screens views of the surface car parking on the northern side.

³⁷ <http://map.n-somerset.gov.uk/dande.html>

Baseline conditions - future baseline

- 9.18.44 It is likely upon completion of MSCP Phase 1 its upper floors will be at least partly visible through and above the canopy of the intervening trees.

Predicted effects and their significance

- 9.18.45 The assessment of effects upon the recreational visual receptors using the north of Downside network of PRowS (Network L) is set out in **Table 9G.46** in **Appendix 9G**. The visual assessment concludes that at Operation Phase Years 1 and 15 the Proposed Development will only be seen by recreational visual receptors using a small proportion of the total length of the PRowS in Network L. The open, elevated and framed view available from Viewpoint 14 is unlikely to be available to recreational visual receptors anywhere else within Network L. Where views are available they will continue to be primarily of the upper section of the ATC tower and possibly of some aircraft tail fins. Visual receptors may have partial views of the upper section of MSCP Phase 3, the terminal canopy and a section of the eastern walkway. Cumulatively these proposed built components will represent a minor visual change within the context of the current and future baseline views of Bristol Airport. It is assessed that this group of high sensitivity recreational visual receptors will sustain a magnitude of visual change will be **negligible** and that the level of effect will be **minor** which will be **not significant**.

9.19 Assessment of effects – visual effects upon recreational visual receptors at local recreational facilities

- 9.19.1 The sensitivity of recreational visual receptors using outdoor recreational facilities is high due to recreational visual receptors possessing high susceptibility, in accordance with GLVIA3. Additionally, it is likely that these receptors attach medium or high value to the views, whose availability is likely to be a contributory factor to their enjoyment of their chosen sport or activity.

Visual receptors at Tall Pines Golf Club

Baseline conditions - current baseline

- 9.19.2 Tall Pines Golf Club is located to the west of Cook's Bridle Path and the north of Runway 09 and taxiway GOLF. It is on the north-western slopes of the Broadfield Down Plateau with an elevation of 178m AOD at its south-eastern corner, adjacent to Bristol Airport which falls away to the west and north-west to 135m AOD. The ZTV for the current development and approved components of the 10 mppa development commenced prior to November 2018 (refer to **Figure 9.2**) shows that recreational visual receptors playing all the holes and at the club house potentially have views of some current and future baseline components at Bristol Airport. The extent of the baseline ZTV is likely to be due to the proximity and height of the ATC tower. Aerial photography and site visits to Downside Road, Winters Lane and Cook's Bridle Path identify a moderate to high amount of tree cover alongside the fairways, with a high concentration around the club house in the most elevated part of the Golf Club close to Cook's Bridle Path. A proportion of this tree cover consists of mature coniferous trees (the titular tall pines).
- 9.19.3 Baseline photographs from Viewpoints 11 and 12 (**Figure 9.17**) provide an indication of the baseline components at Bristol Airport that would be visible to this group of recreational visual receptors in the absence of the tree cover within and along the boundaries of the Golf Club. It is likely that in many parts of the Golf Club recreational visual receptors have no views of any built components nor of stationary or taxiing aircraft, due to the screening provided by tree cover. In some parts they will have partial, filtered and framed eastern views of the ATC tower and, possibly,

the western elevations of the hotel and terminal building. In some southern and south-eastern views the upper sections of aircraft on the west apron and using taxiway GOLF may be visible.

Baseline conditions - future baseline

- 9.19.4 There is slight potential for completion of the upper section (Phase 1b) to result in occasional partial views of MSCP Phase 1.

Predicted effects and their significance

- 9.19.5 The assessment of effects upon the recreational visual receptors at Tall Pines Golf Club is set out in **Table 9G.47** in **Appendix 9G**. The visual assessment concludes that at Operation Years 1 and 15 the large amount of internal and intervening tree and shrub cover screens nearly all the current and future baseline built development and ground level aircraft within Bristol Airport. The tallest and closest components of the Proposed Development will only potentially be visible from some of the open areas of the Tall Pines Golf Club. They have a height and scale that will ensure that existing screening will remain effective. It is assessed golfers should be ascribed with a high visual sensitivity and that the magnitude of change will be **negligible** and the level of effect will be **minor** which will be **not significant**.
- 9.19.6 A summary of the results of the assessment of the visual effects is provided in **Table 9.11**.

Table 9.11 Summary of significance of visual effects

| Receptor and summary of predicted effects | Sensitivity/ importance/ value of receptor ¹ | Magnitude of change ² | Significance ³ | Summary rationale |
|--|--|-------------------------------------|---------------------------|--|
| Residential visual receptors in Lulsgate Bottom Changes in the views and visual amenity of residents in the local community | High | Negligible | Minor & Not Significant | <p>The Proposed Development will result in a negligible magnitude of visual change for the residential visual receptors located in the community of Lulsgate Bottom. It is assessed that the baseline situation in which the difference in elevation between these properties and the northern area of Bristol Airport and the high level of existing mature vegetation screening which minimise views of built development, car parking and vehicular movement in Bristol Airport and on the A38 will continue to be effective. A proportion of the residents in properties to the north of Downside Road and residents in properties south of Downside Road will have filtered views of the new gyratory road and internal surface car parking, especially in winter months, as per the current baseline for the northern area surface car parking. Proposed reinforcement planting between the closest properties and the existing mature boundary planting will support the screening function of the boundary planting. The construction of the proposed works on the A38 will temporarily result in low magnitudes of visual change for residential visual receptors in a small number of (approximately six) properties but will not extend into the Operation Phase hence the overall assessment of a negligible magnitude of visual change and a resultant minor level of effect.</p> <p>Minimal variation in effects between Operation Phase Year 1 and Year 15 with the establishment of the proposed reinforcement planting in some boundary locations as proposed in the integrated/embedded mitigation masterplan.</p> |
| Residential visual receptors in Hyatt Wood Road/Oatfield Changes in the views and visual amenity of residents in the local community | High | Negligible | Minor & Not Significant | <p>Some of the taller components of the Proposed Development will be visible within the visual context of the taller existing built development in the northern area. This new development will not extend the horizontal angle of view affected by the existing development and MSCP Phase 3 could screen the hotel whose windows make it a relatively prominent component in some residents' views. It is unlikely that any residential visual receptors in this community who have no views of Bristol Airport under the baseline due to screening and/or their properties' orientation will have views of the Proposed Development. A good proportion of residential visual receptors in this community will continue to have no views or just partial oblique views of the taller components at Bristol Airport from their properties' windows or from within their</p> |

| Receptor and summary of predicted effects | Sensitivity/ importance/ value of receptor ¹ | Magnitude of change ² | Significance ³ | Summary rationale |
|--|--|-------------------------------------|---|---|
| | | | | <p>curtilage. Overall the magnitude of visual change will be negligible with a minor level of effect.</p> <p>Minimal variation in effects between Operation Phase Year 1 and Year 15 with the establishment of the proposed reinforcement planting in some boundary locations.</p> |
| Residential visual receptors in Downside, east of Cook's Bridle Path Changes in the views and visual amenity of residents in the local community | High | Low to Negligible | Moderate & Significant (Melody Cottage) for Operational Phase Year 1 Moderate & Not Significant (Melody Cottage) for Operational Phase Year 15 Minor & Not Significant (remaining properties) | <p>The Proposed Development will result in a small-scale intensification in the visual role of the built development in the northern area of Bristol Airport in residential visual receptors' often oblique south-eastern views. Once the MSCP Phase 1 become fully operational in the future baseline, the Proposed Development will not extend the horizontal angle of view occupied by built development. There will be small-scale changes to the composition of the horizon within this horizontal angle of view, but the ATC tower will retain its prominence. Where residential visual receptors have open or framed and usually oblique framed views the magnitude of change will vary between low and negligible. The low magnitude of change will be sustained by residential visual receptors at properties at the eastern end of this section of Downside Road, principally at Melody Cottage due to the presence of MSCP Phase 3. The negligible magnitude of change will be sustained by most of the residential visual receptors in this community due to the partial views of the proposed western terminal extension, the western end of MSCP Phase 3 and, to a lesser extent, the slight increase in the number of aircraft tail fins periodically visible. Overall, adopting a worst-case scenario approach the magnitude of visual change will be low with a moderate level of effect. This is assessed as being significant for residents at Melody Cottage for Operation Phase Year 1 but not significant by Operation Phase Year 15 with the full establishment of nearby boundary screen planting proposed in the integrated /embedded mitigation masterplan. Not significant for the remaining receptors within this community.</p> <p>Other than for residents in Melody Cottage it is assessed there will be minimal variation in effects between Operation Phase Year 1 and Year 15 with the establishment of the proposed reinforcement planting in some boundary locations.</p> |
| Residential visual receptors in Downside, west of Cook's Bridle Path | High | Negligible | Minor & Not Significant | <p>The Proposed Development will not be visible to residential visual receptors in this community from any ground level locations within and around properties. There is the slight possibility that a small proportion of residential visual receptors will have partial,</p> |

| Receptor and summary of predicted effects | Sensitivity/ importance/ value of receptor ¹ | Magnitude of change ² | Significance ³ | Summary rationale |
|---|--|-------------------------------------|---------------------------|--|
| Changes in the views and visual amenity of residents in the local community | | | | seasonal and/or heavily filtered views of MSCP Phase 3 and/or the western terminal extension. Any such views of these proposed components would result in a negligible magnitude of change and a minor level of effect. No variation between Operation Phase Year 1 and Year 15. |
| Residential visual receptors in Potters Hill Changes in the views and visual amenity of residents in the local community | High | Negligible | Minor & Not Significant | The Proposed Development will result in an incremental change to the minor role played by components in the eastern part of Bristol Airport in the rarely available southern views. These views are only available to a small proportion of residential visual receptors in Potters Hill. Most residential visual receptors will sustain no changes to their baseline views from any component of the Proposed Development. There are unlikely to be any change to the views available at Yewtree Farm. The magnitude of change will be negligible with a minor level of effect. No variation between Operation Phase Year 1 and Year 15. |
| Residential visual receptors in Felton and Long Cross Changes in the views and visual amenity of residents in the local community | High | No Change | None & Not Significant | Intervening topography and vegetation cover screen potential views of the present taller components in the northern and southern areas of Bristol Airport. As the principal components of the Proposed Development will be sited alongside these existing components, they will likewise not be visible to residential visual receptors in Felton and Long Cross where outward western or south-western views are available. The magnitude of visual change will be no change. No variation between Operation Phase Year 1 and Year 15. |
| Residential visual receptors in Felton Hill Changes in the views and visual amenity of residents in the local community | High | No Change | None & Not Significant | Detailed topography between the eastern part of Bristol Airport and Felton Hill, supported by existing screening from vegetation cover and built development, will ensure that the Proposed Development will not be visible from any location within Felton Hill. The magnitude of visual change will be no change. No variation between Operation Phase Year 1 and Year 15. |
| Residential visual receptors in Redhill | High | No Change | None & Not Significant | Intervening slope topography between the southern part of Bristol Airport and Redhill will ensure that the Proposed Development will not be visible from any location within Redhill. The magnitude of visual change will be no change. |

| Receptor and summary of predicted effects | Sensitivity/ importance/ value of receptor ¹ | Magnitude of change ² | Significance ³ | Summary rationale |
|--|--|-------------------------------------|----------------------------|---|
| Changes in the views and visual amenity of residents in the local community | | | | No variation between Operation Phase Year 1 and Year 15. |
| Residential visual receptors in Blagdon Changes in the views and visual amenity of residents in the local community | High | Negligible | Minor & Not Significant | <p>Some of the components of the Proposed Development will be visible in the established visual context of Bristol Airport. Nevertheless, a minimum separation distance of 5km, the slightly lower elevation of Blagdon and the design of the components to minimise any potential visual contrast with existing built components at Bristol Airport will combine such that the Proposed Development will not alter the minimal baseline day time visual role played by Bristol Airport. The magnitude of change will be negligible with a minor level of effect.</p> <p>No variation between Operation Phase Year 1 and Year 15.</p> |
| Residential visual receptors at Cook's Farm Changes in the views and visual amenity of residents at individual or small groups of properties | High | Low | Moderate & Not Significant | <p>Cumulative changes in the western side of the northern area of Bristol Airport will increase the baseline visual role of the largest built components in the southern and eastern views available to residential visual receptors at Cook's Farm. They will not represent a major change in the composition of the view, nor will they extend the angle of view occupied by built development at Bristol Airport, especially following the completion of MSCP Phase 1. Residential visual receptors' northern and western views will remain unaffected.</p> <p>It is assessed that the magnitude of change will be low and the level of effect will be moderate. Under the significance criteria set out in Table 9.9, a moderate level of effect is possibly significant. Application of professional judgement for the residential visual receptors at Cook's Farm concludes that visual effects will be not significant. This judgement is due to the retention of the baseline unaffected views and the baseline dominance of Bristol Airport in other views with the consequence that its presence and operation is already visually significant for residential visual receptors at Cook's Farm.</p> <p>Minimal variation in effects between Operation Phase Year 1 and Year 15 with the establishment of the proposed reinforcement planting in some boundary locations under the integrated/embedded mitigation masterplan.</p> |

| Receptor and summary of predicted effects | Sensitivity/ importance/ value of receptor ¹ | Magnitude of change ² | Significance ³ | Summary rationale |
|--|--|-------------------------------------|----------------------------|---|
| Residential visual receptors at Edson's Farm Changes in the views and visual amenity of residents at individual or small groups of properties | High | No Change | None & Not Significant | <p>The Proposed Development will not be visible in any views available to residential visual receptors at or close to Edson's Farm due to intervening topography reinforced by nearby and intervening screening. The magnitude of change will be no change.</p> <p>No variation between Operation Phase Year 1 and Year 15.</p> |
| Residential visual receptors at Oatfield Farm Changes in the views and visual amenity of residents at individual or small groups of properties | High | Negligible | Minor & Not Significant | <p>Upper parts of some components of the Proposed Development may be visible above a section of the southern horizon in the context of the limited role of some of the existing taller components at Bristol Airport. Visual changes will be incremental and at least partly screened and/or filtered by intervening vegetation cover. The magnitude of change will be negligible and the level of effect will be minor.</p> <p>No variation between Operation Phase Year 1 and Year 15.</p> |
| Residential visual receptors at Downside House Farm Changes in the views and visual amenity of residents at individual or small groups of properties | High | Negligible | Minor & Not Significant | <p>The tallest component (MSCP Phase 3) and the most elevated component (the terminal building extension) of the Proposed Development will be highly likely to be screened by a combination of differences in elevation, screening by existing development in the northern side and intervening tree cover. The magnitude of change will be negligible and the level of effect will be minor.</p> <p>No variation between Operation Phase Year 1 and Year 15.</p> |
| Residential visual receptors at properties on Long Lane Changes in the views and visual amenity of residents at individual or small groups of properties | High | Low | Moderate & Not Significant | <p>A proportion of the components of the Proposed Development have the potential to be visible to these two pairs of residential receptors. Residential visual receptors at the southerly properties have substantial nearby vegetation screening and will be highly unlikely to sustain any changes in their baseline views, especially in summer months. Measures (items 5, 6, 7, 8 & 9) in the integrated/embedded mitigation masterplan could help to incrementally increase intervening screening of ground level components of the Proposed Development. They will sustain a negligible magnitude of change and a minor level of effect. Residential visual receptors at the northerly properties (Hill House and Windmill House) have open views towards Bristol Airport, especially from some first-floor windows. Some proposed components will be visible in these views but will always be seen in the existing context of extensive development and activities at Bristol Airport. They will not alter the balance and overall composition of north-western and western baseline views. The assessment concludes that the</p> |

| Receptor and summary of predicted effects | Sensitivity/ importance/ value of receptor ¹ | Magnitude of change ² | Significance ³ | Summary rationale |
|--|--|-------------------------------------|---------------------------|---|
| | | | | <p>magnitude of visual change will be low and the level of effect will be moderate. This is possibly significant in accordance with Table 9.9 but the application of professional judgement concludes that due to the baseline context provided by Bristol Airport, the visual changes that will be sustained must be assessed as not significant for the residential visual receptors at Hill House and Windmill House.</p> <p>Minimal variation in effects between Operation Phase Year 1 and Year 15 with the establishment of the proposed reinforcement planting and changes to ecological management plans in some boundary locations as set out in the integrated/embedded mitigation masterplan.</p> |
| Residential visual receptors at properties south of Hunters Hall Changes in the views and visual amenity of residents at individual or small groups of properties | High | No Change | None & Not Significant | <p>The plateau and slope topography results in the area occupied by these properties being excluded from the ZTV for the Proposed Development. Any potential residual views from first floor windows will be screened or heavily filtered by nearby tree cover. The magnitude of change will be no change.</p> <p>No variation between Operation Phase Year 1 and Year 15.</p> |
| Residential visual receptors at properties around Butcombe Court Changes in the views and visual amenity of residents at individual or small groups of properties | High | Negligible | Minor & Not Significant | <p>Separation distances of over 1km combined with intervening topography and considerable amounts of nearby and intervening tree cover will be likely to screen views of the Proposed Development as they combine to screen Bristol Airport in baseline views. As the residential visual receptors are at properties that are within the ZTV for the Proposed Development, it is not possible to confidently assess that there will be no changes to baseline views. It is therefore assessed that the magnitude of change will be negligible and the level of effect will be minor.</p> <p>No variation between Operation Phase Year 1 and Year 15.</p> |
| Residential visual receptors at properties around Hailstones Farm and the A38 Changes in the views and visual amenity of residents at individual or small groups of properties | High | Negligible | Minor & Not Significant | <p>It is highly likely that a combination of topography, extensive intervening tree cover and perimeter bunding around the southern boundary of Bristol Airport will screen all views of the Proposed Development as it does for the existing and permitted development in the southern and northern areas. As most of the properties are sited within the ZTV for the Proposed Development, it is not possible to confidently assess that there will be no changes to baseline views. It is therefore assessed that the magnitude of change will be negligible and the level of effect will be minor.</p> |

| Receptor and summary of predicted effects | Sensitivity/ importance/ value of receptor ¹ | Magnitude of change ² | Significance ³ | Summary rationale |
|--|--|-------------------------------------|------------------------------|---|
| No variation between Operation Phase Year 1 and Year 15. | | | | |
| Residential visual receptors at properties around Winters Lane Changes in the views and visual amenity of residents at individual or small groups of properties | High | Negligible | Minor & Not Significant | Residential visual receptors at three properties (Goblin Combe Farm, Springfields and Highfield) have some potential to sustain small scale changes in a portion of their existing views from the proposed Silver Zone car park extension (Phase 2) extension of an existing carpark with a grasscrete surface and 2m high perimeter bunding. Available views will be partly screened and framed and will be within the context of existing car parking being a readily visible component of the views. It is assessed that the magnitude of change will be negligible and the level of effect will be minor. A small-scale reduction of visual changes by Operation Phase Year 15 as existing and proposed planting on perimeter bunding around Silver Zone car park extension Phase 2 set out in the integrated/embedded mitigation masterplan becomes fully established. |
| Residential visual receptors at properties alongside Cook's Bridle Path Changes in the views and visual amenity of residents at individual or small groups of properties | High | Low | Moderate and Not Significant | Residential visual receptors at the eight properties sited alongside Cook's Bridle Path have varying views of the existing and permitted developments and activities at Bristol Airport. This variation is primarily determined by separation distance and the amount of tree cover in their curtilages and intervening hedgerows. Visual changes generated by the Proposed Development relate to MSCP Phase 3, the terminal building and use of Stands 33-36. The same factors that apply to the current and future baseline views will influence the magnitudes of change that will be sustained by residential visual receptors due to the Proposed Development. The magnitudes of change will vary between negligible and low and the level of effect will vary between minor and moderate. Under the significance criteria set out in Table 9.9 a moderate level of effect is possibly significant. Application of professional judgement for the residential visual receptors in the four affected properties on the eastern side of Cook's Bridle Path concludes that visual effects will not be significant. This is due to the design of MSCP Phase 3 and the terminal extension and canopy possessing the same scale, form and architectural principles as the future baseline MSCP Phase 1 and existing terminal that are present in the residential visual receptors' baseline views. For the property close to Stands 33-36 the periodic and partial presence of aircraft is a long-established component in the views available to the residential visual receptors. |

| Receptor and summary of predicted effects | Sensitivity/ importance/ value of receptor ¹ | Magnitude of change ² | Significance ³ | Summary rationale |
|--|---|----------------------------------|----------------------------|---|
| | | | | Minimal variation in effects between Operation Phase Year 1 and Year 15 with the establishment of the proposed reinforcement planting becomes fully established in some boundary locations as set out in the integrated/embedded mitigation masterplan. |
| Residential visual receptors at Downside Farm Changes in the views and visual amenity of residents at individual or small groups of properties | High | Low | Moderate & Not Significant | <p>The upper sections of built components of the Proposed Development that will be sited on the most elevated part of the northern area of Bristol Airport will change the detailed composition of a proportion of the southern view that is available to this residential visual receptor. The proposed new and extended built components will reflect the height, scale, mass and appearance of the current and future baseline built components in this view. Effective screening of the lower sections of these built components and the ground level components and operational activities will continue to be provided by the tree cover on the northern perimeter bund. It is assessed that the magnitude of change will be low and that the level of effect will be moderate. Under the significance criteria set out in Table 9.9 a moderate level of effect is possibly significant. Application of professional judgement for the residential visual receptors at Downside Farm concludes that the long-standing baseline visual prominence of built components and aircraft at Bristol Airport in the residential visual receptors' likely principal view has the consequence that a limited intensification of built development that retains the visual characteristics of current and future baseline built development should be assessed as resulting in a visual effect that is not significant.</p> <p>Minimal variation in effects between Operation Phase Year 1 and Year 15 with the establishment of the proposed reinforcement planting becomes fully established in some northern boundary locations as set out in the integrated/embedded mitigation masterplan.</p> |
| Recreational visual receptors using Monarch's Way Changes in the views and visual amenity of people walking, cycling or riding along a long-distance trail | High | Negligible | Minor & Not Significant | <p>The Proposed Development will potentially be visible to recreational visual receptors from two sections totalling approximately 4km of Monarch's Way. The separation distances make Bristol Airport susceptible to screening by nearby vegetation cover. On short sections where open views are available to recreational visual receptors, the proposed built components will be difficult or impossible to identify against the current and future baseline buildings, carparks, runways and taxiways. It is assessed</p> |

| Receptor and summary of predicted effects | Sensitivity/ importance/ value of receptor ¹ | Magnitude of change ² | Significance ³ | Summary rationale |
|--|--|-------------------------------------|---------------------------|--|
| | | | | that the magnitude of change will be negligible or no change and that the level of effect will be none or minor. No variation between Operation Phase Year 1 and Year 15. |
| Recreational visual receptors using the Limestone Link Changes in the views and visual amenity of people walking, cycling or riding along a long-distance trail | High | Negligible | Minor & Not Significant | Separation distances over 6km and the minimal visual role of Bristol Airport in the baseline views will result in a negligible magnitude of change from the closest sub-sections of the Limestone Link and no change from other sub-sections. The level of effect will be minor to none. No variation between Operation Phase Year 1 and Year 15. |
| Recreational visual receptors using the West Mendip Way Changes in the views and visual amenity of people walking, cycling or riding along a long-distance trail | High | No Change | None & Not Significant | As the only potential views of the Proposed Development are screened by the coniferous woodland in Rowberrow Warren, it is assessed that the magnitude of change will be no change and the level of effect will be none. No variation between Operation Phase Year 1 and Year 15. |
| Recreational visual receptors using the Community Forest Path Changes in the views and visual amenity of people walking, cycling or riding along a long-distance trail | High | Negligible | Minor & Not Significant | Potential views of Bristol Airport and the Proposed Development may be available from a couple of hundred metres of a 72km long distance trail. Where and if views are available, Bristol Airport is a minor visual element and the built components of the Proposed Development will generate an incremental change. It is assessed that the magnitude of change will be negligible and the level of effect will be minor, although there is a strong possibility that there will be no visual effects. No variation between Operation Phase Year 1 and Year 15. |
| Recreational visual receptors using Regional Cycle Route 410 Changes in the views and visual amenity of people cycling along a regional cycle route | High | Negligible | Minor & Not Significant | The Proposed Development will be visible for approximately 1km of a 21km cycle route plus there will be limited changes at a junction on an 'A' road. Any changes will be transient and only available to cyclists travelling in one direction (east). They will also only be visible in the visual context of existing built development at Bristol Airport in the same field of view. In the context of the entirety of Regional Cycle Route 410 it is assessed that the magnitude of change will be negligible and the level of effect will be minor. |

| Receptor and summary of predicted effects | Sensitivity/ importance/ value of receptor ¹ | Magnitude of change ² | Significance ³ | Summary rationale |
|--|--|-------------------------------------|---------------------------|---|
| | | | | Minimal variation in effects between Operation Phase Year 1 and Year 15 with the establishment of the proposed reinforcement planting becomes fully established in some northern boundary locations as set out in the integrated/embedded mitigation masterplan |
| Recreational visual receptors using National Cycle Route 334 Changes in the views and visual amenity of people cycling along a national cycle route | High | No Change | None & Not Significant | <p>The baseline review shows that no current and future baseline built components at Bristol Airport, including the terminal building and the ATC tower, can be seen in western views due to screening from intervening vegetation. It is therefore highly unlikely that any of the proposed built components will be visible in the short-lived, transient views available to recreational visual receptors cycling in a westerly direction. It is assessed that the magnitude of change will be no change and the level of effect will be none.</p> <p>No variation between Operation Phase Year 1 and Year 15.</p> |
| Recreational visual receptors using National Cycle Route 3 Changes in the views and visual amenity of people cycling along a national cycle route | High | No Change | None & Not Significant | <p>No baseline built components at Bristol Airport can be readily identified in the limited number of locations where long-distance northern views are available. It is therefore highly unlikely that any of the proposed built components will be identifiable in the transient views available to recreational visual receptors cycling this approximately 2km long section of National Cycle Route 3. It is assessed that the magnitude of change will be no change and the level of effect will be none.</p> <p>No variation between Operation Phase Year 1 and Year 15.</p> |
| Recreational visual receptors using Felton Common Open Access Area Changes in the views and visual amenity of people undertaking recreational activities within an open access area. | High | Low | Minor & Not Significant | <p>Aircraft on the ground and built components at the northern area of Bristol Airport are prominent baseline visual elements in some views available to recreational visual receptors from most, but not all, of the Felton Common Open Access Area. In this baseline context some components of the Proposed Development, principally the eastern walkway and east pier, will result in an intensification of built development and activity in part of the horizontal angle of view occupied by the northern area but will screen other activities and built components. There will be no changes to existing views in which Bristol Airport currently has no visual role.</p> <p>It is assessed that the magnitude of change will vary from low in the southern and western parts of the open access area to negligible in northern and eastern parts and</p> |

| Receptor and summary of predicted effects | Sensitivity/ importance/ value of receptor ¹ | Magnitude of change ² | Significance ³ | Summary rationale |
|---|--|-------------------------------------|---------------------------|---|
| | | | | <p>none at the northern and north-eastern edges. Consequently, the level of effect will not exceed low. Under the significance criteria set out in Table 9.9 a moderate level of effect is possibly significant. Application of professional judgement for recreational visual receptors using Felton Common Open Access Area concludes that visual effects will not be significant due to the baseline context provided by Bristol Airport and because it is likely that visual receptors' most valued views are in directions away from Bristol Airport.</p> <p>Minimal variation in effects between Operation Phase Year 1 and Year 15 with the establishment of the proposed reinforcement planting and changes to ecological management plans in some eastern boundary locations as set out in the integrated/embedded mitigation masterplan.</p> |
| Recreational visual receptors using Black Down Open Access Area Changes in the views and visual amenity of people undertaking recreational activities within an open access area. | High | Negligible | Minor & Not Significant | <p>Some of the largest proposed components of the Proposed Development will sometimes be visible in the existing visual context of Bristol Airport. They will represent an incremental change within the existing, limited visual parameters of the built development at Bristol Airport and will not increase its vertical or horizontal extent. Any minor, incremental visual change will be identifiable only from the small proportion of the Black Down Open Access Area where the difference in comparative elevation is greatest. It is assessed that the incremental visual change will result in a negligible magnitude of change and a minor level of effect.</p> <p>No variation between Operation Phase Year 1 and Year 15.</p> |
| Recreational visual receptors using Burrington Open Access Area Changes in the views and visual amenity of people undertaking recreational activities within an open access area. | High | Negligible | Minor & Not Significant | <p>None of the built components of the Proposed Development will be readily identifiable in the existing minimal visual context of Bristol Airport. Any possible, incremental visual change will be identifiable only from a small proportion of the Burrington Open Access Area and recreational visual receptors using most of the open access area will continue to have no views of the built components at Bristol Airport. Any minor, incremental visual change will be identifiable only from a small proportion of the Burrington Open Access Area. It is assessed that the incremental visual change will result in a negligible magnitude of change and a minor level of effect.</p> <p>No variation between Operation Phase Year 1 and Year 15.</p> |

| Receptor and summary of predicted effects | Sensitivity/ importance/ value of receptor ¹ | Magnitude of change ² | Significance ³ | Summary rationale |
|--|--|-------------------------------------|------------------------------|---|
| Recreational visual receptors using Dolebury Warren Open Access Area Changes in the views and visual amenity of people undertaking recreational activities within an open access area. | High | Negligible | Minor & Not Significant | <p>None of the built components of the Proposed Development will be readily identifiable in the existing minimal visual context of Bristol Airport. Any possible, incremental visual change will be identifiable only from a small proportion of the Dolebury Open Access Area and recreational visual receptors using most of the open access area will continue to have no views of the built components at Bristol Airport. It is assessed that the incremental visual change will result in a negligible magnitude of change and a minor level of effect.</p> <p>No variation between Operation Phase Year 1 and Year 15.</p> |
| Transient visual receptors travelling southbound on the A38 Changes in the views and visual amenity of people travelling on an 'A' road | Medium | Negligible | Negligible & Not Significant | <p>It is estimated that forward and oblique views are and will be available for about 1km and are likely to last for 1-2 minutes. The composition of the views briefly available will be changed incrementally with some existing components being lost and some proposed components, mainly the eastern walkway and east pier, being partly visible in transient and filtered views. Some of the proposed reinforcement planting and changes to the management regime will increase the effectiveness of the filtering by hedgerows and boundary planting. The completed proposed works along the A38 will not increase the locally prominent baseline visual role of the associated infrastructure such as lighting columns, traffic lights, barriers and signage. This group of visual receptors have medium sensitivity, the magnitude of change will be negligible and the level of effect will be negligible.</p> <p>Minimal variation in effects between Operation Phase Year 1 and Year 15 with the establishment of the proposed reinforcement planting and changes to ecological management plans in some eastern boundary locations as set out in the integrated/embedded mitigation masterplan.</p> |
| Transient visual receptors travelling northbound on the A38 Changes in the views and visual amenity of people travelling on an 'A' road | Medium | Low | Minor & Not Significant | <p>It is estimated that forward and oblique views are and will be available for about 1km and are likely to last for 1-2 minutes. The composition of the views briefly available will be slightly changed with some existing components being lost and some proposed components, mainly the extended terminal building and eastern walkway and east pier and associated aircraft, being partly visible in transient and filtered views. Some of the proposed reinforcement planting and changes to the management regime will increase the effectiveness of the filtering by hedgerows and boundary planting. The completed proposed works along the A38 will not increase the locally prominent</p> |

| Receptor and summary of predicted effects | Sensitivity/ importance/ value of receptor ¹ | Magnitude of change ² | Significance ³ | Summary rationale |
|---|--|-------------------------------------|------------------------------|---|
| | | | | <p>baseline visual role of the associated infrastructure such as lighting columns, traffic lights, barriers and signage. This group of visual receptors have medium sensitivity, the magnitude of change will be low and the level of effect will be minor.</p> <p>Minimal variation in effects between Operation Phase Year 1 and Year 15 with the establishment of the proposed reinforcement planting and changes to ecological management plans in some eastern boundary locations as set out in the integrated/embedded mitigation masterplan</p> |
| <p>Transient visual receptors travelling along Downside Road</p> <p>Changes in the views and visual amenity of people travelling on a local road</p> | Medium | Negligible | Negligible & Not Significant | <p>The Proposed Development will be visible for approximately 500m of the 5km total length of Downside Road. Any changes will be transient and largely restricted to visual receptors travelling in one direction (east). They will also only be visible in the visual context of existing built development at Bristol Airport in the same field of view. This group of visual receptors have medium sensitivity. It is assessed that the magnitude of change will be negligible and the level of effect will be negligible.</p> <p>Minimal variation in effects between Operation Phase Year 1 and Year 15 with the establishment of the proposed reinforcement planting in some northern boundary locations as set out in the integrated/embedded mitigation masterplan.</p> |
| <p>Recreational visual receptors using PRow in Network A: Wrington Warren</p> <p>Changes in the views and visual amenity of people using a group of PRow</p> | High | No Change | None & Not Significant | <p>There will be no changes to the views available to recreational visual receptors using the Wrington Warren network of PRow, the magnitude of change will be no change and the level of effect will be none.</p> <p>No variation between Operation Phase Year 1 and Year 15.</p> |
| <p>Recreational visual receptors using PRow in Network B: east of Redhill</p> <p>Changes in the views and visual amenity of people using a group of PRow</p> | High | Negligible | Minor & Not Significant | <p>There will be minimal potential for any changes to the views available to recreational visual receptors using the east of Redhill (Network B) network of PRow due to screening by nearby and intervening vegetation, the magnitude of change will be negligible and the level of effect will be minor.</p> <p>No variation between Operation Phase Year 1 and Year 15.</p> |
| <p>Recreational visual receptors using PRow in Network C: west and north of Redhill</p> | High | No Change | None & Not Significant | <p>As the closest existing component of Bristol Airport, the Silver Zone car park extension (Phase 1) is screened, it is unlikely that the proposed Silver Zone car park extension</p> |

| Receptor and summary of predicted effects | Sensitivity/ importance/ value of receptor ¹ | Magnitude of change ² | Significance ³ | Summary rationale |
|---|--|-------------------------------------|---------------------------|--|
| Changes in the views and visual amenity of people using a group of PRow | | | | <p>(Phase 2) will be visible nor that any more distant built components of the Proposed Development will be visible. As there will be minimal potential for any changes to the views available to recreational visual receptors using the north and west of Redhill (Network C) network of PRow, the magnitude of change will be no change and the level of effect will be none.</p> <p>By Operation Phase Year 15 proposed planting on perimeter bunding around Silver Zone car park extension Phase 2 set out in the integrated/embedded mitigation masterplan becomes fully established.</p> |
| Recreational visual receptors using PRow in Network D: Hailstones Farm Changes in the views and visual amenity of people using a PRow | High | No Change | None & Not Significant | <p>As there will be no changes to the views available to recreational visual receptors using the Hailstones Farm PRow, i.e. no components at Bristol Airport will be visible, the magnitude of change will be no change and the level of effect will be none.</p> <p>No variation between Operation Phase Year 1 and Year 15.</p> |
| Recreational visual receptors using PRow in Network E: Hunters Hall Changes in the views and visual amenity of people using a PRow | High | Negligible | Minor & Not Significant | <p>The Proposed Development would be potentially visible from the northern half of the PRow with the southern half being at an elevation that is too low to allow recreational visual receptors to have any views. There will be minor changes to the filtered views available to recreational visual receptors using the northern section of the Hunters Hall PRow (Network E), the magnitude of change will be negligible and the level of effect will be minor.</p> <p>No variation between Operation Phase Year 1 and Year 15.</p> |
| Recreational visual receptors using PRow in Network F: Felton Common and environs Changes in the views and visual amenity of people using a group of PRow | High | Negligible | Minor & Not Significant | <p>Aircraft on the ground and built components at the northern area of Bristol Airport are prominent baseline visual elements in some views available to recreational visual receptors from most, but not all, of the western half of this extensive PRow network. In this baseline context some components of the Proposed Development, principally the eastern walkway and east pier, will result in an intensification of built development and activity in part of the horizontal angle of view occupied by the northern area but will screen other activity and built components. There will be no changes to the existing views available in which Bristol Airport has no current visual role and no new views of Bristol Airport from the PRow in the eastern half of Network F. It is assessed that the magnitude of change will vary from none in the eastern half to negligible on</p> |

| Receptor and summary of predicted effects | Sensitivity/ importance/ value of receptor ¹ | Magnitude of change ² | Significance ³ | Summary rationale |
|---|--|-------------------------------------|----------------------------|--|
| | | | | <p>northern parts of the western half of Network F and low for PRowS close to the western edge. Consequently, the level of effect will not exceed low and when aggregated for recreational visual receptors across Network F the level of effect is assessed as minor.</p> <p>Minimal variation in effects between Operation Phase Year 1 and Year 15 with the establishment of the proposed reinforcement planting and changes to ecological management plans in some eastern boundary locations as set out in the integrated/embedded mitigation masterplan.</p> |
| Recreational visual receptors using PRow in Network G: south side of Felton Changes in the views and visual amenity of people using a group of PRow | High | No Change | None & Not Significant | <p>Intervening tree and built development screening will ensure that, as under the current and future visual baseline, no built components or ground level aircraft associated with the Proposed Development will be visible to this group of recreational visual receptors.</p> <p>No variation between Operation Phase Year 1 and Year 15.</p> |
| Recreational visual receptors using PRow in Network H: west side of Felton Changes in the views and visual amenity of people using a group of PRow | High | Negligible | Minor & Not Significant | <p>Screening provided by intervening and nearby tree cover will make it likely that, as under the visual baseline, no built components or ground level aircraft associated with the Proposed Development will be visible to this group of recreational visual receptors. The magnitude of change will be negligible and the level of effect will be minor</p> <p>No variation between Operation Phase Year 1 and Year 15.</p> |
| Recreational visual receptors using PRow in Network I: north side of Felton Changes in the views and visual amenity of people using a group of PRow | High | No Change | None & Not Significant | <p>Screening provided by intervening tree cover plus buildings in Felton will make it highly likely that, as under the visual baseline, no built components or ground level aircraft associated with the Proposed Development will be visible to this group of recreational visual receptors. The magnitude of change will be no change and the level of effect will be none.</p> <p>No variation between Operation Phase Year 1 and Year 15.</p> |
| Recreational visual receptors using PRow in Network J: north west of Potters Hill Changes in the views and visual amenity of people using a group of PRow | High | Low | Moderate & Not Significant | <p>The Proposed Development will only be seen by recreational visual receptors using a fraction of the length of the PRowS in Network J. The open, elevated view available from Viewpoint 3 is only available for approximately 60m. Within that view the</p> |

| Receptor and summary of predicted effects | Sensitivity/ importance/ value of receptor ¹ | Magnitude of change ² | Significance ³ | Summary rationale |
|--|---|----------------------------------|----------------------------|--|
| Changes in the views and visual amenity of people using a group of PRow | | | | <p>proposed eastern walkway, east pier, terminal extension and canopy and MSCP Phase 3 will be visible within the existing visual context of the overall built development in the northern area. They will contribute to a rationalisation of the appearance of the built development and therefore should not be assessed as an adverse visual change. In the short-lived key view, it is assessed that the magnitude of visual change will be low and the level of effect will be moderate.</p> <p>Application of the evaluation matrix in Table 9.9 concludes that this effect will be possibly significant. Application of professional judgement based upon the design attributes of the eastern walkway, pier and canopy, allied to the absence of any visual change across a high proportion of Network J, lead to a conclusion that the proposed changes will be not significant.</p> <p>Minimal variation in effects between Operation Phase Year 1 and Year 15 with the full establishment of the proposed reinforcement and ecological enhancement planting in some northern boundary locations as set out in the integrated/embedded mitigation masterplan</p> |
| Recreational visual receptors using PRow in Network K: Lulsgate Bottom Changes in the views and visual amenity of people using a group of PRow | High | Low | Moderate & Not Significant | <p>The upper sections of built components of the Proposed Development that are sited on the most elevated part of the northern area of Bristol Airport will change the detailed composition of a proportion of the southern view that is available to recreational visual receptors using this PRow. The proposed new and extended built components will reflect the height, scale, mass and appearance of the baseline built components in this view. Effective screening of the lower sections of these built components and the ground level components and operational activities will continue to be provided by the tree cover on the northern perimeter bund. It is assessed that the magnitude of change will vary between negligible and low (depending upon precise location and seasonality) and that the level of effect will be moderate.</p> <p>Under the significance criteria set out in Table 9.9 a moderate level of effect is possibly significant. Application of professional judgement for the recreational visual receptors concludes that the long-standing baseline visual prominence of built components and aircraft at Bristol Airport has the consequence that a limited intensification of built development that retains the visual characteristics of current</p> |

| Receptor and summary of predicted effects | Sensitivity/ importance/ value of receptor ¹ | Magnitude of change ² | Significance ³ | Summary rationale |
|---|---|----------------------------------|---------------------------|---|
| | | | | <p>and future baseline built development should be assessed as resulting in a visual effect that is not significant.</p> <p>Minimal variation in effects between Operation Phase Year 1 and Year 15 with the establishment of the proposed reinforcement and ecological enhancement planting in some northern boundary locations as set out in the integrated/embedded mitigation masterplan.</p> |
| <p>Recreational visual receptors using PRow in Network L: north of Downside</p> <p>Changes in the views and visual amenity of people using a group of PRow</p> | High | Negligible | Minor & Not Significant | <p>The Proposed Development will only be seen by recreational visual receptors using a small proportion of the length of the PRow in Network L. The open, elevated and framed view available from Viewpoint 14 is unlikely to be available to recreational visual receptors anywhere else within Network L. Where views are available they will continue to be primarily of the upper section of the ATC tower and possibly of some aircraft tail fins. It is assessed that the magnitude of visual change will be negligible and the level of effect will be minor.</p> <p>No variation in effects between Operation Phase Year 1 and Year 15.</p> |
| <p>Recreational visual receptors at Tall Pines Golf Club.</p> <p>Changes in the views and visual amenity of people undertaking outdoor recreational activities in which views are likely to contribute to their enjoyment of those activities.</p> | High | Negligible | Minor & Not Significant | <p>The large amount of internal and intervening tree and shrub cover screens nearly all the current and future baseline built development and ground level aircraft within Bristol Airport. The proposed built development will only potentially be visible across part of the Tall Pines Golf Club and will have a height and scale that will ensure that existing screening will remain effective. It is assessed that the magnitude of change will be negligible and the level of effect will be minor.</p> <p>No variation between Operation Phase Year 1 and Year 15.</p> |

4. The sensitivity/importance/value of a receptor is defined using the criteria set out in **Appendix 9A** and is defined as low, medium and high.
5. The magnitude of change on a receptor resulting from activities relating to the development is defined using the criteria set out in **Appendix 9A** and is defined as negligible, low, medium and high. Where no effects are identified the magnitude of change is stated as none.
6. The significance of the environmental effects is based on the combination of the sensitivity/importance/value of a receptor and the magnitude of change and is expressed as major (significant), moderate (possibly significant) or minor/negligible (not significant), subject to the evaluation methodology outlined in **Section 9 9**.

9.20 Conclusions of significance evaluation

- 9.20.1 The principal conclusion of the landscape and visual impact assessment (LVIA) is that none of the 12 landscape receptors or only one of the 47 individual or groups of visual receptors sustain significant effects due to the Proposed Development. The only significant visual effect will be sustained by residents in Melody Cottage in the community on Downside Road, east of Cook's Bridle Path in Operation Phase Year 1. Full establishment of mitigation screen planting will result in the visual effect becoming not significant by Operation Phase Year 15.
- 9.20.2 Of the remaining landscape and visual effects identified as not significant, none are assessed as not significant due to the implementation of the landscape and visual (and ecological) mitigation measures contained in the integrated/embedded mitigation masterplan as summarised in **Tables 9.10 and 9.11**.
- 9.20.3 Apart from the residents in Melody Cottage, there are no landscape or visual receptors where the magnitude of change will vary between Operational Phase Year 1 and Operational Phase Year 15.

Landscape assessment

- 9.20.4 The results of the landscape assessment are summarised in **Table 9.10** which shows that for 11 of the 12 landscape receptors, the magnitude of change is assessed to be negligible. The exception is the host Broadfield Down Plateau Landscape Character Area which is assessed as sustaining a low magnitude of change. Landscape effects upon the Mendip Hills AONB are summarised in **Table 9F.1** and assess the changes upon the 12 special qualities of the AONB, as defined in its current Management Plan¹², which will be generated by the Proposed Development, including those relating to lighting and tranquillity. Potential effects pathways are identified for three special qualities, however the incremental changes that will arise from the Proposed Development will only result in negligible magnitudes of change to each of these special qualities (and no effects on the remaining nine special qualities). When these changes are aggregated the resultant magnitude of change for the AONB is negligible, even with its high landscape sensitivity, hence the level of effect will be minor and not significant.
- 9.20.5 Baseline landscape sensitivity assessments have been undertaken for each of the 11 LCAs within the study area where landscape effects will have the potential to arise due to proximity and/or intervisibility with Bristol Airport. These are contained in **Appendix 9B**. The subsequent landscape assessments in **Tables 9F.2 – 9F.12** in **Appendix 9F** conclude that none of the LCAs will sustain significant landscape effects. This is because, other than the host LCA, any effects will be indirect. The Proposed Development will result in no, or incremental, changes to their key characteristics as defined in the relevant published landscape character assessments.
- 9.20.6 The host Broadfield Down Plateau LCA will sustain a small number of direct effects due to the loss of a single pasture field to accommodate the Silver Zone Car Park extension (Phase 2), plus a small number of trees in the northern area and at the Downside Road/A38 junction. The built components of the Proposed Development will all be sited in locations where there is existing built development or hardstanding. Many of the host LCA's key characteristics reflect the long-standing presence of Bristol Airport, which leads to a baseline sensitivity assessment of low sensitivity. Some key characteristics will be incrementally reinforced by the Proposed Development leading to the assessment of a low magnitude of change and a negligible level of effect.

Visual assessment

- 9.20.7 The visual assessment has been aided by the production of photomontages of the Proposed Development from seven of the 20 viewpoint locations agreed with consultees. Detailed visual assessments for all 47 groups of visual receptors are provided in **Appendix 9G**. The visual assessment, as summarised in **Table 9.11**, concludes that low magnitudes of change will be experienced by nine of the 47 groups of visual receptors. 38 groups of visual receptors will experience either negligible magnitude of change or no change, i.e. no views are potentially available of any proposed built component or ground level aircraft.
- 9.20.8 The nine groups of visual receptors assessed as experiencing a low magnitude of change are all located close to the northern area of Bristol Airport and do not consistently benefit from existing effective screening by vegetation cover an/or perimeter bunding. For eight of the nine groups of visual receptors a low magnitude of change combines with high sensitivity to result in moderate levels of effects that will be possibly significant under the adopted methodology set out in **Appendix 9A** and **Table 9.9**. The one exception is a group of vehicular visual receptors ascribed with a medium sensitivity (visual receptors travelling northbound on A38) although a medium visual sensitivity combined with a low magnitude of change will give rise to a minor level of effect that will be not significant. The eight groups of visual receptors which are of high sensitivity are:
- Residential visual receptors at properties in Downside, east of Cook's Bridle Path;
 - Residential visual receptors at Cook's Farm;
 - Residential visual receptors at two properties on Long Lane;
 - Residential visual receptors at four properties alongside Cook's Bridle Path;
 - Residential visual receptors at Downside Farm;
 - Recreational visual receptors using Felton Common Open Access Area;
 - Recreational visual receptors using the north-west of Potters Hill PRow network; and
 - Recreational visual receptors using the Lulsgate Bottom PRow.
- 9.20.9 Application of professional judgement concludes that residents at a single property, Melody Cottage (assessed as part of the residential visual receptors at properties in Downside, east of Cook's Bridle Path receptor group), would sustain significant visual effects at Operation Phase Year 1 but not by Operation Year 15. The remaining groups of visual receptors will experience no significant visual effects. This will be because:
- The changes in their views will always be in the same angle of view and the visual context of existing built development and activities at Bristol Airport; and
 - The scale, height, form and appearance of all the proposed built components will reflect the existing built development.
- 9.20.10 The residents at Melody Cottage are assessed as sustaining a low magnitude of visual change and a moderate level of effect that results in a significant adverse effect at Operation Phase Year 1. This assessment is due to the following factors:
- The 100m separation distance between the Cottage and the western end of MSCP Phase 3;
 - The position of the Cottage's southern frontage immediately against Downside Road with no front garden and boundary planting;
 - The orientation of the Cottage so that residents have direct views towards MSCP Phase 3 from five windows in the property's southern frontage; and

- The current baseline with moderate amounts of screening available on the closest section of Bristol Airport's northern boundary, including some relatively recent planting on the western end of the northern bund which is not yet fulfilling the screening role that it will fulfil when it becomes fully established.

- 9.20.11 The full establishment of the current boundary planting supplemented by additional woodland and scrub screen planting as specified in the integrated/embedded mitigation masterplan will result in the visual effects sustained by residents at Melody Cottage being assessed as not significant by Operation Phase Year 15.
- 9.20.12 It is important to contextualise the visual effects assessed for residents at Melody Cottage. The low magnitude of visual change will only apply to views from the two upper floor windows in the property's southern frontage. These rooms are likely to be bedrooms and therefore not to be regularly occupied during daytime hours. The current and future baseline views from these windows include direct views to the western walkway, ATC tower and hotel, albeit at separation distances of 220m – 500m and under the future baseline these views will include oblique views to the upper section of the completed MSCP Phase 1. Higher levels of screening are available in residents' views across Downside Road from the three ground floor windows. Views from the Cottage's curtilage to the east are partly filtered by garden boundary planting alongside Downside Road, whilst from the curtilage to the north views are screened by the Cottage itself. There will continue to be no views of MSCP Phase 3 nor any other components at Bristol Airport from windows on the Cottage's western or northern frontages.
- 9.20.13 It is also useful to put a single temporary adverse significant visual effect in the context of the overall number of residential visual receptors present in the study area. As shown on **Figure 9.36** the scope of the visual assessment includes residents in nine settlements and communities and residents at 11 small groups or individual properties. It is estimated that the latter category includes residents at 52 properties. In this context a single adverse significant effect that is temporary is strongly indicative that the Proposed Development is acceptable in visual terms.

9.21 Implementation of environmental measures

- 9.21.1 **Table 9.12** describes the environmental measures embedded within the Proposed Development and the means by which they will be implemented.

Table 9.12 Summary of environmental measures to be implemented – relating to landscape and visual

| Environmental measure | Responsibility for implementation | Compliance mechanism | ES section reference |
|---|-----------------------------------|----------------------|----------------------|
| Implementation of external lighting strategy as set out in the Lighting Impact Assessment to minimise effects of lighting on AONB and visual receptors | Developer/Contractor | CoCP/CEMP | |
| Implementation of landscape and visual mitigation and enhancement measures as set out in integrated/embedded mitigation masterplan. Measures that have been designed for landscape and visual purposes include: | Bristol Airport | Planning condition | Section 9.8 |

| Environmental measure | Responsibility for implementation | Compliance mechanism | ES section reference |
|--|-----------------------------------|----------------------|----------------------|
| <ul style="list-style-type: none"> - Extend scrub planting at northern (Downside Road) end of North Side Road with provision for rides in scrub. In the island bed surrounded by North Side Road and Downside Road this planting is to include a high proportion of tree planting, some of which will be extra heavy standard trees, to provide increased screening for residents in Melody Cottage. - Reinforce woodland planting on the top and northern side of western end of the northern bund close to junction of North Side Road and Downside Road. Plant native climbers (honeysuckle, ivy and clematis) on trellis along northern side of acoustic wall to soften appearance in views. - Woodland at junction of Downside Road and A38 to be managed to improve structure and composition, undertake any necessary tree surgery, remove non-native invasive species and to plant native local species including hazel, yew and holly along the woodland margin to help reduce light ingress into the woodland. - Extend woodland copse on the eastern side of the A38 northern traffic island to east. Scallop eastern edge of woodland extension. - Reinforce and thicken existing hedgerow in the field between A38 and Felton Common and allow to grow to maximum 1.5m height. - Reinforce and thicken existing hedgerow alongside section of boundary north of the southern A38 traffic island and allow to grow to maximum 1.5m height. - Introduce extra heavy standard trees into section of A38 boundary hedgerow south of the southern A38 traffic island and allow hedgerow section to grow out to maximum height of 1.5m to improve screening effectiveness. | | | |

| Environmental measure | Responsibility for implementation | Compliance mechanism | ES section reference |
|---|-----------------------------------|----------------------|----------------------|
| <ul style="list-style-type: none">- Gruffy's Field (south of Silver Zone car park's southern boundary); Introduce small copses in south-eastern and south-western corners; introduce parkland trees; and reinforce and thicken boundary hedgerow to maximum height of 1.5m.- Silver Zone car park extension (phase 2) to have 2m high perimeter bund with design, planting mix and management strategy to replicate existing perimeter bund around car park extension (phase 1). | | | |