

19. Summary of Significant Effects and Mitigation

19.1.1 This Environmental Statement (ES) has been prepared on behalf of Bristol Airport Limited (BAL), in support of a planning application submitted to North Somerset Council (NSC). The planning application seeks permission to expand Bristol Airport beyond the permitted passenger cap of 10 million passengers per annum (mppa) to 12 mppa and to provide the associated infrastructure necessary to accommodate this growth, whilst making best and most efficient use of the existing airport site.

19.1.2 This chapter summarises the **likely significant effects** which are reported in full in each of the individual topic chapters described below. Both the construction and operation of the Proposed Development are considered.

19.1.3 A detailed description of the Proposed Development is provided in **Chapter 2: Description of the Proposed Development**, however in broad terms, in addition to the increase in passengers by 2 mppa, the following components are assessed within this ES:

- Permission for a rolling annual cap of 4,000-night flights;
- Extensions to the existing terminal building;
- Construction of the following:
 - ▶ A new walkway to the east pier;
 - ▶ A new pier connecting to the eastern stands;
 - ▶ A service yard;
 - ▶ A multi-storey car park (MSCP);
 - ▶ A gyratory road;
 - ▶ A new eastern taxiway link;
 - ▶ Extension to the Silver Zone Car Park (Phase 2);
- Taxiway widening (and fillets);
- Changes to the operation of aircraft stands 38 and 39;
- Operational extension to the Silver Zone Car Park (Phase 1); and
- Improvements to the A38.

19.1.4 The scope of the Environmental Impact Assessment (EIA) has been agreed with NSC, who have in turn consulted the appropriate statutory bodies. Therefore, it is considered that all necessary environmental technical topics, from which a likely effect could occur, have been given due consideration.

19.1.5 A summary of the topic requirements of the *Town and Country Planning (Environmental Impact Assessment) Regulations 2017* (hereafter referred to as the 'EIA Regulations'), and the chapters in which they are addressed, is included in **Table 1.2** within **Chapter 1: Introduction**. However, for comprehension within this summary, the environmental chapters or topics which are the subject of this EIA are as follows:

- **Chapter 6: Traffic and Transport;**

- **Chapter 7: Noise and Vibration;**
- **Chapter 8: Air Quality;**
- **Chapter 9: Landscape and Visual;**
- **Chapter 10: Land Quality;**
- **Chapter 11: Biodiversity;**
- **Chapter 12: Surface Water and Flood Risk;**
- **Chapter 13: Groundwater;**
- **Chapter 14: Historic Environment;**
- **Chapter 15: Socio-Economics;**
- **Chapter 16: Human Health;**
- **Chapter 17: Carbon and Other Greenhouse Gases;**
- Climate Change, which is discussed throughout relevant technical chapters; and
- **Chapter 18: Cumulative Effects Assessment.**

19.1.6 Each of the environmental topics above have been the subject of an assessment carried out in accordance with the agreed scope. The assessments include consideration of mitigation measures and reports on the likely significant effects following the implementation of such mitigation.

Overall summary of significant effects

19.1.7 A summary of the significant effects arising due to the Proposed Development, as assessed within this ES, is provided in **Table 19.1**. All effects, including those which are significant and those which are not significant, are then summarised under the topic headings which follow this table.

Table 19.1 Summary of significance of effects

Receptor and summary of predicted effects	Significance	Summary rationale
Air Quality		
Human health effects: Annual mean NO ₂	Moderate (negative)	Seven properties, all close to the A38, are modelled to experience moderate impacts, at all other receptors the impact is slight or negligible, so impacts are at the most of moderate significance. Concentrations at all receptors remain below the limit value of 40 µg m ⁻³ for annual mean NO ₂ .
Landscape and Visual		
Residential visual receptors in Downside, east of Cook's Bridle Path: Melody Cottage	Moderate (negative)	Moderately significant changes in the views and visual amenity at Melody Cottage for Operation Phase Year 1, but not significant by Operation Phase Year 15 when mitigating boundary screening is fully established.
Socio-Economics		

Receptor and summary of predicted effects	Significance	Summary rationale
Employees, employers and airport users in North Somerset District - Employment and GVA effects - Operational stage	Major (positive)	Increase in the size of the North Somerset economy, creation of a large number of direct, indirect and catalytic jobs, with a significant effect on the North Somerset District.
Employees, employers and airport users in West of England - Employment and GVA effects - Operational stage	Major (positive)	Increase in the size of the West of England economy, creation of a large number of direct, indirect and catalytic jobs, with a significant effect at the West of England level.
Employees, employers and airport users in the South West and South Wales region - Employment and GVA effects - Operational stage	Moderate (positive)	Increase in the size of the South West of England and South Wales economy, creation of a large number of direct, indirect and catalytic jobs, with a moderate effect at the regional level.
Human Health		
Operation - Community identity: General population and vulnerable groups	Minor (negative) to Moderate (positive)	The population surrounding Bristol Airport are already exposed to prominent aviation activity, but population response to the Proposed Development is highly subjective due to encompassing a range of views. Some may focus on the effects on environmental amenity, others may focus on the economic and travel benefits.
Operation - Economic effects: General population and vulnerable groups	Minor (positive) to Moderate (positive)	Employment may improve living conditions and support healthier choices e.g. diet and physical activity. Long-term employment could reduce levels of poverty and inequality, so is likely to be beneficial for health locally and, to a lesser extent, regionally.
Cumulative Effects Assessment		
Seven properties close to the A38 (in Lulsgate Bottom)	Moderate (negative)	Generally, there are no significant inter-related effects anticipated. The exception to this is Melody Cottage (at operation Year 1 only) and seven properties around the A38 which were assessed as moderate significance due to the effects of visual changes and annual mean NO ₂ respectively (which is no worse than the assessment of the effects alone. For Melody Cottage, this will not be increased as a result of other effects acting and by year 15 the visual effect would be not significant due to the effects of screening.
Melody Cottage (in Downside)	Moderate (negative)	

Traffic and Transport

- 19.1.8 Effects on Traffic and Transport, generated by the Proposed Development, are assessed in accordance with requirements of the EIA Regulations, and assessment scope is as agreed with Highways England (HE), Bath and North East Somerset Council (BaNES) and NSC.

Construction

- 19.1.9 **No significant effects** are anticipated to occur during the construction phase. In broad terms, this is due to the relatively small changes in traffic flows (<5% increase in Average Annual Weekday Traffic (AAWT)) associated with the construction of the Proposed Development, and the implementation of mitigation measures through the Outline Construction and Environmental Management Plan (CEMP). These mitigation measures will help reduce potential adverse effects on the local highway network and restrict routing of construction traffic to major roads such as the A38.

Operation

- 19.1.10 **No significant effects** are anticipated during operation in relation to severance, pedestrian and cyclist delay and amenity, fear and intimidation and accidents and road safety due to the relatively limited increases in AAWT (<10%) and largely rural nature of the area. There will be **significant beneficial effects** associated with the proposed improvements to the A38 / Bristol Airport Northern Roundabout, A38 / Downside Road and A38 / West Lane junctions, which will decrease driver delay times by more than 90 seconds and provide new crossing facilities.

Noise and Vibration

- 19.1.11 Government guidance from the Noise Policy Statement for England (NPSE) has been applied across the assessment of effects on Noise and Vibration, while a unique methodology has been used for a given source.

Construction

- 19.1.12 Construction effects resulting from changes to Noise and Vibration are assessed in accordance with BS 5228-1 and BS 5228-2 of the British Standards Institution (BSI).
- 19.1.13 The assessment concludes that with adoption of the recommended mitigation measures, **no significant effects** from Noise and Vibration are expected to occur as a result of the construction of the Proposed Development. As means of mitigation, it is recommended that a site-specific Construction Noise and Vibration Management and Mitigation Strategy, covering both demolition and new construction, is developed.

Operation

- 19.1.14 Operational Noise and Vibration has been assessed in relation to flights into and out of Bristol Airport (air noise); aircraft activities at Bristol Airport such as taxiing (ground noise); and road traffic on the road network in the vicinity of Bristol Airport (road traffic noise). Effects resulting from aircraft are assessed in accordance with recognised UK and Government guidance.
- 19.1.15 Although some receptors are presently exposed to high noise levels due to the present operational noise, **no significant effects** are expected to occur as a result of the Proposed Development due to the small changes in noise level; this is the case for air noise, ground noise, and road noise. Vibration due to aircraft is expected to currently affect a small number of dwellings on an infrequent basis and this is not expected to materially change under the future scenarios. For dwellings that are exposed to significant levels of air noise, BAL offers mitigation through their noise insulation grant scheme. As part of the Proposed Development this scheme will be enhanced, the noise thresholds for insulation will remain as current i.e. daytime 57 dB, 60 dB and 63 dB $L_{Aeq,16h}$ noise contours. However eligible properties can benefit as part of this enhanced scheme for 100% grant contributions without the need for match funding. In addition, the value of the grants will increase to generate a greater uptake of the scheme. Furthermore, the Quota Count budget

allowance for summer and winter season night flights, the 57 dB $L_{Aeq\ 16hr}$ daytime noise envelope and shoulder period movement limits will all remain as agreed under the 10 mppa consent provided in 2011.

Air Quality

- 19.1.16 Effects on Air Quality, generated by the Proposed Development, are assessed in accordance with guidance from the Institute of Air Quality Management (IAQM).

Construction

- 19.1.17 With embedded mitigation, there will be **no significant effects** as a result of dust generated during construction. The embedded mitigation will include standard dust management measures and will be controlled through an approved CEMP. Other potential effects of construction on Air Quality, for example from construction traffic, have been scoped out of the assessment and will have **no significant effects**.

Operation

- 19.1.18 Human health effects are assessed to be of **moderate significance**, due to increases in annual mean nitrogen dioxide (NO_2). At just seven properties close to the A38, these increases are described as "**moderate**" in terms of the IAQM and Environmental Protection UK (EPUK) guidance. At all other receptors, the increase is "**slight**" or "**negligible**" in IAQM and EPUK terms. However, there will be no exceedances of the limit value of $40\ \mu g\ m^{-3}$ for annual mean NO_2 and it is deemed very unlikely that there will be breaches of the hourly mean limit value of $60\ \mu g\ m^{-3}$. There are **no other significant** Air Quality effects on either human or ecological receptors.

Landscape and Visual

- 19.1.19 Effects on Landscape and Visual amenity, generated by the Proposed Development, are assessed through a Landscape and Visual Impact Assessment (LVIA) and a Cumulative Landscape and Visual Impact Assessment (CLVIA), conducted in accordance with Guidelines for Landscape and Visual Impact Assessment (GLVIA3).

Construction

- 19.1.20 The largest scale components of the Proposed Development assessed as having the most potential to generate significant Landscape and Visual effects are scheduled for the end of the construction period. Consequently, the worst-case scenario for potential Landscape and Visual effects would be when all the components of the Proposed Development are completed and operational. With the ongoing operation of Bristol Airport and the simultaneous construction of some components of the Proposed Development, effects would be **not significant** for all 12 landscape receptors (11 landscape character areas and the Mendip Hills Area of Outstanding Natural Beauty (AONB)) and 47 visual receptors. The only exception will not arise until the completion of Phase 3 of the MSCP, when the low magnitude of change in the views and visual amenity at one property (Melody Cottage) is likely to result in a **significant effect** by the end of the construction period.

Operation

- 19.1.21 The LVIA divides the operation period into Operation Year 1 (winter 2026) and Operation Year 15 (winter 2041), allowing any changes arising from the full establishment of the limited amount of enhancement and reinforcement planting to be provided. The LVIA concludes that there will be negligible magnitudes of change for the Mendip Hills AONB and 10 of the 11 landscape character

areas (LCAs), hence landscape effects will be **not significant**. The only exception will be the host Broadfield Down Settled Limestone Plateau LCA, where the magnitude of change will be low. However, as Bristol Airport already strongly influences the LCA, this reduces the susceptibility, so the change will result in landscape effects that are **not significant**. The visual assessment concludes that for 46 of the 47 groups of visual receptors, visual effects will be **not significant** at Operation Year 1. This is due to several factors: the components of the Proposed Development will be dispersed; screening from mature planting and existing built development; the complex plateau topography; and a design reflecting the scale of existing built development. A single property (Melody Cottage) is assessed as likely to sustain a low magnitude of visual change due to its proximity to the MSCP, so is assessed as being **significant** at Operation Year 1, but by Operation Year 15 tree and shrub planting will be mature, providing screening, so visual effects will be **not significant**. No other visual receptors will sustain changes to the magnitude assessed at Operation Year 1, hence all 47 groups of visual receptors will sustain visual effects that will be **not significant** by Operation Year 15.

Land Quality

- 19.1.22 Effects on Land Quality, generated by the Proposed Development, are assessed using the Source-Pathway-Receptor (SPR) approach, with potential contaminant linkages being identified in a Preliminary Risk Assessment in accordance with the Environment Agency (EA) *Model Procedures for the Management of Land Contamination (Contaminated Land Report (CLR) 11)*.

Construction

- 19.1.23 With embedded mitigation, it has been assessed that there will be **no significant effects** on Land Quality as a result of construction of the Proposed Development. The embedded mitigation, including ground investigation to inform the design, and control measures in accordance with an approved CEMP, will be further developed during the construction phase as information becomes available to ensure that there are no significant effects during construction.

Operation

- 19.1.24 It has been assessed that there will be **no significant effects** on Land Quality as a result of operation of the Proposed Development. The embedded mitigation measures during the design and the construction phase, and safe working practices during the operational phase in accordance with environmental best practice, will mean that there are no significant effects.

Biodiversity

- 19.1.25 Effects on Biodiversity, generated by the Proposed Development, are assessed with reference to the Chartered Institute of Ecology and Environmental Management's (CIEEM) EIA Guidelines. Identification of potential receptors focused on legally protected and otherwise important Biodiversity resources.

Construction

- 19.1.26 Baseline habitats within or around the Proposed Development include existing species poor lowland grassland, scrub, and woodland edge, although it is dominated by existing developed areas of Bristol Airport that have a low biodiversity importance.
- 19.1.27 Construction effects are limited to the change of use of an area of grassland to long stay car parking and the removal of a small amount of woodland edge to enable highway enhancements, both of which support foraging bats. This loss of habitat is mitigated through the provision and

enhancement of extensive areas of new tree and shrub planting, grassland enhancement and provision of new bat roosts on site and the restoration and enhancement of woodland offsite. A wide range of other ecological and environmental measures integrated into the Proposed Development ensure that **no significant effects** on Biodiversity will occur to habitats, species and designated sites during construction.

Operation

- 19.1.28 The Proposed Development design and the implementation of the integrated and embedded mitigation and enhancement ensures that the biodiversity associated with Bristol Airport and in the surrounding areas are not impacted by the operation of the airport up to the proposed 12 mppa limit. Through a robust programme of monitoring, reporting, management and intervention (if necessary), there is a high confidence in the success of these measures that confirms that **no significant operational effects** on Biodiversity will occur to habitats, species and designated sites.

Surface Water and Flood Risk

- 19.1.29 Receptors to changes in Surface Water and Flood Risk conditions have been identified using the SPR approach; with receptors being categorised as aquatic environment, water resources and flood risk.

Construction

- 19.1.30 For the construction phase a CEMP has been prepared in line with best practice to manage and minimise the potential environmental effects of construction activities, for example managing potentially silty dewatering of excavations, containing runoff from construction sites, and ensuring correct storage and handling of concrete and associated wash-water, and fuels, lubricants and chemicals used in the construction process. Application of the CEMP measures will ensure that there are **no significant effects** to the identified receptors.

Operation

- 19.1.31 For the operational phase, the identified receptors remain the same as those during construction. The Proposed Development's drainage systems have been designed to current standards, compliant with National Planning Policy Framework (NPPF) specifications and the 1% annual exceedance probability (AEP) rainfall event + climate change. This ensures that runoff is appropriately managed, and the Proposed Development and existing downslope off-site development remain safe from flooding. Sustainable drainage principles have been incorporated, so runoff from the Proposed Development will be retained on-site to be infiltrated into the ground, thereby causing **no significant effects** to water resources or aquatic environment receptors.
- 19.1.32 All runoff passing through soakaways will be treated by passing through full retention oil water separators before infiltration. Contaminated runoff (emergency incidents or spillages) will be collected (via pollution control valves in the drainage system) and disposed of via a suitable method. Design mitigation measures to manage the risk of surface water flooding include the setting of ground floor levels above local ground levels, local profiling of ground levels and the incorporation of existing exceedance flow pathways in the design to manage surface water flooding or drainage exceedance within the landscape and car parking areas of the application site. Based on full application of the identified mitigation measures **no significant effects** to the identified aquatic environment, water resources or flood risk receptors are expected.

Groundwater

- 19.1.33 Assessment of effects on Groundwater due to the Proposed Development was based on the SPR approach; receptors were identified, followed by the potential effects on these receptors from the Proposed Development, then pathways that link the effect and receptor.

Construction

- 19.1.34 In the construction phase the potential effects are: entry of turbid water into the underlying aquifer; pollution as a result of leaks or spills of fuel oils used by construction equipment; and temporary loss of groundwater resources due to water being directed away from construction areas to surface water.
- 19.1.35 The embedded mitigation measures set out in the CEMP will limit the potential for turbid water and pollutants to enter the ground, measure include the treatment of construction runoff to remove silt or turbidity, inspection of equipment for leaks, parking of vehicles on hardstanding and provision of spill response materials. As a result, the magnitude of change is very low and effect significance is **minor or negligible (not significant)**. Any loss of groundwater resource due to water being directed away from construction areas to surface water, will be limited to a relatively small area of the site, and also be limited in time because it will only occur during the construction phase in the areas that are being worked on at any one time. As a result, the magnitude of change for this effect is very low and the effect significance is **minor or negligible (not significant)**.

Operation

- 19.1.36 In the operational phase, the potential effects are: entry of potentially polluting materials into groundwater and loss of groundwater resources due to interception of infiltration. The aquifer beneath the application site is sensitive to both pollution and loss of water resources. The mitigation measures that will be incorporated will limit the potential for contaminants to enter the ground and will ensure that there is no loss of resources by infiltrating all rainwater to ground. In addition, discharges to groundwater will be controlled via an Environmental Permit. This will seek to prevent the entry of hazardous substances and limit the entry of non-hazardous pollutants to groundwater. As a result, the magnitude of change for all receptors as a result of the operation of the Proposed Development is very low and the effect significance is **minor or negligible (not significant)**.

Historic Environment

- 19.1.37 Effects on Historic Environment, generated by the Proposed Development, are assessed through both a desk study and survey work, conducted based on guidance from Historic England (HE), the Chartered Institute for Archaeologists (CIfA) and English Heritage.

Construction

- 19.1.38 There will be **no significant effects** as a result of direct disturbance of heritage assets during the construction phase. The Proposed Development will involve only limited additional land-take and a programme of geophysical survey and trial trenching was completed within the site of the Silver Zone Car Park Extension (Phase 2). This did not reveal any features of archaeological interest. With embedded mitigation there will be **no significant effects** on the settings of any heritage assets during the construction phase. An earth bund will be created as the first phase of construction of the Silver Zone Car Park Extension (Phase 2); this will screen the scheduled monument Long barrow 350m southwest of Cornerpool Farm (SM1008291) from later construction activities and will therefore limit the duration of construction effects on this monument.

Operation

- 19.1.39 Effects on the settings of heritage assets arising during the operation phase have been assessed with reference to visual changes resulting from the presence of new airport infrastructure and noise changes resulting from additional aircraft movements. It has been concluded that any effects will be **minor and not significant**.

Socio-Economics

- 19.1.40 The Socio-Economics assessment was conducted as a desk-based study from publicly available data sources (including Census data, Nomis, Public Health England (PHE)) and Civil Aviation Authority (CAA)), and the 2017 and 2018 York Aviation: Economic Impact Assessments. As there is no definitive guidance on significance criteria for Socio-Economics, effects on Socio-Economics, generated by the Proposed Development, are assessed in accordance with the generic project wide approach.

Construction

- 19.1.41 Employment opportunities alongside Gross Value Added (GVA) will be generated throughout the construction period (2019-2016). These effects have been assessed at three different spatial scales (study areas). In North Somerset the annual effects estimated range from £1 million and £11 million per year and the number of jobs from 5 to 95. To the larger West of England, the corresponding effects are between £1 million and up to £16 million per year and between 10 and up to 260 job opportunities per year. Effects across the South West of England and South Wales are larger still, at between £1 million and £23 million per year, with between 25 and up to 445 job opportunities per year. Overall for all three study areas this is a positive effect supporting new job opportunities accessible to local people, but the scale of change is **negligible**, and effects are **not significant**.

Operation

- 19.1.42 Once operational the total economic effect of Bristol airport by 2026 is expected to reach over £0.5 billion of gross value added (GVA), per year, alongside over 4,000 jobs to the economy of North Somerset alone. These effects are created directly and indirectly along supply chains and via employee spending, but Bristol Airport also supports wider productivity growth as well as the benefits from inbound tourism. The total effect if the Proposed Development was not constructed represents an increase of £90 million GVA per year and 650 additional jobs. Across the West of England, Bristol Airport is expected to contribute over £1 billion to annual GVA as well as 12,600 jobs; over £200 million per year in GVA and 2,000 jobs over and above what is expected if the Proposed Development does not go ahead. Across the wider South West of England and South Wales, the corresponding total impact figures are nearly £2.4 billion GVA per year and over 31,000 jobs. This would be an increase of some £390 million per year in GVA and of over 5,000 new jobs. Overall, based on the scale of change judged in comparison with historical changes in economic and employment growth as well as socio-economic characteristics in both North Somerset and in the West of England, this is considered a **positive and major (significant) effect** to both areas. To the wider South West of England and South Wales area, the effect is also **positive** and judged to be **moderate (significant)**. The nature of the employment opportunities alongside the size of labour catchment area means that significant in-migration to take up new jobs at the airport is not anticipated.

Human Health

- 19.1.43 Effects on Human Health, generated by the Proposed Development, are assessed in accordance with emerging best practice for the consideration of health in EIA. It has been informed by

approaches used in Health Impact Assessment (HIA) and by interim advice from IEMA and PHE. The assessment has been based on publicly available data and results from other chapters of the ES.

Construction

- 19.1.44 A qualitative assessment of population health effects has been undertaken, based on quantitative modelling and analysis as reported in other ES chapters. For the construction phase the Human Health chapter has considered the potential for likely significant effects associated with the following determinants of health: dust; noise; traffic; and community identity. The relevant geographic population is the population near to Bristol Airport. Construction would occur over approximately seven years alongside existing airport activities, flights and traffic. In the context of this baseline and the existing consented works at the airport, there would be limited potential for the changes due to the Proposed Development to have more than a small magnitude of effect. For the general population it is considered that the outcome would be a **negligible** effect to population health. For groups near to Bristol Airport who may be particularly sensitive to change, e.g. due to age or existing poor health, the assessment notes the potential for up to **minor adverse** effects (**not significant**). The embedded mitigation measures taken into consideration during the assessment are as described in the source ES chapters.

Operation

- 19.1.45 For the operational phase the Human Health chapter has considered the potential for likely significant effects associated with the following determinants of health: air quality, noise, traffic, economic effects, community identity, healthcare service demand and climate change. Overall, across the scope of the Human Health chapter assessment, the adverse effects to population health for the general population and vulnerable groups are considered at most, **minor adverse (not significant)**. For the population near to Bristol Airport, the combination of such incremental adverse effects may result in up to a **moderate adverse** effect (**potentially significant**). However, this should be seen in the context that there would likely also be up to a **moderate beneficial** effect for this area (and a wider area) relating to employment and investment. Beneficial effects also include a number of permanent highways infrastructure improvements that would be likely to make a modest but beneficial contribution to health and provide up to a **minor beneficial** effect (**not significant**). The overall effect for population health, taking account of differing effects across vulnerable groups and geographic levels, of the Proposed Development and all relevant other projects that it might interact with, is considered to be beneficial.

Carbon and Other Greenhouse Gases

- 19.1.46 Assessment of effects on Carbon and Other Greenhouse Gases (GHGs) considers IEMA's *EIA Guide to Assessing Greenhouse Gas Emissions and Evaluating their Significance* and is based on expert judgement of the scale of emissions in relation to the sector and/or UK Carbon Budgets, and as to whether satisfactory GHG mitigations have been put in place.

Construction

- 19.1.47 Construction GHG emissions are relatively small in relation to the aviation sector as a whole and cannot be said to have a substantial impact on meeting UK Carbon Budgets across sectors. The measures embedded into the construction of the Proposed Development align with best practice and enable the reduction of emissions where practicable. The mitigations secured are in-line with the indicators used in the Green Construction Board Low Carbon Routemap and good practice across the sector. Therefore, the effect of constructing the Proposed Development on the global climate is considered **not significant**.

Operation

- 19.1.48 For both non-aviation operations (e.g. surface access and electricity usage) and aviation, the GHG emissions are deemed to not be substantial in comparison to UK Carbon Budgets, or national or regional sector totals. Mitigations have been secured to reduce emissions wherever practical that are in-line with the Committee on Climate Change's recommendations and the Draft West of England Joint Spatial Plan. Therefore, for each emissions source, the effect of operating the Proposed Development on the global climate is considered **not significant**.

Climate Change

- 19.1.49 Climate Change does not have a standalone chapter but is discussed throughout relevant technical chapters.

Construction

- 19.1.50 Climate Change resilience in the construction phase was scoped out of the ES due to its short nature.

Operation

- 19.1.51 There are **no significant effects** identified for climate change resilience, as the embedded mitigations and commitment to embed Climate Change within the detailed design and operation of the airport through a Carbon and Climate Change Action Plan are regarded as appropriate mitigation at this stage. The combined impact of the Proposed Development and Climate Change has been considered in all relevant environmental topic chapters and there are **no significant effects** relating to in-combination Climate Change impacts.

Cumulative Effects Assessment

- 19.1.52 **No significant adverse inter-project effects** are anticipated from the Proposed Development together with 'other developments' proceeding in the surrounding area and the 10 mppa and permitted developments at Bristol Airport. There is one **beneficial inter-project effect of moderate significance** on the collective health benefits from employment and investment from 'other developments' in addition with the Proposed Development.
- 19.1.53 Generally, there are no significant inter-related effects anticipated. The exception to this is Melody Cottage (at operation Year 1 only) and seven properties around the A38 which were assessed as **moderate significance** due to the effects of visual changes and annual mean NO₂ respectively (which is no worse than the assessment of the effects alone). For Melody Cottage, this will not be increased as a result of other effects acting and by year 15 the visual effect would be **not significant** due to the effects of screening.