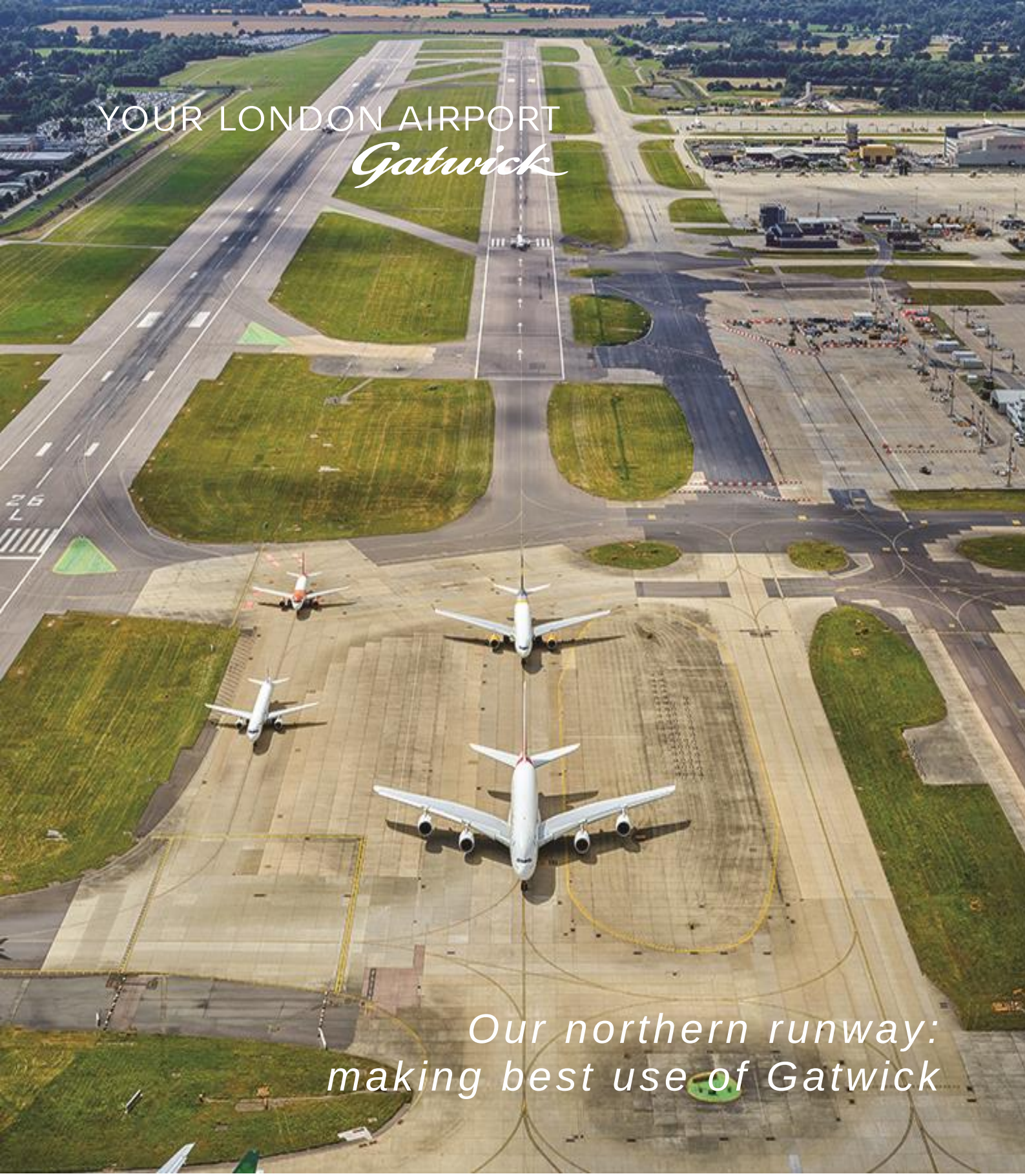

Preliminary Environmental Information Report
Chapter 6: Approach to Environmental Assessment

September 2021

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6 Approach to Environmental Assessment

6.1. Introduction

6.1.1 This chapter of the Preliminary Environmental Information Report (PEIR) sets out the approach taken to the Environmental Impact Assessment (EIA) process to date, to identify and evaluate the likely significant effects associated with the Project. This chapter also includes details of the consultation undertaken and the overall approach to the assessment of the effects of the Project. Further details of topic specific methodologies, such as survey methods, are provided in the relevant PEIR topic chapters (Chapters 7-19).

6.2. Scope of the Assessment

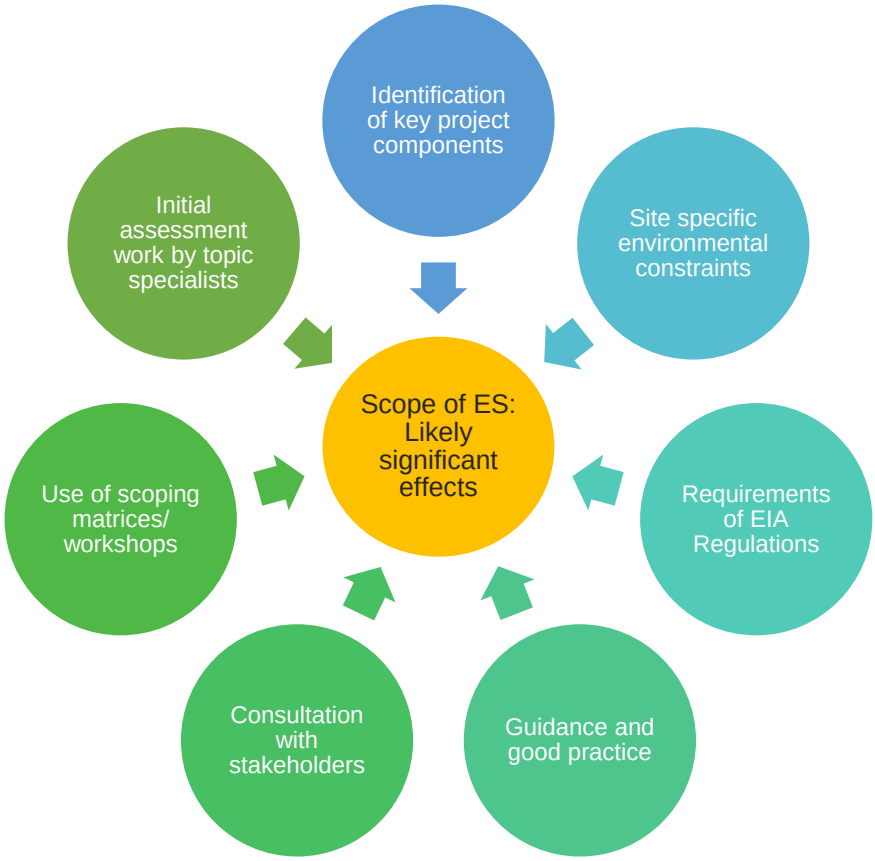
6.2.1 Scoping is the process of identifying the issues to consider within the EIA process (establishing the scope of the assessment). Scoping is therefore an important preliminary procedure, which sets the context for the EIA process. Through scoping, the key environmental issues are identified at an early stage, which permits subsequent work to concentrate on those environmental topics for which significant effects may arise as a result of a proposed development.

6.2.2 The scoping process is an iterative one, informed by increasing knowledge acquired through the EIA process. Diagram 6.2.1 highlights some of the key inputs to the scoping process. These inputs include the identification of an initial project description, identifying the key components of the Project and their likely maximum parameters. Taking this into account, alongside the characteristics of the environment in the vicinity of the site, the requirements of the EIA Regulations (as defined below) can be reviewed to provide an initial indication of the broad environmental topic areas likely to be relevant to the Project. From this point, the scope of assessment can be refined through the use of scoping workshops, consultation and the findings of initial assessments by topic specialists.

6.2.3 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, as amended (hereafter referred to as the EIA Regulations), allow the applicant to request that the Planning Inspectorate (on behalf of the Secretary of State) sets out its opinion (known as a Scoping Opinion) as to the issues to be addressed in the EIA process. Whilst there is no formal requirement in the EIA Regulations to seek a Scoping Opinion prior to the submission of an application, it is recognised best practice to do so.

6.2.4 In September 2019, Gatwick Airport Limited (GAL) submitted a Scoping Report to the Planning Inspectorate, which described the scope and methodology for the technical studies being undertaken to provide an assessment of any likely significant effects and, where necessary, to determine suitable mitigation measures for the construction and operational phases of the Project. It also described those topics or sub-topics which are proposed to be scoped out of the EIA process and provided justification as to why the Project would not have the potential to give rise to significant environmental effects in these areas.

Diagram 6.2.1: Overview of Scoping Process



6.2.5 Following consultation with the statutory bodies, the Planning Inspectorate (on behalf of the Secretary of State) provided a Scoping Opinion on 11 October 2019.

6.2.6 The scope of the EIA process underway for the Project, and the scope of this PEIR, has been informed by legislative requirements, the nature, size and location of the Project, the Scoping Opinion and consultation responses received to date. The structure of this PEIR, including details of the topic chapters, is provided in Chapter 1: Introduction.

6.2.7 Details of the key points raised in the Scoping Opinion and the way in which these have been addressed within the PEIR, or will be addressed during the ongoing EIA process, are provided in Appendix 6.2.1. Further details of topic-specific issues are set out within each of the topic chapters.

6.2.8 Table 6.2.1 summarises the scope of the EIA process in the context of the requirements of Regulation 14(2) of the EIA Regulations. Further details of the requirements of the EIA process are set out within Schedule 4 of the EIA Regulations. Appendix 6.2.2 sets out details of how each of these requirements have been addressed within the PEIR or will be addressed during the ongoing EIA process.

6.2.9 In addition to the key topics identified in Table 6.2.1, it is noted that microclimate and heat effects were identified within the Scoping Opinion as requiring inclusion within the assessment process. These matters are not considered likely to be significant but will be reported within the ES.

Table 6.2.1: Summary of Preliminary Environmental Information Requirements (Regulation 14(2) of the EIA Regulations)

Required Information	Location within PEIR
a) a description of the proposed development comprising information on the site, design, size and other relevant features of the development	Chapter 5: Project Description
b) a description of the likely significant effects of the proposed development on the environment	Chapter 7: Historic Environment Chapter 8: Landscape, Townscape and Visual Resources Chapter 9: Ecology and Nature Conservation Chapter 10: Geology and Ground Conditions Chapter 11: Water Environment Chapter 12: Traffic and Transport Chapter 13: Air Quality Chapter 14: Noise and Vibration Chapter 15: Climate Change and Carbon Chapter 16: Socio-economic Effects Chapter 17: Health and Wellbeing Chapter 18: Agricultural Land Use and Recreation Chapter 19: Cumulative Effects and Inter-relationships Appendix 5.3.1: Outline Code of Construction Practice Appendix 5.3.2: Draft Waste Strategy Appendix 5.3.3: Major Accidents and Disasters
c) a description of any features of the proposed development, or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment	
d) a description of the reasonable alternatives studied by the applicant, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment	Chapter 3: Need and Alternatives Considered
e) a non-technical summary of the information referred to in sub-paragraphs (a) to (d)	Non-technical Summary
f) any additional information specified in Schedule 4 relevant to the specific characteristics of the particular development or type of development and to the environmental features likely to be significantly affected.	See Appendix 6.2.2: Schedule 4 Requirements of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, as amended.

Topics Scoped out of the EIA Process

6.2.10 Effects on aspects of the environment, other than those listed in Table 6.2.1, are not likely to be significant. The topics scoped out of the assessment are set out below. Further details are provided in the Scoping Report.

Material Assets

6.2.11 The EIA Regulations refer to 'material assets', including cultural heritage, architectural and archaeological aspects and landscape. The phrase 'material assets' has a broad scope, which may include an asset of human or natural origin, valued for heritage, landscape or socio-economic reasons. Material assets are in practice considered across a range of topic areas within the PEIR, in particular the historic environment, landscape and socio-economic chapters. These topics have been included within the EIA process. Therefore, no separate consideration of material assets is considered necessary. This approach was confirmed in the Scoping Opinion provided by the Planning Inspectorate.

Radiation

6.2.12 Radiation is used within airports as part of the security screening process, including through the use of metal detectors, baggage screening and staff and passenger body screening. Each of these processes is well regulated in order to ensure that receptors are not exposed to any health or environmental risk. The Project would require internal reconfiguration of airport processes but would not introduce any new sources of radiation or include any sources of radiation other than those in use at airports throughout the UK.

6.2.13 Overall, the Project does not propose any new or unusual sources of radiation that could lead to significant effects on the environment. The Project would operate in line with normal good practice, regulatory and permitting requirements as is the case for all other UK airports. No radiation emissions are anticipated to occur as a result of the construction process. Radiation emissions have therefore been scoped out of the EIA process. The Scoping Opinion provided by the Planning Inspectorate confirmed that a standalone assessment of radiation effects is not required.

Daylight and Sunlight

6.2.14 Due to the location of the proposed works and the nature of the surrounding infrastructure and land use, it is not considered likely that the Project would have significant effects in relation to daylight and sunlight. Effects on daylight and sunlight have been scoped out of the EIA process. This approach was confirmed in the Scoping Opinion provided by the Planning Inspectorate.

Decommissioning Effects

6.2.15 The Project is proposed to form a long term part of Gatwick Airport, providing an integral part of the improved airport in order to allow an increase in flight and passenger numbers through making best use of Gatwick's existing runways. Although some elements of the Project would have a defined design life, it is proposed that all elements would be subject to continued maintenance/replacement in line with the management of the airport as a whole. Therefore, the Project, once operational, would form part of a permanent airport and no activities are proposed that would require decommissioning or associated decommissioning plans. As such, decommissioning effects for the airport itself have been scoped out of the EIA process. The

removal of any temporary elements of the Project (such as construction compounds) has been assessed within this PEIR and the EIA process. This approach was confirmed in the Scoping Opinion provided by the Planning Inspectorate.

Airspace Change Process

FASI South

6.2.16 As set out in Chapter 4: Existing Site and Operation, work is being undertaken to review the airspace over London and the south east of England, with the aim of addressing existing constraints and allowing for future growth in air transport.

6.2.17 Airspace within the UK is regulated by the Civil Aviation Authority (CAA) and managed by NATS En Route Limited (NERL), which is a subdivision within the National Air Traffic Services (NATS).

6.2.18 Work is being undertaken to review the airspace over London and the south east of England, with the aim of addressing existing constraints and allowing for future growth in air transport. This work is being undertaken by NATS, in partnership with the Department for Transport and the CAA and is known as the Future Airspace Strategy Implementation (FASI) South.

6.2.19 FASI South will be developed through an airspace change consultation in line with the CAA's airspace change process document (CAP1616 (CAA, 2021)). This process for the airspace around Gatwick Airport below 7,000 feet has just re-started (July 2021) but it will be some years before the outcome is clear. However, FASI South is not required in order to allow dual runway operations at Gatwick. The Environmental Impact Assessment (EIA) process for this Project has therefore been undertaken based on current flightpath information, updated to reflect the movement of the centreline of Gatwick's northern runway by 12 metres.

6.2.20 Although the proposed FASI South airspace changes lie outside of the scope of this Project, should information on the outcome of the FASI South process become available during the course of the EIA process (at a time when the information can be taken into account prior to submission), the implications of this, in terms of amended noise impacts, will be reviewed and considered within the EIA process.

Dual Runway Operations

6.2.21 In order to ascertain whether an airspace change is required to enable dual runway operations at Gatwick (with the realignment to the centreline of the northern runway), GAL submitted a Statement of Need within the scope of CAP 1616 to the CAA on 11 November 2019. The CAA issued CAP 1908 in May 2020, assigning the airspace change as Level 0[1] as the proposal would not alter traffic patterns (CAA, 2020). In December 2020, the CAA issued its decision (Decide Gateway): '*The CAA has completed the Decide Gateway Assessment and is satisfied that the change sponsor has met the requirements of the Airspace Change Process. The CAA approves the implementation of this airspace change proposal.*' CAP 1908 notes that all physical works associated with the Northern Runway Project would be considered through the DCO consenting process.

[1] Level 0: Changes to nomenclature or qualifying remarks of notified airspace design that will not later air traffic patterns. Change sponsors are required only to complete Stage 1A of the airspace change process.

Transboundary Effects

6.2.22 The EIA Regulations require consideration of transboundary effects of development on the environment. Transboundary effects are the effects of a project on the environment of another European Economic Area (EEA) member state. The need to consider such transboundary effects has been embodied by the United Nations Economic Commission for Europe on EIA in a Transboundary Context (commonly referred to as the 'Espoo Convention'). The Convention requires that assessments are extended across borders between parties of the Convention when a planned activity may cause significant adverse transboundary impacts.

6.2.23 Paragraph 3 of Schedule 3 to the EIA Regulations requires that '*the likely significant effects of the development on the environment must be considered… taking into account - … (c) the transboundary nature of the impact'.* Further, at Schedule 4, the EIA Regulations state that the ES must include *'[t]he description of the likely significant effects on the factors specified in regulation 5(2) should cover the direct effects and any indirect, secondary, cumulative, transboundary… effects of the development*'. Regulation 32 also obligates the Planning Inspectorate to form a view on the potential for transboundary impact and consult with relevant EEA states.

6.2.24 The Planning Inspectorate Advice Note Twelve (Planning Inspectorate, 2020c) outlines the legal context and the process for undertaking a transboundary assessment. The advice note states that the Inspectorate should determine whether or not the development is likely to have significant effects on the environment within another EEA State. A transboundary screening exercise has been undertaken to aid the Inspectorate and details are provided in Appendix 6.2.3.

6.2.25 The screening exercise concluded that significant transboundary effects can be ruled out for the majority of aspects. Two environmental aspects were identified for which there could conceivably be a transboundary effect (effects on migratory bird species and effects on climate change). The conclusions are summarised below.

6.2.26 Ashdown Forest is located within 20 km of the Project site and is designated for the European nightjar *Caprimulgus europaeus* and the Dartford warbler (*Sylvia undata*). The European nightjar is a migratory species. The potential for impacts on migratory species supported by Ashdown Forest (as a result of air quality emissions from traffic) has been considered throughout the environmental assessment process. The conclusions of the assessment process to date are presented in Appendix 9.9.1, the Habitat Regulations Assessment. Impacts on migratory species are unlikely, given the distance of the European designated sites from the airport, the distance over which any changes in traffic would result in any effect on air quality (and therefore habitat) and the regulatory regime in place to protect European designated sites. As set out in Appendix 9.9.1, no significant effects are predicted.

6.2.27 Due to the global nature of climate change impacts, the receptor for impacts is the global climate. Impacts should therefore be considered in terms of the contribution to global greenhouse gas levels within the EIA process, as impacts cannot be attributed to any individual EEA states. The assessment of impacts and effects on the global climate is provided in Chapter 15: Climate Change and Carbon.

6.2.28 The information presented in Appendix 6.2.3 does not identify any potential for significant effects on the environment in other EEA States.

6.3. Environmental Assessment Methodology

Relevant EIA Guidance

6.3.1 The following government or institute guidance has been taken into account during the EIA process:

- National Planning Practice Guidance (Ministry of Housing, Communities and Local Government, 2019);
- Mitigation Measures in Environmental Statements (Department of the Environment, Transport and of the Regions, 1997);
- Design Manual for Roads and Bridges: Sustainability and Environmental Appraisal. LA 104: Environmental assessment and monitoring (Highways England *et al*., 2020);
- Guidelines for Environmental Impact Assessment (Institute of Environmental Management and Assessment (IEMA), 2004);
- Environmental Impact Assessment Guide to: Shaping Quality Development (IEMA, 2015a);
- Environmental Impact Assessment Guide to: Climate Change Resilience and Adaption (IEMA, 2015b);
- Environmental Impact Assessment Guide to: Delivering Quality Development (IEMA, 2016);
- Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance (IEMA, 2017a);
- Health in Environmental Impact Assessment: A Primer for a Proportional Approach (IEMA, 2017b);
- Planning Act 2008: Guidance on the pre-application process for major infrastructure projects (Ministry of Housing, Community and Local Government, 2015);
- Advice Note Three: EIA Consultation and Notification (Planning Inspectorate, 2017);
- Advice Note Six: Preparation and Submission of Application Documents (Planning Inspectorate, 2020a);
- Advice Note Seven: Environmental Impact Assessment: Preliminary Environmental Information, Screening and Scoping (Planning Inspectorate, 2020b);
- Advice Note Nine: Using the Rochdale Envelope (Planning Inspectorate, 2018);
- Advice Note Twelve: Transboundary Impacts and Process (Planning Inspectorate, 2020c);
- Advice Note Seventeen: Cumulative Effects Assessment (Planning Inspectorate, 2019).

6.3.2 Other topic-specific specialist methodologies and good practice guidelines have been drawn on as necessary and are set out in each topic chapter.

Methodology and Assessment Criteria

6.3.3 Each topic chapter provides details of the methodology for baseline data collection and the approach to the preliminary assessment of effects. Each environmental topic has been considered by a specialist in that area.

6.3.4 Each topic chapter defines the scope of the assessment within the methodology section, together with details of the study area, desk study and survey work undertaken. The identification and evaluation of effects have been based on the information set out in Chapter 5: Project Description, EIA good practice guidance and relevant topic-specific guidance where available.

Baseline Conditions

Existing Baseline Conditions

6.3.5 The existing and likely future environmental conditions in the absence of the Project are known as 'baseline conditions'. Each topic-based chapter includes a description of the current (baseline) environmental conditions. The baseline conditions at the site and within the study area form the basis of the assessment, enabling the likely significant effects to be identified through a comparison with the baseline conditions.

Future Baseline Conditions

6.3.6 As set out in Chapter 4, a number of improvements are proposed at Gatwick Airport to accommodate the predicted increase in passenger numbers in the absence of the Project. The likely timing of these improvements has been taken into account through the use of future baseline scenarios and assessment years (see below).

6.3.7 The consideration of future baseline conditions has also taken into account the likely effects of climate change, as far as these are known at the time of writing. This has been based on information available from the UK Climate Projections project, developed by the Met Office and Environment Agency (Met Office, 2018), which provides information on plausible changes in climate for the UK and on published documents such as the UK Climate Change Risk Assessment 2017 (HM Government, 2017).

6.3.8 Topic authors have also considered other factors relevant to identification of future baseline conditions, such as trends in population size of protected species or changes in socio-economic conditions over time.

Assessment of Effects

6.3.9 The EIA Regulations require the identification of the likely significant environmental effects of the Project. The overarching approach taken within this preliminary assessment is set out below.

Assessment Years

6.3.10 The approach to assessment has incorporated the use of identified assessment years to allow for preliminary evaluation of the likely effects during the phased construction process and during the operation of the Project. The following assessment years have been used to inform this PEIR:

- 2024 to 2029, representing the initial construction phase prior to opening of the altered northern runway;
- 2029: represents the opening year of the altered northern runway (and therefore the first point at which effects arising from its operation would occur);
- 2032: an interim assessment year;
- 2038: representing the year in which the development works proposed as part of the Project would be completed; and
- 2047: to meet a specific requirement of guidance in the Design Manual for Roads and Bridges to assess impacts 15 years after the last of the key highways works associated with the Project are due to be completed.

6.3.11 For the purposes of this PEIR, assessment concentrates on the period 2024 to 2038, with modelling topics modelling 2029, 2032 and 2038 as the primary assessment years. In addition,

for some topics it is a requirement to assess the effects of the highways improvements 15 years after completion. Therefore, for these topics, an assessment is provided for 2047. Although the throughput at the airport is predicted to grow slightly between 2038 and 2047, no greater effects for other topics are predicted in this assessment year (due to factors such as improvements in aircraft performance over time).

6.3.12 For some of the assessment years (including the airfield opening year (2029) and the interim assessment year (2032)), construction activities would occur alongside operation of the altered northern runway and this has been taken into account in the assessments. In some cases, individual topic chapters may also identify additional years to be included in the assessment work, in accordance with topic-specific good practice guidance.

6.3.13 As set out in Chapter 5: Project Description, this PEIR considers an increase in passenger throughput up to approximately 75.6 mppa by 2038.

Assessing the Likely Effects of the Project

6.3.14 Each topic chapter clearly defines its approach to the evaluation of significance and the methodology used for the EIA process. The PEIR provides a preliminary view on the likely significant effects which will be refined during the ongoing EIA and iterative design process.

6.3.15 This section provides details of the overarching methodology for the EIA process. This has been used to inform the approach to assessment for each environmental topic, except where topic-specific guidance or usual practice for that topic indicates otherwise. The overarching approach takes into account both the sensitivity of receptors affected and the magnitude of the likely impact in determining the significance of the effect.

Sensitivity or Importance of Receptors

6.3.16 Receptors are defined as the physical or biological resource or user group that would be affected by a project. For each topic, baseline studies have informed the identification of potential environmental receptors. Some receptors will be more sensitive to certain environmental effects than others. The sensitivity or value of a receptor may depend, for example, on its frequency, extent of occurrence or conservation status at an international, national, regional or local level.

6.3.17 Sensitivity has been defined within each of the topic chapters of the PEIR, where appropriate, and takes into account the factors including:

- vulnerability of the receptor;
- recoverability of the receptor; and
- value/importance of the receptor.

6.3.18 Sensitivity has generally been described using the following scale:

- high;
- medium;
- low; and
- negligible.

6.3.19 In some cases, a further category of ‘very high’ has been used.

6.3.20 As a general rule, the receptor sensitivity levels have been defined as set out in Table 6.3.1.

Table 6.3.1: Definitions of Receptor Sensitivity (based on Highways England *et al*., 2020)

Sensitivity	Typical Descriptors
Very High	Very high importance and rarity, international scale and very limited potential for substitution.
High	High importance and rarity, national scale and limited potential for substitution.
Medium	High or medium importance and rarity, regional scale, limited potential for substitution.
Low	Low or medium importance and rarity, local scale.
Negligible	Very low importance and rarity, local scale.

Magnitude of Impact

6.3.21 Impacts are identified as the physical changes to the environment attributable to the Project. For each topic, the likely environmental impacts have been identified. The magnitude of the impact has been described using the criteria defined within each topic chapter.

6.3.22 The categorisation of the impact magnitude has taken into account the following four factors:

- extent;
- duration;
- frequency; and
- reversibility.

6.3.23 Impacts have been defined as either adverse or beneficial. They may also be described as listed below.

- Direct: arise from activities associated with the Project. These tend to be either spatially or temporally concurrent.
- Indirect: impacts on the environment which are not a direct result of the Project, often produced away from the Project site or as a result of a complex pathway.

6.3.24 Impacts have been divided into those occurring during the construction phase and those occurring during operation. As set out above, interim assessment years have been considered, where construction and operational activities may overlap. Where appropriate, chapters have referred to temporary and permanent impacts (where temporary impacts are those that last for a limited period of time).

6.3.25 The impacts related to land take have been assessed as part of the construction process within the year that the impact would occur. These impacts could be considered either temporary or permanent depending on whether the land would be restored following completion of the construction phase.

6.3.26 With respect to the duration of temporary impacts, the following has been used as a guide within this assessment, unless defined separately within the topic chapters:

- Short term: A period of months, up to one year
- Medium term: A period of more than one year, up to five years; and
- Long term: A period of greater than five years.

6.3.27 Magnitude has generally been described using the following scale:

- high;
- medium;
- low; and
- negligible.

6.3.28 In some cases, a further category of 'no change' has been used.

6.3.29 As a general rule, magnitude levels have been defined as set out in Table 6.3.2.

Table 6.3.2: Definitions of Impact Magnitude (based on Highways England *et al*., 2020)

Magnitude	Typical Descriptors
High	Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features and elements (Adverse).
	Large scale or a major improvement of resource quality; extensive restoration or enhancement; major improvement of attribute quality (Beneficial).
Medium	Loss of resource but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements (Adverse).
	Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality (Beneficial).
Low	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements (Adverse).
	Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring (Beneficial).
Negligible	Very minor loss or detrimental alteration to one or more characteristics, features or elements (Adverse).
	Very minor benefit to or positive addition of one or more characteristics, features or elements (Beneficial).
No change	No loss or alteration of characteristics, features or elements; no observable impact in either direction.

Significance of Effects

6.3.30 Effect is the term used to express the consequence of an impact (expressed as the 'significance of effect'), which is determined by considering both the magnitude of the impact and the sensitivity of the receptor affected.

6.3.31 The magnitude of an impact does not generally directly translate into significance of effect. For example, a significant effect may arise as a result of a relatively modest impact on a resource of national value, or a large impact on a resource of local value. In broad terms, therefore, the significance of the effect can depend on both the impact magnitude and the sensitivity or importance of the receptor.

6.3.32 Significance levels are defined separately for each topic, taking into account relevant topic-specific guidance, based on the scale set out below;

- substantial;
- major;
- moderate;
- minor; or
- negligible.

6.3.33 Table 6.3.3 sets out the general approach proposed to inform the assessment of significance based on the sensitivity of the receptor and the magnitude of impact. This matrix has informed the topic-specific methodologies. For some topics, a simplified approach is considered appropriate or the approach may be informed by topic-specific guidance.

Table 6.3.3: Assessment Matrix

Sensitivity	Magnitude of Impact				
	No Change	Negligible	Low	Medium	High
Negligible	No change	Negligible	Negligible or Minor	Negligible or Minor	Minor
Low	No change	Negligible or Minor	Negligible or Minor	Minor	Minor or Moderate
Medium	No change	Negligible or Minor	Minor	Moderate	Moderate or Major
High	No change	Minor	Minor or Moderate	Moderate or Major	Major or Substantial
Very high	No change	Minor	Moderate or Major	Major or Substantial	Substantial

6.3.34 Where a range of significance levels are presented, the final assessment for each effect is based upon expert judgement.

6.3.35 In all cases, the evaluation of receptor sensitivity or value, impact magnitude and significance of effect has been informed by professional judgement and is underpinned by narrative to explain the conclusions reached.

6.3.36 Unless set out otherwise in each topic chapter, effects assessed as moderate or above are considered to be significant within the assessment.

Addressing Uncertainty or Difficulties in Assessment

6.3.37 There is some degree of inherent uncertainty within the EIA process, in relation to factors such as future improvements to construction and design, the potential effects of climate change on existing receptors and in terms of the margin of error within forecasting or modelling tools. The text below sets out the proposed approach to addressing uncertainty. In all cases, where uncertainty exists, or where difficulties have been encountered, this has been identified within the relevant chapter of the PEIR, together with details of the measures that have been taken to reduce uncertainty as far as reasonably practicable. As the EIA process progresses, the degree of uncertainty is anticipated to reduce.

Project Parameters

6.3.38 The EIA process to date has been undertaken based on the description set out in Chapter 5: Project Description. The existing airport provides a number of constraints that have informed the Project design, including constraints with regard to location, available space and phasing, given the need to ensure continued use of the airport during construction of the Project. In addition, GAL's experience in operating Gatwick Airport has ensured that the design of many components of the Project is well understood. This has limited the number of options that have been carried forward through the EIA process. However, flexibility will need to be retained with regard to the detailed design of some elements of the Project, particularly for those elements that would be constructed later in the construction programme or that would be operated by third parties (such as hotels).

6.3.39 Where flexibility is required, guidance produced by the Planning Inspectorate with regard to the use of the 'Rochdale envelope' approach (Planning Inspectorate, 2018) has informed the key parameters identified for assessment. This includes the 'worst case' option from the realistic and likely options that may be developed. Where the assessment shows that no significant effect is anticipated for the worst case option, it is assumed that other (lesser) options would also have no significant effect.

6.3.40 Any assumptions made regarding the maximum design scenarios have been identified in each of the topic chapters and have been selected as those having the potential to result in the greatest effect on an identified receptor or receptor group.

Future Baseline and Assessment Years

6.3.41 The approach to assessment of future baseline conditions and the use of assessment years is set out under the 'Baseline Conditions' section above. The assessment has taken into account future baseline conditions at the airport (including growth in throughput and consented/committed developments that would occur in the absence of the Project), as set out in Chapter 4.

6.3.42 There will always be some element of uncertainty regarding future trends in environmental conditions and climate. The assessments made have been based on the most up to date information available at the time of assessment, including information available from the UK Climate Projections project and on published documents such as the UK Climate Change Risk Assessment 2017 (HM Government, 2017). This information has been reviewed by climate change technical specialists in order to inform Chapter 15: Climate Change and Carbon.

Forecasting and Modelling

6.3.43 Whilst there is inherent uncertainty in predicting long term aviation growth, the forecasts presented have been prepared jointly by GAL's in-house airline relations and marketing and research teams and ICF, one of the UK's foremost experts in air traffic forecasting.

6.3.44 As set out in Chapter 4: Existing Site and Operation, the COVID-19 pandemic had a very severe impact on the global aviation industry in 2020. Gatwick, along with all other UK airports, experienced a significant reduction in passenger traffic levels as a result of both Government-imposed restrictions on air travel and reduced passenger demand driven by low consumer confidence. While the immediate outlook remains challenging, the current forecasts indicate that passenger and airline demand at Gatwick will return to previous levels over the course of the next few years and then continue to grow thereafter.

6.3.45 In preparing the forecasts, regard has been had to the importance of having a realistic view of the level and characteristics of air traffic growth that would occur at Gatwick, whilst also ensuring that the environmental impacts of Gatwick's growth, some of which, such as noise, traffic and carbon, rely heavily on the forecasts, are not understated. This also accords with advice from the Planning Inspectorate to ensure that realistic 'worst case' environmental impacts are understood. For this reason, the forecasts presented are considered to represent a robust and realistic view of the level of traffic growth but are likely to be towards the upper end of the levels of growth that could occur at Gatwick.

6.3.46 Where modelling tools have been used within the topic assessments, care has been taken to ensure that the tool selected is appropriate for the assessment, taking into account topic-specific good practice and guidance. Calibration has been used to ensure a reasonable degree of accuracy in measurements. Topic chapters within the PEIR set out measures taken to address any uncertainty with regard to modelling inputs and outputs and any assumptions made.

Mitigation, Monitoring and Enhancement Measures

6.3.47 The EIA Regulations (Regulation 14(2)(c)) require that where significant effects are identified '*a description of any feature of the Project, or measures envisaged in order to avoid, prevent or reduce or, if possible, offset any likely significant adverse effects on the environment*' should be provided.

6.3.48 The development of mitigation measures is part of the iterative EIA process. Therefore, measures are under consideration throughout the EIA process in response to the findings of initial assessments. The Project that forms the subject of the application for development consent will include a range of measures designed to reduce or prevent significant adverse environmental effects arising, where practicable. In some cases, these measures may result in enhancement of environmental conditions. The assessment of effects within this PEIR takes into account all measures that currently form part of the Project and to which GAL is committed. These measures are currently at an early stage of development and will be refined further through the EIA process and in response to consultation, prior to preparation of the final ES.

6.3.49 The topic chapters included in this PEIR consider the following mitigation types:

- measures included as part of the Project design (sometimes referred to as primary or embedded mitigation);
- measures proposed to avoid effects occurring or to minimise environmental effects, such as measures to control light spillage (sometimes referred to as secondary mitigation). Where these measures relate to the construction phase, they will be implemented through the Code of Construction Practice (CoCP) and any other environmental management plans; and
- measures required as a result of legislative requirements or standard good practice (sometimes referred to as tertiary mitigation). Although many of these measures are regulated separately, these measures will also be included within the CoCP and any other environmental management plans for completeness.

6.3.50 Where required, further mitigation measures have been identified in individual topic chapters. These are measures that could further prevent and, where possible, offset any residual adverse effects on the environment. Where this is the case, residual effects with the further mitigation in place have been considered.

6.3.51 Where appropriate, monitoring measures have been set out within each topic chapter of the PEIR.

6.3.52 Mitigation and monitoring measures identified to control construction effects would be implemented through the CoCP. Where necessary, for example in relation to the future management of any ecological mitigation areas, operational management plans would be developed. An outline CoCP is provided at Appendix 5.3.1.

6.3.53 As the EIA process progresses, further work in relation to mitigation measures will be undertaken and this will inform the design of the Project for which development consent is sought. This will be reflected in the ES. The draft Development Consent Order (DCO) will be developed to be consistent with the measures identified in the ES, CoCP and any draft management plans, in order to ensure consistent implementation of the measures identified through the EIA process.

Cumulative and Inter-related Effects

6.3.54 Cumulative effects with other proposed developments have been assessed as part of the EIA process. This includes consideration of whether the Project, when considered together with other proposed developments, may result in any greater effects on a receptor than the effects of the Project alone.

6.3.55 In addition, inter-relationships between topic areas have been considered, in order to ensure that effects on a receptor arising from more than one environmental topic area are considered.

6.3.56 Further details of the approach to this assessment are provided in Chapter 19: Cumulative Effects and Inter-relationships. Details of the other proposed development considered within the cumulative effects assessment are set out at Appendix 19.4.1.

6.4. Next Steps

6.4.1 The PEIR provides a preliminary view on the likely significant effects and the appropriate methodologies to assess and address those effects. The environmental assessment is ongoing and, therefore, the development of the Project design and appropriate mitigation, monitoring and enhancement measures will be refined alongside the continued assessment and taking into account the consultation responses received. The findings will be reported in the ES, which will form part of the application for development consent.

6.5. References

Legislation

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6.6. Glossary

Table 6.6.1: Glossary of Terms

Term	Description
CoCP	Code of Construction Practice
DCO	Development Consent Order
DMRB	Design Manual for Roads and Bridges
EEA	European Economic Area
EIA	Environmental Impact Assessment
ES	Environmental Statement
FASI	Future Airspace Strategy Implementation
GAL	Gatwick Airport Limited
IEMA	Institute of Environmental Management and Assessment
NATS	National Air Traffic Services
NPPF	National Planning Policy Framework
NPPG	National Planning Practice Guidance
PEIR	Preliminary Environmental Information Report