Gatwick Airport Northern Runway Project

Environmental Statement
Non-Technical Summary

Book 5

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1 Introduction

1.1. Purpose of this Non-Technical Summary

1.1.1 This **Non-Technical Summary** provides an overview of the **Environmental Statement** prepared on behalf of Gatwick Airport Limited for the Gatwick Northern Runway Project ('the Project'). This **Non-Technical Summary** forms part of the documents submitted by Gatwick Airport Limited in support of the application for development consent for the Project.

1.1.2 This **Non-Technical Summary** has been written in a non-technical language and summarises information contained within **Environmental Statement**. For the full **Environmental Statement**, please refer to **ES Volume 1 – Main Text**, **ES Volume 2 – Figures** and **ES Volume 3 – Appendices** on the National Infrastructure Planning Website: https://infrastructure.planninginspectorate.gov.uk/projects/south-east/gatwick-airport-northern-runway/.

1.1.3 Documents which form part of the application for development consent for the Project are identified using **bold** text. The location of these documents, including document reference numbers are provided in Section 8 of this **Non-Technical Summary**.

1.2. Site Location

1.2.1 London Gatwick Airport (referred to hereafter as Gatwick) is in the county of West Sussex between the towns of Crawley and Horley. Gatwick lies within the administrative area of Crawley Borough Council and immediately adjacent to the boundaries of Mole Valley District Council to the north west, Reigate and Banstead Borough Council to the north east and Horsham District Council to the south west.

1.2.2 The airport's two passenger terminals (North Terminal and South Terminal) are directly served by the M23 motorway spur off the M23, which runs approximately 1.7 kilometres to the east of the airport. The A23 (London Road) also serves the airport, running in a north-south direction through the airport. Gatwick's railway station is located at the South Terminal, from which there is a direct transit link to the North Terminal.

1.2.3 The location of the Project and the relevant local authority areas are shown on **Figure 1.2.1**. The extent of the Project site boundary is shown on **Figure 1.2.2**.

1.3. Overview of the Project

1.3.1 Gatwick is a key piece of national infrastructure, an economic engine for local and regional growth, and the airport of choice for millions of passengers. Gatwick is currently served by a single main runway and a standby runway, which is located north of the main runway and is only available for use when the main runway is closed. This runway is known as the 'northern runway' or the 'standby runway'.

1.3.2 A planning condition, together with a planning agreement, has historically prevented this runway from being used at the same time as the main runway. The agreement expired in August 2019,

but the planning condition remains in place. Limiting Gatwick to the use of a single runway imposes a constraint on growth but also on resilience.

1.3.3 The Project proposes to make amendments to the northern runway, including repositioning its centreline to the north by 12 metres which, along with the lifting of the planning condition restricting its use, would enable dual runway operations in accordance with international standards. The Project also includes investment in a range of infrastructure and facilities which, together with the amendments to the northern runway, would enhance the efficiency of the airport and allow increased airport passenger numbers and aircraft operations. By proposing these changes, Gatwick Airport Limited is planning for its future growth, which will contribute towards meeting national demand for aviation growth.

1.4. Consenting Process

1.4.1 The Planning Act 2008 created a new development consent regime for major infrastructure projects in the fields of energy, transport, water, wastewater, and waste. The intention was to speed up the process for approving major infrastructure projects categorised as Nationally Significant Infrastructure Projects.

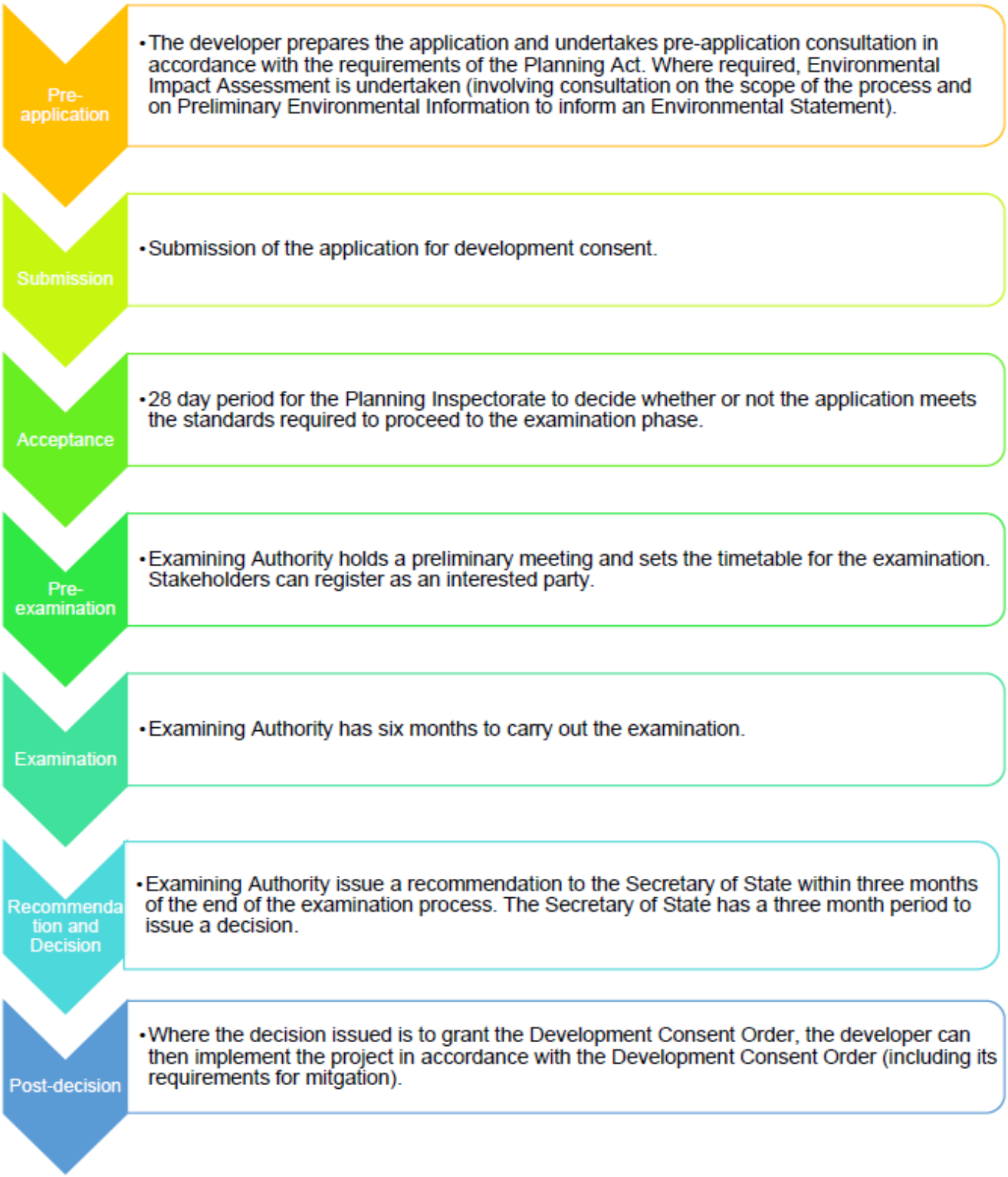
1.4.2 Amendments to existing airports in England fall under the Planning Act 2008 where the amendment would exceed defined thresholds. The Project proposes an amendment to Gatwick and meets the threshold for change by virtue of the increase in passenger throughput capacity and, therefore, represents an airport Nationally Significant Infrastructure Project.

1.4.3 Amendments to existing highways also fall within the scope of the Planning Act 2008, where the affected highway is entirely within England, where the Secretary of State or strategic highways company will be the highway authority for the highway and where the area exceeds the stated threshold. The proposed highway improvements (outside of Gatwick), which form part of the Project (to the North Terminal and South Terminal roundabouts) exceed the thresholds and also constitute a highways Nationally Significant Infrastructure Project in their own right.

1.4.4 Accordingly, there is a requirement to apply for development consent for the Project to the Planning Inspectorate. The Planning Inspectorate is a government agency responsible for dealing with applications for development consent for Nationally Significant Infrastructure Projects in England and Wales. The application for development consent for the Project is then ultimately decided by the Secretary of State for Transport.

1.4.5 The Planning Act 2008 defines the key stages in the application process for Nationally Significant Infrastructure Projects. These stages are summarised in **Error! Reference source not found.** below.

Diagram 1.4.1: Overview of the Planning Act 2008 Application Process.



2 Approach to Environmental Assessment

2.1. What is Environmental Impact Assessment (EIA)

2.1.1 EIA is the formal process of identifying and assessing the positive (beneficial) and negative (adverse) effects of a proposed development on the environment and determining if these are likely to be significant. Where significant adverse impacts are identified, suitable measures are proposed to avoid, prevent, reduce, or offset their effect on the environment. The EIA is then reported in an **Environmental Statement** to assist with the decision making process.

2.2. Consultation and Engagement

2.2.1 Consultation and engagement with stakeholders have formed an integral part in the development of the Project and EIA process. The following consultation and engagement activities have been undertaken for the Project:

- EIA Scoping: Gatwick Airport Limited submitted an **EIA Scoping Report** to the Planning Inspectorate in September 2019. The **EIA Scoping Report** was consulted upon with relevant stakeholders by the Planning Inspectorate, who provided their **EIA Scoping Opinion** in October 2019.
- Public Consultation (Autumn 2021): Gatwick Airport Limited held the first round of public consultation with stakeholders from 9 September 2021 to 1 December 2021. This included presentation of the Project proposals and publication of the Preliminary Environmental Information Report (PEIR).
- Public Consultation (Summer 2022): Gatwick Airport Limited held a second round of public consultation with stakeholders from 14 June to 27 July 2022 to update stakeholders and the local community on the ongoing work and refinement of the Project following the Autumn 2021 consultation. Part of that consultation included information on design changes to the proposed highway improvements and updated Preliminary Environmental Information (PEI).

2.2.2 In addition to the formal consultation activities identified above, stakeholders have also been consulted throughout the EIA process as part of regular Topic Working Groups.

2.3. Scope of the Assessment

2.3.1 Scoping is the process of identifying the issues to consider within the EIA process (ie establishing the scope of the assessment). Through scoping, the key environmental issues are identified at an early stage in the application process, which allows the EIA to prioritise aspects of the environment likely to experience significant effects because of a proposed development.

2.3.2 As set out above, Gatwick Airport Limited submitted a Scoping Report to the Planning Inspectorate in September 2019. The **EIA Scoping Report** set out the scope and methodology of the EIA for the Project. The **EIA Scoping Report** was consulted upon by the Planning Inspectorate and feedback was received from relevant stakeholders.

2.3.3 Following consultation, the Planning Inspectorate provided their **EIA Scoping Opinion** in October 2019. The **EIA Scoping Opinion** formed the basis of the EIA for the Project by identifying and confirming which environmental topics require assessment in the **Environmental Statement**.

The scope of the EIA has also been informed by relevant legislative requirements; the nature, size and location of the Project; and consultation responses received to date.

2.4. Preliminary Environmental Information

2.4.1 The PEIR was published as part of the Autumn 2021 consultation. The PEIR set out the preliminary findings of the EIA at the time. Updated PEI was provided as part of the Summer 2022 consultation in respect of design changes to the highway improvement works. These documents were used to inform pre-application consultation activities with stakeholders. Feedback received from stakeholders during the consultation period was then used to inform the **Environmental Statement**, where appropriate.

2.5. EIA Methodology

2.5.1 For each environmental topic considered as part of the EIA process, the following information has been provided in the **Environmental Statement**:

- legislation and policy considered;
- consultation and engagement carried out;
- the methodology and assessment criteria used for the assessment;
- a description of the existing environment;
- a description of the future environment (without the Project);
- a description of how stakeholder feedback has been considered;
- identification of suitable mitigation measures (where required); and
- identification and assessment of the likely significant effects.

Cumulative and Inter-related Effects

2.5.2 The EIA process has also considered the potential for cumulative effects between the Project and other proposed developments. Cumulative effects are those which occur on the environment as result of the interaction between the Project and other proposed developments, where the effect is greater than if the Project was considered in isolation. For example, the cumulative effect of traffic generated during construction of the Project and another nearby development on the local road network.

2.5.3 In addition, inter-related effects between the environmental topics covered in the **Environmental Statement** have also been evaluated as part of the EIA process. Inter-related effects occur where the combined effect of one or more environmental topics on a single receptor (or a group of receptors) is greater than if the environmental topics were considered in isolation. For example, the inter-related effects of dust, noise, and visual changes during construction of the Project on nearby residential properties.

3 Planning Policy Context

3.1. National Planning Policy

3.1.1 The EIA has considered existing and emerging national planning policy relevant to the Project. The following national planning policies are relevant to the Project:

- The Airports National Policy Statement;
- Aviation Policy Framework;
- Beyond the Horizon – The Future of UK Aviation: Making Best Use of Existing Runways;
- Flightpath to the future;
- Jet Zero Strategy: Delivering net zero aviation by 2050;
- Decarbonising Transport: A Better, Greener Britain;
- National Policy Statement for National Networks;
- National Planning Policy Framework; and
- National Planning Practice Guidance.

3.2. Local Planning Policy

3.2.1 The EIA process has considered adopted and emerging local planning policy relevant to the Project produced by the following local authorities:

- West Sussex County Council;
- Surrey County Council;
- Crawley Borough Council;
- Reigate and Banstead Borough Council;
- Tandridge District Council;
- Mid Sussex District Council;
- Horsham District Council; and
- Mole Valley District Council.

3.2.2 In addition, relevant supplementary planning documents are also considered. In some cases where the study area for a technical topic extends beyond the boundary of the administrative areas listed above, the planning documents relevant to additional administrative areas have also informed the assessment.

4 Alternatives

4.1. Alternatives Considered

Gatwick Master Plan Options

4.1.1 As part of the airport planning process and to address increasing demand, Gatwick Airport Limited regularly publishes a master plan, which sets out the long term plans for airport growth and development at Gatwick. To address increasing demand at Gatwick, the latest Master Plan (published in 2019) considered three alternative scenarios:

- Scenario 1: Gatwick continues to use the existing main runway, utilising technology to increase its capacity via more efficient operations.
- Scenario 2: Gatwick uses the existing main runway in conjunction with the northern runway on a regular basis.
- Scenario 3: Gatwick continues to preserve land for an additional runway to the south of the existing main runway.

4.1.2 Gatwick Airport Limited considered that Scenario 2 presented the best option for addressing increasing demand at Gatwick because that option:

- aligns with Government policy of making best use of existing runways and infrastructure at all UK airports;
- provides greater airport capacity when compared to Scenario 1 and current operations;
- brings an increase in flights, connectivity, employment, and economic benefits to the local area;
- has a lower environmental impact when compared to Scenario 3;
- delivers significant economic benefits to the national, regional, and local economies;
- provides Gatwick with the much needed flexibility to routinely use two runways;
- minimises the requirement for growth outside of the existing Gatwick site; and
- does not prevent safeguarding of land to the south for a future additional runway.

Iterative Design Process

4.1.3 A review of the design and layout of Project components has been undertaken through an iterative design process. This review process assessed design and layout options against a range of criteria to identify the preferred approach, including the operation, business case, deliverability, planning, surface access, water, land and property, environment and community.

4.1.4 Refinements were made to the design and layout of the Project in response to consultation (both in Autumn 2021 and Summer 2022) and key stakeholder engagement feedback. The current design and layout of the Project is described in Section 6 of this **Non-Technical Summary** and presented in **Figure 1.6.1** and **Figure 1.6.2** .

5 Existing Site and Operations

5.1. Gatwick

5.1.1 The existing site at Gatwick consists of the following key elements, which are presented in **Figure 1.5.1**.

Existing Runway and Terminals

5.1.2 The operation at Gatwick is served by a single main runway and the two terminals: North Terminal and South Terminal. When the main runway is unavailable, the existing northern runway is used. The passenger terminals provide a variety of facilities, such as: check-in desks; security; departure lounges; outbound and inbound baggage handling; gates; air bridges; and immigration control.

Taxiways, Piers and Stands

5.1.3 The network of taxiways allows aircraft to move around the airfield and access the existing piers where the passengers embark and disembark aircraft at the South Terminal (Piers 1, 2 and 3) and North Terminal (Piers 4, 5 and 6). Each pier has several aircraft stands (an area designated for stationary aircraft). The number and configuration of aircraft stands is dependent upon the type and size of aircraft.

Supporting facilities

5.1.4 The existing site at Gatwick includes several facilities required to support the operation of the airfield, including: airport fire station; Central Area Recycling Enclosure (CARE); motor transport facilities; ground maintenance facilities; airfield surface transport facilities; emergency traffic control tower and rendezvous point; cargo facilities; aircraft engine ground running areas; fire training ground; hangars; perimeter boundaries to mitigate noise, including the existing bund and noise wall; internal access routes; substations; and aviation fuel storage area (known as the fuel farm).

Hotels, commercial facilities and multi-storey car parking

5.1.5 The existing airport includes hotels located at both the North Terminal and South Terminal (approximately 3,000 rooms combined), office facilities and on-airport multi-storey car parking (approximately 46,700 spaces), including short stay, long stay and staff parking.

Surface Access

5.1.6 Gatwick is directly connected to the M23 via the M23 spur road, approximately 25 miles south of central London. Gatwick's railway station is located at the South Terminal. There is a direct transit link from Gatwick station to the North Terminal (via an internal transit system). The station provides over 120 direct rail connections, including direct trains to central London. These include the Gatwick Express service to London Victoria as well as the Southern and Thameslink networks. Both the North Terminal and South Terminal provide access to bus services.

Surface and Foul Water Drainage

5.1.7 Within the existing Gatwick site, surface water is managed through a series of existing drainage ponds. Rainfall runoff usually drains into these ponds and then flows into one of three watercourses: Crawter's Brook, Gatwick Stream and the River Mole, in accordance with existing discharge consents (planning conditions outlining the quality and quantity of water discharge). Foul water currently passes to the Crawley Sewage Treatment Works to the south east of Gatwick or Horley Sewage Treatment Works to the north east.

Existing Operation and Maintenance

5.1.8 As set out above, aviation fuel is stored in a designated area (known as the fuel farm) in the northern part of the existing Gatwick site, to the north of the cargo area. As part of routine maintenance of the airport, the existing runways are resurfaced every 10 to 15 years. The main runway was resurfaced in 2022.

5.1.9 Two existing areas are managed for biodiversity within the existing Gatwick site boundary. The locations of the biodiversity areas are presented in **Figure 1.6.2**. In addition, wildlife hazard control is carried out by the airside team, with the aim of maintaining, as far as reasonably practicable, a bird-and-animal-free airfield. This includes bird scaring and other activities to minimise the risk of wildlife strikes, as well as habitat management.

5.2. Predicted Future Changes at Gatwick in the absence of the Project

Passenger Numbers and Cargo

5.2.1 It is predicted that by 2047, the number of passengers using the airport would increase to approximately 67.2 million passengers per year (without the Project). Against a background of strong demand, three main factors enable the predicted change in future passenger numbers:

- growth in runway utilisation in off-peak periods (April to March);
- airlines replacing their fleets with larger aircraft; and
- increase in the average occupancy levels of flights.

5.2.2 In addition to increasing passenger numbers, the quantity of cargo passing through Gatwick is also predicted to increase from 150,000 tonnes in 2019 to 290,000 tonnes by 2047.

Future Infrastructure

5.2.3 Several developments at Gatwick are proposed in the absence of the Project to serve the predicted future changes described above. These include:

- Western extension to Pier 6, which would increase the number of aircraft stands from 9 to 17.
- Multi-storey car park at the South Terminal Hilton Hotel, which would provide an additional 820 car parking spaces.
- Multi-storey car park at car park 7 North Terminal, which would provide an additional 3,250 car parking spaces.
- Robotics technology at long stay parking areas at the South Terminal, which would provide an additional 2,500 car parking spaces.

- Electric vehicle charging forecourt at the South Terminal, which are currently under construction.
- Highway improvements, including local widening of the junction entry/exit lanes for the North and South Terminal roundabouts, signalisation of the roundabouts and enhanced signage. These works are expected to be undertaken in collaboration with National Highways.
- Upgrades to Gatwick Railway Station, including expansion the station concourse and access improvements. The planning application for these improvements was submitted by Network Rail in 2019 and are due to be completed by 2023.

6 Project Description

6.1. Key Components of the Project

6.1.1 The proposed Project would include the development of a range of infrastructure and facilities to allow Gatwick to make best use of its existing runways and infrastructure. The key components of the Project include:

- amendments to the existing northern runway, including repositioning its centreline 12 metres further north to enable dual runway operations;
- reconfiguration of taxiways;
- pier and stand amendments (including a proposed new pier);
- reconfiguration of other airfield facilities;
- extensions to the North Terminal and South Terminal;
- provision of additional hotel and office space;
- provision of reconfigured multi-storey car parking, including new multi-storey car parks;
- surface access (including highway) improvements;
- demolition and relocation of the CARE facility;
- provision of additional water treatment facilities;
- reconfiguration of existing utilities, including surface water, foul drainage and power; and
- landscape/ecological planting and creation of environmental mitigation areas.

6.1.2 **Figure 1.6.1** shows the location of key components within the Project site. **Figure 1.6.2** shows the location of existing and proposed mitigation areas within and surrounding the Project site. The total area of land within the Project site boundary comprises 735 hectares. When operational, the number of flights is expected to increase to 389,000 per year by 2047, which would result in approximately 80.2 million passengers per year at Gatwick.

Amendments to the Existing Northern Runway

6.1.3 Once operational, the Project would result in all aircraft arrivals using the existing main runway and shared departures between the existing main runway and the altered northern runway. In addition, the northern runway could be used for both arrivals and departures in circumstances when the main runway is closed, for example during periods of emergency or maintenance.

6.1.4 The existing northern runway would be adjusted to reposition the centreline 12 metres further north to ensure a separation distance of 210 metres between it and the main runway. This distance is required to meet European Aviation Safety Agency standards. The altered northern runway would retain a width of approximately 45 metres and length of approximately 2.6 kilometres.

6.1.5 The redundant 12 metre strip to the south of the altered northern runway would be removed and returned to grass. The 33 metre wide section of retained existing runway, together with the new 12 metre strip to the north, would be resurfaced and provided with new markings to form the altered northern runway. There would be no change to the overall length of the runway.

Reconfiguration of Taxiways

6.1.6 A number of existing taxiways within the Project site would require reconfiguration to accommodate the altered northern runway, provide sufficient room for the safe manoeuvre of aircraft and accommodate increased aircraft numbers. As part of the reconfiguration, a new spur (connection between taxiways) and new runway exits/entrance taxiway connections would be provided as part of the Project.

6.1.7 In addition, new exit/entrance taxiways to/from the main runway would be required as part of the Project for aircraft to access and egress the runway, and to allow aircraft to be held before crossing the northern runway, under the direction of air traffic control. As part of this works, existing exit/entrances taxiways would be substantially changed or removed.

6.1.8 Amendments are required to existing infrastructure to provide end around taxiways (at each end of both runways) to allow large aircraft to exit and cross beyond the end of the runway, under the direction of air traffic control. In addition, they would provide a resilient route for all aircraft in case of any issue preventing the use of exit taxiways.

Aircraft Holding Area

6.1.9 Reconfiguration of an existing apron area is proposed (referred to as the 'Aircraft Holding Area'). This would include reconfiguration of the existing stands, removal of the Airside Operations Building and pumping station and relocation of de-icer storage tanks and substations. The Aircraft Holding Area would occupy an area of approximately 15 hectares.

Pier and Stand Amendments

6.1.10 Gatwick Airport Limited currently operates six piers (Piers 1, 2 and 3 at the South Terminal and Piers 4, 5 and 6 at the North Terminal). A western extension to Pier 6 has been permitted separately to the Project. Construction of the extension has commenced and is proposed to be completed by 2026. As part of the Project, a new Pier 7 is proposed to the north west of Pier 6, served by an autonomous vehicle station and commercial facilities. The new Pier 7 would occupy an area of approximately 10.1 hectares and would be up to approximately 18 metres in height (above ground level). The Project would also include the provision of 40 additional stands and amendments to existing stands to allow for different aircraft types.

Reconfiguration of Existing Airport Facilities

6.1.11 Several existing facilities would require reconfiguration, relocation or additional facilities to be provided. This would include:

- CARE facilities;
- motor transport and grounds maintenance facilities;
- airfield surface transport facilities;
- emergency air traffic control tower and rendezvous point north;
- cargo facilities and provision for aircraft engine ground running;
- fire training ground and satellite airport fire service provision;
- hangars;
- provision of perimeter boundary treatments to reduce noise; and
- internal access routes.

Extension of North and South Terminals

6.1.12 Extensions to the existing North and South Terminals would be required to serve passenger growth. In addition, internal changes and reconfiguration works are proposed within the North and South Terminals to allow for changes in technology and innovative approaches to security, passenger experience and baggage handling, together with changes to the terminal forecourts. The extended North Terminal would occupy approximately 0.3 hectares and would be up to approximately 32.5 metres in height (above ground level). The extended South Terminal would occupy approximately 0.4 hectares and would be up to approximately 27.0 metres in height (above ground level).

6.1.13 The forecourts and approaches to the North and South Terminals would be enhanced through the provision of access to terminals, multi-storey car parks, hotels and pick-up/drop off areas. A new office building is proposed on the existing multi-storey car park H site and four additional hotels are proposed at the South Terminal. The office block and hotels would occupy a combined area of approximately 2.8 hectares and would be up to approximately 27.0 metres in height (above ground level).

6.1.14 While some existing car spaces will be lost due to reconfiguration and new design, the Project proposes five additional multi-storey car parking areas, which would occupy an area of approximately 14.2 hectares and provide a total of 10,005 car parking spaces. The multi-storey car parking areas would be up to approximately 27.0 metres in height (above ground level).

Surface Access Improvements

6.1.15 To accommodate the proposed increase in passenger numbers accessing the airport, background growth and planned developments in the area, improvements are proposed for the North Terminal, South Terminal, and Longbridge roundabout. In addition, enhancements are also proposed for active travel routes between Longbridge roundabout and North Terminal (eg segregated path for pedestrians and cyclists) and public transport services (eg additional funding), including bus/coach routes.

Water Management

6.1.16 To accommodate the amendments to the northern runway, to allow for areas of new development and meet planning requirements (including an allowance for climate change), modifications to the existing Surface Access Drainage Strategy are proposed. These modifications include:

- realignment of existing surface water infrastructure;
- works to protect existing substations from flooding;
- new water treatment works to provide greater capacity for pollution storage;
- diversion of part of the River Mole corridor; and
- provision of flood compensation areas at Museum Field, multi-storey Car Park X and a small weir on the River Mole. The flood compensation areas would occupy an area of approximately 9.3 hectares.

6.1.17 The modifications listed above would ensure that the Project would not result in an adverse impact on flood risk within the existing site at Gatwick or surrounding area. Changes to the foul drainage system to improve capacity and resilience are also proposed to accommodate the new

and improved facilities. These changes would include three new pumping stations and pipeline connections to Crawley Sewage Treatment Works.

Environmental Management

Power Strategy

6.1.18 To ensure sufficient capacity and power is provided where required, adjustments would be made to existing facilities, including the relocation of cables and substations. In addition, a new substation is proposed at the North Terminal. The relocation of substations and provision of additional capacity would allow for additional loads and would ensure that substations are located away from areas required for other purposes or at risk of flooding.

Landscape and Ecological Planting

6.1.19 The Project proposes a Vegetation Retention Strategy, which forms part of the **Outline Landscape and Ecology Management Plan** to ensure existing natural spaces (eg Riverside Garden Park) and areas of significant vegetation (eg hedgerows, woodland, trees, shrubs, wetland) are retained and protected, where practical. Additional public open space and footpaths would be also provided alongside the creation of new areas of woodland, trees, scrub, wetland/pond, and grassland. The landscape and ecological planting would occupy an area of approximately 20.0 hectares.

6.1.20 The landscape and ecological planting proposals are set out in the **Outline Landscape and Ecology Management Plan**, which has been prepared and submitted in support of the application for development consent. The location and geographic extent of environmental mitigation areas is shown on **Figure 1.6.2**.

Public Rights of Way Management Strategy

6.1.21 The Project would require the temporary diversion of public rights of way and National Cycle Route 21, together with the permanent diversion of two public rights of way associated with the proposed highways improvements. As such, a **Public Rights of Way Management Strategy** has been prepared and is submitted in support of the application for development consent for the Project. The **Public Rights of Way Management Strategy** provides measures to maintain public safety and reduce disruption caused by the Project due to temporary and permanent diversions.

Appearance and Design

6.1.22 Many of the components of the Project are relocated and/or reconfigured airfield elements and it is anticipated that the appearance of the relocated facilities would be similar to the existing facilities. The proposed extensions to the airport terminals would be designed to be in keeping with the design of the existing terminal buildings. The operator of the proposed hotel buildings would inform the external appearance of these buildings, which would be determined prior to construction and in consultation with the local planning authority.

6.1.23 A **Design and Access Statement** has been prepared and will be submitted in support of the application for development consent for the Project. This statement explains how the Project is suitable to the site and its setting and demonstrates that it can be adequately accessed. It also includes design guidelines for the operational buildings within the Project site.

Operational Lighting

6.1.24 An **Operational Lighting Framework** has been prepared and submitted in support of the application for development consent for the Project. The framework would set out the types of external lighting to be used by the Project, including measures to be implemented to reduce the effect of light spill on the surrounding area. Considering effects on nearby sensitive receptors and the safety of ongoing aircraft operations. The framework considers relevant good practice guidance, where appropriate.

Mitigation

6.1.25 Mitigation measures which seek to avoid, prevent, reduce or offset environmental effects have been incorporated into the Project or are proposed as further mitigation including good practice measures. These measures are described within the topic sections of this **Non-Technical Summary**, where appropriate.

6.2. Approach to Construction

6.2.1 The timing of construction of the Project depends on the timing of development consent and discharge of the associated requirements. The **Indicative Construction Sequence**, developed to support the application anticipates construction commencing in 2024 and continuing (across different scheme components) until approximately 2038. The assumptions which inform the **Indicative Construction Sequence** enable a representative assessment of the likely significant effects but are not fixed dates within a prescribed programme or sequence.

6.2.2 The **Indicative Construction Sequence** for the main airfield construction works is approximately five years' duration which would enable the altered northern runway and taxiways to be complete and fully operational in combination with the main runway in 2029. During the construction period the northern runway would not be available as a standby runway for a period of several months.

6.2.3 The indicative sequence of construction works is presented in Table 6.2.1 below. Whilst this **Indicative Construction Sequence** enables a representative assessment of the likely significant effects, they are not fixed dates within a prescribed programme or sequence.

Table 6.2.1: Indicative Sequencing of Construction Works

Order	Indicative Sequencing	Component of the Project
1	2023 - 2029	Pre-construction activities
2	2024 - 2029	Amendments to the existing Northern Runway
3	2024 - 2033	Extensions to North and South Terminals
4	2024 - 2032	Hotel and commercial facilities
5	2024 - 2035	Car parking
6	2024 - 2029	Flood compensation areas
7	2028 - 2032	Surface access improvements
8	2029 - 2034	Final reconfiguration and improvements to airfield facilities
9	2030 - 2034	Pier 7
10	2035	Reinstatement of construction compounds
11	2038	Completion of all works for the Project

6.2.4 Construction of the Project would be undertaken in accordance with the **Code of Construction Practice** which has been provided as part of the **Environmental Statement**. The **Code of Construction Practice** sets out environmental management measures that contractors are required to implement during construction of the Project. These include measures for managing the potential environmental effects of construction and limiting disturbance from construction activities as far as reasonably practicable.

6.3. Operation

Operating Hours

6.3.1 Gatwick Airport Limited has overall responsibility for the management of the Project site, excluding aircraft maintenance. As is currently the case, Gatwick would remain in operation 24 hours a day, seven days a week throughout the construction and operation period of the Project. However, the number of flights between 23:00 and 07:00 will remain limited due to night time restrictions.

Passengers and Workforce

6.3.2 It is anticipated that the Project could increase the number of passengers at Gatwick to approximately 80.2 million per year by 2047. Without the Project the number of passengers at Gatwick would be approximately 67.2 million per year by 2047. This represents an anticipated increase of approximately 13.0 million passengers per year using Gatwick because of the Project.

6.3.3 The number of people working at Gatwick in 2022 was estimated to be 20,450, of which 2,192 were directly employed by Gatwick Airport Limited. The number of people working at Gatwick is forecast to increase to around 30,000 by 2038 without the Project, and around 32,800 with the Project.

6.4. Decommissioning

6.4.1 Once operational, the Project would form a permanent part of Gatwick. No activities are proposed that would require decommissioning. Therefore, the potential effects associated with decommissioning the Project on the environment have not been considered in the EIA process.

6.5. Major Accidents and Disasters

6.5.1 The EIA regulations require consideration of the potential environmental effects resulting from the vulnerability of the Project to major accidents and disasters. A risk assessment for major accident and disaster scenarios relevant to the Project was undertaken. The risk assessment concluded that the Project would not introduce hazards during construction or operation which could not be effectively managed using measures contained within the **Code of Construction Practice** and/or existing procedures currently implemented at Gatwick.

7 Summary of Environmental Effects

7.1.1 This section of the **Non-Technical Summary** provides a summary of each environmental topic chapter of the **Environmental Statement**, including assessment methodology, current baseline environment, mitigation, and enhancement measures and potential significant effects. This section also includes the summary of cumulative and inter-related impacts.

7.2. Historic Environment

Introduction

7.2.1 This section presents a summary of the assessment of the likely significant effects on historic environment resources during construction and operation of the Project. The assessment considered the potential direct and indirect impacts of the Project on historic buildings and areas, historic landscape character and buried archaeological remains. Direct physical impacts are those which result in the loss of or damage to historic environment resources. Other direct impacts are those which result in a change to the setting (the surroundings) of historic environment resources, such as views, noise, dust and vibration.

Assessment Methodology

7.2.2 The existing historic environment was established using a detailed desk review of existing studies and data sets including the Historic Environment Records for West Sussex and Surrey. Multiple walkover surveys were also undertaken in 2019 to identify historic buildings and areas likely to be affected by the Project. This included areas beyond the Project site, which may be directly affected by aircraft noise or other sources of noise (eg road traffic) and visual changes.

7.2.3 Buried archaeological remains were identified using geophysical surveys (used to locate archaeological remains beneath the soil), followed by two phases of archaeological trial trenching (used to estimate the archaeological potential of a location). In addition, contact has also been made with organisations involved in previous archaeological investigations wherever possible, where data was not available from Historic Environment Records.

Current Baseline Environment

7.2.4 Land within the Project site is mostly occupied by Gatwick, with very little remaining of the preceding historic landscape. The Church Road (Horley) Conservation Area is partially located within the Project site. Other historic buildings and areas located within 1 kilometre of the Project site include:

- two scheduled monuments, including an area of former medieval settlement at Tinsley Green and the medieval moated site known as Thunderfield Castle;
- three Grade I listed churches, including the Church of St Bartholomew, the Church of St Nicholas and the Church of St Bartholomew at Burstow;
- eight Grade II* listed buildings, including Charlwood Park Farmhouse, Charlwood House, Gatwick Manor Inn, Rowley Farmhouse, The Beehive, the Church of St Michael and All Angels (Lowfield Heath), the Providence Chapel and Manor House;
- three further Conservation Areas, including Massets Road (Horley), Charlwood and Burstow; and
- numerous Grade II listed buildings.

7.2.5 Three historic buildings were identified which were likely to be directly affected by aircraft or other sources of noise. These were the Grade II listed Church of St John the Baptist, the Grade II listed Quaker Meeting House with attached cottage (both at Capel) and the relocated Grade II listed Lowfield Heath Windmill south west of Charlwood.

7.2.6 Previous archaeological investigations undertaken by other organisations identified five areas of enhanced archaeological interest within the Project site. In addition, geophysical surveys and archaeological trial trenching identified the presence of buried archaeological remains at several locations within the Project site.

Mitigation Measures

7.2.7 Several measures are proposed as part of the Project to mitigate the potential impacts on the historic environment. These include:

- A **Vegetation Retention Strategy** would be prepared as part of the **Outline Landscape and Ecology Management Plan**, which would identify areas of existing vegetation (eg hedgerows, woodland, trees) to be retained to reduce potential impacts resulting from changes within the settings of historic buildings and areas during construction and operation of the Project.
- Proposed woodland and tree planting, landscaping and the installation fences, walls, or barriers. This would reduce potential impacts resulting from changes within the settings of historic buildings and areas during construction and operation of the Project.
- The **Code of Construction Practice**, which contains measures to reduce noise generated during construction of the Project.

Enhancements

7.2.8 The Project also includes proposals to enhance the historic environment beyond the existing conditions. These include enhancement of the Church Road (Horley) Conservation Area, including the extension of public access to land within and adjacent to this location.

Potential Significant Effects

7.2.9 Taking into account the mitigation measures described above, the following significant effects are likely to occur with respect to the historic environment:

- Permanent adverse direct effects (loss or damage) on buried archaeological and geoarchaeological remains within the flood compensation areas (Museum Field, multi-storey Car Park X), new water treatment works, the environmental mitigation areas (Brook Farm, multi-storey Car Park B) and Car Park B contractor compound during construction of the Project. However, this effect would be offset using a programme of archaeological investigation which will identify the date, nature and extent of any buried geoarchaeological remains not yet ascertained.
- Long term adverse direct effects (views) on the Church Road (Horley) Conservation Area during construction and operation of the Project. However, this effect would reduce over time once proposed planting matures.

7.3. Landscape, Townscape and Visual Resources

Introduction

7.3.1 This section presents a summary of the assessment of the likely significant effects on landscape, townscape and views during construction and operation of the Project. The assessment considered the potential impacts of the Project on the landscape and townscape character, visual amenity, and tranquillity.

Methodology

7.3.2 A Zone of Theoretical Visibility (computer generated tool to identify theoretical extent of visibility or zone of visual influence) was generated based on the parameters of the Project and used to establish a 5 kilometre study area. An additional, larger study area was used to assess the potential effects of overflying aircraft on landscape tranquillity and visual receptors within nationally designated landscapes. These study areas were used to identify sensitive landscape, townscape, and visual receptors which may be impacted by the Project site.

7.3.3 The existing landscape and townscape character was established using a detailed desk review of existing studies and data sets, including published landscape and townscape character assessments. Baseline site surveys were used to identify areas from which the Project site would be visible to people. Winter and summer photography from viewpoints representative of these locations was then used to determine the visual impact of the Project on the views within or towards the Project site.

Current Baseline Environment

7.3.4 Due to the scale and nature of development at Gatwick, the airport forms its own distinctive and well-defined urban townscape within the wider Low Weald landscape, which predominately comprises agricultural land interspersed with densely wooded areas. Gatwick occupies most of the land within the Project site boundary, with smaller areas of farmland and open space located in the surrounding area. Most of the land within the Project site is flat and open, with the main built forms comprising the North and South Terminals.

7.3.5 There are no designated landscapes located within or near the Project site. The closest is the High Weald Area of Outstanding Natural Beauty, which is located approximately 3 kilometres to the south east of the Project site. However, four areas of designated ancient woodland are located within the Project site, including Horleyland Wood and Brockley Wood.

7.3.6 The Project site is not currently visible from most areas within the towns of Crawley and Horley, due to intervening vegetation or existing development. In addition, views from the surrounding landscape are generally screened by intervening vegetation. Key people likely to experience views of the Project site include:

- users of public rights of way within and around the airport;
- users of public open spaces;
- cyclists, including users of National Cycle Route 21;
- occupiers of residential properties within the town of Horley;
- occupiers of commercial properties near Gatwick;
- occupiers of vehicles using the A23/M23 spur road and trains;

- visitors to Gatwick using roads, multi-storey car parks, hotels and terminals; and
- members of staff at Gatwick.

Mitigation Measures

7.3.7 Several measures are proposed as part of the Project to mitigate the potential impacts on landscape, townscape, and views. These include:

- The **Outline Landscape and Ecology Management Plan**, which contains measures for the retention/protection of existing vegetation; proposed planting and replacement open spaces; proposed earthworks/earth shaping; and proposed visual screening.
- The **Operational Lighting Framework**, which would set out the types of external lighting to be used by the Project, including measures to be implemented to reduce the visual effect of light spill on the surrounding area.

Potential Significant Effects

7.3.8 Due to the largely urban character of the airport within the Project site, its redevelopment would result in the removal of a limited number of important landscape or townscape features. New buildings and infrastructure would form some intensification of the existing character of the airport and neighbouring settlements of Crawley and Horley. In terms of landscape, effects would be very limited. Significant adverse effects on surrounding landscape character areas within the study area are unlikely as the airport context would remain largely similar and screening provided by existing vegetation, built development and earth mounds would remain or would be replaced as part of the Project.

7.3.9 There are likely to be very few people who would experience significant adverse effects as a result of the Project. During construction some temporary significant effects on views are possible but these will be localised, in the short term and before mitigation planting is mature. The activities and developments may be barely perceptible when seen at distance, or prominent and at times dominant when in close proximity. This would result in effects that generally, would not be significant, due to the established airport development.

7.3.10 The change to the existing level of tranquillity within the nationally designated landscapes within the study area would not be significant as the increase in aircraft numbers may be discernible to some people or barely perceptible to others, compared to existing conditions. No change in flight paths or airspace is required for the Project.

7.3.11 Taking into account the mitigation measures described above, the following significant effects are likely to occur with respect to landscape, townscape and visual resources:

- Temporary and permanent adverse effects on the local landscape character of Mole Valley Open Weald arising from construction and operation of the Project.
- Temporary and permanent adverse effects on the views experienced by occupiers of Hilton Hotel arising from construction and operation of the Project.
- Temporary adverse effects on the local views experienced by users of public open space at Riverside Garden Park and Church Meadows Horley arising from construction of the Project.
- Temporary and permanent adverse effects on the views experienced by occupiers of number 74 Longbridge Road Horley arising from construction and operation of the Project.

7.4. Ecology and Nature Conservation

Introduction

7.4.1 This section presents a summary of the assessment of the likely significant effects on ecology and nature conservation during construction and operation of the Project. The assessment considered potential impacts on sites designated for nature conservation and legally protected and/or notable habitats and species.

Assessment Methodology

7.4.2 Existing ecology and nature conservation conditions were established using a detailed desk review of existing studies and data sets, including records of protected and/notable species acquired from local record centres. Information on ecology and nature conservation within the desk study search area was collected through data gathering exercises were carried out in 2019 to 2022 to obtain information relating to statutory and non-statutory nature conservation sites, priority habitats and species, and legally protected and controlled species. The desk based information was used to inform the requirement for site surveys, which determined the ecological value of the Project site and its potential to support legally protected and/or notable habitats and species.

Current Baseline Environment

7.4.3 An ecological desk study, habitat survey and a range of terrestrial and aquatic surveys were undertaken during the period 2018 to 2022 to establish ecological baseline conditions. The desk based review identified no statutory (legally protected) sites designated for nature conservation located within or near the Project site. The closest statutory site designated for nature conservation is Willoughby Fields Local Nature Reserve, which is located approximately 786 metres to the south of the Project site. A number of non-statutory sites designated for nature conservation were also identified in the surrounding area, including Horleyland Wood, which is located adjacent to the southern boundary of the Project site.

7.4.4 Most of the Project site comprised habitats associated with the airport including areas of tarmacked hard standing and an array of buildings associated with the wider airport. Areas of grassland occurred frequently on the airfield which were managed to retain a relatively short, uniform sward thereby making them unattractive to wildlife and minimise the wildlife strike hazard. However, more natural areas of woodland and grassland are present along the edge of the Project site. The River Mole and Gatwick Stream also run through or adjacent to the Project site.

7.4.5 Following the site surveys, land within the Project site boundary was found to support breeding and wintering birds, grass snakes, great crested newt, smooth newt, common toad, and common frogs. In addition, two buildings and multiple trees within the Project site were identified as having potential to support roosting bats. However, no bats were observed entering or leaving the two buildings. Bat activity across most of the Project site was found to be low, with areas of higher activity associated with areas of woodland and watercourses. The Project site was also found to provide secondary habitat for a rare species, Bechstein's bat.

7.4.6 Surveys identified no signs of dormice, otters, or water voles within the Project site. However, for the purposes of the assessment, otters were still considered present as they have the potential to

use the habitats within Project site. In addition, due the nature of habitats within the Project site, it has also been assumed that hedgehog and harvest mice are present.

7.4.7 Site surveys identified areas within the Project site with the potential to support communities of invertebrates of conservation interest. The River Mole and Gatwick Stream also supported aquatic macroinvertebrates and high populations of fish. Site surveys also identified signs of badger activity. However, due the sensitive nature of badger data, the full findings of the surveys remain confidential and are available upon request to those with a legitimate need for the information.

Mitigation Measures

7.4.8 Several measures are proposed as part of the Project to mitigate the potential impacts on ecology and nature conservation during construction and operation. These include:

- Avoidance of designated sites, areas of woodland (including ancient woodland) and other sensitive habitats. Areas of retained woodland, trees, scrub, and hedgerows would be protected.
- Altering pre-construction survey locations (eg archaeology and ground conditions) where practicable to avoid damage to features of high value and watching briefs to ensure such features are not impacted upon.
- Appropriate storage of material and fuels and the management of runoff to avoid the pollution of designated sites and priority habitats.
- Suitable timing of required vegetation clearance to reduce impacts to breeding birds and the translocation of reptiles and amphibians to alternative areas of suitable habitat (where required).
- The creation of artificial badger sett (if required) and measures to ensure that no badgers or otters (if present within the wider river corridors) are harmed during construction.
- The creation of new areas of woodland, tree, shrub, scrub, grassland and wetland within the Project site and replacement of species-poor hedgerow with native species-rich hedgerow.
- Lighting associated with the Project would be designed to avoid disturbance to areas of value for bats and additional bat roost features would be provided.
- The River Mole would be realigned to provide a more natural river profile and temporary land take would be restored to existing or greater ecological value.
- The creation of new habitats for great crested newts, grass snake, bats, breeding birds, aquatic and terrestrial invertebrates within the Project site.
- Maintenance of grassland and associated habitats at Gatwick under the current regime to ensure avoidance of bat and bird collision risks.
- As bats are a highly transient species and roost locations can change frequently, all trees would be subject to pre-construction surveys to determine if they were being used by bats. Regardless of the findings, bat boxes would be installed on retained trees prior to vegetation clearance commencing to ensure there was no reduction in the availability of roost features.
- Measures proposed for the construction phase would be managed through the **Code of Construction Practice**.

7.4.9 Gatwick Airport Limited would also undertake monitoring for great crested newts, grass snakes, bats, and badgers to determine the success of the mitigation measures identified above and identify if remedial measures are required. In addition, habitats will also be monitored to ensure

that the target ecological condition of various habitats created around the Project site are achieved (see enhancement below).

Enhancement

- Creation of new, high value habitats comprising a mixture of wet and dry neutral grasslands along the new channel of the River Mole, within the Museum Field and within newly created mitigation areas.
- Creation of an earth bund in the south and east of Museum Field to provide a mosaic of habitats comprising scrub, grassland and bare or poorly vegetated ground to provide a matrix of habitats suitable for a variety of invertebrates.

Potential Significant Effects

7.4.10 Taking into account the mitigation measures described above, the following significant effects are likely to occur with respect to ecology and nature conservation during construction and operation of the Project:

- Long term adverse effect due to the loss of woodland, mature trees and associated scrub during construction and operation of the Project, until new planting has established.
- Long term beneficial effect on hedgerows following the maturation of replacement vegetation planting.
- Long term beneficial effect on watercourses (River Mole and Gatwick Stream), due to the creation of a new channel and establishment of native flora and flora providing high value habitats.
- Long term adverse effect on breeding birds due to the loss of suitable nesting sites during construction and operation of the Project, until new planting has established.
- Long term adverse effect on bats due to the loss of woodland and shrubs that form a linear corridor during construction and operation of the Project until new planting has established.
- Medium term adverse effect on terrestrial invertebrates due to the loss of suitable habitat during construction of the Project. However, habitat creation would compensate for the initial significant impact and result in a long-term beneficial effect.

7.5. Geology and Ground Conditions

Introduction

7.5.1 This section presents a summary of the assessment of the likely significant effects on geology and ground conditions during construction and operation of the Project. The assessment considered the potential impacts on land, groundwater, and surface water quality, land instability and mineral resources because of the Project.

Assessment Methodology

7.5.2 Existing geological and ground conditions including any contamination were established using a detailed desk review of existing studies and data sets, including previous ground investigation and assessment reports. A walkover of the Project site was undertaken in September 2019 to validate this information and identify existing sources of potential contamination.

Current Baseline Environment

7.5.3 The Project site is situated above superficial deposits, including Alluvium, Head and River Terrace Deposits. These superficial deposits are associated with surface watercourses that cross the Project site and are classified as Secondary A aquifers. The underlying bedrock comprises Weald Clay Formation, which is classified as unproductive. In addition, the Project site coincides with Brick Clay Resource Mineral Safeguarding Area (relating to the Weald Clay Formation), designated by the West Sussex County Council Minerals Authority.

7.5.4 The main watercourse flowing through the site is the River Mole. The River Mole is culverted beneath the main runway and existing northern runway and forms the western and northern boundary of Gatwick. The River Mole connects to other nearby watercourses within or near the Project site, including Crawter's Brook, Gatwick Stream, Man's Brook, Burstow Stream and Westfield Stream.

7.5.5 A review of historic maps showed that the Project site had been developed as an aerodrome by the 1930s and major airport development had occurred by the 1950s. Prior to this, the site was used as farmland, a racecourse and golf course, with a railway line through the site. The airport has been subject to further development, which has been accompanied by an extensive drainage and balancing pond network and hotel, multi-storey car parking and commercial development.

7.5.6 Previous ground investigations identified high levels of contaminants in leachate and groundwater samples taken from within the Project site, in addition to high levels of ground gas.

Mitigation Measures

7.5.7 The desk study and site walkover information were used to identify potentially contaminating land uses. This information was used to identify Potential Areas of Concern. A strategic approach has been used to target parts of the Project site where further investigation may be required based on the potential for contamination to exist and the future use of the area.

7.5.8 Several measures are proposed as part of the Project to mitigate the potential impacts on geology and ground conditions during construction and operation. These include:

- Further ground investigations would be undertaken in areas with the potential for contamination to exist within the Project site. These ground investigations would inform an appropriate Remediation Strategy.
- The **Code of Construction Practice**, which contains measures to prevent and control accidental spillages of harmful liquids and measures to protect groundwater during construction.
- Where incidental extraction of minerals generates an excess which cannot be retained within the Project site, this material would be exported for reuse offsite.
- A **Soil Management Strategy** would be prepared as part of the **Code of Construction Practice**, which would contain measures to document the management of soils within the Project site and ensure these are undertaken in accordance with best practice.

Potential Significant Effects

7.5.9 The assessment has considered potential impacts on the underlying aquifers, surface watercourses, human health (construction workers and future site users) and mineral resources. Taking into account the mitigation measures described above, no significant effects are likely to

occur with respect to geology and ground conditions during construction and operation of the Project.

7.6. Water Environment

Introduction

7.6.1 This section presents a summary of the assessment of the likely significant effects on the water environment during construction and operation of the Project. The assessment considered the potential impacts of the Project on surface water quality, geomorphology, groundwater resources, flood risk (including surface water drainage), wastewater and water supply.

Assessment Methodology

7.6.2 The existing water environment was established using a detailed desk review of existing studies and data sets. A **Flood Risk Assessment** was also undertaken, which evaluated the potential risk of flooding to the Project and the surrounding area. The **Flood Risk Assessment** was informed by site-specific hydraulic models (computer simulations used to assess flood risk associated with proposed development including allowances for future climate change). The site-specific hydraulic models considered watercourses within or near the Project site (eg River Mole, Gatwick Stream, Crawter's Brook, and Man's Brook) and the existing surface water, reservoirs, groundwater and wastewater drainage network at Gatwick. In addition, a walkover survey was also undertaken to identify the characteristics of watercourses, which may be impacted by the Project.

Current Baseline Environment

7.6.3 Gatwick is in the Thames River Basin District and within the Upper Mole catchment. The Project site coincides with areas classified as Flood Zone 3 (1% or greater chance of flooding in any year) and Flood Zone 2 (between 0.1 to1% chance of flooding in any year).

7.6.4 There are also several areas at high, medium, and low risk of surface water flooding within the Project site. These areas are primarily associated with the River Mole and connected tributaries, including Crawter's Brook, Gatwick Stream, and Westfield Stream, which pass through or near the Project site. With regard to water quality, the River Mole is classed as 'Heavily Modified' with a current 'Moderate' status for ecology and 'fail' status for chemicals.

7.6.5 In addition, some areas within the Project site are susceptible to groundwater flooding. However, only two occurrences of groundwater flooding have been recorded in the area, which were not located near the Project site.

Mitigation Measures

7.6.6 Several measures are proposed as part of the Project to mitigate the potential impacts on the water environment during construction and operation. These include:

- The naturalisation of the River Mole and the proposed new channel to provide additional floodwater storage and biodiversity enhancements.
- The provision of a new water treatment system for water originating from the long term storage lagoons.

- The creation of floodplain compensation areas at Museum Field and multi-storey car park X and additional storage within the existing airfield surface water drainage network.
- The installation of airfield surface water drainage storage beneath multi-storey car park Y and new syphons to connect the floodplain on both sides of taxiways and a noise mitigation feature.
- The development of a Surface Access Drainage Strategy for the proposed highway improvements, including Sustainable Drainage Systems.
- A new section of River Mole channel at the existing runway culvert exit.
- Upgrades to the existing wastewater system, including improvements in wastewater capacity.
- Geomorphological mitigation which would include realignment, re-naturalisations and other engineering works at targeted locations.

7.6.7 Gatwick Airport Limited would continue to undertake water quality monitoring to ensure that water discharges comply with environmental permits. Ground water quality monitoring will also be undertaken to ensure an appropriate water discharge strategy is adopted. In addition, regular monitoring of any change to the channel bed and banks would be undertaken, particularly near the River Mole re-naturalised channel.

Enhancements

7.6.8 The Project also includes proposals to enhance the water (and ecological environment) beyond the existing conditions. These include:

- A new fish pass on a weir on the River Mole upstream of the runway culvert to improve fish passage particularly during low flow conditions.
- A new weir on the inlet to the River Mole runway culvert that will concentrate low flows to assist fish passage.

Potential Significant Effects

7.6.9 Taking into account the mitigation measures described above, no significant adverse effects are likely to occur. However, the following significant beneficial effects are likely to occur with respect to the water environment:

- Long term beneficial effects on the water quality of the River Mole and Gatwick Stream during construction and operation of the Project.
- Long term beneficial effects on the geomorphology (physical characteristics) of the River Mole during construction and operation of the Project. Benefits would include River Mole renaturalised channel works, including re-meandering and restoration of natural channel morphology and improved floodplain coupling.
- Long term beneficial effects on flood risk from rivers within the Project site and surrounding area during construction and operation of the Project.

7.7. Traffic and Transport

Introduction

7.7.1 This section presents a summary of the assessment of the likely significant effects on traffic and transport during construction and operation of the Project. The assessment considered potential

impacts of severance (the separation of residents from facilities), driver delay, pedestrian/cyclist delay and amenity, accidents and safety, hazardous loads, and public transport.

Assessment Methodology

7.7.2 Existing traffic and transport conditions were established using a detailed review of existing studies and data sets, such as journey time data and airport-related cargo and goods movement data. In addition, site surveys, including traffic counts and employee surveys were undertaken to inform the current and future baseline environment and update transport models.

7.7.3 Strategic transport modelling was undertaken to determine the impact of the Project on the highway and railway network, including the following receptors: pedestrians; cyclists; bus and coach passengers; rail passengers; car drivers and passengers. The transport modelling also considered developments at Gatwick proposed in the absence of the Project, including upgrades to Gatwick Railway Station, highway improvements and multi-storey car parks (as described in Section 5.2 of this **Non-Technical Summary**).

Current Baseline Environment

7.7.4 Gatwick can be accessed directly via the M23 motorway. Junction 9 of the M23 is the main access point, which links to the spur road at the South Terminal roundabout. The A23, which runs parallel to the M23, connects south London and Croydon, and passes through Redhill, Horley, Gatwick, Crawley, Pease Pottage and Brighton. South of Gatwick, the M23/A23 continues as a strategic highway corridor from London to Brighton on the South Coast.

7.7.5 Existing transport facilities at Gatwick include on-airport roads, forecourts, and multi-storey car parks. In addition, Gatwick is served directly via Gatwick Railway Station which has regular, direct services and there are frequent bus and coach services at North and South Terminals. Off-road pedestrian and cycle links are also available within the vicinity of Gatwick. These include National Cycle Route 21, which is located within the Project site and provides an important pedestrian and cycle route between Horley, Crawley and Gatwick.

Mitigation Measures

7.7.6 Several measures are proposed as part of the Project to mitigate the potential impacts on traffic and transport during construction and operation. These include:

- Highway and active travel improvements to provide additional capacity and accommodate increased demand during operation the Project.
- **Surface Access Commitments**, which seek to promote the usage of public transport and active travel modes (eg walking, cycling) by passengers and staff at Gatwick during operation of the Project.
- The **Outline Construction Traffic Management Plan**, **Outline Construction Material Transport Plan** and **Outline Construction Workforce Transport Plan**, which would contain measures to minimise the impact of the Project on traffic and transport during construction of the Project.
- Gatwick Airport Limited would also undertake ongoing monitoring to ensure the **Surface Access Commitments** are being upheld. This information would be reported annually and shared with the Gatwick Airport Transport Forum Steering Group.

Potential Significant Effects

7.7.7 Taking into account the mitigation measures described above, no significant effects are likely to occur with respect to traffic and transport during construction and operation of the Project.

7.8. Air Quality

Introduction

7.8.1 This section presents a summary of the assessment of the likely significant effects on air quality during construction and operation of the Project. The assessment considered the potential impacts of dust deposition, suspended particulate matter, and increases in pollutant concentrations on human and ecological receptors arising from construction works, road traffic and aircraft.

Assessment Methodology

7.8.2 Existing air quality conditions were established using monitoring undertaken by Gatwick Airport Limited and local authorities, background air quality predicted by the Department for Environment, Food and Rural Affairs (Defra) and data provided by Gatwick Airport Limited with respect to operation of the airport. Site-specific monitoring of ambient concentrations of nitrogen dioxide using diffusion tubes with measurements taken on a monthly basis was undertaken to inform the assessment. In addition, emissions from road traffic and airport activity were also calculated and used in atmospheric dispersion model to predict concentrations of pollutants at human and ecological receptors.

7.8.3 The predicted concentrations were compared against air quality standards to assess the impact of the Project.

Current Baseline Environment

7.8.4 If a local authority identifies an area where national air quality objectives are unlikely to be achieved, it must declare an Air Quality Management Area (AQMA) at this location. Two AQMAs were identified near the Project site, where local air quality was unlikely to meet the Government's national air quality objectives for nitrogen dioxide. These comprised Horley AQMA, declared by Reigate and Banstead Council in 2002 and Hazelwick AQMA, declared by Crawley Borough Council in 2015. The Hazelwick AQMA is in the process of being extended to include the Three Bridges area. However, continuous monitoring data for these areas indicate that nitrogen dioxide levels between 2017 and 2021 have not exceeded the air quality standard and meet national air quality objectives.

Mitigation Measures

7.8.5 Several measures are proposed as part of the Project to mitigate the potential impacts on air quality during construction and operation. These include:

- The preparation of a Dust Management Plan, which would contain measures to reduce the potential impact of dust generated during construction, such as water spraying, covering of dusty materials and speed limits on site.
- Use of low or zero emissions construction plant and machinery where practicable, which would minimise potential adverse air quality effects.

- The **Outline Construction Traffic Management Plan**, which contains measures to reduce construction traffic and minimise impacts on the highway network. For example, construction traffic would be routed to avoid the M23 Junction 10 and Hazelwick AQMA.
- The **Outline Construction Workforce Travel Plan**, which contains measures encouraging sustainable travel, such as the use of public transport, walking and cycling when travelling to site.
- The **Carbon Action Plan** alongside the **Surface Access Commitments**, which include measures to reduce emissions generated during operation of the Project.
- Gatwick Airport Limited will continue to undertake continuous monitoring at Gatwick and offsite locations.

Potential Significant Effects

7.8.6 Taking into account the mitigation measures described above, no significant effects are likely to occur with respect to air quality during construction and operation of the Project.

7.9. Noise and Vibration

Introduction

7.9.1 This section presents a summary of the assessment of the likely significant effects on noise and vibration during construction and operation of the Project. The assessment considered potential impacts of noise originating from aircraft flying departing Gatwick (air noise), airport activities, such as aircraft taxiing and other equipment (ground noise), road traffic outside Gatwick on the public highway (road traffic noise) and noise and vibration from temporary construction of the Project, including the use of construction compounds.

Assessment Methodology

7.9.2 Baseline noise levels at identified noise sensitive receptors (eg residential and non-residential properties) were established using noise monitoring for ground noise and noise modelling for air and road traffic noise (based on noise monitoring).

7.9.3 Modelling was then used to predict future baseline noise levels and the impact of the Project on noise sensitive receptors due to changes in noise levels during the construction and operation period. Both daytime and night time noise effects were considered.

Current Baseline Environment

7.9.4 Baseline road traffic and air noise levels have been modelled across the whole study area and for ground noise, baseline noise levels were measured at nearest noise sensitive receptors. Air noise modelling indicated that approximately 9,400 households (daytime) and 10,800 households (night time) were likely to experience air noise associated with the Project.

7.9.5 Thirteen properties were identified, which were likely to experience construction and ground noise associated with the Project. These include properties at Blue Cedars, 3 Charlwood Road, Brook Farm, Bear and Bunny Nursey, April Cottage, Oakfield Cottage, 103 Cheyne Walk, 82 The Crescent, Hyders Farmhouse, Myrtle Cottage, Rowley Farmhouse, Trent House and Hoots Cottage.

7.9.6 Seventeen properties were identified, which were likely to experience road traffic noise associated with the Project. These include those located nearest to the highway improvements and Riverside Garden Park. For example, properties at The Crescent, Woodroyd Gardens, Cheyne Walk, Longbridge Road, Povey Cross Road, Meadowcroft Close, B2036 Balcombe Road, Riverside Garden Park, First Point office building, Premier Inn London Gatwick and Longbridge Road Centre.

Mitigation Measures

7.9.7 Gatwick Airport Limited understands concerns in the local area regarding increases in noise as result of the Project. As such, Gatwick Airport Limited has consulted widely with stakeholders, including the local authorities and local community to develop appropriate mitigation measures. Several measures are proposed as part of the Project to mitigate the potential impacts on noise and vibration during construction and operation. These include:

- The **Code of Construction Practice**, which contains measures to minimise disturbance from construction activities as far as reasonably practicable. Noise insulation would be offered to qualifying properties experiencing significant levels of construction noise within their dwellings.
- The usage of the northern runway would be limited to the period 06:00 hour to 23:00 hours to avoid most of the night time period, which is the more sensitive period with respect to noise.
- The Project would not require a formal airspace change. This will avoid the noise impacts often associated with new flight paths. Only departures would use the northern runway, except during maintenance or emergency use as is currently the case.
- Gatwick Airport Limited would operate flights from the northern runway using procedures designed to minimise noise impacts, in line with its current processes and the commitments of the Noise Action Plan.
- An enhanced **Noise Insulation Scheme** would provide residents likely to experience the highest levels of air and ground noise with a full package of acoustic insulation to avoid impacts on health and quality of life. Approximately 80 houses are considered eligible for full noise insulation. Acoustic ventilation and upgraded glazing would also be provided for approximately 3,900 houses likely to experience comparatively lower levels of air noise.
- In addition, noise insulation would be provided for schools and assistance would be offered to homeowners if they should choose to move out of properties experiencing the highest noise levels.
- A Noise Envelope is proposed, which would set limits on daytime and night time noise (during the summer season) from future operations at Gatwick. Gatwick would also be limited to 386,000 flights a year. Compliance with the Noise Envelope would be assessed and reported on a yearly basis.
- The provision of noise bunding and barriers at the western of the northern runway to reduce ground noise originating from aircraft taxiing within the Project site.
- The provision of noise barriers, traffic management and speed reductions as part of the highway improvements to reduce noise originating from road traffic associated with the proposed highway improvements.

7.9.8 Gatwick Airport Limited would continue to work closely with communities, its aviation industry stakeholders and other relevant parties to develop ways to minimise noise for all operations at the airport to develop ways to minimise noise generated by operations at Gatwick.

Potential Significant Effects

7.9.9 Taking into account the mitigation measures described above, the following significant effects are likely to occur with respect to noise and vibration during construction and operation of the Project:

- Temporary adverse effect of construction noise on approximately 37 properties during the day and 10 properties at night, located adjacent to work areas during construction of the Project.
- Permanent adverse effect of air noise on approximately 80 properties located at Ifield Road, Russ Hill, Partridge Lane, Balcombe Road, and Peeks Brooke Lane during operation of the Project.
- Permanent adverse effect of ground noise on 37 properties located at Charlwood, Charlwood Road, Povey Cross, Lowfield Health, and Rowley Farm during operation of the Project.

7.10. Climate Change

Introduction

7.10.1 This section presents a summary of the assessment of the likely significant effects of climate change during construction and operation of the Project. The assessment considered the resilience of the design, construction and operation of the Project to projected future climate change impacts. Climate change impacts include extreme weather events, such as hot days, frost days, heavy rainfall, and dry spells.

Assessment Methodology

7.10.2 Existing and future climate conditions were established using a detailed desk review of existing studies and data sets. Climate data sets were based on the most recent climate projections from the Met Office UK Climate Projections 2018. This included observed historical climate observations at Gatwick and the seasonal extreme climate averages. In addition, the climate conditions experienced at Gatwick were compared with a rural location (village of Charlwood) to determine the extent to which human activities are responsible for temperature changes (known as the Urban Heat Island Effect).

Future Baseline Environment

7.10.3 Future climate averages for the 2030s indicate that Gatwick will experience warmer temperatures across all seasons, with slightly wetter winters and slightly drier summers. Future climate averages for the 2060s show a continuation of this trend, with Gatwick experiencing even warmer temperatures across all seasons, with wetter winters and drier summers. In addition, future climate averages show that Gatwick is expected to experience fewer frost days, more heatwaves and a greater number of hot days, dry spells, and heavy rainfall. By the 2030s and 2060s it is anticipated that climate change would contribute to a slight increase in Urban Heat Island effect at Gatwick, particularly at night.

Mitigation Measures

7.10.4 Gatwick has policies and procedures in place to minimise the impacts of extreme weather events. Several measures are proposed as part of the Project to mitigate the potential impacts on climate change during construction and operation. These include:

- Adherence and enhancement for climate change of the latest Gatwick Airside Operation Adverse Weather Plan, which contains processes and procedures for dealing with different extreme weather events at Gatwick and ensuring the health of passengers and staff.
- The **Code of Construction Practice**, which contains best practice measures to mitigate climate change impacts during construction the Project and includes climate resilience design principles and example measures. This also includes the adoption of a Construction Adverse Weather Plan to ensure there are plans in place for sustaining stable construction during the construction period.
- The **Design and Access Statement** also includes climate resilience design principles and example measures supported by the **Carbon Action Plan**, which contains measures to reduce energy demand and support resilience during periods of prolonged warm/cold weather and extreme weather events by requiring low carbon heating, cooling, and energy use. The **Carbon Action Plan** commits to net zero by 2030.
- The **Water Management Plan** also contains outline climate resilience design principles and example measures directly supports resilience through reducing mains water use and demand.
- The **Outline Landscape and Ecology Management Plan**, which will ensure the design of the Project considers future climate change impacts, such as the planting and management of vegetation (eg woodland, tree, scrub, grassland) resilient to extreme weather events in addition to actions for their ongoing maintenance and management.
- The **Flood Resilience Statement** and **Surface Access Drainage Strategy**, which form part of the **Flood Risk Assessment** contain measures to ensure that there is no adverse impact on flood risk at Gatwick and the surrounding area because of the Project.

7.10.5 In addition to the measures listed above, many of the measures set out within the individual topic chapters of **Environmental Statement** also mitigate climate change impacts. As such, these mitigation measures have also been considered for the purposes of the assessment of climate change.

7.10.6 Future monitoring is proposed during operation of the Project. As a responsible operator, Gatwick Airport Limited has a commitment to check the efficacy of mitigation measures to preserve passenger and operational safety and business continuity.

Potential Significant Effects

7.10.7 Taking into account the mitigation measures described above, no significant effects are likely to occur with respect to climate change during construction and operation of the Project.

7.11. Greenhouse Gases

Introduction

7.11.1 This section presents a summary of the assessment of the likely significant effects of the Project on greenhouse gas (GHG) emissions during construction and operation of the Project. The assessment considered the likely effect of the Project on the global atmosphere resulting from the generation of GHG emissions. This includes potential impacts of construction emissions, such as those associated with the extraction of materials, construction processes and construction related traffic. The assessment also evaluated operational emissions, including the consumption of energy/water, production of waste and GHG emissions arising from aircraft and operational traffic entering/exiting Gatwick.

Assessment Methodology

7.11.2 For the purposes of the assessment, the year against which future GHG emissions would be evaluated at Gatwick was 2018 (the baseline year). Baseline GHG emissions for the calendar year of 2018 were established using a detailed desk review of existing studies and data sets.

7.11.3 The future GHG emissions in the absence of the Project (future baseline) were established using current GHG projections for 2029, 2038, 2047 and 2050 (estimates of future GHG emissions based on modelling) drawn from national and international sources.

7.11.4 Further modelling was then used to predict GHG emissions during construction and operation of the Project. The predicted GHG emissions were then compared against the baseline and future baseline to evaluate the impact of the Project with respect to GHGs.

Current Baseline Environment

7.11.5 The primary sources of GHG emissions at Gatwick in 2018 were those associated with aircraft departing from Gatwick, consumption of energy at the airport, and the transport of passengers, staff, and cargo. Similarly, primary sources of GHG emissions at Gatwick for the future baseline years were aviation, consumption of energy at the airport and the transport of passengers, staff, and cargo.

Mitigation Measures

7.11.6 Several measures are proposed as part of the Project to positively contribute to reducing future GHG emissions associated with the Project (and, in some cases, with the existing airport operations). These include:

- The **Carbon Action Plan**, which includes measures to limit or reduce GHG emissions associated with construction of the Project, and operational emissions including airport building/ground operations and aviation; and
- The **Surface Access Commitments**, which include measures to limit or reduce GHG emissions associated with passenger and staff travel.

Potential Significant Effects

7.11.7 Taking into account the mitigation measures described above, no significant effects are likely to occur with respect to GHGs during construction and operation of the Project.

7.12. Socio-Economics

Introduction

7.12.1 This section presents a summary of the assessment of the likely significant effects on socio-economics during construction and operation of the Project. The assessment considered the potential impacts on employment, labour market, population and housing, disruption to business and residents and impacts on community infrastructure and community cohesion. The assessment has been conducted following a combination of Government guidance, feedback from consultation and professional judgement, to develop robust conclusions on the significance of effects.

Assessment Methodology

7.12.2 The assessment analyses the potential socio-economic effects of the Project on receptors in up to five separate study areas: Project site boundary, Local Study Area (LSA), Functional Economic Market Area (FEMA), Labour Market Area (LMA) and Six Authorities Area, depending on the nature of the effect being assessed. The Six Authorities Area comprises the County Council areas of East Sussex, West Sussex, Surrey, Kent and Brighton & Hove and the London Borough of Croydon.

7.12.3 The receptors include businesses and commercial activity, labour market, existing and new residents and community assets. These are expected to be impacted upon by multiple factors including employment change, the introduction of a temporary construction workforce and disruption to businesses and residents.

7.12.4 Existing and future socio-economic conditions within the LSA, FEMA, LMA and Six Authorities Areas were established using a detailed desk top review of existing studies and data sets and economic modelling. In addition, a range of sources have been consulted in respect of social and community infrastructure provision.

Current Baseline Environment

7.12.5 The total population within the LSA increased by 6.6%, from 142,937 in 2011 to 152,369 in 2019. All study areas experienced growth above the national equivalent of 6.0%. The LSA has a younger population than the wider areas, with 21.4% of residents aged 0-15 as of 2019, compared with approximately 19% within the wider areas.

7.12.6 Across all the study areas, the working-age population (aged 16-64) has seen the least growth, at around 3% or slightly lower. Growth in the working-age population in three of the four areas slightly exceeds the average for England. The number of people defined as unemployed in 2022 in the LSA is 6,880 (5.2% of total population), the FEMA is 239,700 (4.5% of total population), the LMA is 1.3 million (6.9%) and the Six Authorities Area is 2.9 million (6.5% of total population). Employment forecasts indicate that the number of jobs in the LSA have increased by 51,764 (5.3%) from 2012 to 2022.

7.12.7 The average price of houses sold within the LSA was £342,265 (September 2022), which has increased by 13% since 2012. House prices within the Six Authorities Area range from £272,000 in Hastings to £650,000 in Elmbridge. Houses within the LSA and Six Authorities Area have also become less affordable than the national average. This is primarily because house prices have increased more than work place earnings. When compared to the national average (8.3%), housing supply has increased slightly faster in the LMA (8.5%) and slightly slower in the Six Authorities Area (8.0%) from 2011 to 2021.

7.12.8 There are 15 General Practitioner's surgery groups, 37 primary schools and seven state secondary schools located within the LSA. In addition, there are 23 community spaces, 35 places of worship, three libraries and numerous open spaces, including 229 designated open spaces, 111 play spaces and 24 allotments within the LSA.

Mitigation Measures

7.12.9 Several measures are proposed as part of the Project to mitigate the potential impacts on socio-economics during construction and operation. These include:

- The **Code of Construction Practice**, which contains measures to reduce potential effects on local businesses and community, including construction traffic management, set hours of work, alternative access, and community engagement strategy.
- The **Outline Construction Traffic Management Plan** and **Outline Construction Workforce Transport Plan**, which contain measures to minimise the impact of the Project on the local road network during construction of the Project.
- The creation of environmental mitigation areas, including replacement public open space, new footpaths, ecological planting and flood compensation.

Enhancements

7.12.10 The Project also includes proposals to enhance socio-economics beyond the existing conditions. These include:

- The preparation of an **Employment, Skills and Business Strategy** that would create opportunities for sustainable employment, skills development, and career progression for communities, which would range from entry level, work preparation and work experience options through to apprenticeships, graduate positions, and higher level skills development. The strategy would also link Gatwick with providers in the supply chain to enhance the benefits of the Project.

Potential Significant Effects

7.12.11 The Project is expected to generate some disruption to business and residents (eg through changes to traffic and noise levels); however, no significant adverse impacts are expected in any cases. The Project is not expected to increase the need for housing above what is already planned for by neighbouring local authorities. Taking into account the mitigation measures described above, no significant adverse effects are likely to occur. The following significant beneficial effects are likely to occur with respect to socio-economics:

- Temporary beneficial effect of direct employment on business and commercial activity during construction of the Project.
- Permanent beneficial effect of direct employment on business and commercial activity during operation of the Project.
- Permanent beneficial effect of indirect, induced, and catalytic employment on business and commercial activity during construction of the Project.
- Permanent beneficial effect of labour supply on the labour market during operation of the Project.

7.13. Health and Wellbeing

Introduction

7.13.1 This section presents a summary of the assessment of the likely significant effects on health and wellbeing during construction and operation of the Project. The assessment draws upon information from other chapters in the **Environmental Statement** (most notably: landscape and visual; traffic and transport; air, water and soil quality; noise and vibration; socio-economic effects; and recreation and land use). The assessment considers the potential impacts on public health, including disease, accidents and risk, in addition to wider socio-economic health determinants that support good health and wellbeing.

Assessment Methodology

7.13.2 The existing health profile of the affected population was established by collecting and analysing demographic, public health, and healthcare capacity data. Quantitative estimates for specific health outcomes have also been calculated using methods published by the Government.

7.13.3 Environmental health determinants (such as changes to air quality and noise exposure) and socio-economic determinants of health (such as new job and investment opportunities) have been considered. Local public health reports were also reviewed to provide additional context on local health circumstances, inequalities, and public health priorities.

Current Baseline Environment

7.13.4 Public health statistics, including physical and mental health in the local and wider area around the Project site can be considered good, and trends are generally positive. In addition, health status in these areas is typically better than the national average.

7.13.5 The highest levels of overall deprivation are in the south west of Crawley (Southgate and Broadfield areas), and the least deprived areas are in the eastern half of Crawley (Pound Hill, Maidenbower) and northern parts of Horley.

7.13.6 Gatwick has on-site personnel trained as first responders in the event of a medical emergency. In addition, Gatwick supports 105 first aid trained staff and 80 Automated External Defibrillators. As such, Gatwick is well prepared to respond, treat and call for emergency assistance from the South East Coast Ambulance Trust. An example of the existing effectiveness of treatment is that Automated External Defibrillators treatment success rate is more than six times greater than the national average.

Mitigation Measures

7.13.7 Generally, mitigation focusses on limiting environmental exposures (such as air pollutants or noise levels) to reduce risks of adverse health outcomes. Further measures are proposed as part of the Project to mitigate the potential impacts on health and wellbeing during construction and operation. These include:

- Appropriate onsite occupational health services would be provided for construction workers at Gatwick, including a procedure to manage demand on local NHS healthcare services.
- With regard to passengers at Gatwick, there would be appropriately scaled onsite medical emergency first responders, first aid training and equipment, as well as data sharing to support routine NHS strategic service planning.
- Various provisions that support vulnerable groups will be integrated into the **Noise Insulation Scheme** and **Employment, Skills and Business Strategy** for the Project.

7.13.8 Gatwick Airport Limited would continue to meet its legal obligations in relation to occupational healthcare support for its workers and in supporting Port Health. Port Health covers the routine measures taken by the Government to monitor and appropriately reduce communicable illness risks at all air and seaports. Gatwick Airport Limited would also continue to collaborate with the local Integrated Care Board to explore options for improving staff access to NHS screening and clinics.

Potential Significant Effects

7.13.9 Taking into account the mitigation measures described above, no significant adverse effects are likely to occur. However, a permanent significant beneficial effect to population health is likely to occur because of additional employment opportunities created during operation of the Project.

7.14. Agricultural Land Use and Recreation

Introduction

7.14.1 This section presents a summary of the assessment of the likely significant effects on agricultural land use and recreational resources during construction and operation of the Project. The assessment considered the potential impacts on agricultural land quality, farm holdings, public rights of way, other linear routes and public open space.

Assessment Methodology

7.14.2 Existing agricultural land use and recreational resources were established using a detailed review of existing studies and data sets. Site visits, information from liaison with local landowners and detailed soil surveys undertaken in September 2019 and May 2022 were also used to determine existing agricultural land use within or near the Project site. Survey work has been undertaken for the Project in the areas affected by elements of the Project where soils and agricultural land would be permanently lost and construction areas where soils would be temporarily disturbed during the construction period.

7.14.3 Recreational surveys were undertaken along National Cycle Network 21 (located adjacent to Gatwick Stream) in May and August 2019 to determine the nature of use of this area of public open space. Further surveys were also undertaken in November 2022 to establish the usage of public rights of way likely to be affected by the proposed highways improvements associated with the Project.

Current Baseline Environment

7.14.4 Publicly available data indicates that land within the vicinity of Gatwick primarily comprises lower quality subgrade 3b land, which is not considered best and most versatile agricultural land. The detailed soil surveys confirmed that agricultural land within these areas comprised lower quality subgrade 3b. Defra farming statistical data for local authority areas indicates that agricultural land likely to be affected by the Project is primarily used for livestock. In addition, site visits and liaison with landowners identified six land holdings within or near the Project site, which are likely to be affected.

7.14.5 Publicly available mapping data from the local authorities indicate that several public rights of way, including Sussex Border Path are located within the Project site. The Sussex Border Path, a long distance walk, runs generally from west to east along the alignment of public footpaths. National Cycle Route 21, which provides an important pedestrian and cycle route between Horley, Crawley and Gatwick, is also located within the Project site. Two areas of designated as public open space were identified within the Project site, Riverside Garden Park and Church Meadows.

Mitigation Measures

7.14.6 Several measures are proposed as part of the Project to mitigate potential impacts on agricultural land use and recreation:

- The **Code of Construction Practice** includes a **Soil Management Strategy**, which contains measures designed to maintain the quality of agricultural land and operation of farming business affected by the Project.
- The provision of replacement public open space to mitigate for the permanent loss of open space because of the Project.
- The provision of permanent diversions to a section of the Sussex Border Path and footpath 367 to maintain public access along these routes during operation of the Project.
- The provision of a shared pedestrian and cyclist ramp between the footway on the northern side of the A23 into Riverside Garden Park.
- The provision of an additional pedestrian route linking Riverside Garden Park into the replacement open space in multi-storey car park B, linking with the Sussex Border Path to the north of the A23.
- The provision of temporary diversions to National Cycle Route 21, Sussex Border Path and other affected public rights of way, to maintain public access to these routes during construction of the Project.
- A **Public Rights of Way Management Strategy**, which identifies measures to avoid severance and safely maintain public access along footpaths and National Cycle Route 21. These would include monitoring of public rights of way and National Cycle Route 21 during the construction period.

Enhancements

7.14.7 The Project also includes proposals to enhance agricultural land use and recreation beyond the existing conditions. This includes the provision of new recreational routes around the proposed flood compensation area to the east of Museum Field to enhance public access opportunities, and potential improvements to National Cycle Route 21 to the south of Gatwick.

Potential Significant Effects

7.14.8 Taking into account the mitigation measures described above, the following significant effects are likely to occur with respect to agricultural land use and recreation:

- Temporary adverse effect on public rights of way, Sussex Border Path and National Cycle Route 21 arising from diversions and/or disruption during construction of the Project.
- Temporary adverse effect on Public Open Spaces, including Riverside Garden Park and Church Meadows arising from disruption during construction of the Project.

7.15. Cumulative Effects and Inter-relationships

Introduction

7.15.1 This section presents a summary of the assessment of the likely significant cumulative and inter-related effects during construction and operation of the Project.

Assessment Methodology

Cumulative Effects

7.15.2 The assessment of cumulative effects for the Project was undertaken using a four stage process, which can be summarised as follows:

- Stage 1: identification of a 'longlist' of other proposed developments based on the area around the Project site that may be affected for each environmental topic considered in the **Environmental Statement**.
- Stage 2: preparation of a 'shortlist' of other proposed developments, which was defined by reviewing the longlist against inclusion/exclusion criteria.
- Stage 3: collection of environmental information (if available) relating to other proposed developments in the shortlist.
- Stage 4: determining if significant cumulative effects were likely to occur between the Project and the other proposed developments in the shortlist.

7.15.3 In addition to the process identified above, a separate qualitative (descriptive) assessment was undertaken to determine the potential cumulative effects between the Project and the potential addition of a new runway at Heathrow (Heathrow Third Runway). The assessment was undertaken on the assumption that Heathrow Third Runway would become operation by the mid-2030s. However, there was insufficient available information on any Heathrow Third Runway project to allow a full cumulative assessment to be undertaken.

Inter-related Effects

7.15.4 The assessment of inter-related effects for the Project was undertaken following completion of the assessments for each of the environmental topics considered in the **Environmental Statement**. These were then reviewed to identify receptors likely to be affected by one or more of the environmental topics. An assessment was then undertaken to determine how individual effects for each environmental topic may combine to create significant inter-related effects on identified receptors.

Current Baseline Environment

Cumulative Effects

7.15.5 The shortlisting process identified a number of other proposed developments within the area around the Project site that may give rise to potential cumulative effects. These comprised a variety of development types, including mineral extraction, waste processing, residential developments and/or extensions, multi-storey car parks, employment space and solar farms.

Inter-related Effects

7.15.6 The current baseline environment provided within each of the environmental topics considered in the **Environmental Statement** was used for the purposes of the assessment of inter-related effects.

Mitigation

7.15.7 The assessment of cumulative and inter-related effects is based on the mitigation measures identified within each of the environmental topic chapters of the **Environmental Statement**.

Potential Significant Effects

Cumulative Effects

7.15.8 Taking into account the mitigation measures set out within each of the environmental topic chapters of the **Environmental Statement**, all of the environmental topics, except for landscape, townscape and visual resources, did not identify significant cumulative effects between the Project and other proposed developments. The following significant cumulative effects were identified with respect to landscape, townscape, and visual resources:

- Temporary and permanent adverse effects on the landscape and townscape character of High Woodland Fringes, Low Weald, Horsham Upper Mole Farmland and Mole Valley Open Weald during construction and operation of the Project. However, the contribution of the Project to these significant effects, when compared to the other proposed developments, is medium to negligible.
- Temporary and permanent adverse effects on people with mid to long distance views from elevated locations during construction and operation of the Project.

Inter-related Effects

7.15.9 Additional adverse inter-related effects may arise at some locations from noise, traffic and visual effects during construction and operation of the Project. However, considering the mitigation measures proposed within each of the environmental topic chapters of the **Environmental Statement**, no significant inter-related effects are likely to occur during construction and operation of the Project.

8 Further Information

8.1. Further information

8.1.1 For the full **Environmental Statement**, please refer to **ES Volume 1 – Main Text**, **ES Volume 2 – Figures** and **ES Volume 3 – Appendices** on the National Infrastructure Planning Website: https://infrastructure.planninginspectorate.gov.uk/projects/south-east/gatwick-airport-northern-runway/.

8.1.2 The location of the documents which form part of the application for development consent for the Project and referred to within this **Non-Technical Summary** are provided in Table 8.1.1 below.

Table 8.1.1: Application documents referred to within this Non-Technical Summary

Book	Document Title	Document Reference
Book 5: Environmental Impact Assessment and Habitat Regulation Information.	ES Non-Technical Summary	5.4
	ES Volume 1 – Main Text	5.1
	ES Volume 2 – Figures	5.2
	ES Volume 3 – Appendices	5.3
	ES Appendix 6.2.1: EIA Scoping Report	5.3
	ES Appendix 6.2.2: EIA Scoping Opinion	5.3
	ES Appendix 8.8.1: Outline Landscape and Ecology Management Plan	5.3
	ES Appendix 19.8.2: Public Rights of Way Management Strategy	5.3
	ES Appendix 5.2.2: Operational Lighting Framework	5.3
	ES Appendix 5.3.3: Indicative Construction Sequence	5.3
	ES Appendix 5.3.2: Code of Construction Practice	5.3
	ES Appendix 11.9.6: Flood Risk Assessment	5.3
	ES Appendix 5.4.1: Surface Access Commitments	5.3
	ES Appendix 5.3.2: Code of Construction Practice Annex 2 – Outline Construction Workforce Travel Plan	5.3
	ES Appendix 5.3.2: Code of Construction Practice Annex 3 – Outline Construction Traffic Management Plan	5.3
	ES Appendix 5.3.2: Code of Construction Practice Annex 5 – Construction Resources and Waste Management Plan	5.3
	ES Appendix 5.4.2: Carbon Action Plan	5.3
	ES Appendix 14.9.10: Noise Insulation Scheme	5.3
	ES Appendix 5.3.2: Code of Construction Practice Annex 1 – Water Management Plan	5.3
	ES Appendix 17.8.1: Employment, Skills and Business Strategy	5.3
	ES Appendix 5.3.2: Code of Construction Practice Annex 4 - Soil Management Strategy	5.3

Book	Document Title	Document Reference
Book 7: Reports / Statements	Design and Access Statement	7.3

9 Next Steps

9.1.1 This **Non-Technical Summary** provides a summary of the **Environmental Statement**, which have been submitted to the Planning Inspectorate, alongside other documentation, in support of the application for development consent for the Project.

9.1.2 As shown in Diagram 1.4.1 of this **Non-Technical Summary** above, the Planning Inspectorate will oversee each stage in the process, following submission of the application for development consent for the Project.

9.1.3 The examination process lasts six months, after which the Examining Authority will provide a recommendation to the Secretary of State within three months of the end of the examination process. The Secretary of State then has three months to decide whether to grant the application for development consent for the Project. Upon receipt of a Development Consent Order, Gatwick Airport Limited would have the necessary legal powers to proceed with the Project.

9.1.4 To participate in the examination process, members of the public can register as Interested Parties using the link provided below: https://infrastructure.planninginspectorate.gov.uk/projects/south-east/gatwick-airport-northern-runway/

10 Glossary

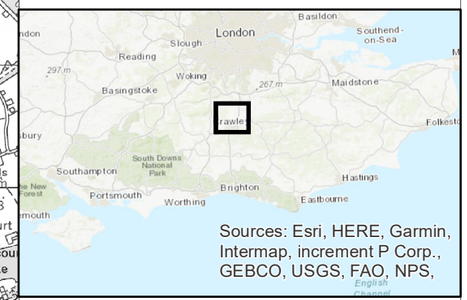
Table 8.1.1: Glossary of Terms

Term	Description
AQMA	Air Quality Management Area
CARE	Central Area Recycling Enclosure
EIA	Environmental Impact Assessment
FEMA	Functional Economic Market Area
LMA	Labour Market Area
LSA	Local Study Area
PEIR	Preliminary Environmental Information Report
PEI	Preliminary Environmental Information

LONDON GATWICK

KEY

Project Site Boundary (ES)



DOCUMENT

Non-Technical Summary

DRAWING TITLE

Site Location Plan

DATE

July 2023

ORIENTATION	DRAWING NO.	REVISION
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	DRAWN BY	PM / CHECKED BY
	MS	KC

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LONDON GATWICK

KEY

Project Site Boundary (ES)

DOCUMENT

Non-Technical Summary

DRAWING TITLE

Project Site Boundary

DATE

July 2023

ORIENTATION	DRAWING NO.	REVISION
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	DRAWN BY	PM / CHECKED BY
	MS	KC

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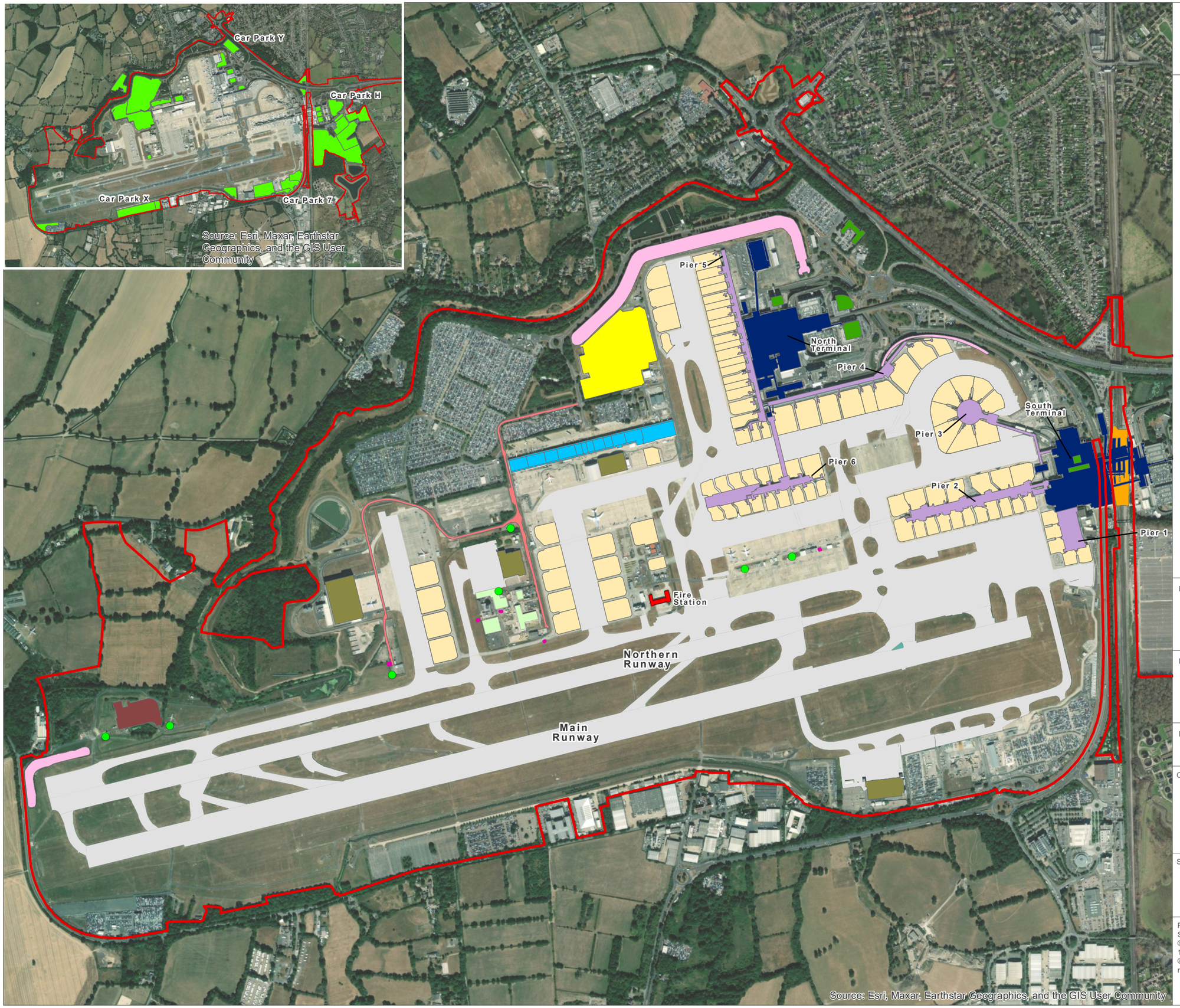

LONDON GATWICK

KEY

- Project Site Boundary (ES)
- Runway or taxiway
- Terminals
- Piers
- Stands
- Aircraft Hangar
- Airport Fire Station
- CARE / Motor Transport / Surface Transport / Grounds Maintenance
- Cargo Facility
- Fire Training Ground
- Air Traffic Control Tower
- Noise mitigation (environmental bund)
- Larkins Road
- Fuel Farm
- Substation
- Pumping Station
- Hotels
- Railway Station
- Car Parks (shown on inset map)

DOCUMENT

Non-Technical Summary

DRAWING TITLE

Existing Site

DATE

July 2023

ORIENTATION	DRAWING NO.	REVISION
N	FIGURE 1.5.1	ES
	DRAWN BY: MS	PM / CHECKED BY: KC

SCALE @ A3 1:12,500

0 125 250 500 m

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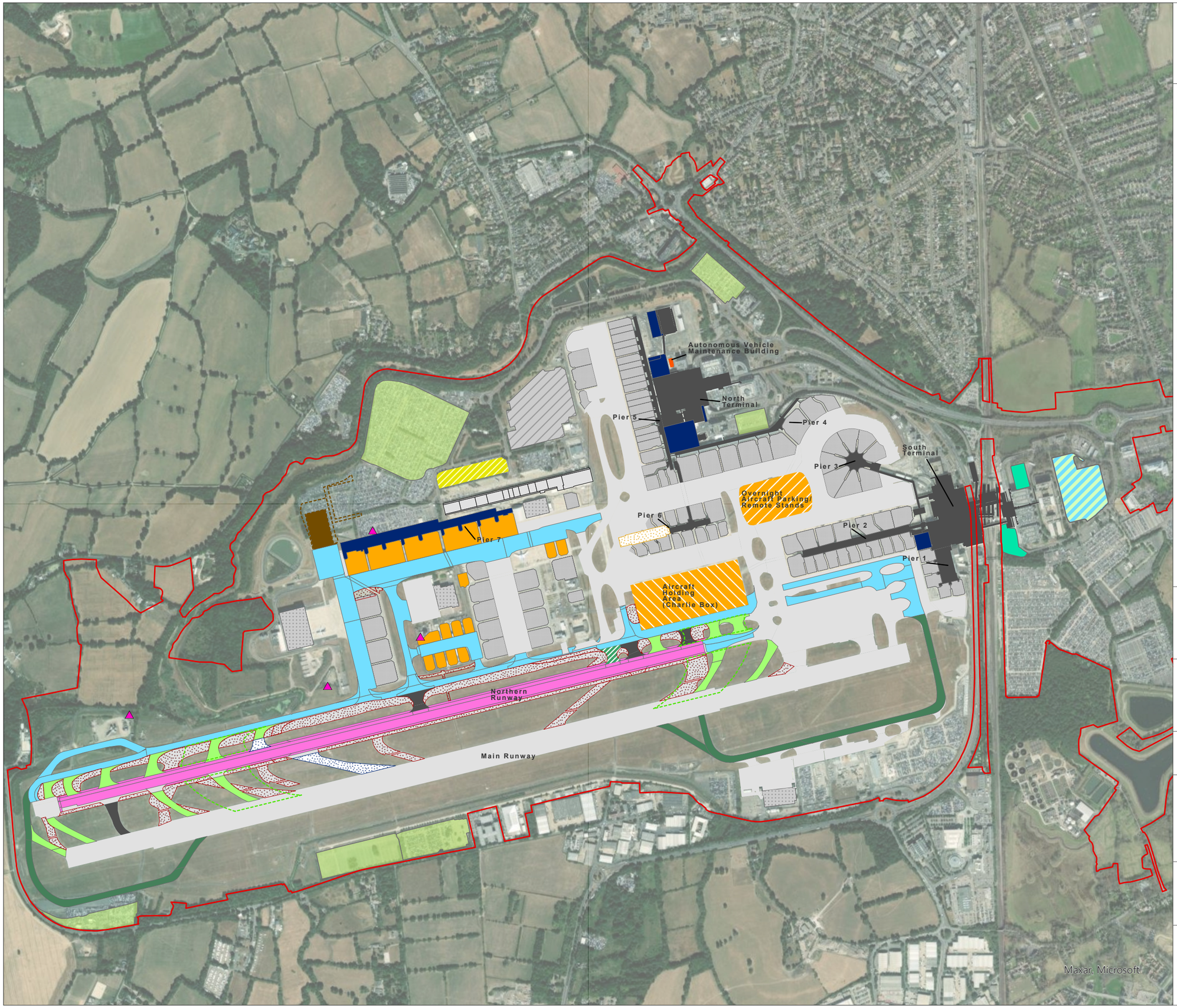

LONDON GATWICK

Project Site Boundary (ES)

Existing

- Terminal buildings
- Cargo facility buildings
- Fuel Farm
- Hangar
- Existing stands
- Existing taxiway
- Existing exit/entrance taxiway

Future Baseline

- Pier 6 Extension
- Rapid Exit Taxiway

Proposed

- Existing taxiway to be replaced with grass
- Northern Runway 08L/ 26R
- Taxiway
- Stands
- Aircraft Holding Area
- Overnight parking/remote stands
- End Around Taxiways
- Modified exit/entrance taxiway
- Exit/entrance taxiway
- Exit/entrance taxiway envelope
- Terminal and pier works
- Hangar
- Reconfigured car parking areas
- Relocated Central Area Recycling Enclosure (CARE)
- Autonomous Vehicle Maintenance Building
- Substation
- Car Parks
- Hotels
- Area for new hotel, offices and Car Park H MSCP

DOCUMENT

Non-Technical Summary

DRAWING TITLE

Key Components of the Project

DATE

July 2023

ORIENTATION	DRAWING NO.	REVISION
N	FIGURE 1.6.1	ES
	DRAWN BY	PM / CHECKED BY
	MS	KC

SCALE @ A3 1:14,000

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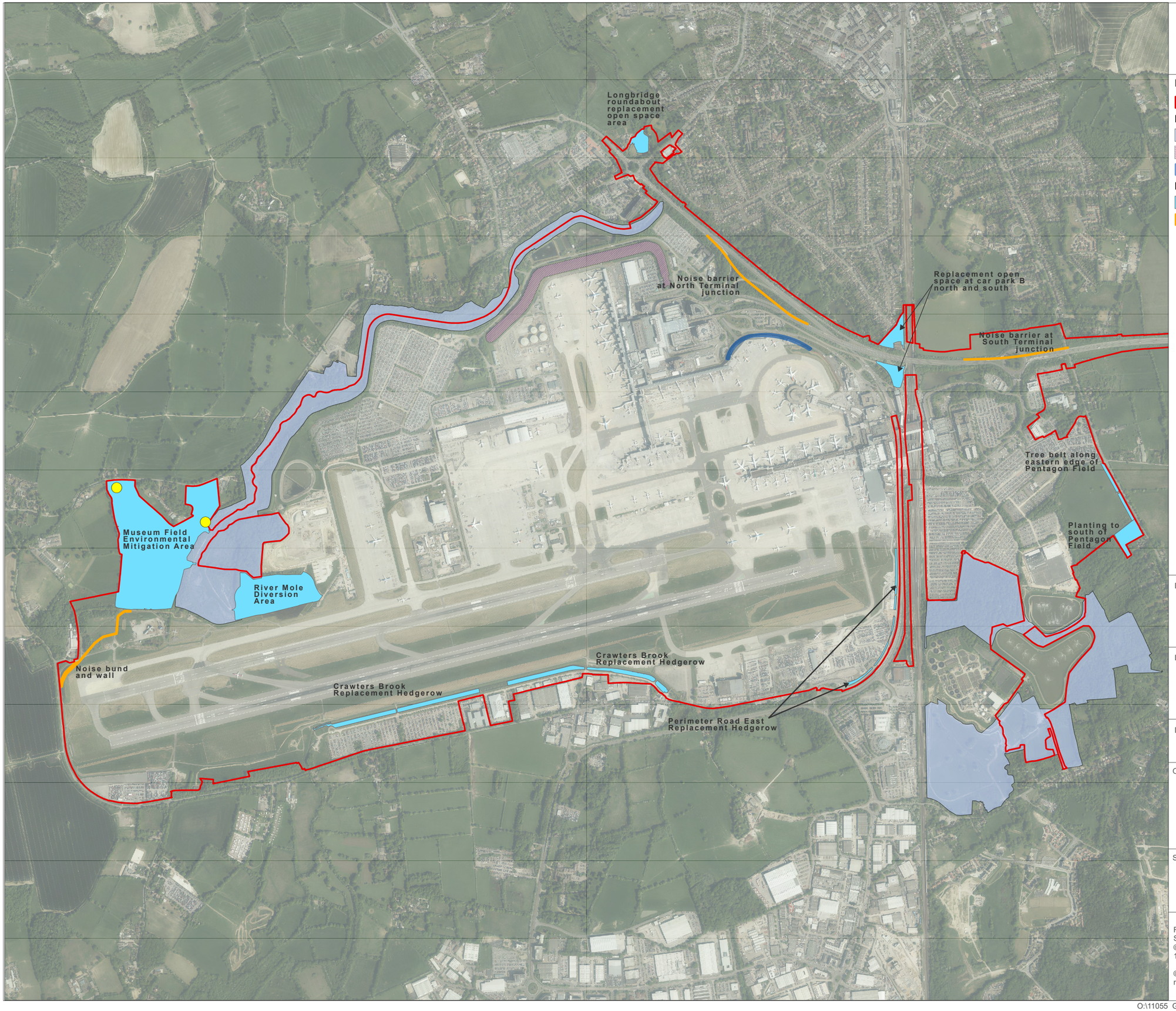

LONDON GATWICK

KEY

- Project Site Boundary

Existing

- Gatwick Biodiversity Area
- Noise mitigation (environmental bund)
- Noise wall

Proposed

- Environmental Mitigation Areas
- Noise Mitigation
- Farm access bridges

DOCUMENT

Non-Technical Summary

DRAWING TITLE

Environmental Mitigation Areas

DATE

July 2023

ORIENTATION	DRAWING NO.	REVISION
N	FIGURE 1.6.2	For ES Issue
	DRAWN BY: MS	PM / CHECKED BY: KC

SCALE @ A3 1:16,000

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