Gatwick Airport Northern Runway Project

Design and Access Statement
Volume 1

Book 7

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Aerial View of Gatwick Airport from the North East

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1.1.1 The Design and Access Statement (DAS) is one of the submission documents produced as part of the Northern Runway Project ('the Project') Development Consent Order (DCO) application.

1.1.2 Gatwick Airport Limited (Gatwick Airport) have developed the indicative masterplan that forms part of this DCO application over a number of years. This has included two rounds of public consultation and ongoing stakeholder engagement to further refine the indicative designs.

1.1.3 The purpose of the DAS is to explain the site context, its setting and describe the design and access principles and concepts that have informed development of the Project. The information contained in the DAS is indicative and intended to explain the analysis undertaken to develop the scheme and support the understanding of the DCO application.

1.1.4 The DAS is formed of five volumes which are structured in the following way:

Volume 1

1.1.5 Section 1 'Introduction': this introduces the DAS, its purpose, scope and context as well as setting out a list of key terms used throughout this DAS.

1.1.6 Section 2 'Site Context': this explains the site context and its setting. It also describes the opportunities and constraints that have informed the development of the scheme. These include physical, social and economic characteristics of the site and its surrounding area.

1.1.7 Section 3 'Project Requirements': outlines the proposal and its evolution with regards to design considerations, strategy and aerodrome regulations. It also outlines the feedback and guidance provided by consultation on both a statutory and public level and how it informed the Project.

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Volumes 2 to 4

1.1.9 Section 5 'Detailed Proposals by Zone': more detail of the key characteristics and proposed projects within each 'zone' of the Project as shown on Figure 1.

Volume 5

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1.1.11 Section 7 'Parameters for Implementation': provides details of how the extend of the projects are defined and controlled.

1.1.12 Section 8 'Temporary Construction Compounds': Details the location of construction compounds and related activities required to construct the Project.

1.1.13 Section 9 'Phasing & Delivery': this section explains the indicative phasing (over time) of the construction works to implement the Project.

1.1.14 Appendix 1 'Design Principles': sets out the design principles that underpin the design and integration of the Project into its context. These design principles are a control document and provide design-related.

Appendix

1.1.15 The appendix contains key overview startegy information. This includes the list of Design Principles that underpin the design and integration of the Project into its context.

1.1.16 It also contains the masterplan drawings for the project. These show the different developments and what the intended land-use is. They show the change in land-use for key years and how the expected sequence of construction will occur for each works area.

The Project

1.1.17 Government policy has consistently recognised the importance of aviation including the critical contribution it makes to the UK economy. Such policy commits to growth to respond to forecast increases in demand and to strengthen the aviation sector to respond to policy objectives.

1.1.18 Gatwick Airport is a major international airport located to the north of the town Crawley in the county of West Sussex, and south of the town Horley. Junction 9 of the M23 and East Grinsted are located to the east of Gatwick Airport with Horsham to the south-west.

1.1.19 Gatwick Airport has seen significant levels of growth in recent years, prior to the COVID-19 pandemic. Over the last decade, the number of passengers served grew by over 14 million passengers, reaching 46.6 million in the most recent full year of operation (2019). This represents a 44% growth in passengers since 2009, resulting from 15% growth in commercial air transport movements combined with the use of larger and fuller aircraft.

1.1.20 The Department for Transport forecasts show that demand will outstrip capacity in the London Airport system by the mid-2030s. The forecasts observe that Heathrow Airport and Gatwick Airport are already 'full'. By 2030, an additional 50+ million passengers are forecast in the London market – far in excess of today's available capacity, indicating significant need for capacity development. Therefore, it is important that airports, including Gatwick Airport, find ways to make best use of its available capacity.

1.1.21 The Project seeks permission to bring the existing northern runway, which is currently restricted to use as a standby/emergency runway, into routine operation alongside continued use of the main runway. It is indicatively expected to open in 2029 ready to meet demand for additional capacity that cannot be provided on the main runway. It is an innovative way of adding additional capacity to Gatwick Airport, through making use of the existing northern runway, and importantly without requiring the significant additional land take that would be required if a full second runway was to be developed.

1.1.22 The land subject to the DCO application is 735 hectares in size and comprises the runways, road-based infrastructure, terminal buildings, car parks, hotels, landscape and ecological areas associated with Gatwick Airport. The Project also includes the development of a range of infrastructure and facilities, largely within the confines of the existing site boundary, but also including major road enhancements to improve access to Gatwick Airport.

1.1.23 A summary of the works to be undertaken as part of the Project are:

- 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 alterations (including a proposed new pier);
- reconfiguration of other airfield facilities;
- extensions to the existing airport terminals (north and south);
- provision of additional hotel and office space;
- provision of reconfigured car parking, including new car parks;
- surface access (including highway) improvements;
- demolition and relocation of Central Area Recycling Enclosure (CARE) facility;
- water treatment facilities;
- reconfiguration of existing utilities, including surface water, foul drainage and power; and
- landscape/ecological planting and environmental mitigation.

1.1.24 As part of the development of this masterplan, Gatwick Airport has considered a range of options and undertaken two rounds of public consultation. Section 4 of the DAS summarises the design evolution of the Project from the start of the initial master planning process in 2019, highlighting the key changes that have been made in response to public consultation responses and stakeholder feedback.

1.1.25 Volumes 2 to 4 of this DAS set out the individual components of the masterplan which form the Project. Due to the large size and varied nature of the proposed development at Gatwick Airport, this DAS describes the development by zones. This division assists with taking into account the different activities and character of each area.

1.1.26 The Project has taken into consideration sustainability policies and principles as part of design development and the production of the masterplan.

1.1.27 The level of design development varies depending on the type of work. The design of the projects set out in Section 5 is at an early feasibility stage. This means they have been designed to test the viability of the masterplan but they are not a fixed design of the future developments.

Design Guide and Design Principles

1.1.28 Section 6 sets out the Project's design guide that contains the overall ethos and the principles that the implementation of the masterplan should adhere to. These guidelines will also set out defined standards which each various development typologies are to be designed within.

1.1.29 The detail within this design guide is intended to illustrate how the Design Principles have been identified and the likely way that the Project would continue to be developed. The Project's design guidelines have been developed taking into consideration national and local policies, existing design guidance, as well as Gatwick Airport-specific guidance that has been developed by the Project team (set out by topic area). The consideration of sustainability and the guidance set out in Section 3 of this DAS cross-cuts all of these topics.

1.1.30 Alongside these standards, Design Principles have been identified to give direction for the design of these developments. These are set out in Appendix 1 of this DAS which contains operational Project-wide Design Principles and detailed built form Design Principles relating to built form, drainage and landscape. Landscape and ecology design principles are also secured within **ES Appendix 8.8.1 Outline Landscape and Ecology Management Plan** (Doc Ref. 5.3).

1.1.31 The Design Principles (Appendix 1 of the DAS) form a control document that the operational designs for each of these works will be required to be in general accordance with as part of the detailed design approval process set out in the Schedule 2 Requirements. Construction-related design commitments are secured through the **ES Appendix 5.3.2 Code of Construction Practice** (Doc Ref. 5.3).

1.1.32 The detailed design will also be constrained by the maximum extent and area of each Work No. shown on the Parameter Plans; with the approximate level of the finished works, the height of the structure (m) and/or maximum parameter height.

Construction Compounds

1.1.33 Gatwick Airport anticipates that seven construction compounds will be required to support the construction of the Project. The locations of these compounds are described below:

- **MA1 – Main Contractor Compound –** the main compound that will be used to support the Project office and most of the key services including the main welfare facility, car parking, airside screening and batch plants.
- **Airside Satellite –** this compound will support the core airfield works located within the north-western area of the airfield.
- **Car Park Z –** this compound will be used as a staging and laydown area for the core airside works.
- **Car Park Y –** this compound will be used for reprocessing the hard-excavated material from the core airside runway works. Following the completion of the airside works, the compound will be used to support the North Terminal Roundabout surface access works.
- **South Terminal Roundabout –** this compound will support the surface access works to the South Terminal Roundabout.
- **Longbridge Roundabout –** this compound will support the Longbridge Roundabout surface access works. The compound will include storage for site containers, short-term material laydown and a pick-up point for workforce vans.

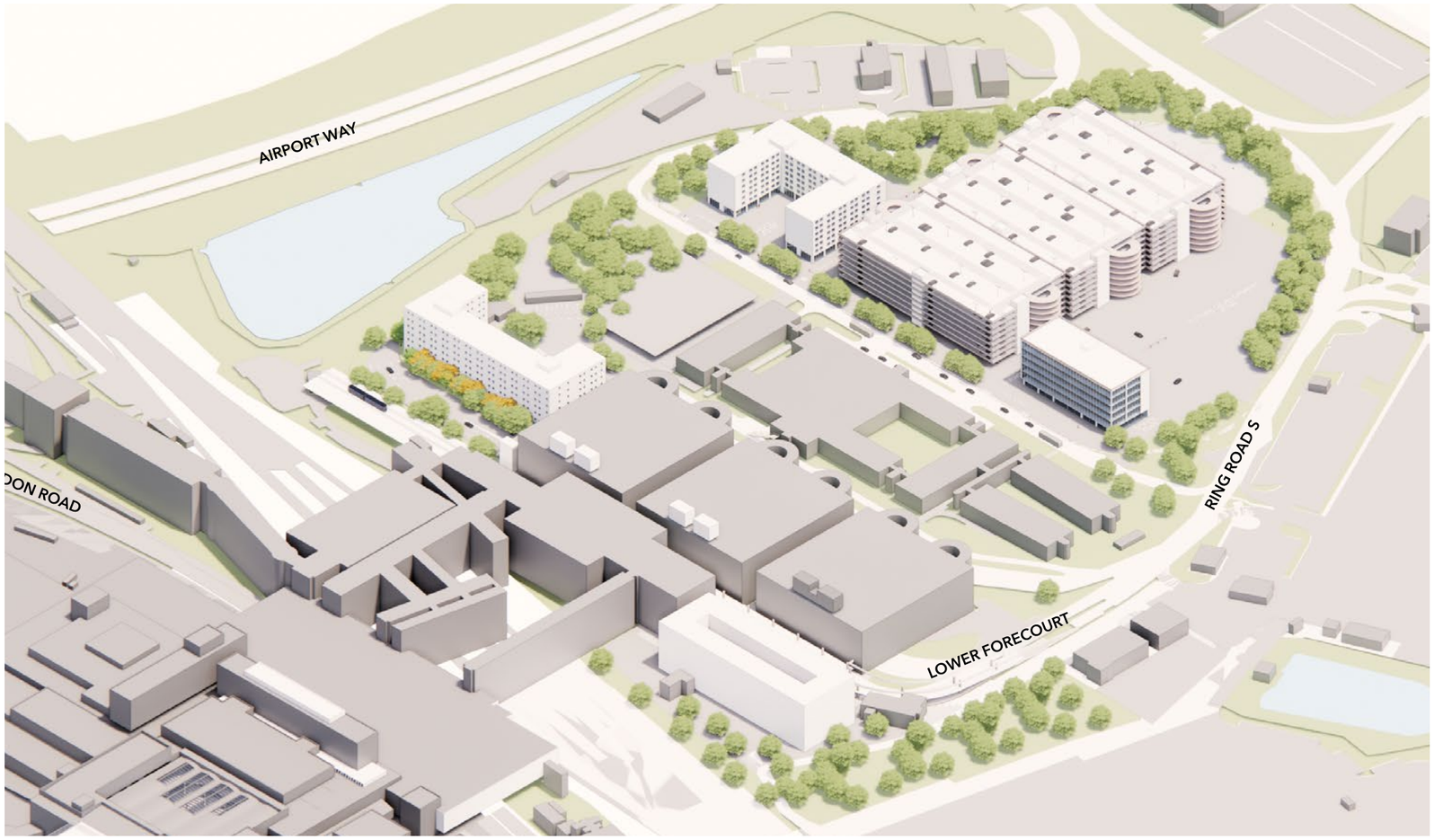
- **Car Park B –** this compound will support the widening works of the Airport Way bridge over the London to Brighton railway. The compound will include storage for site containers, short-term material laydown and a pick-up point for workforce vans.

1.1.34 The general process to establish the construction compounds comprises the following:

- Installation of secure fencing around the site.
- Clearance of the site to remove existing items/structures that are not required as part of the construction compound.
- Marking out roadways and safe walking routes and parking areas.
- Installation of temporary welfare and office facilities.
- Installation of temporary batching plants and bulk material handling.
- Installation of bus terminus and airside process facility (where appropriate).

1.1.35 The contractor facilities are expected to comprise of temporary modular accommodation units.

1.1.36 On completion of the Project (or the relevant works that the compound is required for), all temporary compounds would be restored to their previous land use following completion of the works except for the Car Park B Compound that would become replacement open space.



Indicative view of developments around the South Terminal

1.0 INTRODUCTION

1.1 PURPOSE OF THIS DOCUMENT

1.1.1 The Design and Access Statement (DAS) is one of the submission documents produced as part of the Northern Runway Project ('the Project') Development Consent Order (DCO) application.

1.1.2 Gatwick Airport Limited (GAL) have developed the indicative masterplan that forms part of this DCO application over a number of years. This has included two rounds of public consultation and ongoing stakeholder engagement to further refine the indicative designs.

1.1.3 The purpose of the DAS is to explain the site context, its setting and describe the design and access principles and concepts that have informed development of the project. The information contained in the DAS is indicative and intended to explain the analysis undertaken to develop the scheme and support the understanding of the proposed DCO application.

1.2 SCOPE AND CONTENT OF THE DOCUMENT

1.2.1 The content and structure of the DAS has been informed by the Airports National Policy Statement (Aiports NPS), the National Policy Statement for National Networks (NPSNN), National Planning Policy Framework (NPPF) and National Planning Practice Guidance (NPPG). These provide advice on what the DAS should include. Importantly, the document should:

i. Explain the design principles and concepts that have been applied to the proposed development.

ii. Demonstrate the steps taken to appraise the context of the proposed development, and how the design of the development takes that context into account.

iii. Refer to the particular characteristics of the application site and its wider setting to explain the development context.

iv. Explain the GAL's approach to access and how future users of the site will be able to access the development via a range of transport modes including active travel.

1.2.2 The DAS is formed of five volumes which are structured in the following way:-

<u>Volume 1</u>

1.2.3 **Section 1 'Introduction' (Volume 1):** this introduces the DAS, its purpose, scope and context as well as setting out a list of key terms used throughout this DAS.

1.2.4 **Section 2 'Site Context' (Volume 1):** this explains the site context and its setting. It also describes the opportunities and constraints that have informed the development of the scheme. These include physical, social and economic characteristics of the site and its surrounding area e.g. existing settlements, historic environment, transport links etc.

1.2.5 **Section 3 'Project Requirements' (Volume 1):** outlines the proposal and its evolution with regards to design considerations, strategy and aerodrome regulations. It also outlines the feedback and guidance provided by consultation on both a statutory and public level and how it informed the Project.

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<u>Volume 2 to 4</u>

1.2.7 **Section 5 'Detailed Proposals by Zone' (Volume 2-4):** more detail of the key characteristics and proposed projects within each 'zone' of the Project as shown on Figure 1.

<u>Volume 5</u>

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1.2.9 **Section 7 'Parameters for Implementation' (Volume 5):** provides details of how the extend of the projects are defined and controlled.

1.2.10 **Section 8 'Temporary Construction Compounds' (Volume 5):** Details the location of construction compounds and related activities required to construct the Project

1.2.11 **Section 9 'Phasing & Delivery' (Volume 5):** this section explains the indicative phasing (over time) or the construction works to implement the Project.

1.2.12 A Glossary and list of figures has been included at the close of each volume of the DAS.

1.2.13 Appendix 1 'Design Principles': sets out the design principles that underpin the design and integration of the Project into its context. These design principles are a control document and provide design-related commitments for future design development.

1.2.14 The application site is 735 hectares in size and comprises the runway, road-based infrastructure, terminal buildings, car parks, hotels, landscape and ecological areas associated with the Gatwick Airport. As these uses are wide ranging they have been divided into development zones as shown in Figure 1.

1.2.15 These zones have been developed for the purposes of this DAS to assist with describing the proposed approach to design development and the components that make up the Project's masterplan.

Figure 1. *Development Zones*

1.3 OVERVIEW OF THE PROJECT

1.3.1 The Project proposes alterations to the existing northern runway which, along with lifting the current restrictions on its use, would enable dual runway operations. The Project would also include the development of supporting infrastructure and facilities to enable increased capacity at Gatwick airport to service 75 million passengers per year by 2038.

1.3.2 Gatwick Airport is a major international airport located to the north of the town Crawley in the county of West Sussex, and south of the town Horley. Junction 9 of the M23 and East Grinsted are located to the east of Gatwick Airport with Horsham to the south-west.

1.3.3 The Project seeks permission to bring the existing northern runway, which is currently restricted to use as a standby/emergency runway, into routine operation alongside continued use of the main runway. It is indicatively expected to open in 2029 ready to meet demand for additional capacity that cannot be provided on the main runway.

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1.3.6 A summary of the works to be undertaken as part of the Project (see Figure 3) are:

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- reconfiguration of taxiways;
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- water treatment facilities;
- reconfiguration of existing utilities, including surface water, foul drainage and power; and
- landscape/ecological planting and environmental mitigation.

1.3.7 The Order Limits for the DCO (the limits within which the Project is to be constructed and operated) are shown on the Plan as Figure 2.

1.3.8 The Order Limits include land which is owned by GAL with some additional parcels of land which are not owned by GAL - all of which are surrounded by or adjacent to GAL-owned land. The land required for the construction and operation of the Project is detailed in the **Book of Reference** (Doc Ref. 3.3) and shown on the **Land Plans** (Doc Ref. 4.2).

1.3.9 Replacement open space is to be provided adjacent to Church Meadows (0.52 hectares) and at the Car Park B North site (0.79 hectares) and the Car Park B South site (0.64 hectares) to form part of Riverside Garden Park.

1.3.10 Temporary land take is required for the construction of improvements to the South Terminal roundabout and surface access works.

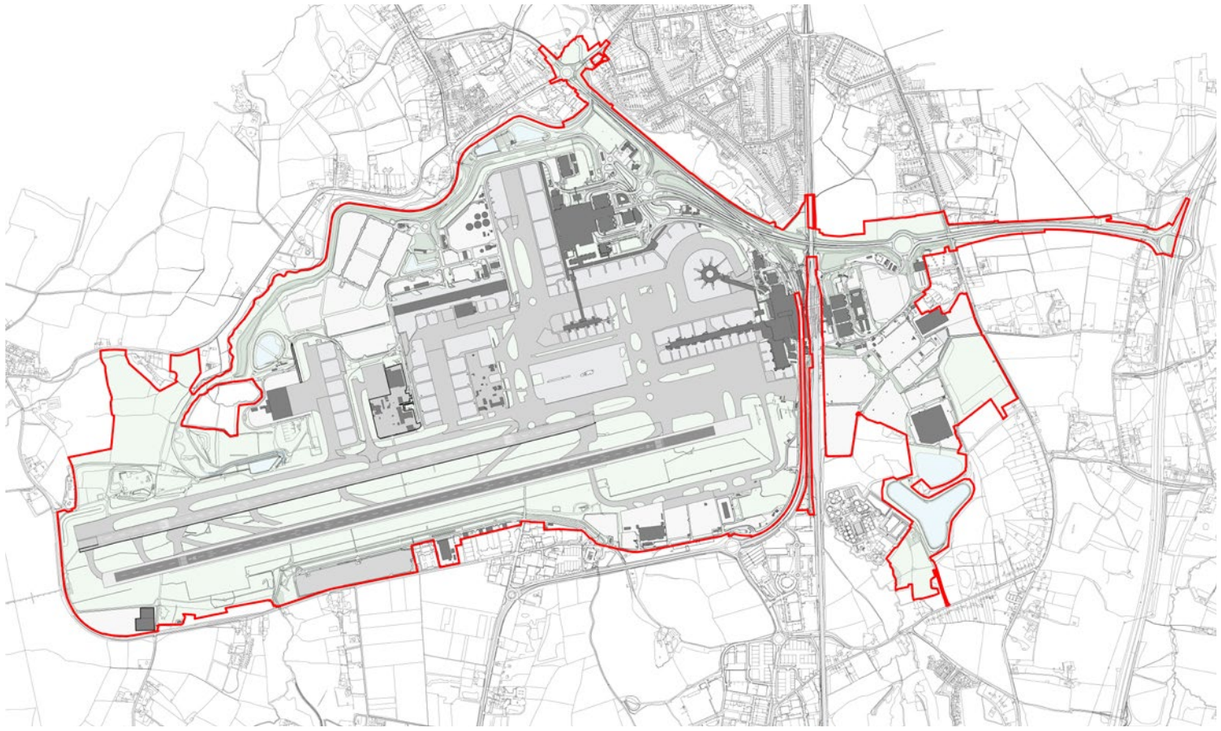


Figure 2. *Project Order Limits*

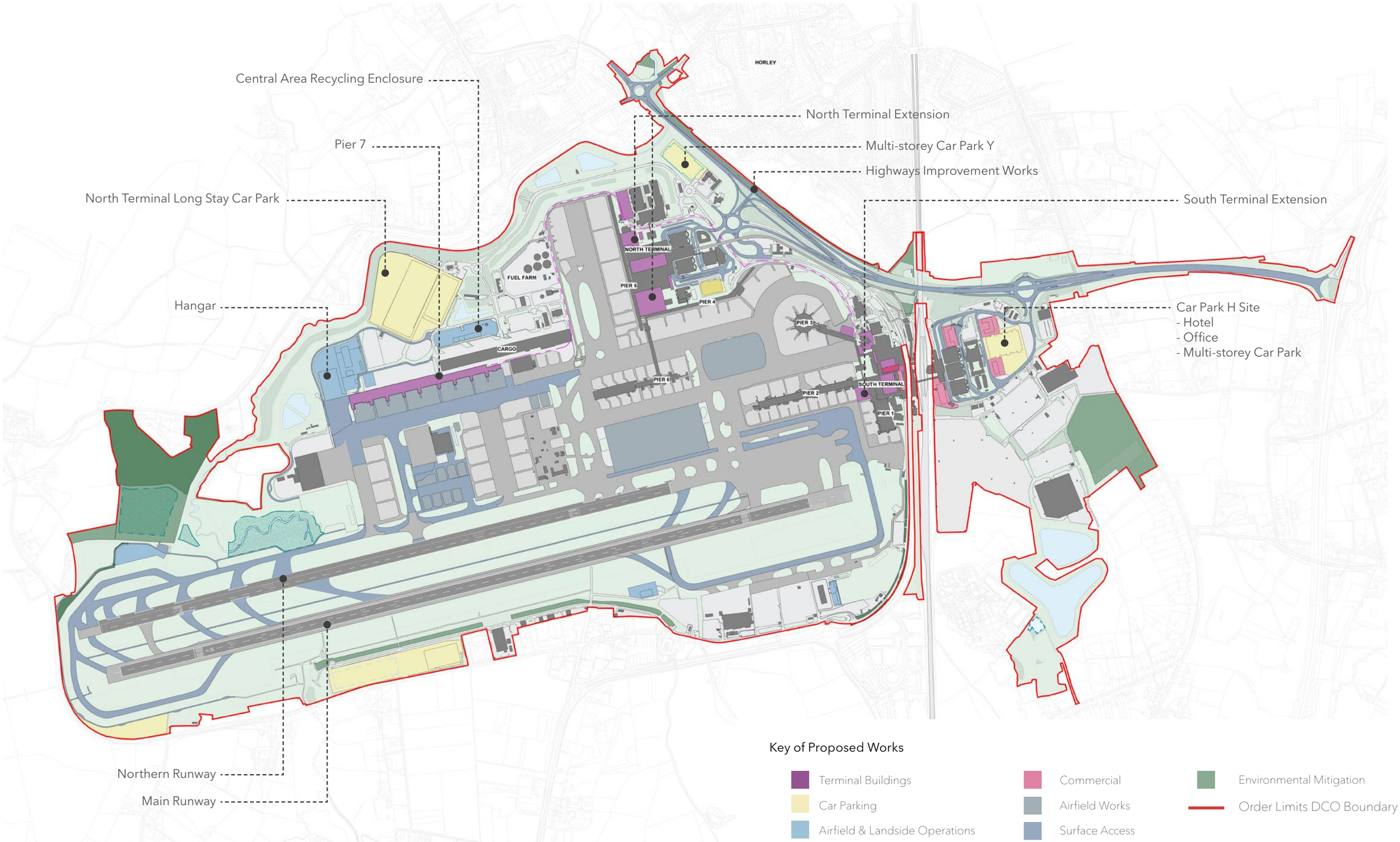


Figure 3. *Indicative Works by Land Use Type and Key Developments*

1.3.11 Figure 4 provides an overview of the Project, highlighting some of the key developments proposed.

1.3.12 For a comprehensive understanding of all the developments, please refer to Section 5 of this document spread over Volumes 2 to 4 of this DAS.

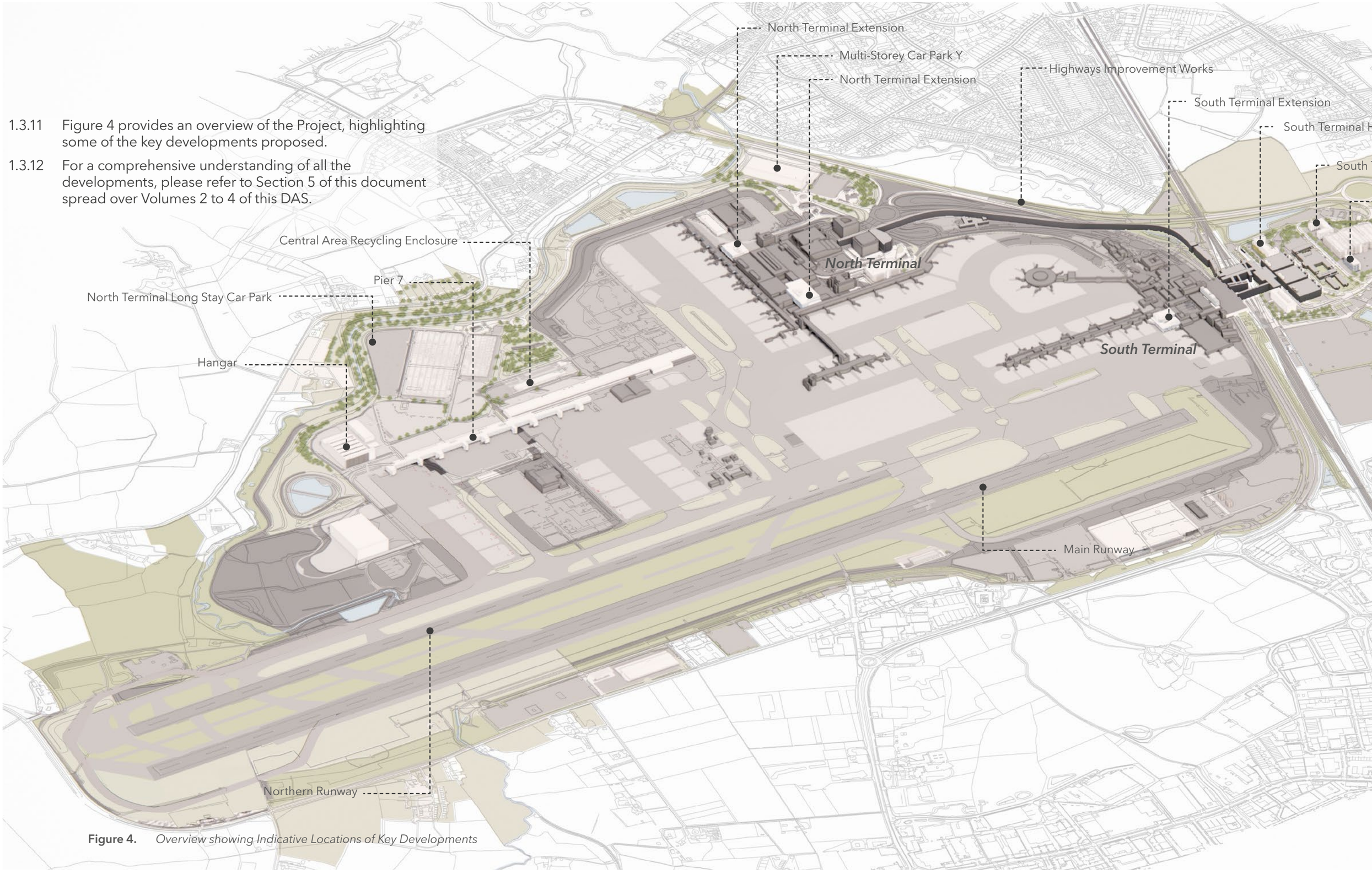


Figure 4. *Overview showing Indicative Locations of Key Developments*

1.4 KEY TERMS

1.4.1 Throughout this DAS, references are made to airport or planning terms that may not be familiar to all readers. This section highlights a few of the key terms used throughout this DAS. A **Project Glossary** has also been submitted as part of the DCO application (Doc Ref. 1.4) which sets out the full list of terms and definitions used within this application.

1.4.2 A glossary which contains the key terms used throughout this DAS has also been provided at the end of each volume.

- **Airport Boundary:** the boundary of London Gatwick Airport is defined on the **Airport Boundary Plan (**contained in the glossary at the end of this volume) and has the same meaning as in Part 1 of the Civil Aviation Act 2012. Gatwick Airport is divided in two landside and airside areas, described below.
- **Airside:** the area within the Airport Boundary that is beyond passport and customs control, and involves the arrival and departure of an aircraft. For example, this includes the airfield, runways, taxiways and hangers.
- **Apron:** the tarmac area where aircraft are parked, unloaded or loaded, refuelled, boarded, or maintained.
- **Cargo:** Goods that are transported via aircraft.
- **Deck parking:** A covered, single level parking structure.
- **Environmental Statement:** presents the findings of the Environmental Impact Assessment for the Project. EIA is the process of identifying and assessing the significant effects likely to arise from the Project. This requires consideration of the likely changes to the environment, where these arise as a consequence of the Project, through comparison with the existing and project future baseline conditions. The Project's Environmental Statement can be found in Book 5 of the DCO application.
- **Fuel farm:** An airport fuel farm is a centralized facility used for the storage and distribution of aviation fuel to support aircraft operations.
- **Gatwick Airport:** The international airport located in the county of West Sussex between the towns of Crawley and Horley. Gatwick Airport is majority owned by VINCI Airports, with the remainder owned by a consortium of investors managed by Global Infrastructure Partners.
- **Gatwick Airport Limited (GAL):** the company licensed to operate Gatwick Airport (i.e. the 'airport operator') by the Civil Aviation Authority and the Applicant for the application for development consent for the Project under the Planning Act 2008.
- **Inter-Terminal Transit System (ITTS):** also referred to as 'the Shuttle', the ITTS provides a direct and frequent transit connection for passengers between the North and South Terminals.
- **Landside:** the area that is outside the Airside (i.e. outside passport and customs control) but within the Airport Boundary. For example, this includes car parking areas, hotels, offices and terminal buildings.
- **Order Limits:** the limits shown on the **Location Plan** (Doc Ref. 4.1) and on Figure 2 in this DAS comprising the extent of the proposed Project boundary.
- **Piers:** The narrow buildings connected to the main terminal buildings which provide 'gates' to the aircraft. Aircraft may be parked either side of each pier to allow for boarding or disembarkment.
- **Receptor:** A component or the natural or built environment that may be affected by the Project as identified within the Environmental Statement.
- **Surface access:** the physical access to and from the site at ground level (e.g. excludes air access).
- **Taxiways:** the tarmac route which aircraft taxi along which connects the runways with the aprons, terminals and hangars.

2.0 SITE CONTEXT

2.1 SITE LOCATION & SURROUNDINGS

2.1.1 Gatwick Airport is located in the county of West Sussex between the towns of Crawley and Horley (Figures 5 & 6).

2.1.2 Gatwick Aiport 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. Other neighbouring administrative areas include Tandridge District Council (located approximately 1.9 kilometres to the east of Gatwick) and Mid Sussex District Council (approximately 2 kilometres to the south-east).

2.1.3 Gatwick Airport's two passenger terminals (the 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 Gatwick Airport. The A23 (London Road) also serves Gatwick Airport, running in a north-south direction past Gatwick Airport.

2.1.4 Gatwick Airport is located on the London to Brighton mainline railway. The railway station is located at the South Terminal, from which there is a direct transit link to the North Terminal.

2.1.5 The areas of the Airport that are defined as 'Airside' (the area within the Airport Boundary that relates to the aircraft movement area of an airport, adjacent terrain and buildings or portions thereof, and to which access for the general public is restricted, for example, this includes the airfield, runways, taxiways and hangers) and Landside (the area within the Airport Boundary and outside the Airside; to which the general public has unrestricted access. For example, this includes access roads, car parking areas, public transport interchanges, hotels, offices and terminal check-in areas) are shown on Figure 7.

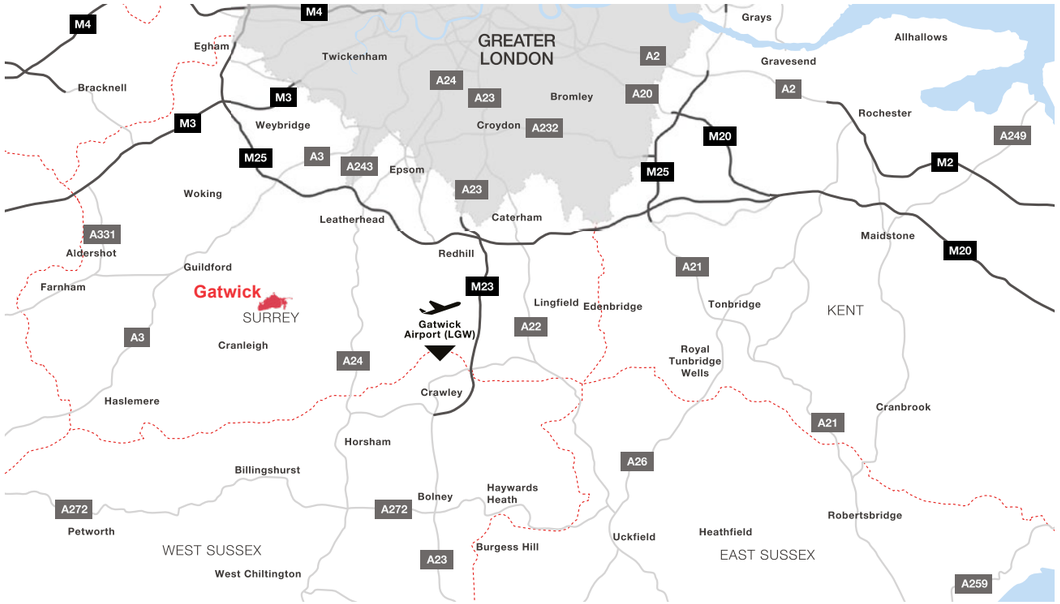


Figure 5. *Regional Context Plan*

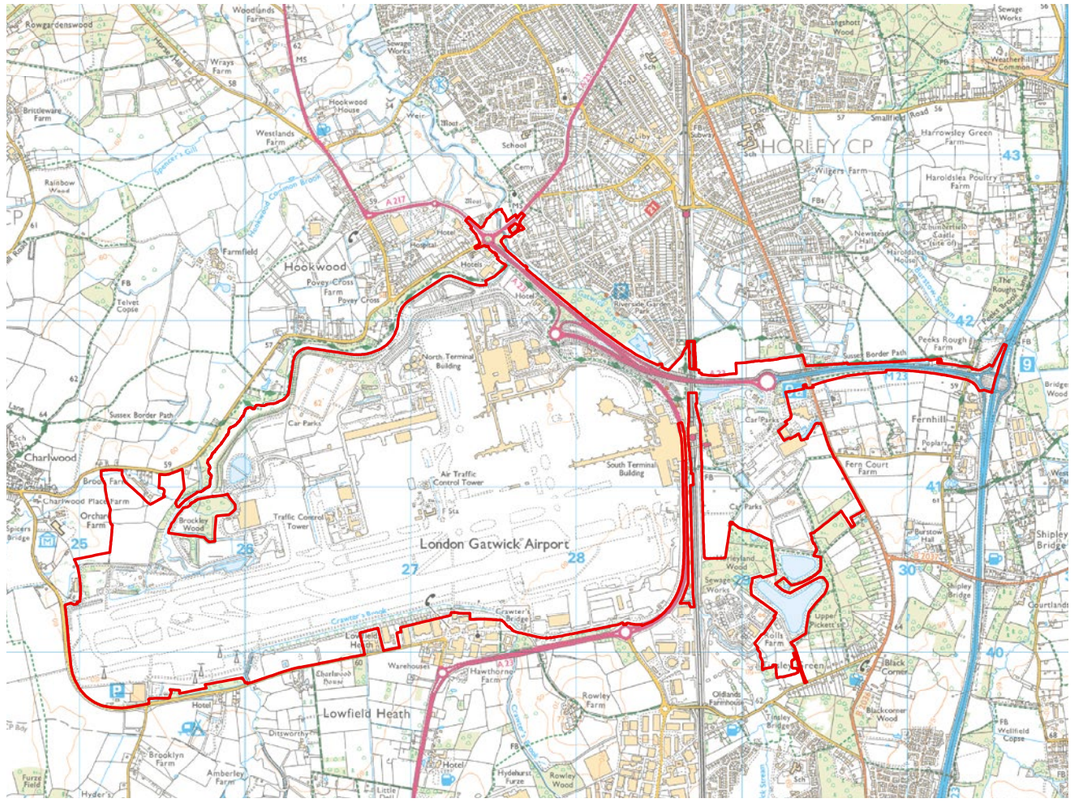


Figure 6. *Local Context Plan : ES Figure 1.2.2*

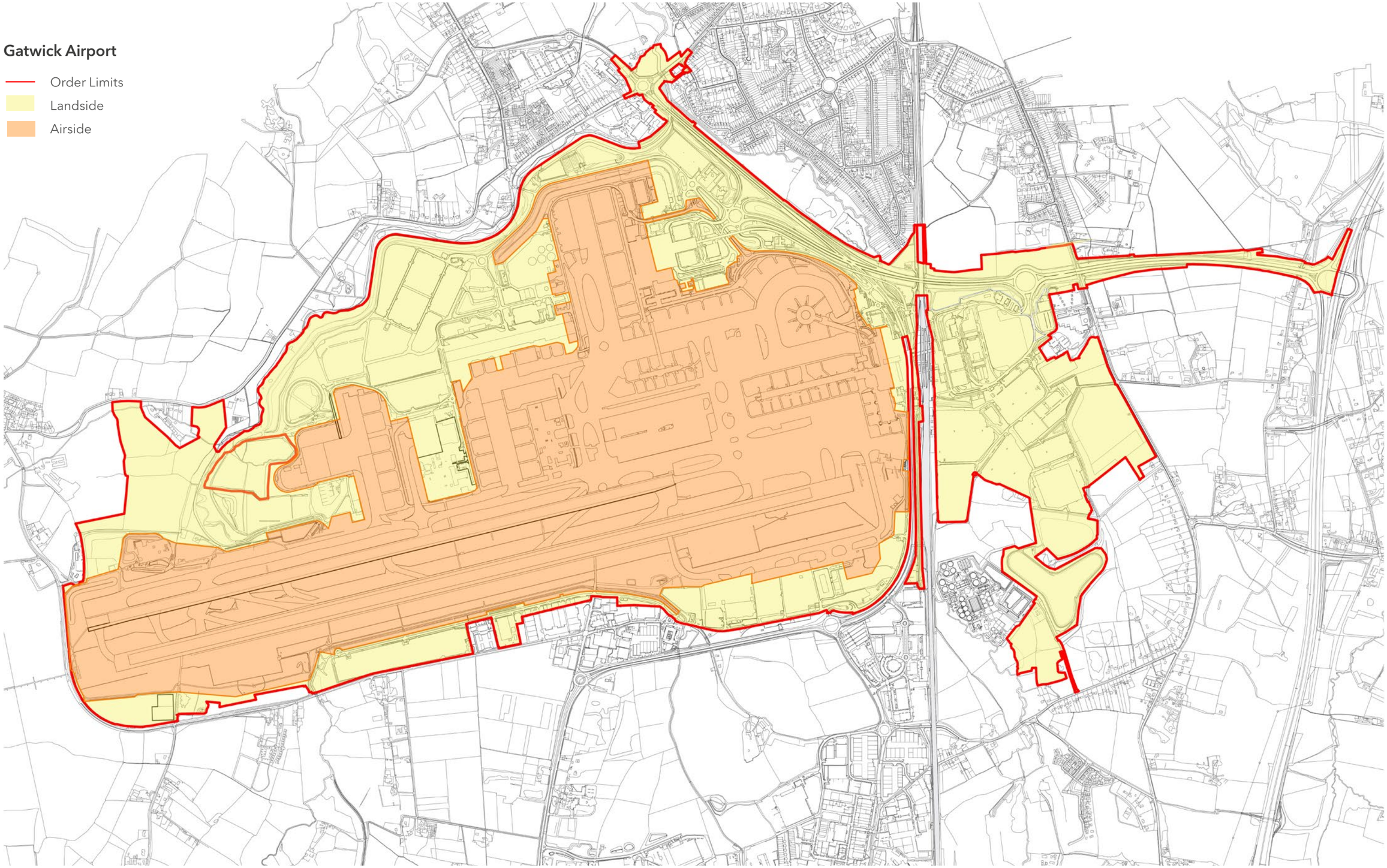


Figure 7. *Gatwick Ownership and Application Boundary Plan*

2.2 HISTORY OF GATWICK AIRPORT

2.2.1 Gatwick Airport became an aerodrome in the 1930s and was formally opened as a passenger airport it 1958. Since this time, passenger numbers have grown to over 46 million passengers per annum. In 2019 (the year prior to the COVID-19 pandemic), Gatwick Airport served more destinations that any other UK airport and was the busiest daytime, single runway airport in the world.

2.2.2 The following section describes the history of Gatwick Airport since its creation in the 1930s.

1930s to 1940s

2.2.3 Gatwick Airport was constructed in 1930 as the Surrey Aero Club, a small flyers club, used exclusively by flying enthusiasts. Four years later, Gatwick Airport was licensed as a public aerodrome, intended to provide regular air services to Paris and act as a relief aerodrome for London Croydon Airport. In this year, Gatwick Airport also gained its first scheduled flights by Hillman's Airways to Belfast and Paris.

2.2.4 In 1935, Gatwick Airport railway station and the Beehive terminal (the world's first circular terminal building) were built. The Beehive hosted its first scheduled flight, a Jersey Airways plane to Paris in 1936. In the same year Gatwick Airport was officially opened by Lord Swinton, the Secretary of State for Air. At this time Gatwick Airport had four landing strips made of grass and a subway connecting the Beehive terminal to the railway station.

2.2.5 At the beginning of World War II, Gatwick Airport was requisitioned by the Air Ministry where it became a base for RAF night-fighters and an Army cooperation squadron. Following the end of World War II, Gatwick Airport was decommissioned as an RAF base but continued operating as a civil airport for charter airlines and cargo flights.

1950s to 1990s

2.2.6 In 1950, Gatwick Airport was designated as London's second passenger airport, which led to a £7.8 million renovation being carried out in 1956. The renovated airport was officially opened by Queen Elizabeth II in 1958 (Figure 8). It was the world's first airport with a direct train link.

2.2.7 During the 1950s Gatwick gained a variety of British, European, American, African and Caribbean Airlines. Other airlines moved to Gatwick Airport as smaller airports closed.

2.2.8 Over the next three decades, Gatwick Airport was developed and expanded. This included the extension of the main runway in the early 1970s to over 3,000 metres to enable arrival and departures of non-stop jet flights to and from the United States.

2.2.9 The 1980s saw the construction of the North Terminal which was officially opened by Queen Elizabeth II. In 1984, the new air traffic control tower opened and the Gatwick Express was launched which provided direct rail services to London Victoria.

2.2.10 A decade later in 1998 the runway was further extended to over 3,300 metres.

2000s – 2010s

2.2.11 Significant upgrades occurred to both the North Terminal and South Terminal in the early 2000s at a cost of £60 million. This was followed by an extension of the baggage reclaim hall and the construction of Pier 6. Pier 6 is connected to the terminal buildings by the longest air passenger bridge in the world.

2.2.12 In 2009, Gatwick Airport Limited was sold to a consortium of investors managed by Global Infrastructure Partners (GIP), who in turn announced a £1 billion investment program was later increased to £2 billion in 2013. This coincided with the rebuild of Pier 1 at the South Terminal which opened in 2016.

2.2.13 In 2014, Gatwick Airport's main runway handled a record 906 movements per day which equates to one aircraft taking off or landing every 63 seconds. This marked a significant milestone for Gatwick Airport as this was the first time a commercial airport handled more than 900 movements per day with only one runway. The year 2018 marked 60 years since Queen Elizabeth II officially opened Gatwick Airport. In the same year, VINCI Airport became the majority shareholder of Gatwick Airport Limited with the remainder owned by GIP.

2020s

2.2.14 The global COVID-19 pandemic at the start of 2020 saw unprecedented restrictions on the movement of populations and curtailed international travel and flights for a significant period. As a result, flights at Gatwick Airport were operated from the North Terminal only. This is the first time that flights from Gatwick Airport operated out of a single terminal since 1988.

2.2.15 Commercial flights resumed at Gatwick Airport from 2021 onwards as travel restrictions eased, however the South Terminal did not resume its operations until April 2022 - 18 months after the halt on operations was introduced. New airlines such as JetBlue and Wizz Air have since opened a base at Gatwick.

2.2.16 In 2022, resurfacing was completed at the main runway.

Figure 8. *June 9th 1958 – Queen Elizabeth II Opens rebuilt airport*

Figure 9. *Gatwick Airport 1936*

Figure 10. *Gatwick Airport 1958*

Figure 11. *Gatwick Airport 1970s*

Figure 12. *Gatwick Airport 1938*

2.3 GATWICK TODAY

2.3.1 This section provides information about how Gatwick Airport operates at present and its existing infrastructure and facilities.

Passenger and Aircraft Operation

2.3.2 Gatwick Airport is a key piece of national infrastructure, an economic engine for local and regional growth, and the airport of choice for millions of passengers. It is operational 24-hours a day, 365 days a year and is ranked 12th globally for the number of long-haul destinations served. Until 2017, Gatwick Airport was the world's busiest single runway at 55 aircraft movements per hour. Today, it remains the world's busiest single daytime runway.

2.3.3 In 2019, Gatwick Airport handled some 283,000 commercial Air Transport Movements (ATMs), serving over 46.6m passengers travelling to 228 destinations across 53 different airlines, and contributed £8.3 billion to the UK economy.

2.3.4 Despite operating with a high degree of slot constraint, Gatwick Airport has still been able to provide significant levels of growth in the recent years before the COVID-19 pandemic. Over the last decade to 2019, Gatwick Airport has grown by over 14 million passengers. This 44% growth in passengers resulted from 15% growth in ATMs. Recent growth in passenger and ATMs is shown in the graphs to the right (Figures 13 and 14).

2.3.5 Gatwick Airport is not currently constrained by a 'limit' on the total number of passengers, or the number of ATMs that are permitted each year. At present, Gatwick Airport can handle 55 scheduled aircraft movements an hour on its main runway. This has increased from 53 scheduled aircraft movements an hour in 2012. This increase has allowed more flights, including during the busy summer period between July and September when Gatwick Airport is already operating with little or no spare capacity.

2.3.6 The COVID-19 pandemic had a very severe impact on the global aviation industry. Gatwick Airport, along with all other UK airports, experienced a significant reduction in passenger traffic levels as a result of both Government-imposed restrictions on air travel and reduced passenger demand driven by low consumer confidence. Whilst the pandemic has continued to have an impact on passenger

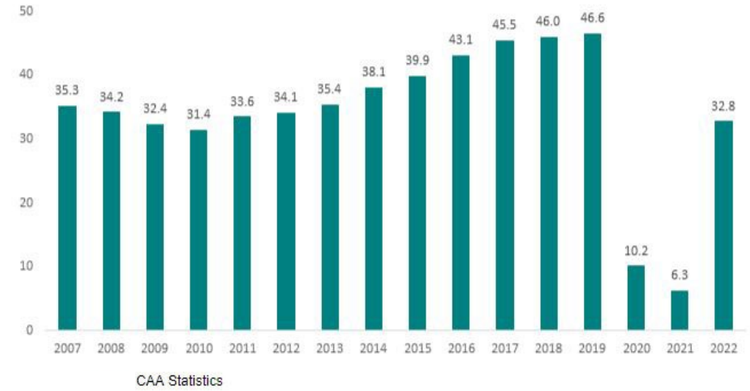


Figure 13. *Gatwick Airport Passengers (m)*

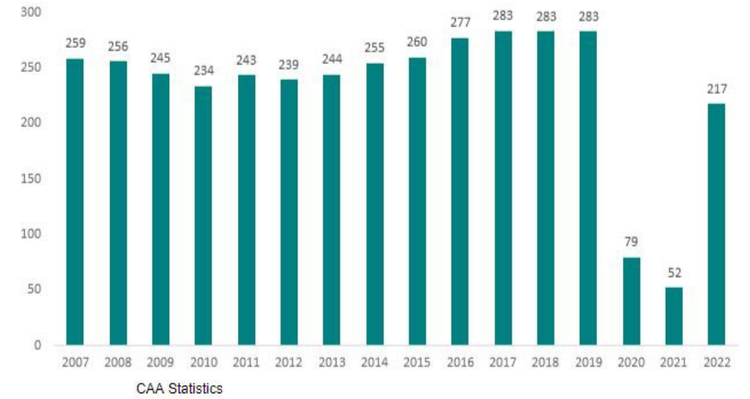


Figure 14. *Gatwick Airport Air Traffic Movements (ATMs) (000s)*

demand and traffic levels throughout 2021, the easing of Government restrictions has led to traffic levels starting to recover. There is confidence that passenger and airline demand at Gatwick Airport will return to previous levels over the course of the next few years and then continue to grow thereafter. Gatwick Airport wants to plan for this recovery and future growth and also contribute towards meeting national demand for air travel.

2.3.7 Gatwick Airport has been at the forefront of this low-cost revolution. In the past ten years, it has seen passengers on low-cost airlines grow from less than 30% of its total throughput to 62% today. The increasing number of

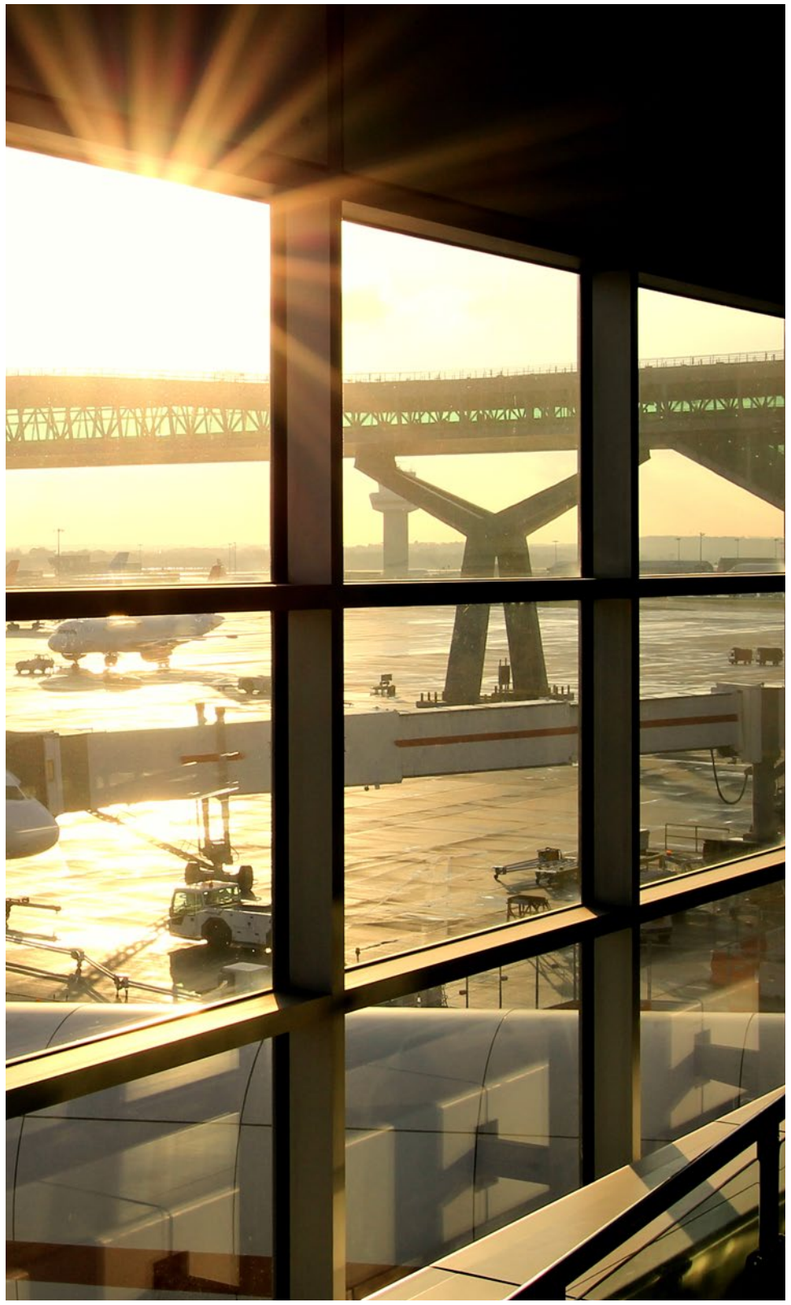


Figure 15. *View towards Pier 6 bridge link from North Terminal*

airlines serving this market is undoubtedly a big factor for driving growth at Gatwick Airport, and it has also stimulated the wider London market with lower fares and greater choice.

2.3.8 Gatwick Airport is also playing a key role in the emergence of low-cost long-haul services, supporting an expanding network of such routes and new entrant airlines.

2.3.9 In addition, demand remains for full-service airlines and these also have growth plans. Recent applicants for slots at Gatwick Airport include existing airlines seeking to grow both short-haul (Wizz Air, Ryanair, easyJet and Vueling) and long-haul (China Eastern and WestJet) plus new airlines seeking to enter the Gatwick short-haul market (SunExpress, SAS and Alitalia) and long-haul (China Southern to China, Vistara to India and JetBlue to USA).

2.3.10 Gatwick Airport continues to support and invest in the growth of both low-cost and full-service airline groups, operating across short-haul and long-haul routes, and this is seen as key to its future ambition and continued success.

Airport Facilities

2.3.11 Gatwick Airport is served by a single main runway and two terminals: the North Terminal and South Terminal. When the main runway is unavailable, for example when it is undergoing maintenance work, the northern (standby) runway is used.

2.3.12 The airfield extends over an area of 230 hectares, approximately one third of the total land within Gatwick Airport's site boundary. The airfield comprises the main and northern runways, apron areas (providing the ability for aircraft to move around the airfield), navigation and landing aids, and the grassed areas surrounding these facilities.

2.3.13 The apron covers an area of 160 hectares and comprises:

- Over 200 aircraft parking stands for both wide-bodied and narrow-bodied aircraft;
- the jet fuel storage facility (known as the 'fuel farm') which supplies fuel to each stand via a hydrant system;
- the air traffic control tower; and
- the fire station

2.3.14 Two passenger terminals, , linked by the Inter-Terminal Transit System (ITTS), offer the passenger services such as check-in, security and baggage facilities, as well as a wide range of shops, restaurants, and welfare facilities. The terminals are served by six piers from which passengers embark and disembark the aircraft (Piers 1, 2 and 3 at the South Terminal and Piers 4, 5 and 6 at the North Terminal).

2.3.15 Gatwick Airport also includes many ancillary buildings and facilities which accommodate services needed to support the airport operation. These include:

- four maintenance hangars;
- vehicle and equipment engineering, storage and maintenance facilities;
- a wide range of office accommodation;
- a waste management facility;
- passenger and staff car parkings;
- cargo centre;
- filling stations; and
- a police station.

Night Flights

2.3.16 Gatwick Airport is permitted to operate at night (defined as hours between 2300 and 0700 hours), however there are restrictions on the level of night-time noise that is allowed and the number of planes that can fly at night during the night quota period (NQP) (2330 to 0600). This is set out in the in Government's 2017 Night Flight Restrictions for Heathrow Airport, Gatwick Airport and Stansted Airport which covers the period to 2022 and has recently been extended to 2025 following public consultation.

2.3.17 On average, Gatwick Airport has 45-50 flights per night during the NQP in the summer, and 18-20 per night during the NQP in the winter.

2.3.18 Night flights are and play an important part of airlines' operating models. They allow routes to be flown which would not otherwise be viable, for example by allowing

Figure 16. *North Terminal foreccourt facade*

aircraft to make several rotations every day – a vital way of ensuring the economic viability of the airlines' operations, particularly for low-cost operators.

2.3.19 The supply side dynamics of the routes and carriers play a pivotal role in Gatwick Airport's cargo performance with long-haul widebody movements to markets such as Asia and the Middle East providing significant economic opportunity.

2.3.20 Gatwick Airport's cargo performance has increased to 150,000 tonnes in 2019/20, reflecting the growth in the number of long-haul markets and carriers, and the greater hold capacity of long-haul aircraft.

Figure 17. *Aircraft at Gatwick Pier 2 Stands*

2.4 SURFACE ACCESS

2.4.1 Gatwick Airport is well located to the strategic highway network and is a transport hub, where a range of modes connect, acting as both a destination and an interchange for passengers. Gatwick Airport has 24-hour rail, bus and express coach access, and access by a range of modes are shown on Figure 18. Gatwick Airport is located adjacent to the M23 and A23 London-Brighton Road, with direct connections to both. A spur which runs approximately 1.7km to the east of the airport from M23 Junction 9 directly serves both passenger terminals.

2.4.2 Car parking and drop off zones are located at both terminals as well as surround Gatwick Airport.

2.4.3 Gatwick Airport also has its own dedicated railway station on the London to Brighton mainline railway. It t has the largest rail catchment of any UK airport. Serving over 20 million rail journeys a year, it connects to more stations than any other European airport and is the busiest railway station in the south-east, outside central London's main terminals. Nearly 15 million people – more than a quarter of the population of England - can access Gatwick Airport by road or rail within 60 minutes (illustrated on Figure 19). With 42% of passengers using the train for their trips to and from Gatwick Airport, it facilitates the highest percentage of passengers travelling by train of any major UK airport.

2.4.4 Gatwick Airport's railway station is located at the South Terminal, where there is also a direct transit link from the railway station to the North Terminal via the IITS, commonly referred to as 'the Shuttle'.

2.4.5 The Gatwick Express connects the Gatwick Airport directly to London Victoria. Thameslink, Southern and Great Western rail services connect Gatwick Airport to settlements in the southern region as well as central London, Brighton and destinations further north including Cambridge and Reading.

2.4.6 Local buses service towns and villages close to Gatwick Airport and provide a connection. Regional and national coach services operate routes to London and other destinations including Heathrow Airport, Bristol, Brighton, Birmingham, Oxford, Cambridge and Norwich.

2.4.7 Gatwick Airport's proximity to London and transport links to the wider south-east provides a substantial catchment area. The catchment is based on the current geographical location of population, the number of people living in 5 mile, 10 mile, 25 mile and 50 mile catchments from Gatwick Airport is as follows:

- 170,000 people within 5 miles;
- 418,000 people within 10 miles;
- 5.910 million people within 25 miles; and
- 16.855 million people within 50 miles.

2.4.8 When considering current journey times across all modes, approximately 47 million people can access Gatwick Airport within four hours (illustrated in Figure 19) - the breakdown is as follows:

- 494,000 people within 30 minutes;
- 4.75 million within 60 minutes;
- 13.584 million people within 90 minutes; and
- 46.696 million people within 120 minutes.

2.4.9 Gatwick Airport's catchment area extends beyond London and the south-east. Recent improvements to the Thameslink rail network has increased the number of towns and cities able to access Gatwick Airport. For example, York is accessible within 150 minutes compared to 189 minutes to Heathrow Airport, and Leeds is accessible within 180 minutes compared to 201 minutes to Heathrow Airport.

2.4.10 Detail on existing active travel facilities (including access by walking and cycling) is set out in Section 2.11 of this DAS.

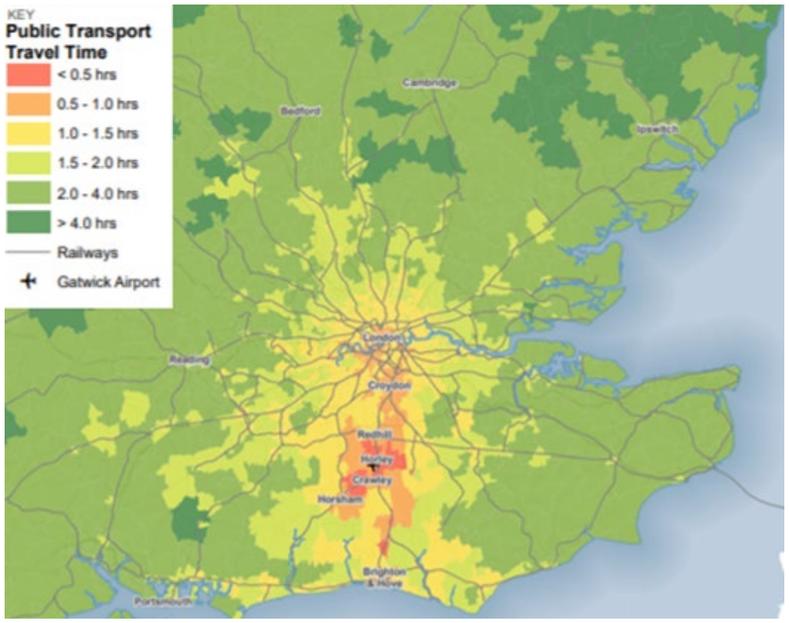


Figure 18. *Gatwick Public Transport Travel distances*

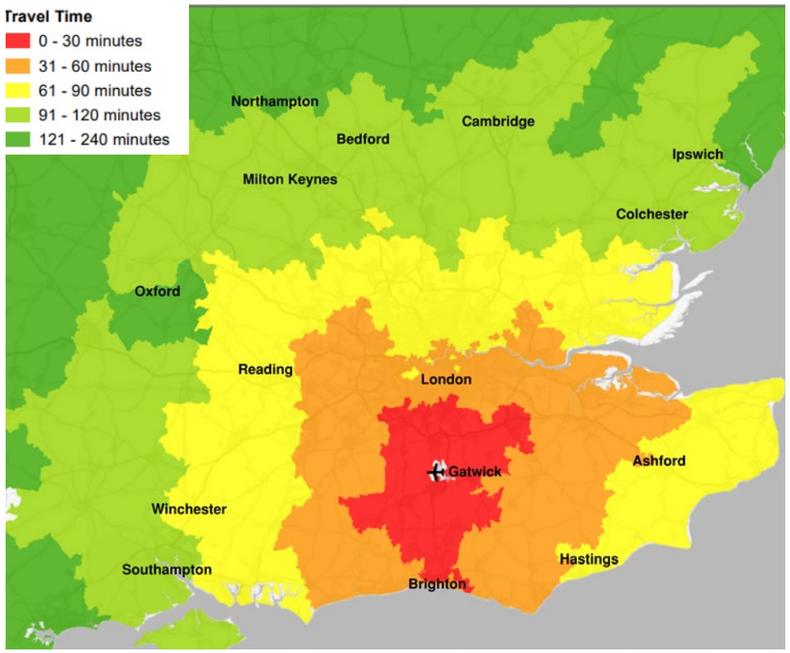


Figure 19. *Transport Assessment for minimum travel by car and public transport*

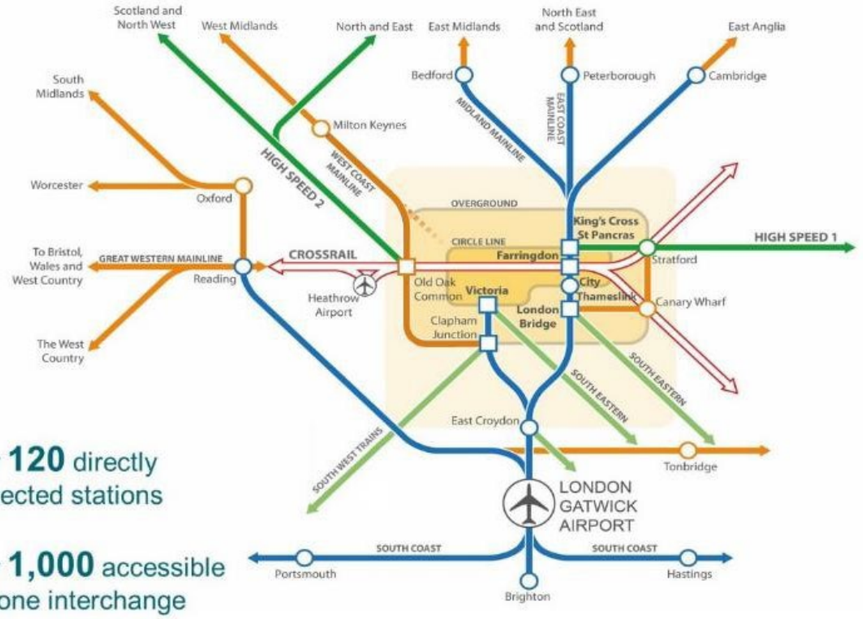


Figure 20. *Rail Transport Connections*

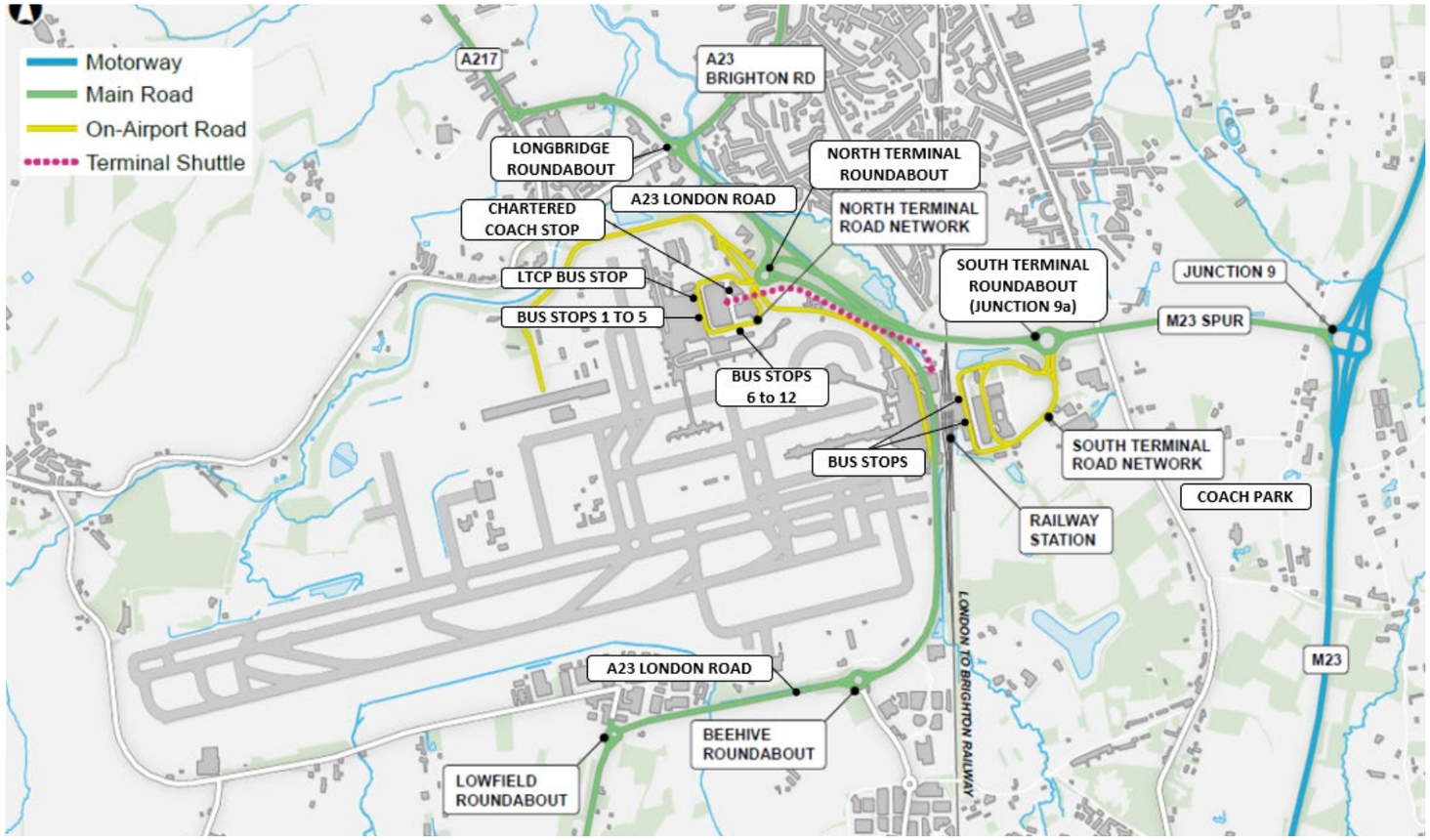


Figure 21. *Local Surface Access Routes*

2.5 INTERNAL MOVEMENT AND CIRCULATION

Surface Access Diagram

2.5.1 Key roads and transport links which effect the overall access strategy shown below on Figure 22.

1 - Longbridge Roundabout
2 - Tunnel Road
3 - Departures Road
4 - Furlong Way
5 - N Terminal Approach
6 - Northgate Road
7 - Longbridge Way
8 - Gatwick Way
9 - Caledonian Way
10 - London Road
11 - Lower Forecourt
12 - Westway
13 - Eastway

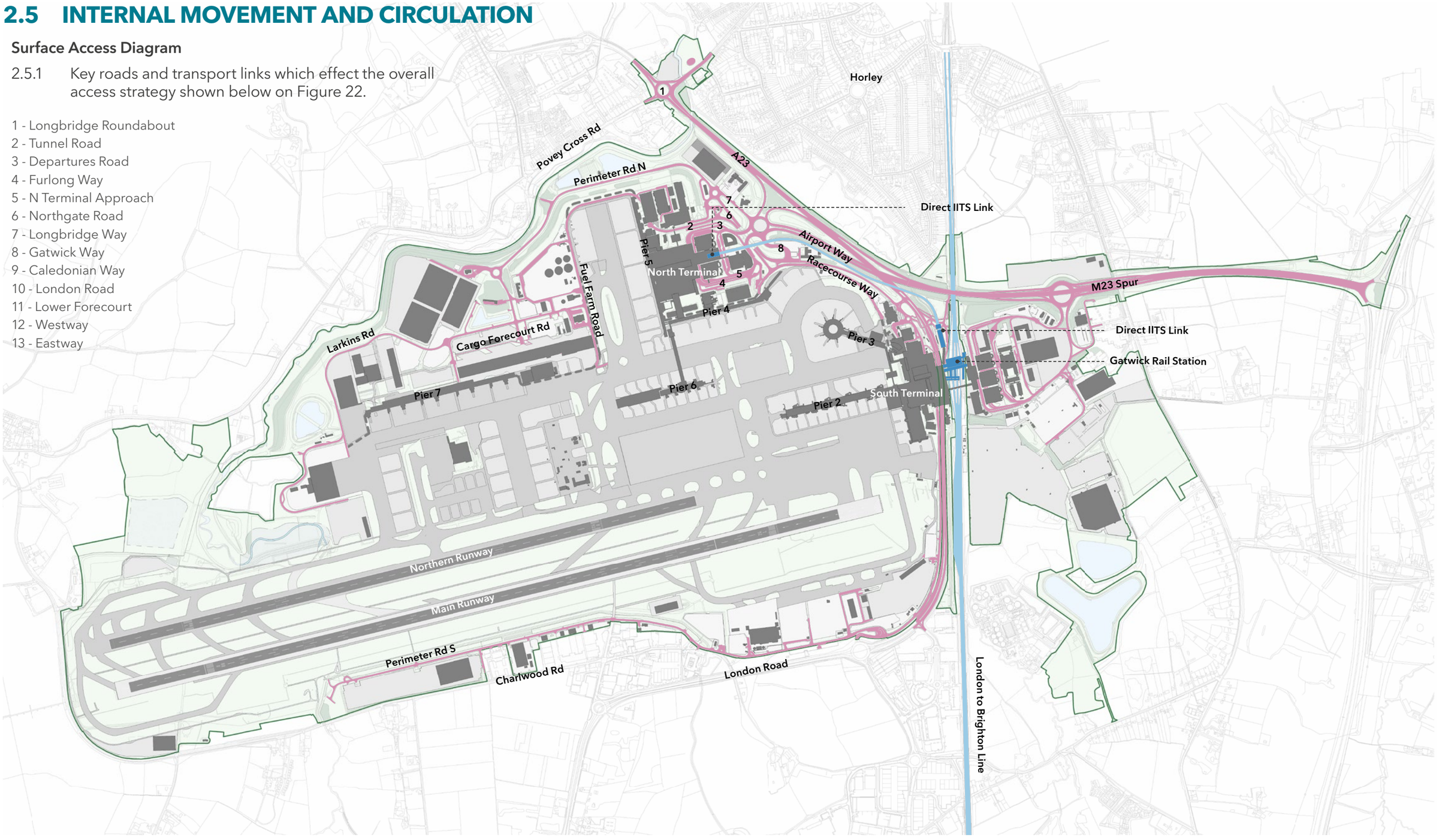


Figure 22. *Internal Surface Access Routes*

2.6 LANDSCAPE CHARACTER AND VISUAL RESOURCES

Character and Visual Appearance

2.6.1 Due to the scale and nature of development, Gatwick Airport forms its own distinctive and well-defined urban townscape. The majority of the land that forms part of the site is flat and open, occupied by runways, taxiways, stands, surface car parking and mown grassland. There are earth bunds in various locations along the western perimeter which provide acoustic and visual screening of Gatwick Airport from the residential properties to the west.. They are visible only locally and contrast with the natural landform.

2.6.2 The main built form is located at the North Terminal and South Terminal clusters. Architectural treatments and materials form a varied built form typical of an international airport which has evolved and expanded over time. Several large aircraft hangars, a cargo hall, hotels, multi-storey car parks and control towers form other large scale or prominent buildings within Gatwick Airport. The remainder of the land within the Order Limits is formed of smaller area of farmland and open space beyond the current boundary.

2.6.3 The M23 spur forms the main road transport route into Gatwick Airport from the east, linking the M23 to the South Terminal and the A23 to the North Terminal and surrounding settlements. The London to Brighton railway passes through Gatwick Airport on a north-south alignment, linking to the station at the South Terminal.

2.6.4 Due to the large number and scale of passenger aircraft at stands and piers across Gatwick Airport, aircraft form a significant and distinctive element of the character of Gatwick Airport.

Green and Blue Infrastructure

2.6.5 Green and blue infrastructure refers to green spaces (open spaces, plants, trees) and urban water features (watercourses, ponds, stormwater drainage).

2.6.6 The main areas of green and blue infrastructure are associated with the River Mole to the north-west of Gatwick and the land to the east of the railway and south of the South Terminal. The broad, naturalised riparian corridor through which the River Mole flows includes the sinuous watercourse, wet meadow terraces and marginal habitats and belts of native tree and shrub planting.

2.6.7 Open areas of grassland and grazing land are located on the eastern edge of Gatwick Airport at Pentagon Field (Figure 24). Mature hedgerows define many of the perimeters of car parks and form remnants of the agricultural landscape. Mature tree, shrub and amenity planting is associated with the North Terminal and South Terminal and the A23 surface access network. The green infrastructure throughout the site combines to form an attractive and diverse element of Gatwick Airport.

2.6.8 Important local landscape features include a small block of mature, ancient woodland at Brockley Wood east of the River Mole. A larger area of green infrastructure lies to the east of the railway. Blocks of mature woodland, some of which is designated as ancient, is located at Horleyland Wood and Upper Pickett's Wood. These features are linked by woodland belts.

2.6.9 Riverside Garden Park and Church Meadow, both to the north of Gatwick Airport, are existing areas of public open space which form part of the Riverside Green Chain. It separates Gatwick Airport from the residential edge of Horley and comprise of informal mature woodland, trees, amenity planting, grassland and lakes.

Figure 23. *Existing Site Photo of Visual Character : Fernhill looking west towards Gatwick Airport*

Figure 24. *Existing Site Photo of Visual Character : Pentagon Field*

Character and Visual Appearance

2.6.10 Gatwick Airport lies within the Low Weald landscape, occupying a relatively level area at about 60 metres above ordnance datum (AOD). The landform is smooth and gently undulating with occasional rounded low hills interrupting an otherwise low-lying landscape. Occasional higher hills, such as the Low Weald Hills to the west of Gatwick Airport rise to about 120 metres AOD.

2.6.11 The large settlement of Crawley lies immediately to the south of Gatwick Airport rising to about 70 metres AOD. Further south-east the landform rises again to the High Weald Area of Outstanding Natural Beauty (AONB) to between 140-160 metres AOD. The landscape of the AONB is visible from the Weald as an escarpment.

2.6.12 The regional topography around Gatwick Airport is shown in Figure 25.

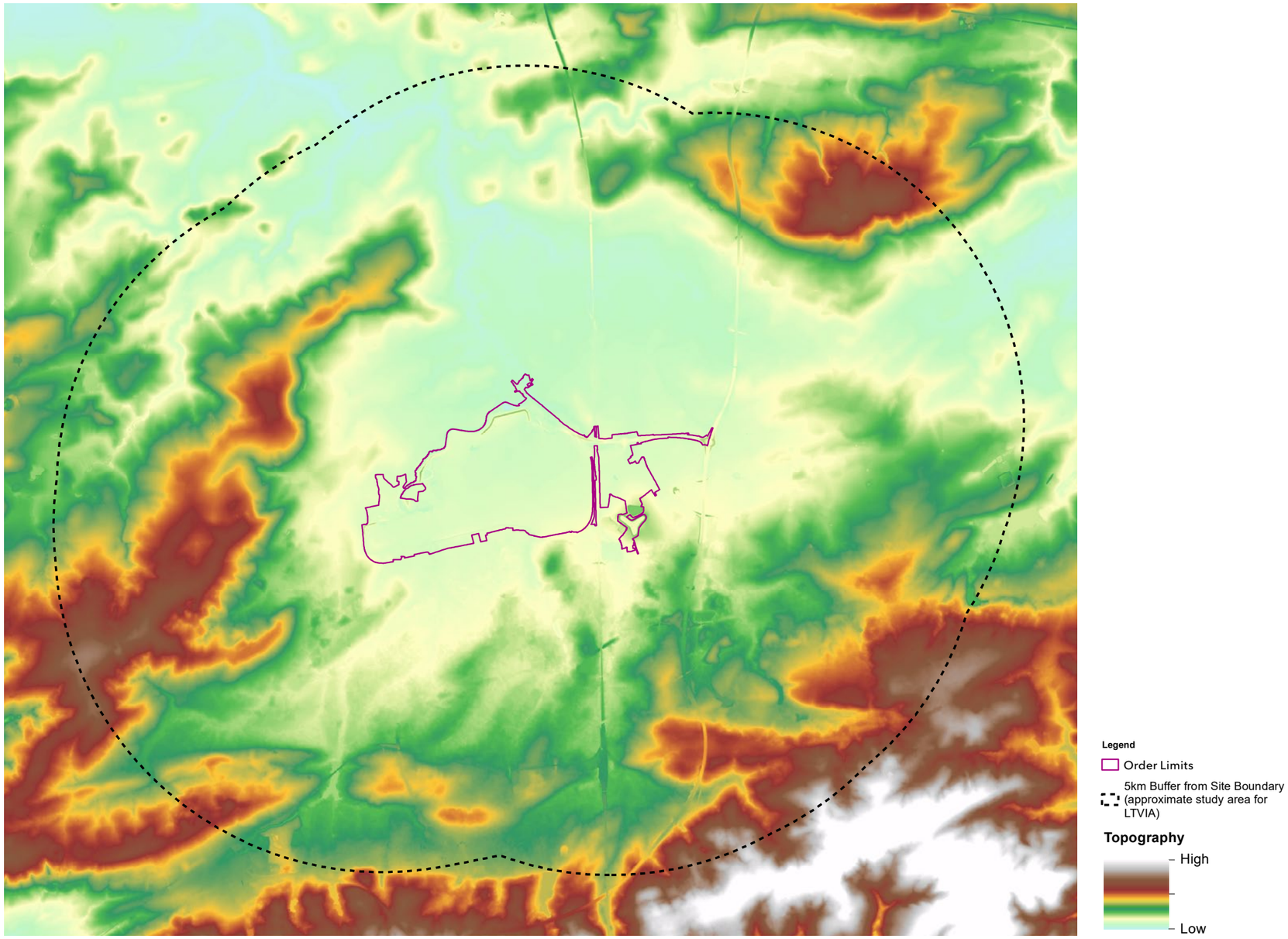


Figure 25. *Topography*

National Landscape Character Areas

2.6.13 Gatwick Airport and its immediate landscape are located within the Low Weald National Character Area 121 (the extent of which is shown Figure 26). Other character areas within the wider study area include the High Weald NCA 122, the Wealden Greensand NCA 120 and the North Downs NCA 119.

2.6.14 The Low Weald National Character Area forms a broad arc of landscape south of London which wraps around the High Weald and extends to the coastline at the Pevensey Levels.

2.6.15 Key characteristics of the Low Weald National Character Area as set out in Natural England's National Character Area profiles are what defines the Low Weald area include:

- Broad, low-lying, gently undulating clay vales with outcrops of limestone or sandstone providing local variation;
- Underlying geology with materials suitable for industries including iron working, brick and glass making, leaving pits, lime kilns and quarries. Many of the resulting exposures are critical to the understanding of the Wealden environment;
- Generally pastoral landscape with arable farming associated with lighter soils on higher ground. Land use is predominantly agricultural but with urban influences, particularly around Gatwick, Horley and Crawley;
- Field boundaries of hedgerows and shaws (remnant strips of cleared woodland) enclosing small, irregular fields and linking into small and scattered linear settlements along roadsides or centred on greens or commons. Rural lanes and tracks with wide grass verges and ditches;
- Small towns and villages scattered among areas of woodland, permanent grassland and hedgerows on the heavy clay soils where larger 20th-century villages have grown around major transport routes;
- Frequent north–south routeways and lanes, many originating as drove roads, along which livestock were moved to downland grazing or to forests to feed on acorns;
- Small areas of heathland particularly associated with commons. Significant historic houses are often in parkland or other designed landscapes;
- The Low Weald boasts an intricate mix of woodlands, much of it ancient, including extensive broadleaved oak over hazel and hornbeam coppice, shaws, small field copses and tree groups, and lines of riparian trees along watercourses. Veteran trees are a feature of hedgerows and in fields;
- Small rivers, streams and watercourses with associated water meadows and wet woodland;
- Abundance of ponds; and
- Traditional rural vernacular of local brick, weatherboard and tile- hung buildings plus local use of distinctive Horsham slabs as a roofing material. Weatherboard barns are also a feature.

2.6.16 **ES Chapter 8 Landscape, Townscape and Visual Resources** (Doc Ref. 5.1) provides a detailed narrative of the existing natural character values of the area.

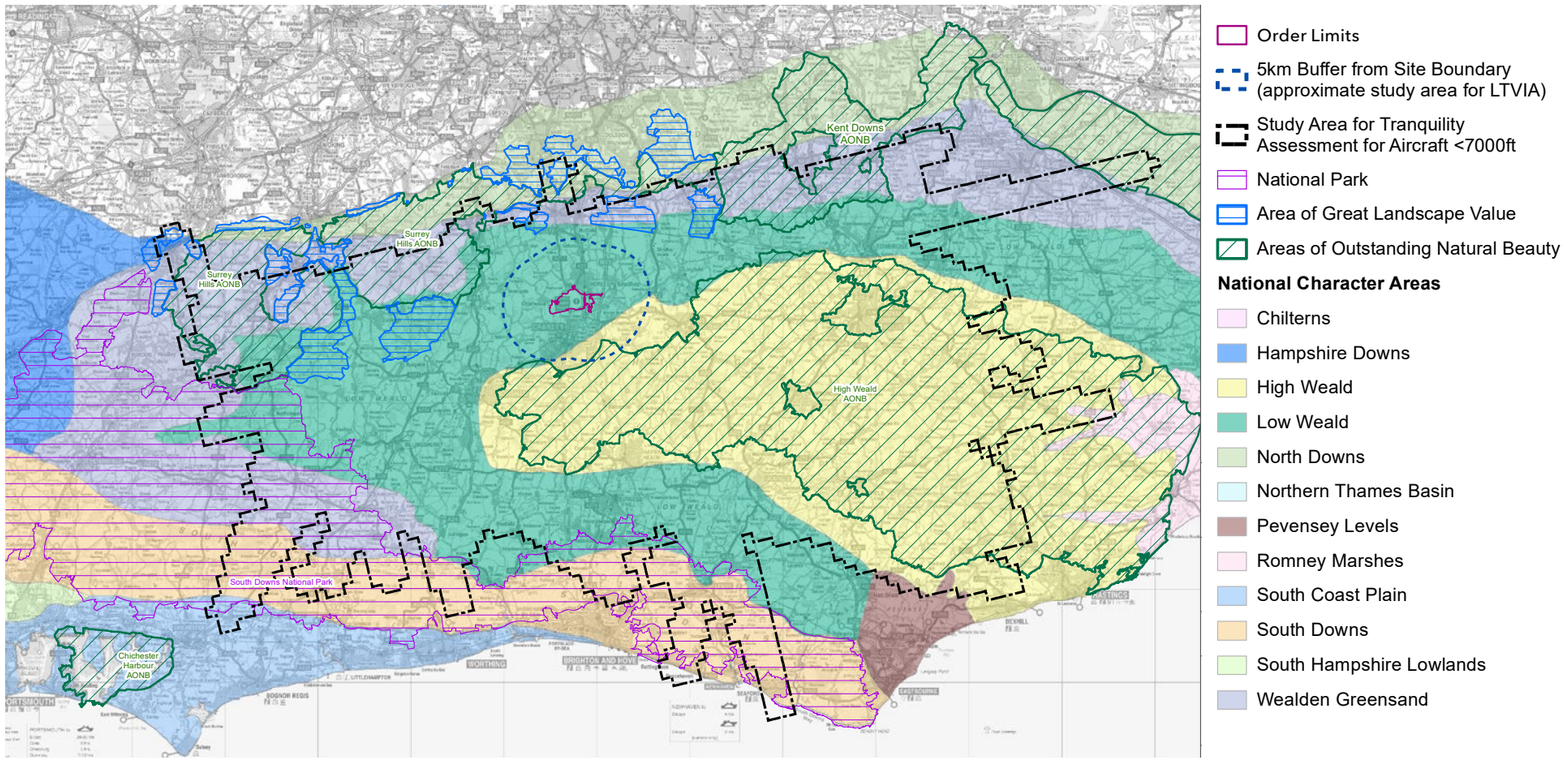


Figure 26. *National Character Areas, ES Figure 8.4.3*

National Landscape Designations

2.6.17 Gatwick Airport is located outside of any designated AONB or National Park. There are three AONBs and a National Park within the wider study area and shown on Figure 27. These are:

- High Weald AONB;
- Surrey Hills AONB;
- Kent Downs AONB; and
- South Downs National Park

2.6.18 The landscapes within these designated areas are relevant to the assessment of the influence of overflying aircraft on the perception of tranquillity and this is considered in **ES Chapter 8 Landscape, Townscape and Visual Resources** (Doc Ref. 5.1).

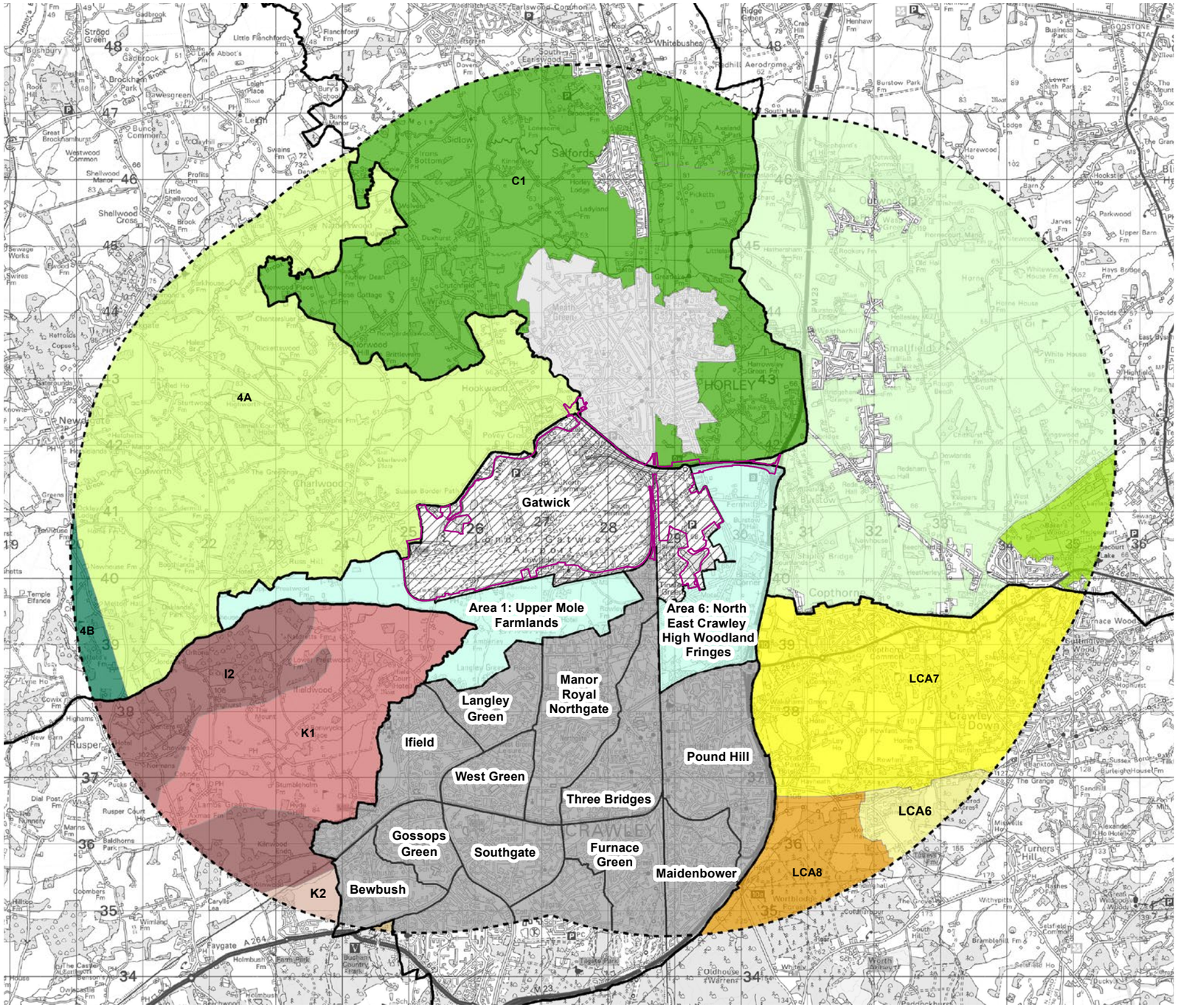


Figure 27. *District Landscape and townscape Character Areas, ES Figure 8.6.2*

2.7 FLOOD RISK AND SURFACE WATER

Water Environment

2.7.1 Gatwick Airport is located in the Thames River Basin District and within the Upper Mole catchment. The existing water environment is shown in Figure 28.

2.7.2 The most notable watercourse is the River Mole which rises to the south-west of Gatwick Airport near Rusper before flowing north to the River Thames. The watercourse is culverted beneath both runways and emerges to flow through a naturalised linear green space on the north western side of Gatwick Airport. Tributaries of the River Mole, including the Crawter's Brook, the Gatwick Stream and Westfield Stream all run through or adjacent to the Project Order Limits.

2.7.3 Crawter's Brook flows across the southern edge of Gatwick Airport around the fringes of Lowfield Heath before joining the River Mole culvert.

2.7.4 Gatwick Stream rises in the Worth Forest in the High Weald AONB and flows through the eastern part of Gatwick Airport, east of the railway via the South Terminal and culverted beneath the A23 to Riverside Garden Park and its confluence with the River Mole.

2.7.5 Man's Brook flows south of Charlwood, easterly through Brook Farm into the River Mole.

2.7.6 Withy Brook, Hookwood Common Stream, and Spencer's Gill are streams that are all located downstream of Gatwick Airport and feed into the River Mole.

2.7.7 Burstow Stream is located to the east of Gatwick Airport and flows downstream in a northernly direction, passing through a culvert where it crosses the A23.

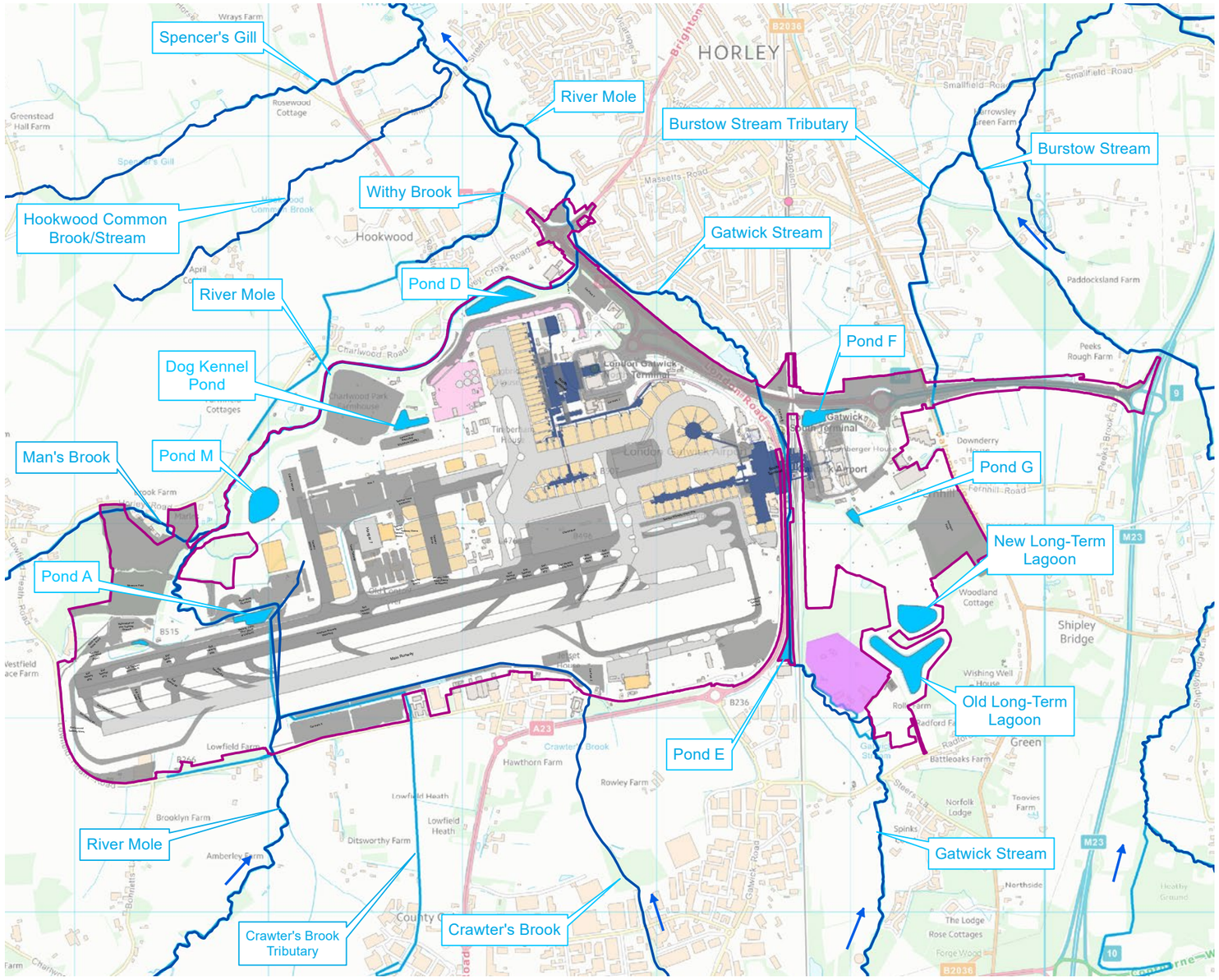


Figure 28. *Indicative plan of General Water Features,ES Figure Appendix 11.9.6 Figure 2.1.1*

2.7.8 There are a number of existing surface water drainage and ponds at the site used for the attenuation and treatment of surface water run-off at Gatwick Airport. The location of these features is shown on Figure 29 showing how surface water moves between the drainage features. The features are:

- Pond A is located at the western extent of the airfield and receives surface runoff prior to discharge to the River Mole;
- Pond M at the north-west of the site contains both contaminated (dirty) and uncontaminated (clean) surface water runoff. Clean surface water is discharged to the River Mole, with water from the 'dirty' compartment pumped to Dog Kennel Pond and Pond D. Dog Kennel Pond is located to the north of the site and contains an oil interceptor to treat surface water runoff prior to discharge to the River Mole;
- Pond D at the very northern extent of the site, is the key drainage pond at Gatwick Airport as it receives the majority of surface water runoff. The pond includes a series of separator channels to treat surface water runoff with eventual discharge to the River Mole provided it meets the minimum water quality standards. Where water quality does not meet those standards, the runoff is conveyed to two long term storage lagoons that ultimately discharge to the Crawley Sewage Treatment Works directly east of the site;
- Ponds, E, F and G collect surface runoff from the eastern catchment of Gatwick Airport and drain direct to the Gatwick Stream; and
- Lagoons located to the south-east of the site provide longterm storage for surface runoff that does not meet water quality standards, prior to disposal at the Crawley Sewage Treatment Works.

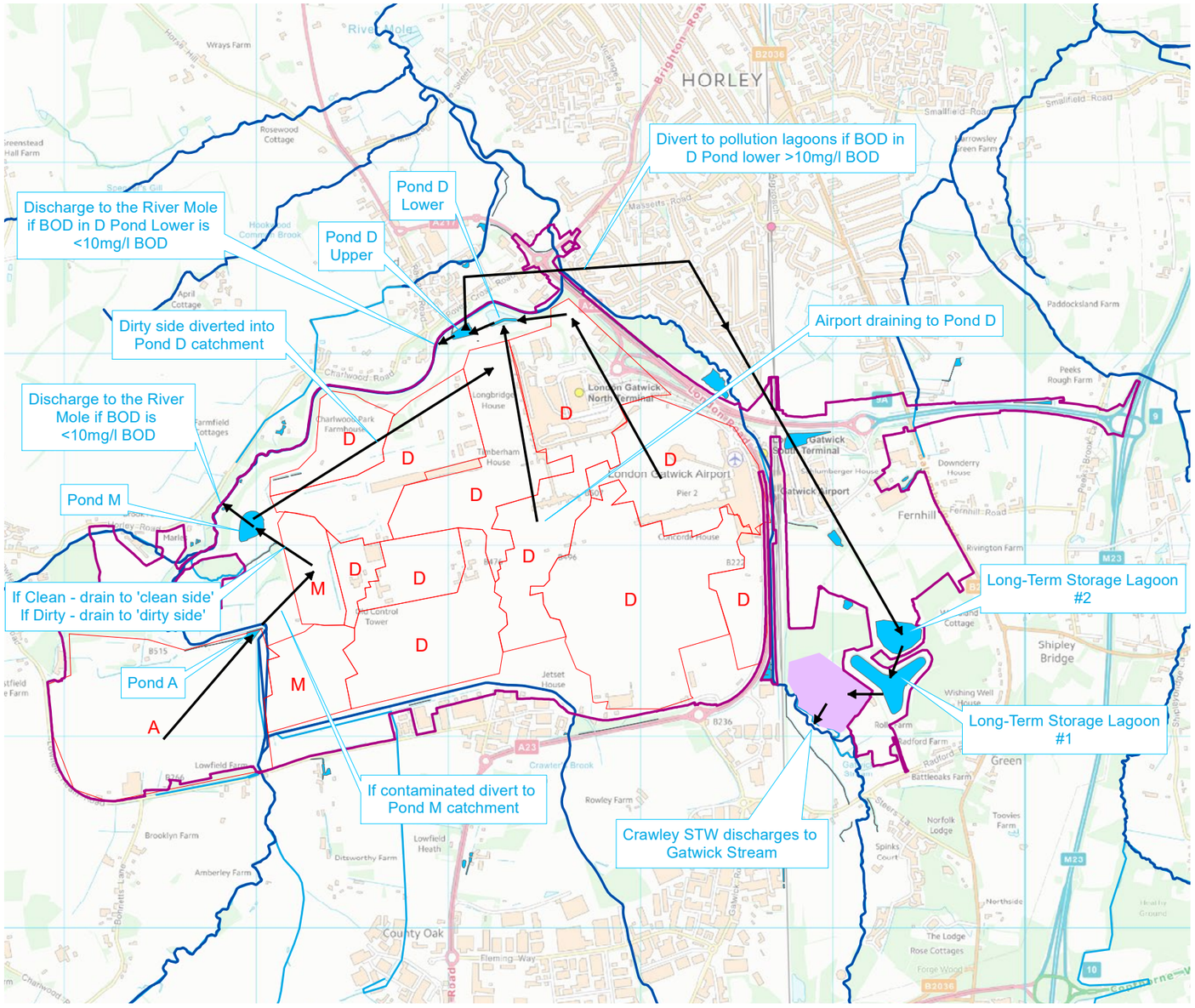


Figure 29. *Indicative plan of Contaminated Water Path Existing, ES Figure Appendix 11.6.2*

Fluvial Flood Risk

2.7.9 The Environment Agency's Flood Risk and Coastal Change Guidance (2022) sets out Flood Zone classifications which identify the probability of flood risk in each Flood Zone - Flood Zones 1, 2 and 3. The Flood Zones at the site are identified in Figure 30. At Gatwick Airport, these are predominantly Flood Zones 2 and 3 which indicate a 'medium' or 'high' probability of river flooding. Development within these zones may be restricted and requires further assessment to understand the impact on flood risk.

2.7.10 Flood Zone 3 represents areas at risk of flooding in a 1 percent AEP event (1 in 100), and Flood Zone 2 represents an area at risk of flooding between a 1 percent and 0.1 percent AEP event (1 in 100 to 1 in 1000). These classifications do not consider the presence of flood defence structures or of the predicted impact of climate change to the future probability of flooding.

2.7.11 These Flood Zones are associated with the River Mole, Westfield Stream, Man's Brook and Crawter's Brook on the western and southern sides of Gatwick Airport and with the Gatwick Stream on the eastern side.

2.7.12 Beyond the site boundary, the Flood Zones are quite extensive and include a number of potential receptors for the Project, including residential areas and transport infrastructure that serves both Gatwick Airport and the wider region.

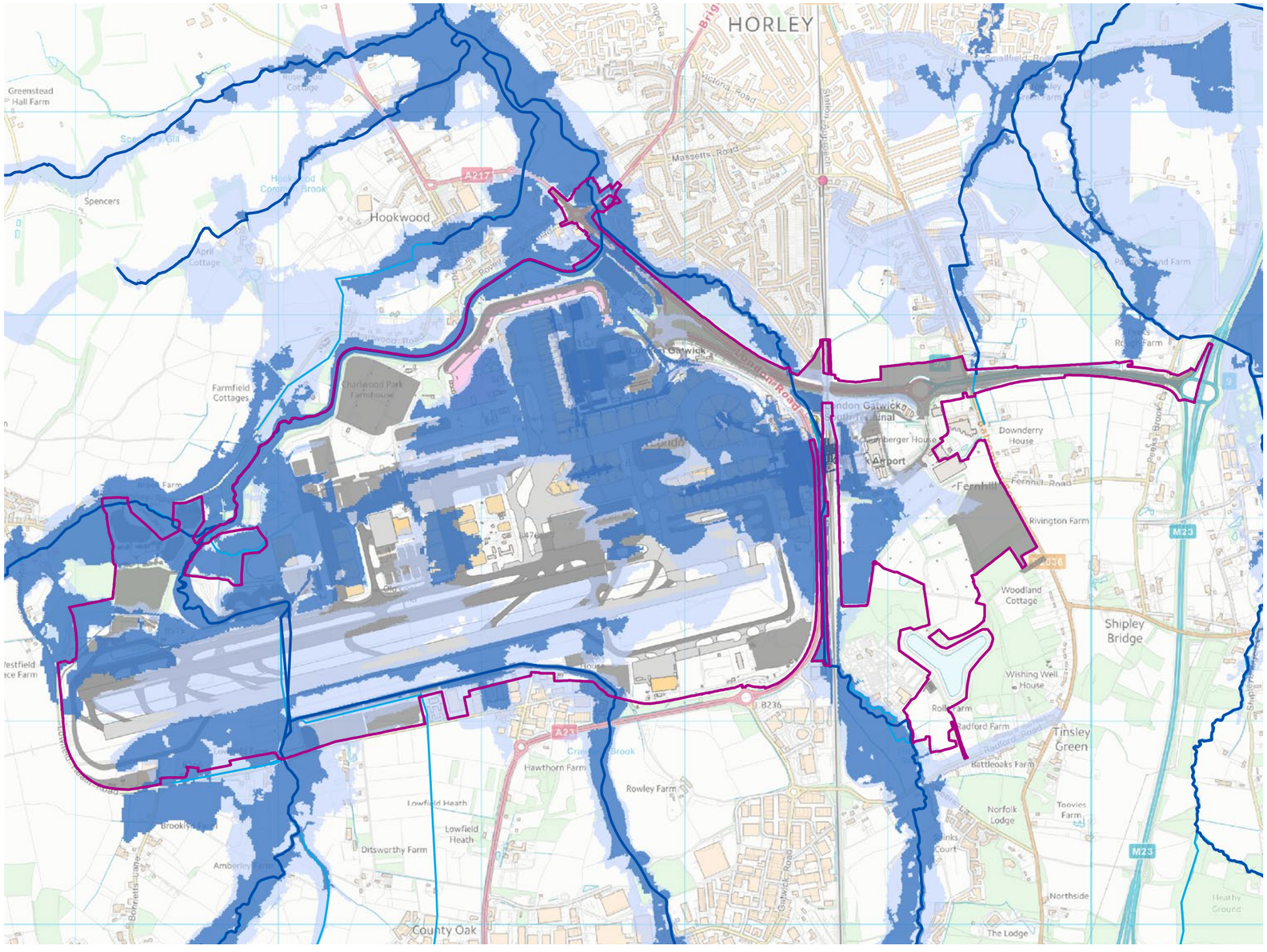


Figure 30. *Flood Risk and Surface Water, ES Figure Appendix 11.9.6*

Surface Water Flood Risk

2.7.13 The existing surface water flood risk at Gatwick Airport has been identified based on the Environment Agency Risk of Flooding from Surface Water mapping (RoFSW) and surface water modelling produced for the Project by Gatwick Airport.

2.7.14 This includes consideration of the fluvial flood risk and the flood risk generated by impervious surfaces at Gatwick Airport (such as buildings and hard standing).

2.7.15 The existing areas vulnerable to surface water flooding are shown in hatching on Figure 31. These are largely associated with areas around existing watercourses of drainage features, as well as existing depressions within the local topography.

2.7.16 Areas with lesser vulnerability to flooding are located to the south of the main runway and within proximity to the existing terminal buildings.

2.7.17 Further detail on the existing surface water flood risk can be found in **ES Chapter 11 Water Environment** (Doc Ref. 5.1).

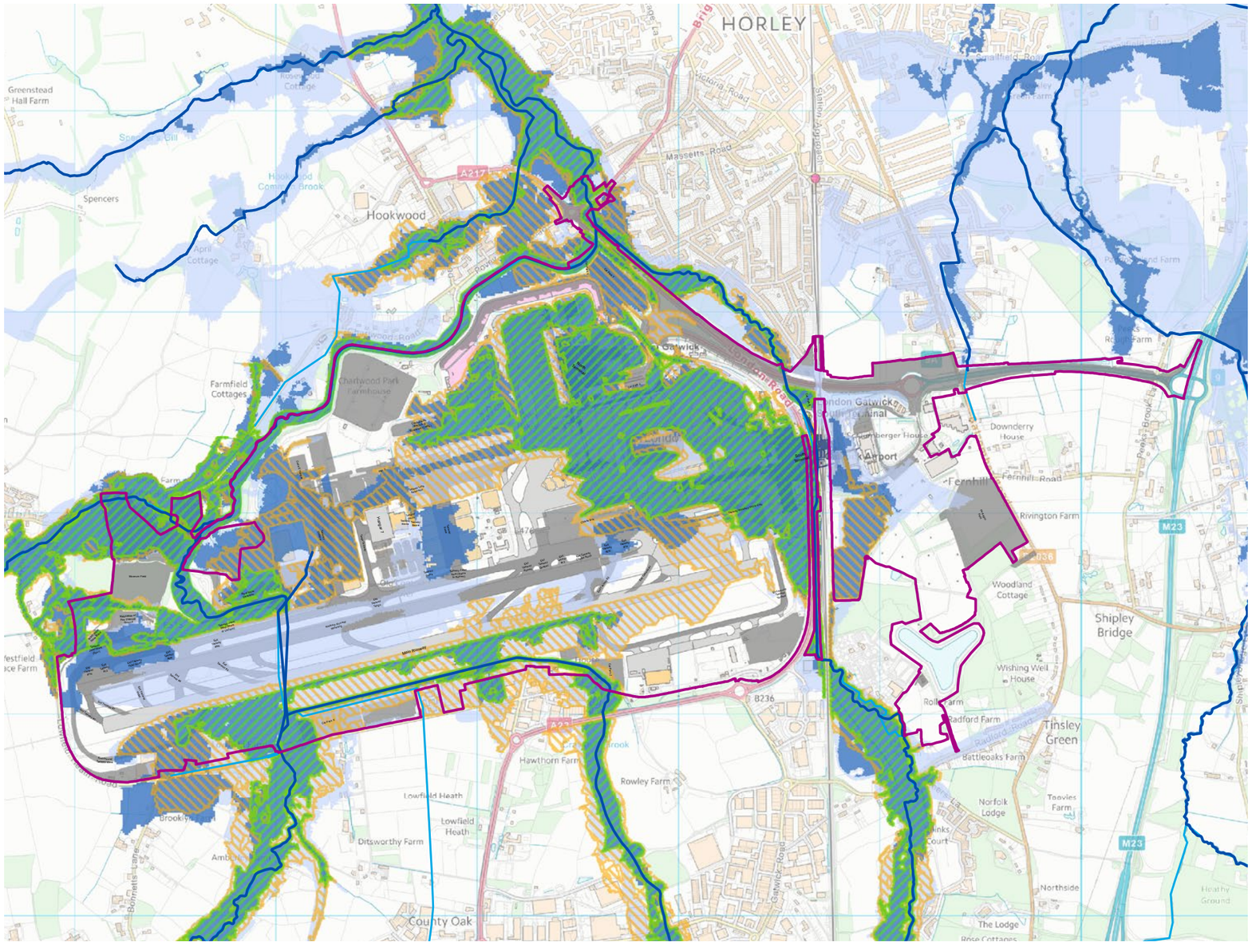


Figure 31. *Indicative plan of Environment Agency Published Flood Zones, ES Figure 11.6.4 Appendix 11.9.6 Figure 5.2.2*

2.8 GROUND CONDITIONS

Geology and Geomorphology

2.8.1 The site is partly underlain by superficial geology of Alluvium, Head and River Terrace Deposits, classified as secondary aquifers that supports local water supplies and forms an important source of base flow to rivers (Figure 32).

2.8.2 The underlying bedrock geology comprises the Weald Clay Formation, which is considered predominantly impermeable. Therefore, it is classified as unproductive in terms of groundwater importance.

2.8.3 The site is not located within a Source Protection Zone and there are no potable groundwater abstraction licenses within the vicinity of the site.

Ground Contamination

2.8.4 The Project site was developed as an aerodrome by the 1930s and major airport development had occurred by the 1950s. Prior to this, the site was predominantly used as farmland, a racecourse and a golf course with a railway line through the site.

2.8.5 Gatwick Airport has been subject to further development since (as detailed in Section 2.2 History.) The wider site has been developed for ancillary uses, for example, hotels, car parks and associated commercial development. This historical and current uses have potential to be sources of ground contamination.

2.8.6 A site walkover identified a number of existing potential sources of ground contamination including the existing fuel farm, petrol filling stations and the fire-fighting training area. Numerous pre-existing ground investigation reports are available for the site. Some localised evidence of contamination has been encountered, which has mainly comprised hydrocarbon contaminants with some leachable concentrations of heavy metals also having been identified.

2.8.7 The desk-based Preliminary Risk Assessment carried out for the site has identified a number historical and current potential sources of contamination representing potential areas of concern and key sensitive receptors including human receptors and ground and surface waters. The outline conceptual site model produced as part of the assessment has identified a number of potential pollutant linkages associated with these sources that may be active where areas of the Project site are proposed for development.

2.8.8 Further detail on ground contamination is contained within **ES Chapter 10 Geology and Ground Conditions** (Doc Ref. 5.1.).

Unexploded Ordnance (UXO)

2.8.9 During and immediately post World War II, munitions storage and disposal activities were undertaken at Gatwick Airport and surrounding areas which presents a UXO hazard.

2.8.10 Munitions supply depots surrounded Gatwick Airport and after the World War II had ended, some of the unused munitions at the depots were disposed locally. This included ordnance returned to the depots which were not required in combat but were primed and fused.

2.8.11 The UXO hazard is considered to be confined to the 'Made Ground' at Gatwick Airport, with potential for some localised munitions stores from World War II buried at shallow depth in the natural ground.

2.8.12 A Project-specific UXO clearance and mitigation strategy will therefore be implemented as part of the development. Further detail on the proposed UXO clearance and mitigation strategy is contained within **ES Chapter 10 Geology and Ground Conditions** (Doc Ref. 5.1).

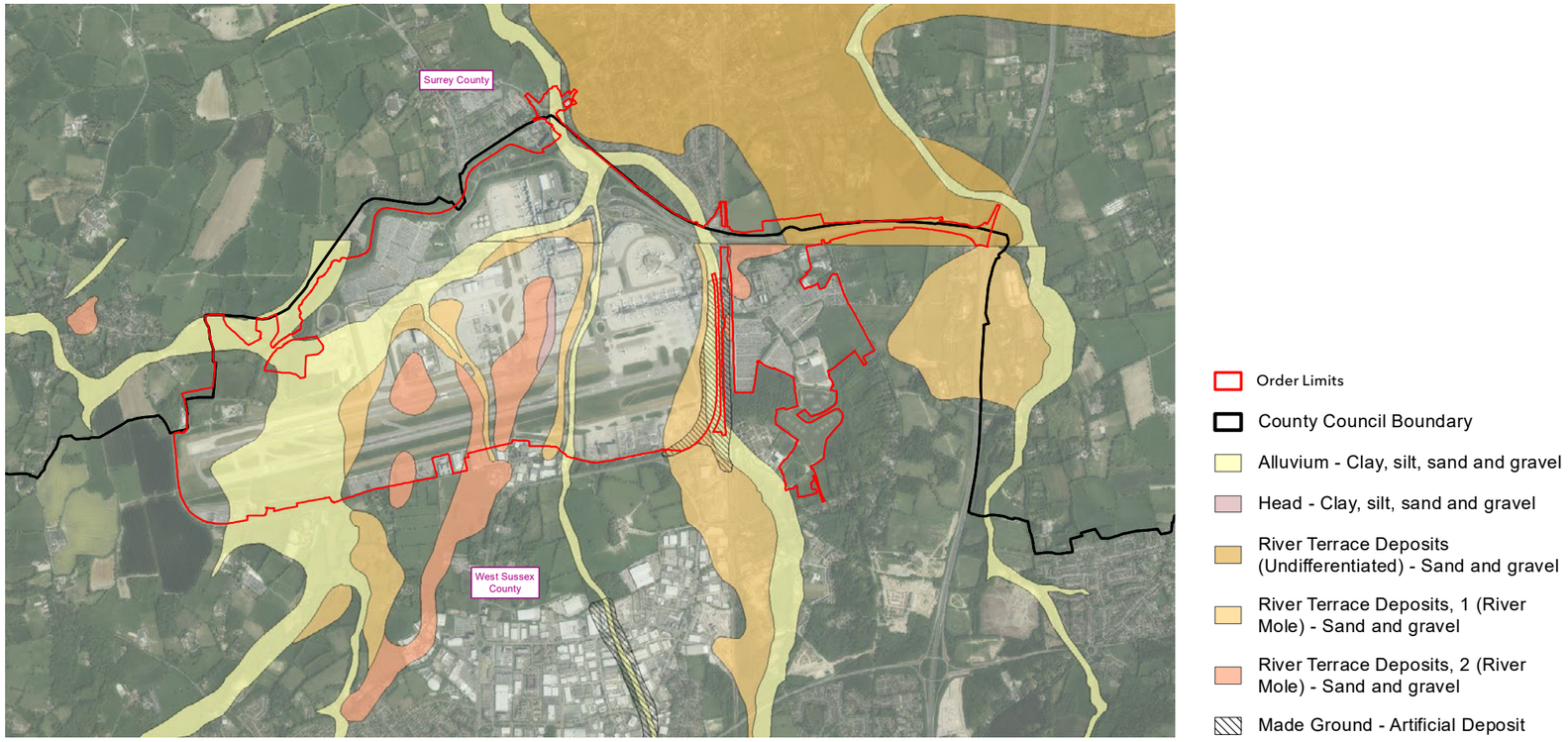


Figure 32. *ES Figure Figure 10.6.1 Ground Conditions Superficial*

2.9 HISTORIC ENVIRONMENT

2.9.1 Gatwick Airport was developed within a historic landscape comprising dispersed farmsteads with small, irregular fields bounded by hedges that were often heavily wooded. Its land use has historically fluctuated between arable and pastoral according to the available farming methods and the needs of society. Newly cleared land was usually set to arable, but depopulation often resulted in a reversion to pasture or rough grazing. Livestock consisted mainly of cattle, although certain areas specialised in sheep farming.

2.9.2 Local woodland provided timber and firewood for use in the ironwork industry, which was widespread in the medieval period and reached a peak during the 17th and 18th centuries.

2.9.3 The London and Brighton Railway opened in 1841 and was subsequently incorporated into the London, Brighton and South Coast Railway. This cut through the historic landscape on a north/south alignment and a railway station was constructed at Horley. To the west of the railway, the former Gatwick Farm was replaced by a large house known as 'Gatwick'. The land to the south-east of Gatwick was purchased in 1890 by the Gatwick Race Course Company, who opened a race course in 1891 along with a new railway station on the adjacent railway. A grandstand was located at the south-eastern end of the racecourse (indicated by the red outline on Figure 33) and was linked to the railway station by three covered walkways.

2.9.4 As set out in Section 2.24 History, the airfield was licensed in 1930, although a plane had been based there from November 1928. A runway was constructed adjacent to the racecourse with a licence for commercial flights acquired in 1933. A new railway station was opened further to the south in 1935 and the following year the world's first circular passenger terminal was opened, linked to the new station by a subway approximately 130 yards in length. The terminal and part of the subway are still present but are outside the current operational airport – the former is a Grade II* listed building known as The Beehive.

2.9.5 During World War II, the airfield was requisitioned by the Air Ministry and used by the RAF, with further requisitioning that included part of the racecourse. After the war the airfield was retained under requisition and operated for civilian use. The country house known as Gatwick was demolished in 1950, and in the same decade Gatwick Airport was substantially expanded to become the newest airport for London; it was further enlarged in 1962.

2.9.6 The land within the site is predominantly occupied by Gatwick Airport within which very little remains of the preceding historic landscape.

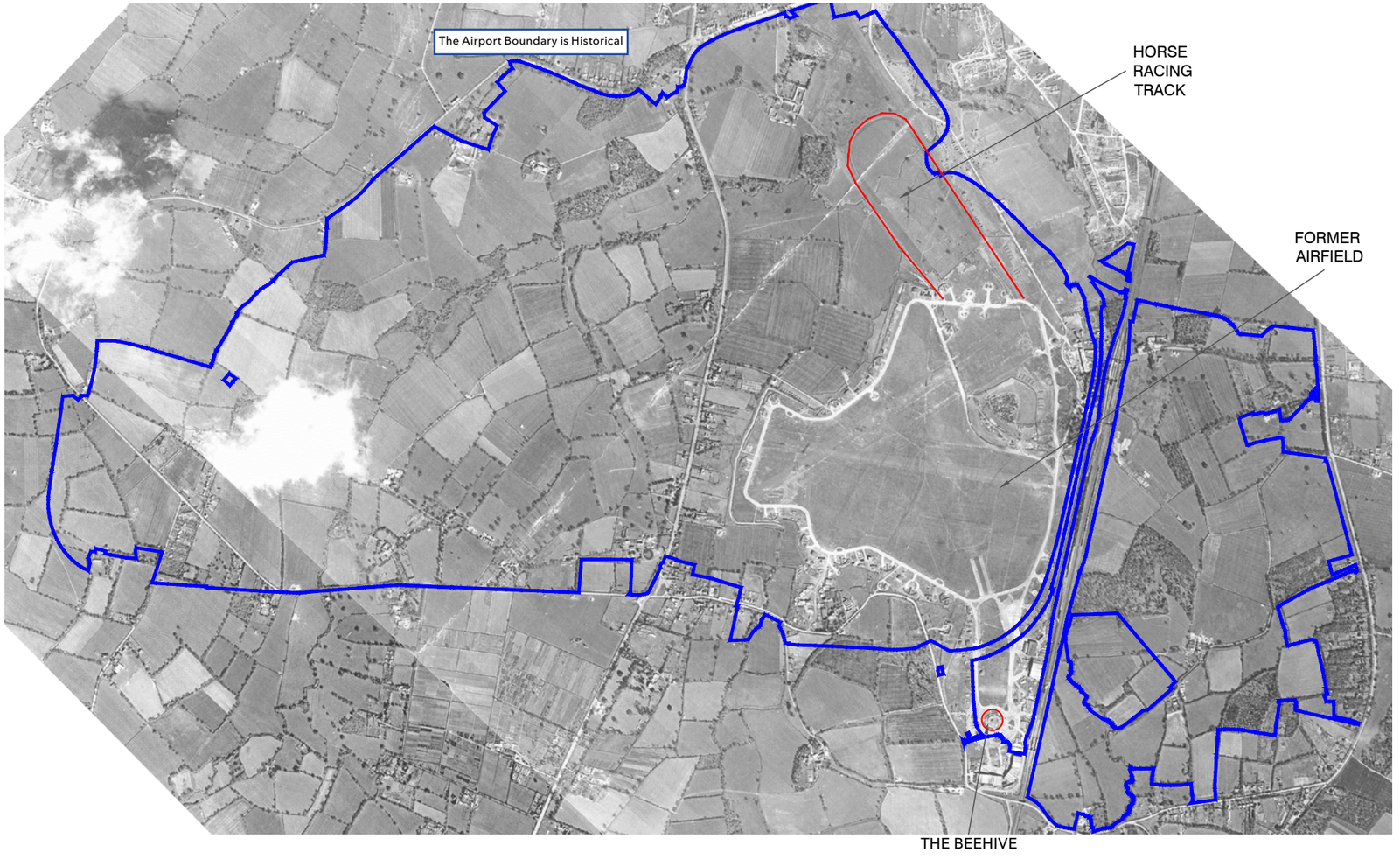


Figure 33. *1944 Former airfield, race course and rail line at the location of the current Gatwick Airport site*

Conservation Areas and Designated Heritage Assets

2.9.7 There is one Conservation Area that partially extends across the site - the Church Road Conservation Area on the south western edge of Horley as shown in blue on Figure 34 (Reference 406).

2.9.8 The eastern part of the Conservation Area comprises a number of historic buildings including the Grade I listed Church of St Bartholomew (Site 16) and the adjacent Grade II listed Ye Olde Six Bells Public House (Site 370) - both of which are outside of the Gatwick Airport site boundary.

2.9.9 To the west of the churchyard the Conservation Area takes in open land on either side of the River Mole, and it is this open land which falls partially across the Gatwick Airport site.

2.9.10 Historic buildings and areas which may be indirectly affected by the Project include:

- two scheduled monuments (former medieval settlement at Tinsley Green (Site 9) and Thunderfield Castle (Site 7)),
- three Grade II* listed buildings (Charlwood Park Farmhouse (Site 27), Providence Chapel on Chapel Road (Site 36), Manor House on Norwood Hill Road (Site 33)), Church Road Conservation Area; and
- several Grade II and locally listed buildings.

Archaeology

2.9.11 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.

2.9.12 Archaeological fieldwork has been undertaken at several locations within the site throughout its history. A comprehensive programme of archaeological investigation in the north western part of Gatwick Airport resulted in the identification of the remains of settlement activity dating from the Late Bronze Age.

2.9.13 Within the Order Limits are four Red Archaeological Notification Areas (ANAs) and one Area of High Archaeological Potential (AHAP). A small part of a Red ANA in the vicinity of the Grade II* listed Charlwood Park Farmhouse is just within the Order Limits. This ANA (Site 487) has been principally identified on the basis that the Late Bronze Age settlement examined to the east could extend further west.

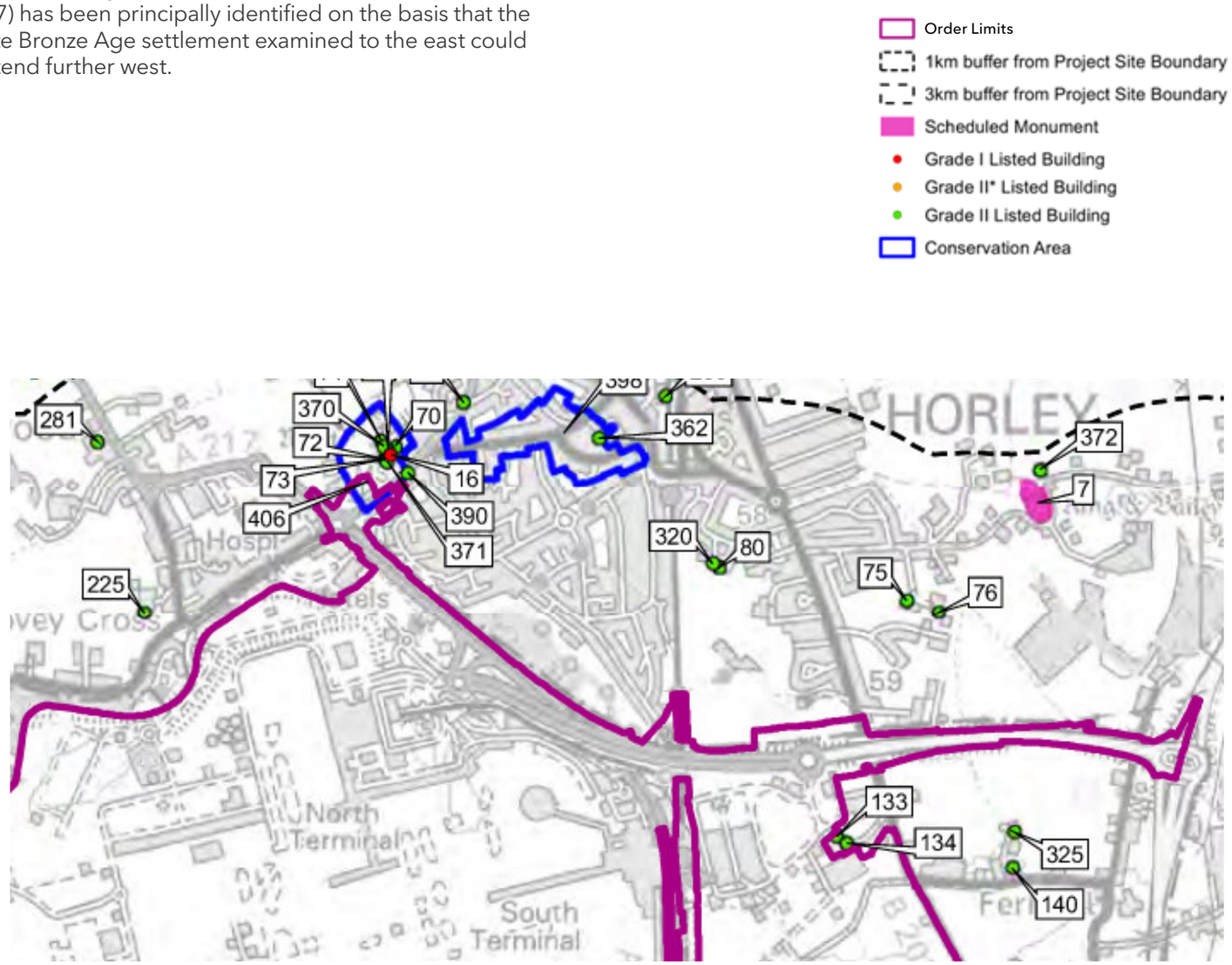


Figure 34. *Conservation area overlap with Order Limits and near-by listed building locations*

2.10 ECOLOGY AND NATURE CONSERVATION

Statutory and Non Statutory Designated Sites

2.10.1 Statutory designations are areas that have been given special protection under the European Union's Habitats Direction. There are no statutory designated sites within the Order Limits, however there are a number of Special Areas of Conservation (SACs) and a Special Protection Area (SPA) within the study area surrounding Gatwick Airport. The locations of these sites are listed below and shown on Figure 35.

a. Mole Gap to Reigate Escarpment SAC;

b. Ashdown Forest SAC; and

c. Ashdown Forest (SPA).

2.10.2 Following consultation with Natural England, the following European sites designated for their bat populations have been considered. These are located more than 20 kilometres from the site and are:

a. Ebernoe Common SAC located 29 kilometers to the south west of the site; and

b. The Mens SAC located 25 kilometers to the south west of the site.

2.10.3 In addition, engagement with Natural England regarding the potential impacts of changes in air quality from vehicle emissions on major roads, has also seen the following sites considered as part of the study area:

a. Thames Basin Heaths SPA located 24 kilometers to the north west of the site; and

b. Thursley, Ash, Pirbright and Chobham SAC located 33.8 kilometers to the north west of the site.

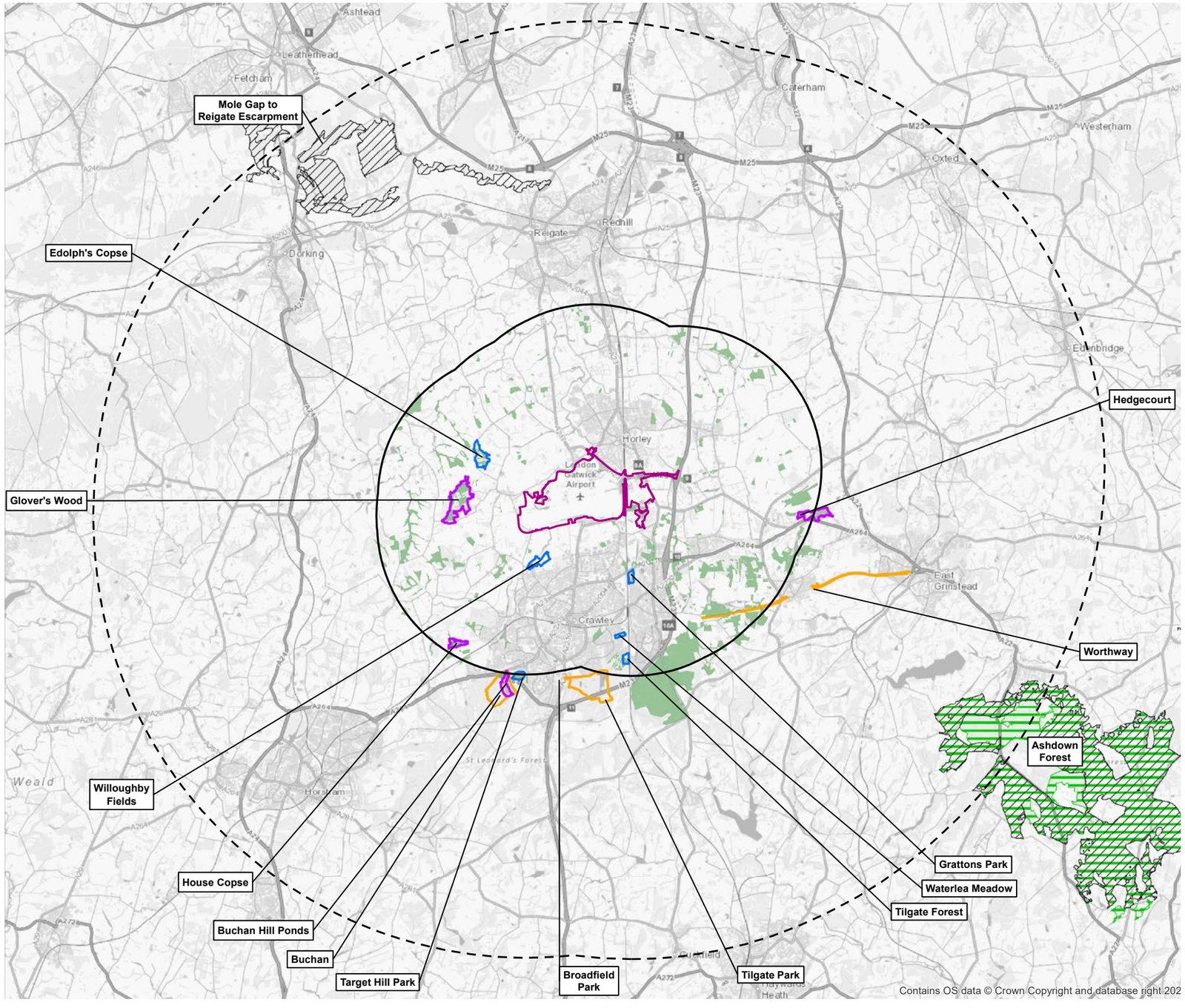


Figure 35. *Statutory Designated Sites, ES*

2.10.4 Furthermore, there are 14 nationally designated sites within five kilometres of the site. These are:

a. Willoughby Fields Local Nature Reserve (LNR):
b. Grattons Park LNR;
c. Edolph's Copse LNR;
d. Glover's Wood Site of Significant Scientific Importance (SSSI);
e. Waterlea Meadow LNR;
f. Worth Way Country Park (CP);
g. Tilgate Forest LNR;
h. House Copse SSSI;
i. Hedgecourt SSSI;
j. Hill Ponds SSSI;
k. Tilgate Park CP;
l. Target Hill Park LNR;
m. Buchan CP; and
n. Broadfield Park LNR.

2.10.5 A total of 71 non-statutory designated sites were identified within five kilometres of the Order Limits through the desk study. A list of all 71 sites and their distance from the Order Limits is provided in Table 9.6.1 and shown on Figure 36 of the **ES Chapter 9 Ecology and Nature Conservation** (Doc Ref. 5.1).

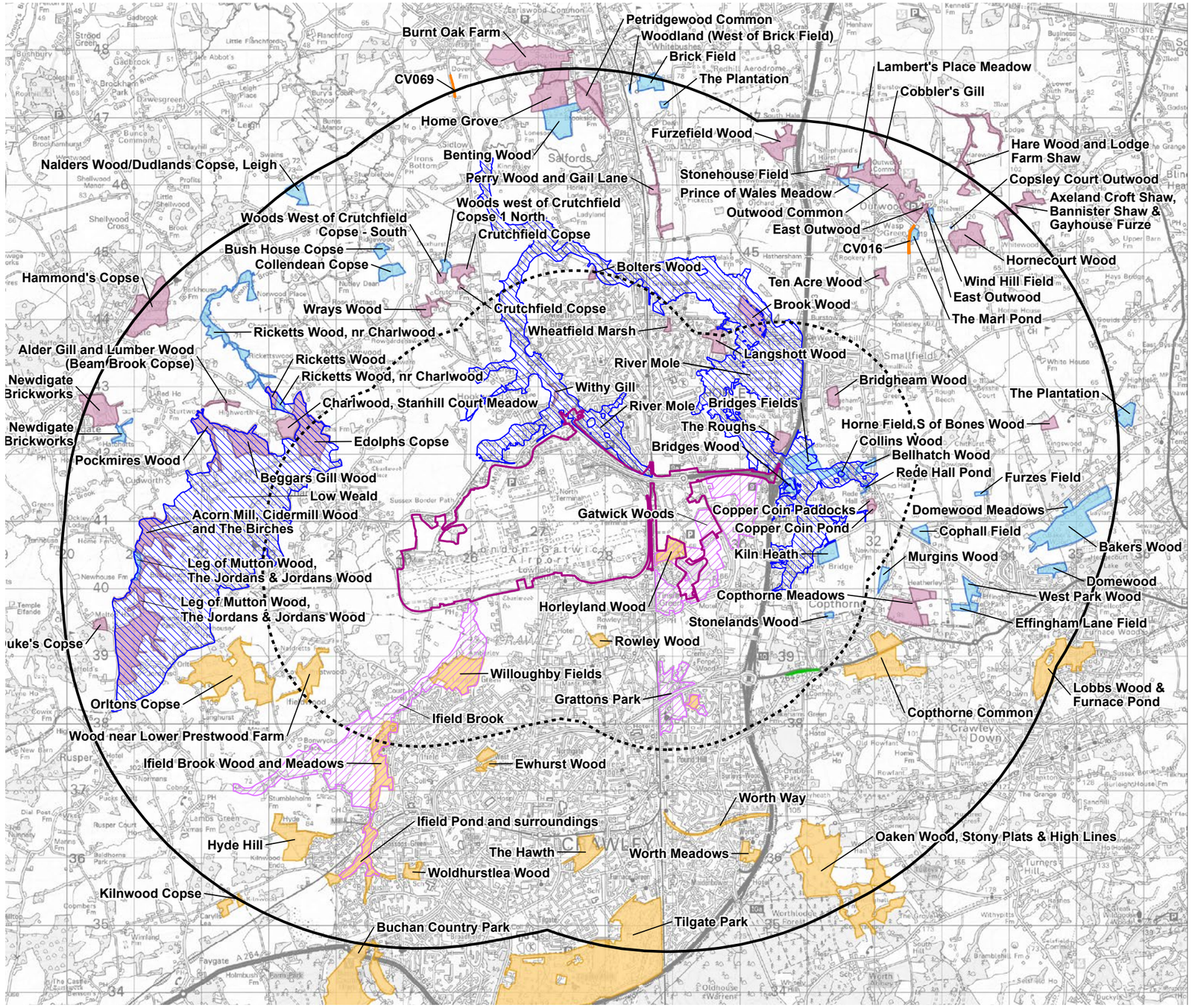


Figure 36. *Special Protection Areas (SPAs) and Special Areas of Conservation (SACs)*

2.11 RECREATIONAL AMENITY, OPEN SPACE AND PUBLIC RIGHTS OF WAY

Active Travel Routes

2.11.1 As shown on Figure 37, there are a number of recreational routes for walkers, cyclists and horse riders surrounding the Gatwick Airport site.

2.11.2 National Cycle Route 21 (NCR21) (shown as a dashed pink line on Figure 37) runs south from Greenwich out of London through Lewisham (the Waterlink Way) to Crawley, and then via East Grinstead and Eridge to Heathfield and Eastbourne. From Crawley it runs northwards between the A23 London Road and the railway line as a traffic free route to the east of the main airport campus. It then follows the alignment of the Gatwick Stream, crossing Airport Way to the north of Gatwick Airport via a subway which exits in Riverside Park in Horley. NCR21 continues to follow the Gatwick Stream within the northern area of the park, becoming an on-road route between Riverside and Crescent Way.

2.11.3 NCR21 provides an important non-vehicular route between Horley, Crawley and Gatwick Airport for use by cyclists and walkers. Surveys undertaken observed that NCR21 was well used all days of the week and in the local vicinity was used by walkers and cyclists to access their place of work as well as to access Riverside Garden Park.

2.11.4 The route intersects with a number of local cycle routes including near Horley railway station which provides an east-west connection, and the Sussex Border Path, a long distance walk, just north of the South Terminal.

2.11.5 Around Gatwick Airport, the Sussex Border Path (highlighted in yellow on Figure 37) runs along the alignment of existing public footpaths in Surrey and West Sussex. It runs to the north of the M23 spur road along Surrey public footpaths 367 and 368, and then follows Public Footpath 362a before crossing the railway line and joining Public Footpath 355a to the west of Riverside Garden Park and running south to the county boundary to the north of Airport Way.

2.11.6 The Sussex Border Path is not currently designated as a National Trail but once the England Coast Path National Trail has been completed, its Sussex route combined with the Sussex Border Path will create a route allowing a complete walk around the country.

2.11.7 Also within the vicinity of Gatwick Airport is the Millennium Trail (illustrated as an orange dashed line on Figure 37) which is a 28 kilometre long distance path from Banstead Downs to Horley and was created by Reigate and Banstead Borough Council to mark the new century. Near Gatwick Airport, the Millennium Trail largely follows the same route as the Sussex Border Path and finishes in Riverside Garden Park.

2.11.8 Further detail on Public Rights of Way and National Cycle Routes within or near the Order Limits are set out in **ES Chapter 19 Agriculture and Recreation** (Doc Ref. 5.1).

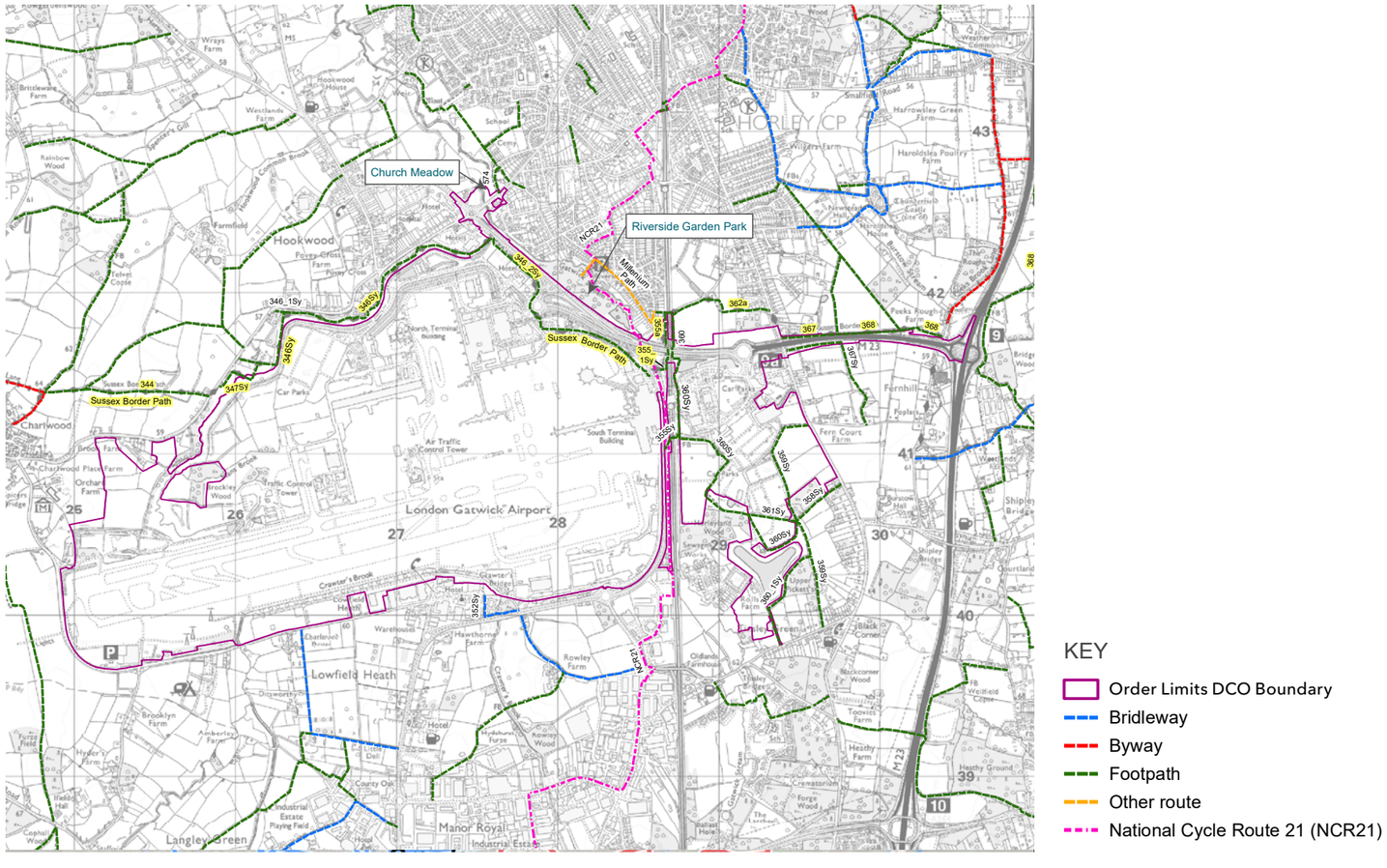


Figure 37. *Existing Recreational Facilities*

Public Open Space

2.11.9 In addition to the walking, cyclist and horse riding routes, there are several areas of public open space close to Gatwick Airport.

2.11.10 Riverside Garden Park is located at the south-western edge of Horley between areas of residential development to the north-east, the A23 and Gatwick Airport (shown on Figure 38). It covers an area of approximately 10 hectares and originally formed part of Horley Common.

2.11.11 Reigate and Banstead Borough Council recognise this open space as high value in their *Urban Open Space Assessment and Review* (Reigate and Banstead Borough Council, 2018).

2.11.12 The park is bound by the Gatwick Stream to the north and features areas of woodland and a man-made lake. Despite the proximity of the A23 and Gatwick Airport, these features are largely screened from view by embankments and tree planting. In addition, cyclists use NCR21 running through the park to gain access to and from Gatwick Airport.

2.11.13 Surveys undertaken observed that Riverside Garden Park was also used by Gatwick Airport employees during the day.

2.11.14 On the northern side of the A23 at this location, Church Meadow is located within the Project Order Limits. The open space lies to the east of the River Mole and comprises St Bartholomew's Church and the former Horley Anderson Centre and Playing Fields. This area is also designated as urban open space of high overall value by Reigate and Banstead Council in the *Urban Open Space Assessment and Review* (Reigate and Banstead Borough Council, 2018), also forming part of the Riverside Green Chain.

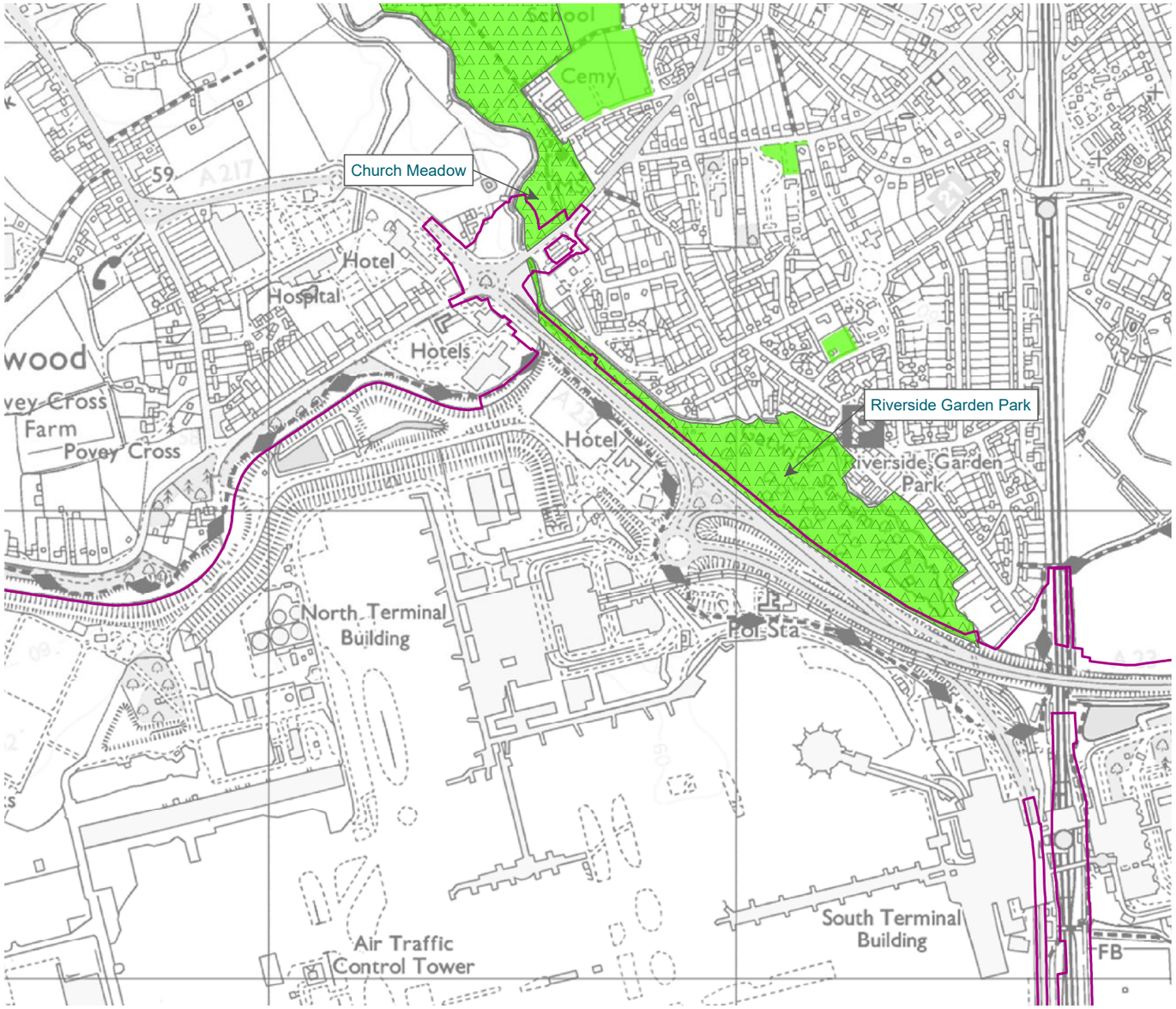


Figure 38. *Existing Open Recreational Space*


LONDON
GATWICK

3.0 PROJECT REQUIREMENTS

3.1 PROJECT VISION AND OBJECTIVES

3.1.1 This section describes the Project requirements for the NRP, starting with the strategic objectives developed by Gatwick Airport, followed by a summary of policy, regulations and guidance that have influenced design development and the proposal put forward as part of this DCO application. Section 6 and Section 7 of this DAS set out the design guidelines and parameters for implementation that will influence the detailed design of the Project components in the future. The Design Principles located in Appendix 1 of this DAS provide a control framework against which the detailed design would be assessed. They are explained further in Volume 5 of this DAS. In developing the design of the NRP proposal, Gatwick Airport has produced a number of strategic objectives have been produced. These are:

a. Make the best use of our existing runways and infrastructure to meet growing aviation demand, particularly in London and the South East, in accordance with Airports NPS and Networks NPSNN policy;

b. Provide better operational performance for our passengers and airlines and improve resilience at our airport;

c. Design infrastructure that is capable of efficiently handling the predicted increase in passenger and aircraft throughputs;

d. Maintaining passenger and airline service standards and creating greater choice for our airlines and passengers;

e. Make efficient use of our land;

f. Minimise and mitigate the environmental effects of our proposals, such as on noise, air pollution, carbon and other impacts on the natural environment, and seek opportunities to enhance these aspects where possible;

g. Phase the development of the project so that disruption to our neighbours and passengers is minimised; and

h. Develop the project largely within the current footprint of Gatwick Airport and minimise disruption to our neighbours.

Figure 39. *Elevated view for the Airfield from the East*

3.2 NEED CASE AND POLICY SUPPORT

3.2.1 Government policy has consistently recognised the importance of aviation including the critical contribution it makes to the UK economy. Such policy commits to growth to respond to forecast increases in demand and to strengthen the aviation sector to respond to policy objectives.

3.2.2 Gatwick Airport has seen significant levels of growth in recent years, prior to the COVID-19 pandemic. Over the last decade, the number of passengers served grew by over 14 million passengers, reaching 46.6 million in the most recent full year of operation (2019). This represents a 44% growth in passengers since 2009, resulting from 15% growth in commercial air transport movements combined with the use of larger and fuller aircraft.

3.2.3 In 2019, the last year of full operations prior to the COVID-19 pandemic, Gatwick Airport handled some 283,000 commercial Air Transport Movements (ATMs), serving over 46.6m passengers travelling to 219 destinations with 53 different airlines.

3.2.4 Despite capacity constraints, throughput at Gatwick Airport grew more than at any other UK airport in the five years prior to 2019 (Figure 40) and, whilst the pandemic seriously affected Gatwick Airport, and all other airports, recovery has been rapid with a return to more than 80% of passenger numbers by the summer of 2022.

3.2.5 At Gatwick Airport, demand demonstrably exceeds supply, to the extent that there is a severe shortage of take-off and landing slots with 21 airlines allocated less than 40% of their requested demand. A secondary market has developed with slot premiums increasing and costs being passed onto passengers through increased fares, directly contrary to government objectives.

3.2.6 London is the biggest aviation market in the world in terms of passenger numbers. In 2019 London's airports served 181 million passengers, representing 60% of the total UK passengers. This is more than New York, Tokyo, and Shanghai, the next three largest markets, and a large part of this stems from the size of London itself as well as the leading role it plays in global commerce, tourism and international connectivity. Demand in the London system has been subject to strong growth, with over 54 million passengers added since 2010 and 34 million additional passengers in the five-year period 2014 to 2019.

3.2.7 The Department for Transport forecasts show that demand will outstrip capacity in the London Airport system by the mid-2030s. The forecasts observe that Heathrow Airport and Gatwick Airport are already 'full'. By 2030, an additional 50+ million passengers are forecast in the London market – far in excess of today's available capacity, indicating significant need for capacity development. Therefore, it is important that airports, including Gatwick Airport, find ways to make best use of its available capacity.

3.2.8 The Project is an innovative way of adding additional capacity to Gatwick Airport, through making use of the existing northern runway, and importantly without requiring the significant additional land take that would be required if a full second runway was to be developed. The Project's use of the existing northern runway at Gatwick Airport is therefore consistent with Government policy as set out in the ANPS.

3.2.9 With the Project, through the early 2030s, Gatwick Airport is forecast to grow towards 70 million passengers, reaching 75.6 million by 2038 and 80.2 million passengers by 2047 – 13.2 million more than would be the case without the Project. This growth would see Gatwick Airport capturing a greater share of London demand as other airports will have relatively limited capacity to grow further.

3.2.10 Further detail on the needs case for the Project is set out in the **Planning Statement** (Doc Ref. 7.1) and the **Need Case** (Doc Ref. 7.2).

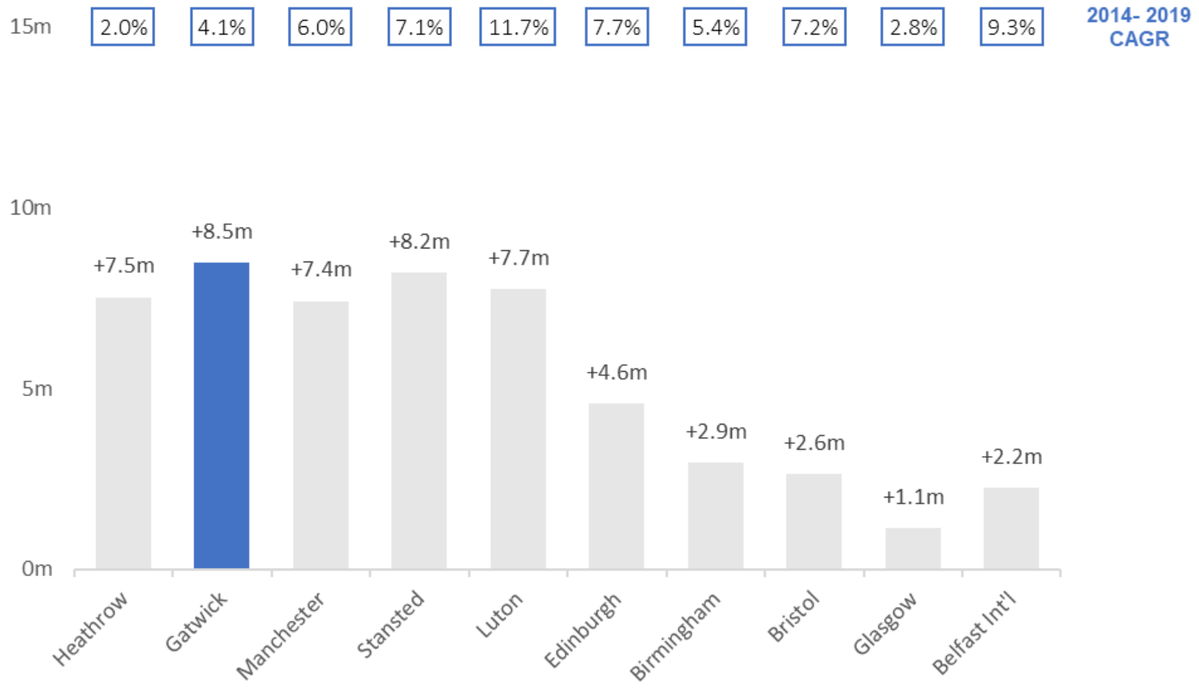


Figure 40. *Passenger Growth Comparisons, UK market (5 years: 2014 -2019)*

Airports National Policy Statement

3.2.11 The Airports NPS recognises the significant economic and social benefits that aviation industry growth can bring while simultaneously setting out measures that ensure the adverse impacts are weighed against the positives when determining whether to grant development consent.

3.2.12 While the Airports NPS is primarily associated with Heathrow's third runway development, a key element of the Airport NPS is the confirmation of the Government's support for all other airports making best use of their existing runways. This is subject to economic, social and environmental considerations, which are relevant to the Project.

3.2.13 Relevant to this DAS are Paragraphs 4.29 to 4.35 of the Airports NPS which set out the 'Criteria for 'good design' of airports infrastructure'. This criteria has influenced design development to date. These paragraphs state:

"4.29 The applicant should include design as an integral consideration from the 'outset of a proposal'.

4.30 Visual appearance should be an important factor in considering the scheme design, as well as functionality, fitness for purpose, sustainability and cost. Applying 'good design' to airports projects should therefore produce sustainable infrastructure sensitive to place, efficient in the use of natural resources and energy used in their construction, and matched by an appearance that demonstrates good aesthetics as far as possible.

4.31 A good design should meet the principal objectives of the scheme by eliminating or substantially mitigating the adverse impacts of the development, for example by improving operational conditions. It should also mitigate any existing adverse impacts wherever possible, for example in relation to safety or the environment. A good design will also be one that sustains the improvements to operational efficiency for as many years as is practicable, taking into account capital cost, economics and environmental impacts.

4.33 Scheme design will be an important and relevant consideration in decision making. The Secretary of State will need to be satisfied that projects are sustainable and as aesthetically sensitive, durable, adaptable and resilient as they can reasonably be, having regard to regulatory and other constraints and including accounting for natural hazards such as flooding. The Secretary of State will also need to be satisfied that extant security, customs and immigration measures are maintained or reprovided.

4.34 The scheme should take into account, as far as possible, both functionality, including fitness for purpose and sustainability, and aesthetics, including the scheme's contribution to the quality of the area in which it would be located. The applicant will want to consider the role of technology in delivering new airports projects. Professional, independent advice on the design aspects of a proposal should be undertaken to ensure good design principles are embedded into infrastructure proposals.

4.35 There may be opportunities for the applicant to demonstrate good design in terms of siting and design measures relative to existing landscape and historical character and function, landscape permeability, landform, and vegetation.

4.36 The applicant should be able to demonstrate in its application how the design process was conducted and how the proposed design evolved. Where a number of different designs were considered, the applicant should set out the reasons why the favoured choice has been selected. The Examining Authority and Secretary of State will take into account the ultimate purpose of the infrastructure and bear in mind the operational, safety and security standards which the design has to satisfy."

3.2.14 This DAS has been produced to demonstrate how compliance with this criteria for good design has been achieved.

3.3 SUSTAINABILITY

3.3.1 Sustainability has been a core consideration throughout the development of the Project. Gatwick Airport has set out its focus areas for sustainability in its Second Decade of Change to 2030. This has been influenced by the key themes of the Airports National Policy Statement (Airports NPS), National Policy Statement for National Networks (NPSNN) and National Policy Planning Framework (NPPF).

3.3.2 Gatwick Airport has a responsibility to its stakeholders to ensure that any further development of Gatwick Airport has taken into account the necessary mitigative action. This broadly includes limiting disruption to the local communities, minimising its impact on the local environment, and staying aligned with emissions reduction targets set by both Gatwick Airport policy and wider government and industry targets. Gatwick Airport's potential to positively impact the local economy is significant and forms a major part of Gatwick Airport's sustainability agenda.

3.3.3 As part of the DCO application, a Sustainability Statement has been prepared in **Planning Statement Annex B - Sustainability Statement** (Doc Ref. 7.1). This sets out in more detail the objectives of the Second Decade of Change to 2030 and other influential policy relevant to sustainability. Refer to oLEMP.

3.3.4 Specific to the Project, the following sustainability objectives have been identified. These include:

- Mitigation of the impact on local air quality throughout the lifecycle of the Project;
- Mitigation of the potential various impacts on the local ecology and look towards biodiversity net gain to support Gatwick Airports ambition of being 'sector leaders' when it comes to net gain;
- Mitigation of the Project's impact on the climate throughout the lifecycle of the project in support of Gatwick Airport's sustainability policy and the wider industry and governmental targets;
- Minimisation of any potential negative effects on the surrounding communities;
- Ensure the Project generates a local and regional thriving economy;
- Ensure the Project does not negatively impact the historic environment and surrounding landscape;
- Encourage resource and material efficiency, as well as sustainable waste management, throughout the Project; and
- Surface access actions are to be strategically developed to assist with the sustainable transportation targets of onsite staff and the natural influx of increased passengers travelling to and from Gatwick Airport due to its increased capacity upon completion.

3.3.5 The Project has taken into consideration sustainability policies and principles as part of design development and the production of the masterplan. The following sets out the relevant policy documents and how sustainability has influenced the development of the Project.

3.3.6 An initial Outline Sustainability Framework was developed during the early stages of design development and aligned with the development of the Preliminary Environmental Information Report. The framework includes a series of themes and objectives to guide specialists when considering measures to embed sustainability principles into the design and mitigation. This appraisal against the framework was repeated following stakeholder engagement which identified further areas for improvement. Gatwick Airport has laid out the focus areas for sustainable development in its Second Decade of Change to 2030. The core themes within the Second Decade of Change to 2030 and relevant wider sustainability policy documents, mentioned above, have formed the basis of the sustainability framework which incorporates a series of sustainability criteria set out in the Sustainability Statement. The sustainability framework has been developed to consider the entire life cycle of the Project (i.e. design, procurement, construction, commissioning, operation, and end of life when relevant).

3.3.7 The Project's approach to embedding sustainability throughout its lifecycle is detailed across various documents that form part of this application. These include:

- **ES Appendix 5.3.2 Code of Construction Practice** (Doc Ref. 5.3) applies to the construction activities which form part of the Project. It legally secures the implementation of environmental mitigation measures during construction, including measures to achieve sustainability targets
- **Carbon Action Plan** (Doc Ref. 5.3) sets out how Gatwick Airport intends to build on what it has achieved to date by committing to key outcomes and detailing the actions that Gatwick Airport could take to transition to a low carbon future.

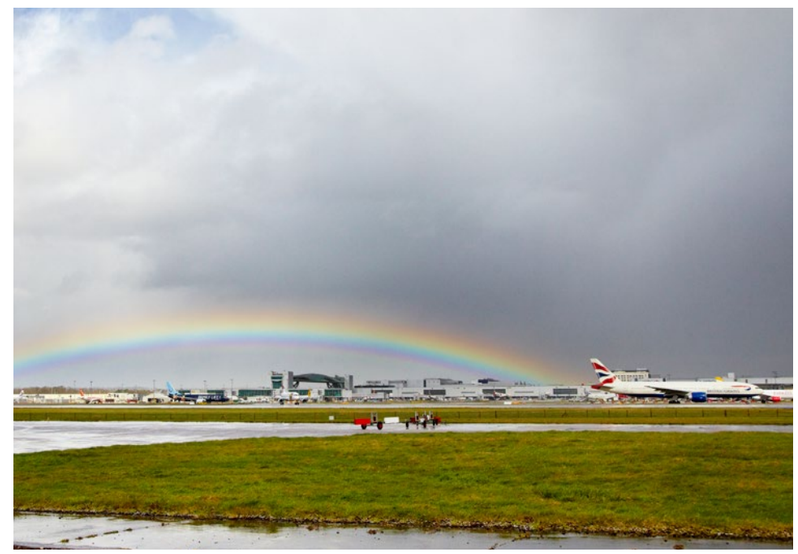


Figure 41. *Gatwick Airport Runway*

3.3.8 The following summaries the key policy documents relevant to the design of the Project.

Gatwick Airport Sustainability – Our Second Decade of Change to 2030

3.3.9 The 'Second Decade of Change' document sets out Gatwick Airport's sustainability policies up to 2030, which apply across its entire business. It is structured around three themes:

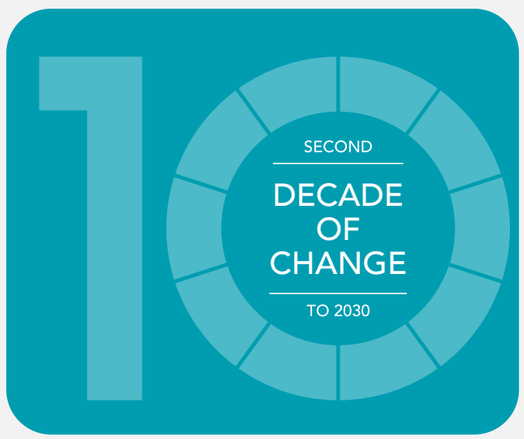
- People and Communities – Support our people and invest in local communities;
- Net Zero Emissions – Continue our transition to Net Zero and improve air quality; and
- Local Environment – Reduce our impact on the local environment and waste.

3.3.10 Under each of these themes are a number of objectives. The below summarises these and how they influence the development of the Project. These are set out in diagram below.

3.3.11 As it is GAL-promoted, the Project is required to comply with the Second Decade of Change to 2030 sustainability policies throughout its development.

Our Goals

As 2020 has demonstrated all too starkly, we live, work and operate in a complex and fast changing world where plans can change, dates may alter, schedules may be brought forward or pushed back - however our commitment and approach to a sustainable Gatwick will remain focused on what really matters. Accordingly, we are once again focusing on 10 issues over 10 years, with continued emphasis on the economy, local community and the environment while increasing our emphasis on People and on Emissions.



THROUGH OUR SECOND DECADE OF CHANGE WE WILL:

People and Communities

1. Local economy:
Be a partner and advocate for a thriving resilient economy and contribute to local and regional workforce skills partnerships and initiatives.

2. Opportunity and Accessibility:
Increase workforce diversity through recruitment, training and retention practices and partnerships; and ensure accessibility and opportunity for disabled colleagues and passengers.

3. Workplace safety:
Be a leading airport for the safety, health and wellbeing of our workforce and passengers, striving to learn and continually improve.

4. Local communities:
Invest resources in programmes and partnerships for those communities most affected by Gatwick's operations.

5. Noise:
Limit and where possible reduce the airport's impact on local communities by working with partners and stakeholders to create the most noise efficient operation possible.

Net zero

Continue Gatwick's net zero transition and further improve local air quality by:

6. Airport emissions:
- Achieve Net Zero for GAL Scope 1 and 2 GHG emissions by 2030.
- Sourcing 50% of airport network electricity and 50% of heat network from UK renewable sources via onsite generation and direct purchase agreements (PPAs) by 2030;
- Requiring all GAL and airport duty vehicles, ground support equipment and mobile construction equipment to meet zero or ultra-low emission standards by 2030;

7. Aircraft and surface access emissions:
- Playing our part in UK aviation and ground transport transition to net zero carbon.
- Working with airlines and fuel providers to implement the Sustainable Aviation decarbonisation roadmap and interim goals.
- Working with transport partners to increase airport passenger and staff usage of public transport and zero and ultra-low emission journey modes to 60% by 2030.

Local Environment

8. Water:
Reduce the airport's potable water consumption by 50% on a per passenger basis by 2030 compared to 2019, continue to improve the quality of water leaving the airport and work with partners to promote local water stewardship.

9. Waste:
Ensure that by 2030 all materials used at Gatwick in operations, commercial activity and construction, are repurposed for beneficial use i.e. repaired, reused, donated, recycled, composted or converted to fuel for heating or transport.

10. Biodiversity:
Have a sector-leading 'net gain' approach to protecting and enhancing biodiversity and habitats on the airport estate, including zero use of herbicides by 2030; and support biodiversity partnerships in our region.

Airports National Policy Statement, National Policy Statement for National Networks and the National Planning Policy Framework.

3.3.12 The Airports NPS and NPSNN set out policies in relation to sustainability that the masterplan shall comply with.

3.3.13 An Appraisal of Sustainability (2018) was prepared in support of the Airports NPS which presents a strategic level assessment of the likely environmental, social and economic impacts – including a 'second' runway at Gatwick Airport. The illustrative masterplan produced for the purposes of the Appraisal of Sustainability assumed a second runway would be provided to the south of the existing main runway rather than repurposing of the existing northern runway. The Environmental Statement is required to take into consideration the contents of the Appraisal of Sustainability.

3.3.14 Sustainability is also a consideration for 'good design' set out in Paragraph 4.30 of the Airports NPS – *"Applying 'good design' to airports projects should therefore produce sustainable infrastructure sensitive to place, efficient in the use of natural resources and energy used in their construction, and matched by an appearance that demonstrates good aesthetics as far as possible".*

3.3.15 Policy 12 Achieving well-designed places of the NPPF highlights that development should achieve the 'creation of high quality, beautiful and sustainable buildings and places.' To achieve this, development proposals should consider design quality throughout the evolution of a project and utilise engagement with the local planning authority and community to improve the design and style.

3.3.16 The NPPF also encourages development proposals to consider improving accessibility and connectivity of public and sustainable transport modes, including cycling, walking and public transport. Policy 9 of the NPPF outlines that applications for development should:

- Facilitate access to public transport services and encourage active travel, including walking and cycling;
- Provide accessibility for people with disabilities and reduced mobility (eg disabled parking);
- Create safe and secure places for pedestrians, cyclists (e.g. cycle shelters) and vehicles; and
- Include charging facilities for low-emission vehicles.

3.3.17 Sustainable transport and surface access are also key themes within the Airports NPS, which provides a number of relevant requirements that relate to the Project. Firstly, the Airports NPS emphasises the desire to maximise sustainable transport, whilst avoiding congestion and environmental impacts. It also states that improvements to the surface access should be able to support the increased transport associated with the increased operational capacity of the airport.

3.3.18 These objectives and requirements are reinforced within the NPSNN, which looks to encourage sustainable travel and improve accessibility. This includes the expectation of development proposals to address the needs of cyclists and pedestrians in order to encourage safe, active travel. Additionally, the NPSNN aims to improve inclusive access.

3.3.19 Gatwick Airport aims to provide access for all and will continue to provide step-free level access to all platforms at Gatwick Airport Station (which will be upgraded as part of a separate Network Rail project).

3.3.20 Gatwick Airport will also continue to provide dedicated drop-off points for Blue Badge holders or passengers that require assistance. This will contribute to the Government's strategy to improve disabled access.

3.3.21 Throughout the development of the masterplan, Gatwick Airport has identified opportunities to improve access via active travel modes. These outcomes are detailed in Volumes 2-4 of this DAS.

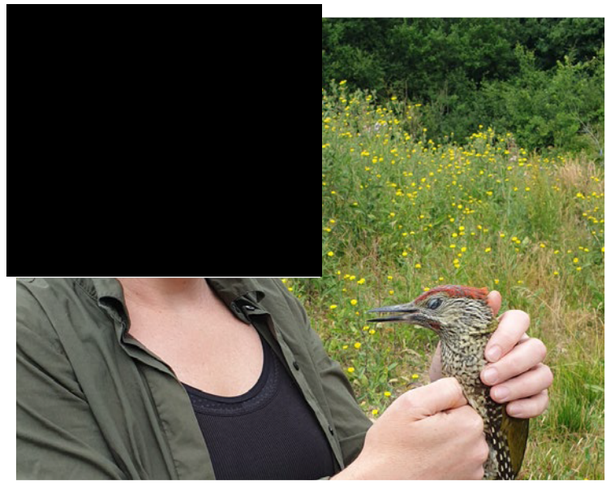


Figure 42. *Green space and Biodiversity at Gatwick Airport*

Figure 43. *Gatwick Airport. South Terminal and Road Tunnel*

Figure 44. *Sustainability- Wildlife Trust Biodiversity Gatwick*

3.4 PRINCIPAL COMPONENTS OF THE SCHEME

3.4.1 The Project proposes alterations to the existing northern runway which, along with lifting the current restrictions on its use, would enable dual runway operations. Together with the alterations to the northern runway, the Project would include the development of a range of infrastructure and facilities to allow increased airport passenger numbers and aircraft operations.

3.4.2 The Project includes alterations to the existing northern runway and corresponding enhancements to the taxiway system and parking stands to accommodate an increase in aircraft movements. Other elements of the Project would enable the increased airfield capacity to be accessed by passengers through additional processing capability and improved airport access. Land is proposed to mitigate environmental effects (for example, for habitat creation, flood compensation or provision of recreational routes and public open space).

3.4.3 The Project includes the following key components:

- 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 alterations (including a proposed new pier);
- reconfiguration of other airfield facilities;
- extensions to the existing airport terminals (north and south);
- provision of additional hotel and office space;
- provision of reconfigured car parking, including new car parks;
- surface access (including highway) improvements;
- demolition and relocation of Central Area Recycling Enclosure (CARE) facility;
- water treatment facilities;
- reconfiguration of existing utilities, including surface water, foul drainage and power; and
- landscape/ecological planting and environmental mitigation.

Terminal Buildings

Internal Terminal Regonfiguration

Hotel/Offices

Hangar & Airfield

Car Parks

Surface Access

Utilities & Surface Water

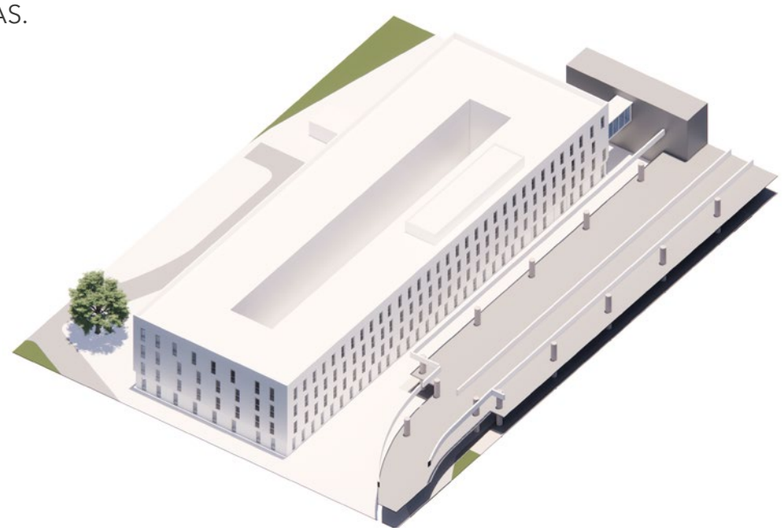
Landscape & Ecology

Figure 45. *Indicative Look and Feel images of range of works in the Project*

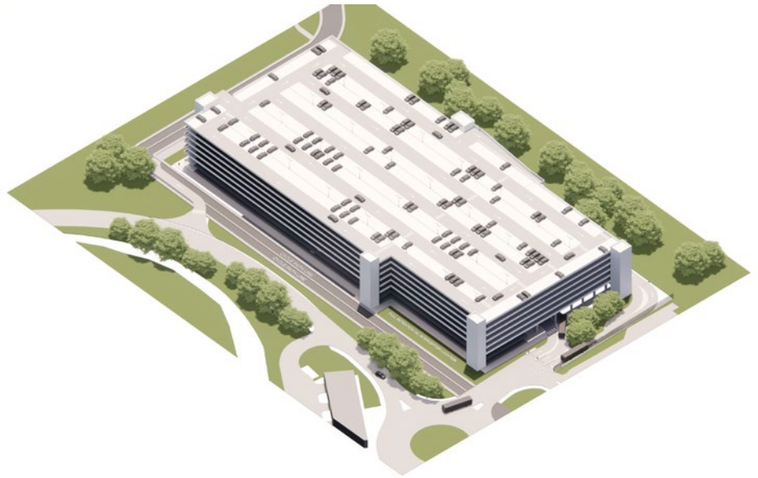
3.4.4 A detailed description of the Project components is set out in **ES Chapter 5 Project Description** (Doc Ref. 5.1). This describes the component within each zone with indicative description of the built form.

3.4.5 Examples and typical views of some of Project components are illustrated in Figures 45 and 46 to assist with describing the indicative features. The indicative designs of the individual components are illustrated in more detail throughout Volumes 2 to 4 of this DAS.

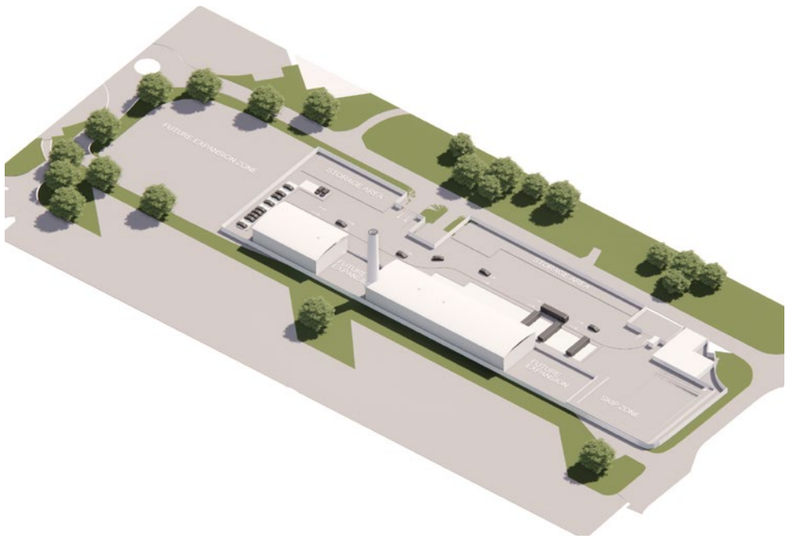
Terminal Buildings - Piers



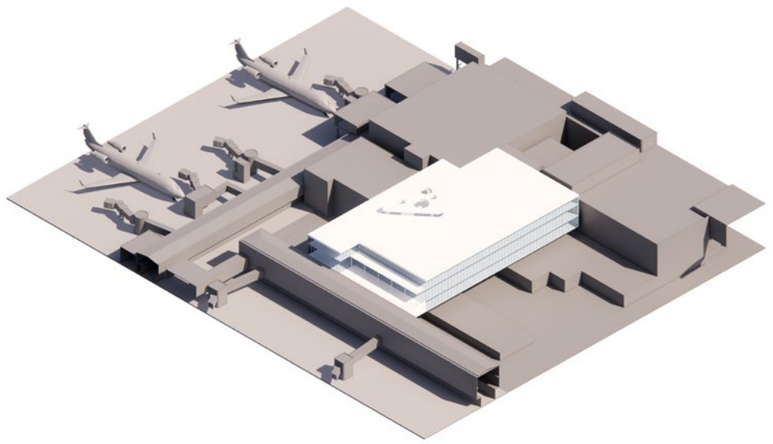
Commercial



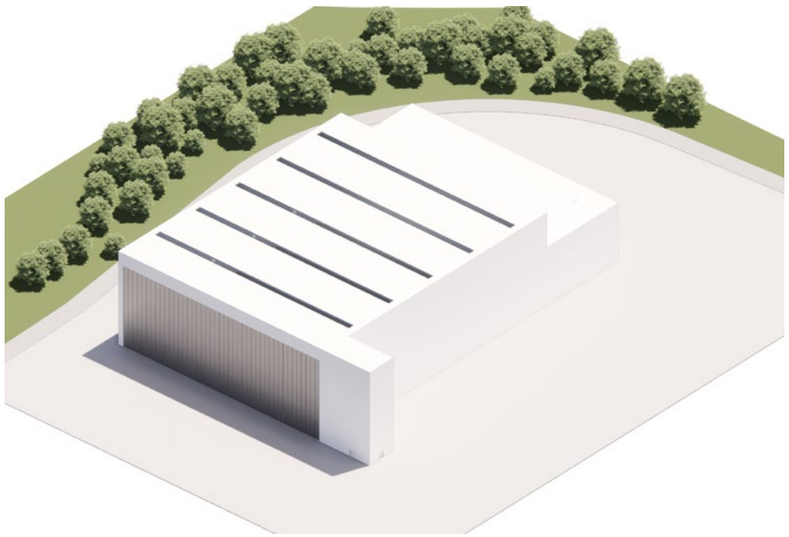
Car Parks



Operational Buildings



Terminal Extension



Hangar

Figure 46. *Typical Views of Building Components of the Scheme*

3.5 AERODROME SAFEGUARDING

3.5.1 The safeguarding of aerodromes is the process used to ensure the safety of aircraft manoeuvring on the ground, taking off, landing or flying in the vicinity of Gatwick Airport. Aerodrome safeguarding is a regulatory requirement of the UK CAA. The following sets out the aerodrome safeguarding requirements that the proposal must comply with.

3.5.2 Aerodrome safeguarding has been considered in the evolution of the design of the Project and any detailed design following DCO grant will comply with safeguarding requirements.

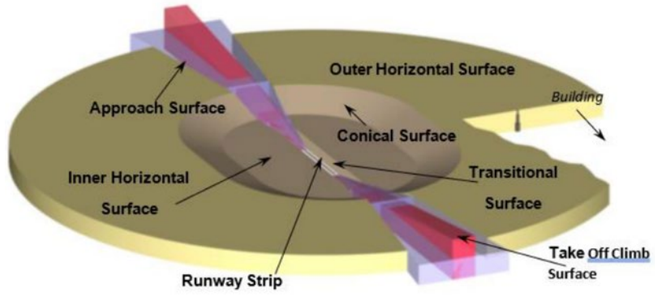


Figure 47. *Safeguarding Diagram*

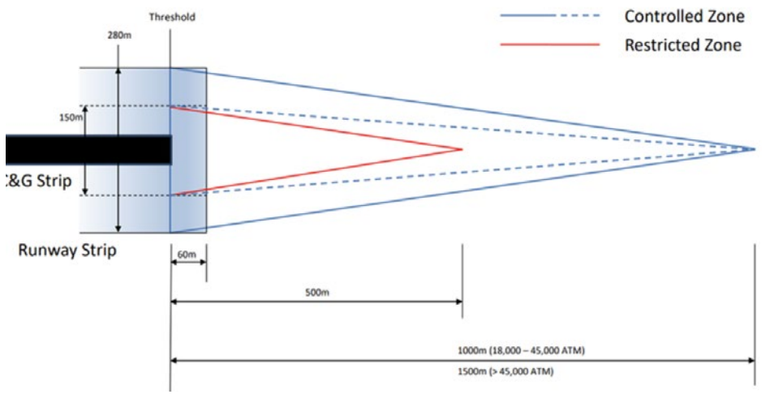


Figure 48. *Public Safety Zones*

Obstacle Limitation Surfaces (OLS)

3.5.3 The OLS (illustrated on Figure 47) completely surround Gatwick Airport and currently extend out to 15 kilometres. They are designed to protect aircraft from obstacles when manoeuvring on the ground, taking off, landing or flying in the vicinity of the airport. It is important that these surfaces are not infringed by proposed development. The OLS represent the lower limit of the blocks of protected airspace around an aerodrome.

3.5.4 They form a set of three dimensional surfaces which extend upwards and outwards from the runways encompassing the critical airspace utilised by air traffic. An illustration of the considerations that make up the OLS is shown at Figure 47.

3.5.5 The design must ensure that it does not breach the planes of the OLS by siting buildings and structures at appropriate locations.

Communication, Navigation & Surveillance (CNS) Equipment

3.5.6 Buildings and structures can impact on equipment utilised by both the airport and by aircraft. The equipment is collectively referred to as Communication, Navigation and Surveillance (CNS) and is the ground infrastructure used by both Air Traffic Control (ATC) and aircraft. Aircraft can be those approaching/departing Gatwick Airport as well as those further away and in the cruise. This equipment is mostly a form of radio equipment. Potential issues can include:

- Signal reflection;
- Refraction or false plots on radar Interference/clutter and false plots on radar displays; and
- Any large areas of metallic/reflective materials must be avoided as they can cause signal reflections and glint and glare distractions to aircrew and ATC.

3.5.7 The design of buildings and structures shall ensure that these risks and managed through detailed design and the use of materials.

Instrument Flight Procedures (IFPs)

3.5.8 Instrument Flight Procedures are a series of predetermined manoeuvres, by reference to flight instrument or satellite-based waypoints, with specified protection from obstacles. An IFPs primary purpose is to provide clearance from obstacles and to allow safe aircraft operations to/from the runway into the local airspace.

Lighting

3.5.9 At night and in periods of poor visibility during the day, pilots rely on a particular pattern of aeronautical ground lights, principally the approach and runway lights, to assist in aligning themselves with the runway to land at the correct point. Depending on their location various types of lighting have the potential to cause issues. Examples of such lighting includes:

- Temporary lighting including construction lighting, light shows, temporary installations;
- Advertisements;
- Lighting of buildings and other structures;
- Street and car park lighting; and
- Flood lighting at sporting venues or similar.

3.5.10 No lighting should be displayed which could distract pilots or confuse them by being mistaken for aeronautical ground lights. This influences the design of the Project's lighting and the lighting Design Principles set out in Appendix 1.

Wildlife Hazard Management

3.5.11 Aircraft are vulnerable to wildlife strike risk. Species such as deer, badger & foxes can cause safety concerns, however birds are the most problematic species in the UK. Bird strike is one of Gatwick Airport's top risks and GAL is required under regulations to 'reduce the attractiveness of the area to birds/wildlife on and in the vicinity of the airport'. Gatwick Airport has a robust wildlife hazard management regime, including 24 hour patrols by dedicated personnel on the airfield, regular monitoring outside of Gatwick Airport boundary, and strict habitat management.

Public Safety Zones

3.5.12 Public safety zones are areas at either end of the runway and development is restricted within these zones to minimise the risk to public safety the event of an aircraft accident on take-off or landing. The zones relevant to Gatwick Airport are illustrated on Figure 49.

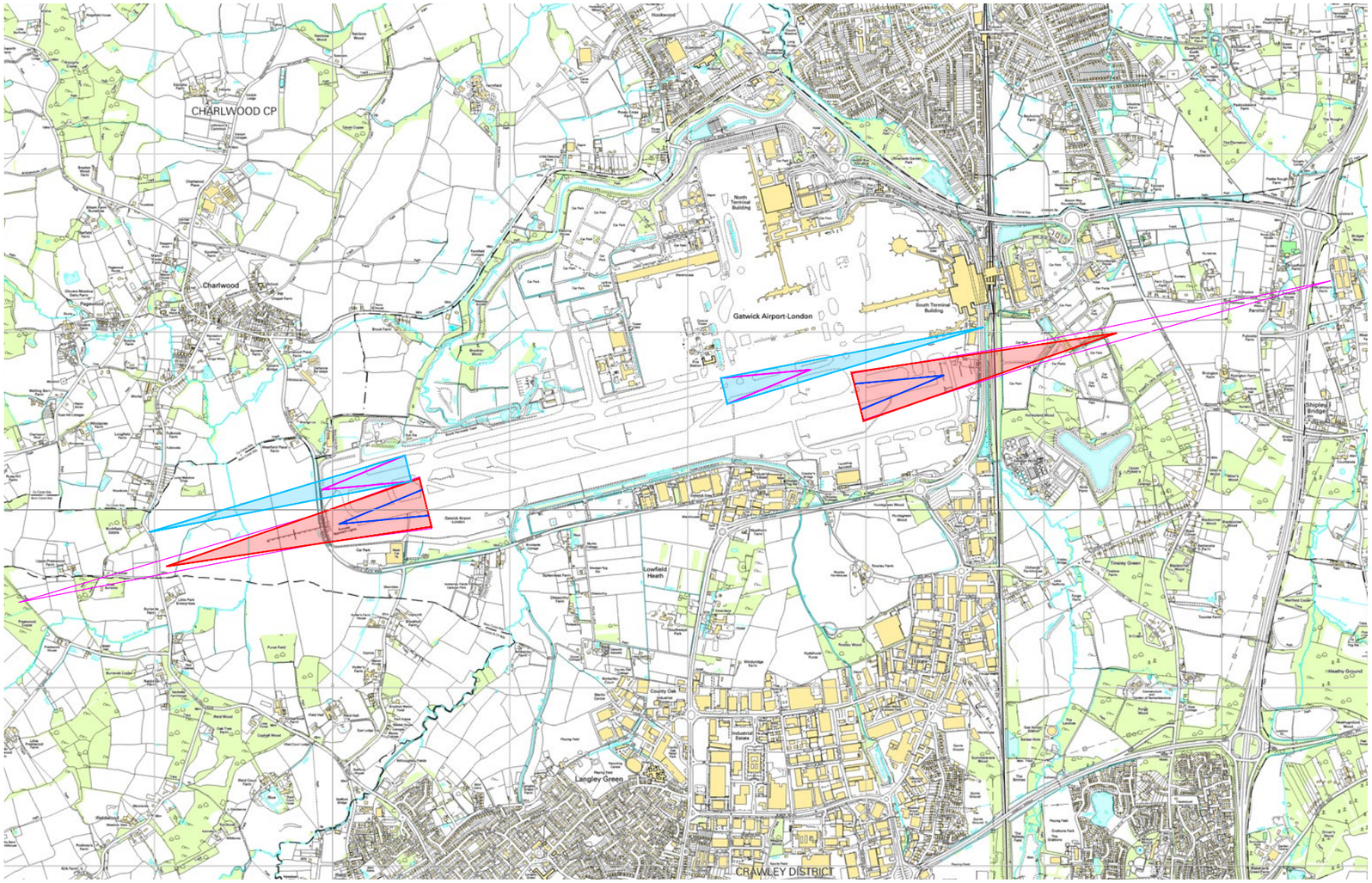


Figure 49. *Public Safety Zones - Main Runway and Northern Runway*

3.6 UTILITIES

3.6.1 The proposed development will impact a number of existing utilities, which will need to be diverted, relocated, protected or made redundant. As detailed design progresses the extent of the impact on these existing utilities will be carefully considered and discussed with the relevant statutory undertaker.

3.6.2 Any power, water and communications requirements will be considered as part of the detailed design stage and the requirements will be discussed with the relevant statutory providers.

3.6.3 The Project will protect the utilities provider's assets which will include provisions which protect the statutory undertaker, their assets and ensure their ability to carrying out their statutory undertaking is maintained.

4.0 MASTERPLAN CONCEPT & EVOLUTION

4.1 OPTIONEERING PROCESS AND MASTERPLAN EVOLUTION

4.1.1 As part of the airport planning process, Gatwick Airport regularly publishes a masterplan, setting out long term plans for airport growth and development. A masterplan was prepared in 2019 which considered three scenarios to respond to the increasing demand at Gatwick Airport:

- Scenario 1: Gatwick Airport remains a single-runway operation using the existing main runway. This scenario would use technology to increase the capacity of the main runway, leading to incremental growth through more efficient operations;
- Scenario 2: The existing northern runway is routinely used together with the main runway (Figure 50); and
- Scenario 3: Gatwick Airport continues to safeguard for an additional runway to the south of the existing airport.

4.1.2 The do-minimum option (Scenario 1) was considered to restrict future growth and the ability for Gatwick Airport to contribute to meeting future demand for increased aviation capacity. Scenario 3 was not pursued in light of the Government's support for a third runway at Heathrow Airport but the Gatwick Airport will continue to safeguard the land to the south of the airport to allow for the possibility that it is required in the future.

4.1.3 GAL confirmed it would pursue the dual runway option (Scenario 2) as it offers the optimum approach to achieving the objectives and makes the best use of existing runways and airport infrastructure.

4.1.4 Making best use of the two existing runways at Gatwick Airport requires alterations to the northern runway to provide a minimum separation distance of 210 metres from the main runway. In turn, this requires relocation of a number of other airfield facilities. Improvements would be required to both airside and landside elements of Gatwick Airport to accommodate the increase in aircraft and passenger throughput.

4.1.5 Developing a masterplan for Scenario 2 has been a focus of the Project. The Project team has had regard to the policies set out in the Airports NPS. A two-stage appraisal process was followed to identify the preferred proposal to support growth at Gatwick Airport:

- Stage One: Consideration of strategic growth options; and
- Stage Two: Appraisal of key areas of the development.

4.1.6 Also considered was the Infrastructure Planning – Environmental Impact Assessment Regulations 2017 (the EIA Regulations) which requires the assessment of 'reasonable alternatives' to a proposed development including how an option was selected following that assessment.

4.1.7 An options appraisal for the design and layout of the Project components has been undertaken by specialists to consider the feasibility and potential impacts of each of the component options. A number of options of identified and assessed using the criteria set out in **ES Chapter 3 Alternatives Considered** (Doc Ref. 5.1).

4.1.8 Optioneering was undertaken for a range of Project components including the location of the runways, taxiways, terminals, and ancillary facilities. Section 4.4 of this DAS summarises design evolution and development process. The full details of the process are set out in **ES Chapter 3 Alternatives Considered** (Doc Ref. 5.1).

4.1.9 The outcome of this initial optioneering process was to identify the preferred option for each component to be taken forward as part of the statutory consultation.

4.2 DESIGN DEVELOPMENT & REVIEW

4.2.1 The outcome of this design evolution is a masterplan which underpins this DCO application and sets out the strategic stage of the design. As summarised above, detailed design work has been undertaken to establish the feasibility of the individual components that form part of the masterplan.

4.2.2 The level of design development varies depending on the project type, with the highways, flood compensation and airfield works needing greater technical definition to satisfy stakeholder and regulatory requirements whilst the buildings are at an earlier stage of development. These developments may include options to reflect the flexibility needed going forward so they can best react and cater to the needs at that time or for a specific tenant or user group.

4.2.3 All designs will be developed in more detail and are subject to the normal approvals processes so those contained with-in this document are indicative of what's possible or an outline representation of the requirements.

4.2.4 Consideration of the building form, location, aspect, layouts and facade treatments will be developed at the next stage of design. These will be further constrained by the Requirements set out in Schedule 2 of the draft CO, the Design Principles and other controlling mechanisms that form part of the DCO application.

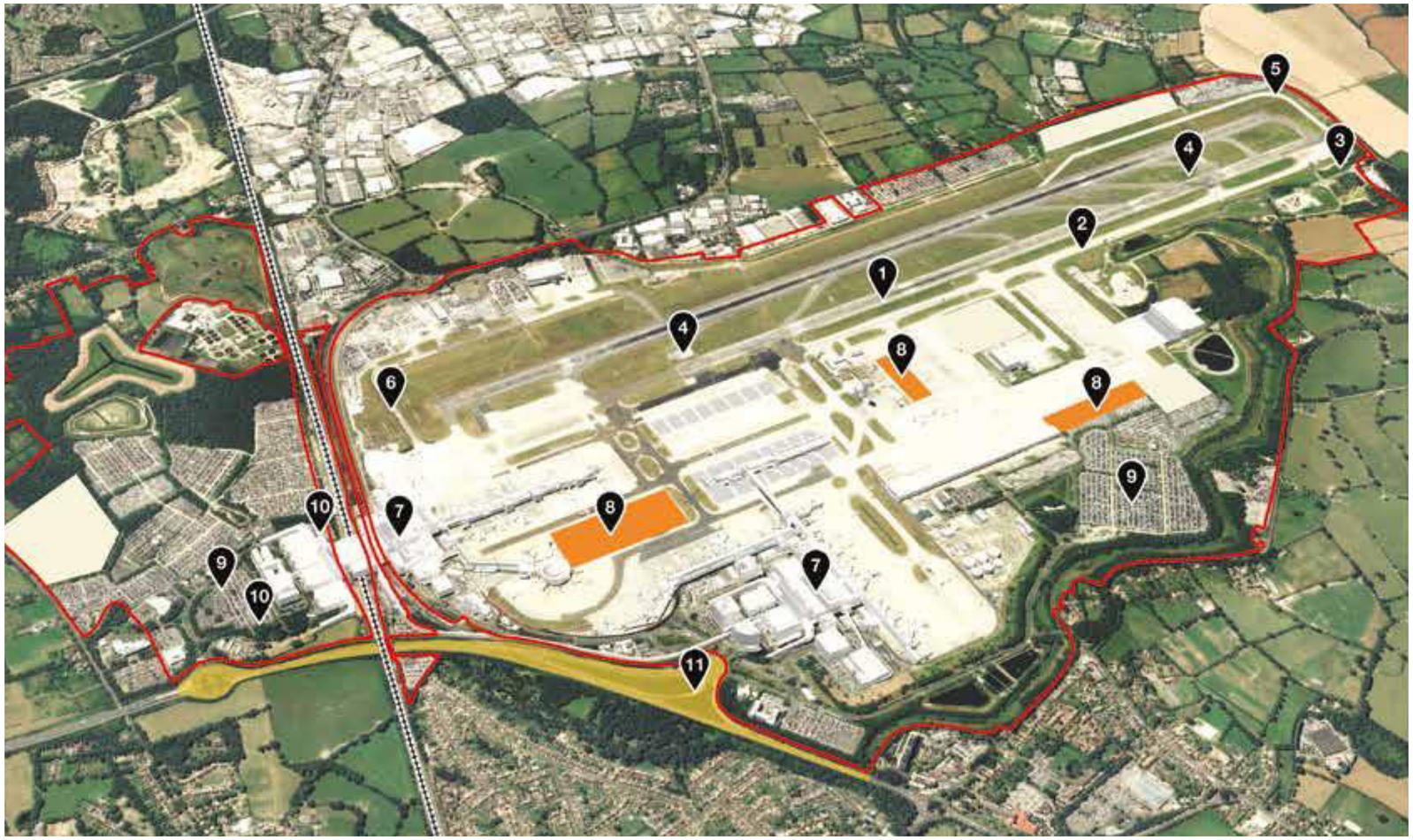


Figure 50. *Indicative Airport Layout Standby and Main Runway 2032*

KEY

Anticipated or potential developments

1. Widen existing standby runway
2. Relocate Juliet taxiway
3. New holding areas
4. Reconfigure existing Rapid Exit taxiways
5. New end-around taxiway
6. Existing taxiway used as end-around taxiway
7. Terminal Improvements
8. One further pier project (in one of the three location options shown)
9. Additional checked MSCP parking
10. Additional hotel/office development
11. Additional road improvements

Airport Boundary

N

4.3 CONSULTATION

4.3.1 Following the identification of the preferred component options that formed the wider masterplan, Gatwick Airport set out to undertake a statutory consultation and receive feedback from the public on the proposal put forward. The following section sets out how feedback received as part of the two public consultations has influenced design development of the masterplan submitted as part of this DCO application.

4.3.2 Detailed responses received and Gatwick Airport's response to consultation responses are set out in the **Consultation Report** (Doc Ref. 6.1).

Autumn 2021 Consultation

4.3.3 Gatwick Airport undertook a public consultation between 9th September and 1st December 2021 over a period of 12 weeks ('the Autumn 2021 Consultation'). This was a statutory consultation informed by the Preliminary Environmental Information Report (PEIR) which presented the preliminary findings of the EIA process for the Project at the time.

4.3.4 The consultation presented the Project's proposals, outlining the need for and benefits of the Project, and provided the likely environmental impacts of the Project and how those impacts would be mitigated.

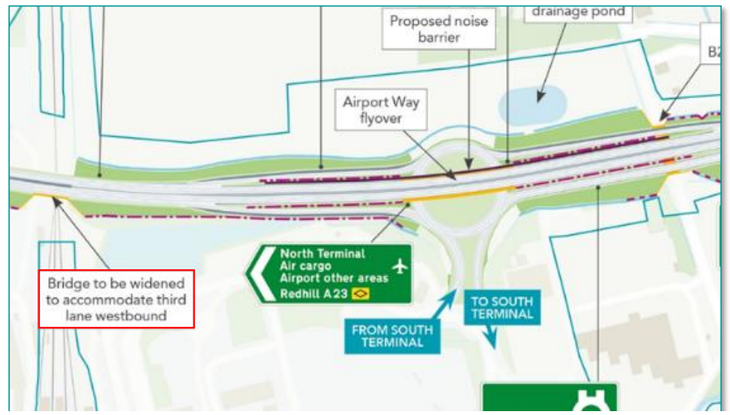
4.3.5 In response to the feedback received and ongoing stakeholder engagement, the following changes were introduced as a result of the Autumn 2021 Consultation:

a. The road improvement plans were revised to provide a layout that was more intuitive while still meeting the needs of local non-airport and airport traffic. (see examples in Figures 51 and 52). The Project team revisited previous options considered and undertook further assessment against criteria.

b. Commitment to the development of an Airport Surface Access Strategy (ASAS) to encourage staff and passengers to use sustainable travel modes where possible.

Autumn 2021

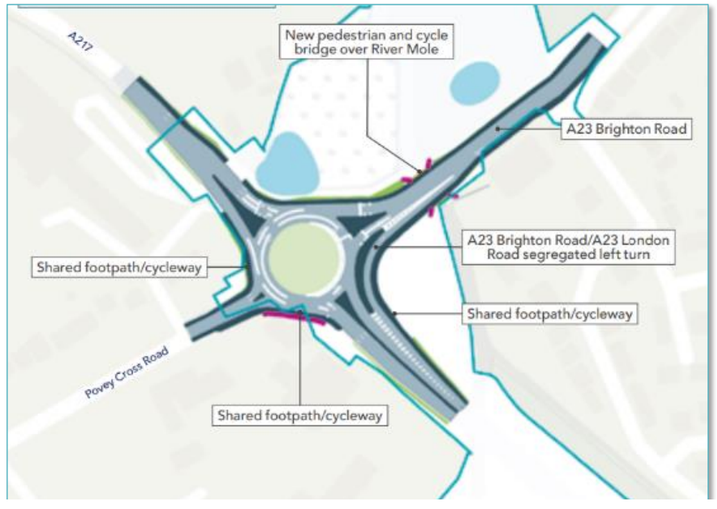
Summer 2022



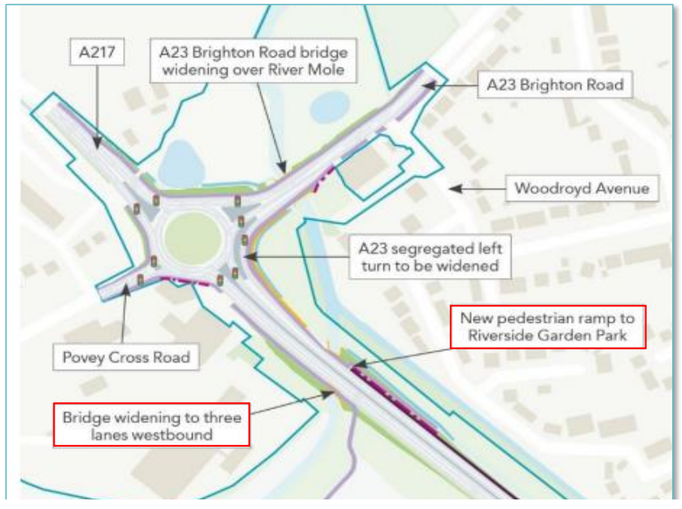
South Terminal junction largely unchanged but westbound slip from South Terminal now a lane gain arrangement to avoid traffic weaving. This requires widening of the bridge over the Brighton mainline railway

Figure 51. *Changes to the design of the South Terminal Roundabout between 2021 Consultation and the Summer 2022 Consultation*

Autumn 2021



Summer 2022



Scheme has matured with inclusion of environmental mitigations to the north, improved active travel facilities and deeper understanding of structural complexity of River Mole bridges.

Figure 52. *Changes to the design of the Longbridge Roundabout between 2021 Consultation and the Summer 2022 Consultation*

c. Feedback was also received regarding Gatwick Airport's commitment to sustainable travel. This has resulted in fewer new on-airport car parking spaces being proposed This has been balanced with the need to prevent additional off-airport parking and its consequences on local communities.

d. Predictions of future demand for hotels and office space have been refined following feedback. An increase in hotel rooms is proposed due to an expected increased in demand as passenger levels return to pre COVID-19 levels and continue to grow.

e. Further development of landscape and ecological proposals to respond to feedback.

f. Reduction in the amount of land required for flood compensation areas and a reduction in surface water drainage ponds.

g. Development of a Carbon Action Plan to describe the actions Gatwick Airport would take to reduce carbon impacts with its control.

h. Development of a Noise Envelope Group to support continued work on the proposal to set limits on noise from future operations at Gatwick Airport.

i. Selection of a CARE facility – the option closest to the terminals, to the north of the cargo hall.

j. A limited number of other changes are proposed to airfield infrastructure including running areas, Hangar 7, the east-west runway track, and the alignment of the north-west noise bund to improve noise mitigation for Charlwood residents.

4.3.6 Updated Preliminary Environmental Information was provided for the highway improvement changes as part of the subsequent consultation.

Summer 2022 Consultation

4.3.7 A second public consultation was held between 14th June and 27th July 2022. The Summer 2022 Consultation included updates on the preliminary environmental information in respect of the highway improvement changes, including latest thinking on measures to mitigate the likely adverse effects of these proposals.

4.3.8 A summary of the design changes introduced following feedback from the Summer 2022 Consultation are set out below:

Road Improvements: Landscaping - preliminary landscape proposals have been developed, with comments from National Highways incorporated into the design. Detailed landscape proposals will be agreed in consultation with the relevant authorities should the DCO be granted.

A23 - proposals for a noise barrier between the A23 London Road and Riverside Garden Park have been removed from the Project.

Active Travel: South Terminal access – the highway proposals now include enhancements to active travel infrastructure, including a connection between Balcombe Road and South Terminal.
A shared pedestrian and cycle path proposed between the Longbridge Roundabout to the North Terminal Roundabout was amended to a segregated pedestrian and cycle path along the southern side of the A23 London Road, crossing and then following the River Mole for a short distance before connecting to Perimeter Road North and Longbridge Way.
Signalised pedestrian and cycle crossings on all arms of the Longbridge roundabout.
A signalised pedestrian crossing on the west side of the new A23/North Terminal junction.

Unauthorised Car Parking: the proposals no longer include provision on the Airport to reprovide off-airport unauthorised parking lost as a result of local authority enforcement.

Car parking (green spaces): new green space has been created with the proposed removal of Car Park B. There are no longer any proposals for new car parks on green space.

4.4 SUMMARY OF DESIGN EVOLUTION

4.4.1 The process of developing the indicative masterplan that forms part of this DCO application was iterative and considered specific requirements for each component, the views of stakeholders as well as minimising adverse effects.

4.4.2 Ongoing stakeholder engagement has led to more detailed proposals in some areas. For example, as the surface access improvements include works to assets owned by National Highways. It was important that the necessary level of detail was provided to ensure National Highways are comfortable with the proposed approach.

4.4.3 The following section provides a summary of the design evolution of the following features that form part of the indicative masterplan:

- Runways;
- Landscape and ecology;
- Core airfield;
- Core passenger facilities;
- Hangars;
- Car parking;
- Hotels and offices;
- CARE facility;
- Rendezvous Point North;
- Water;
- Surface access;
- Active travel; and
- Open space.

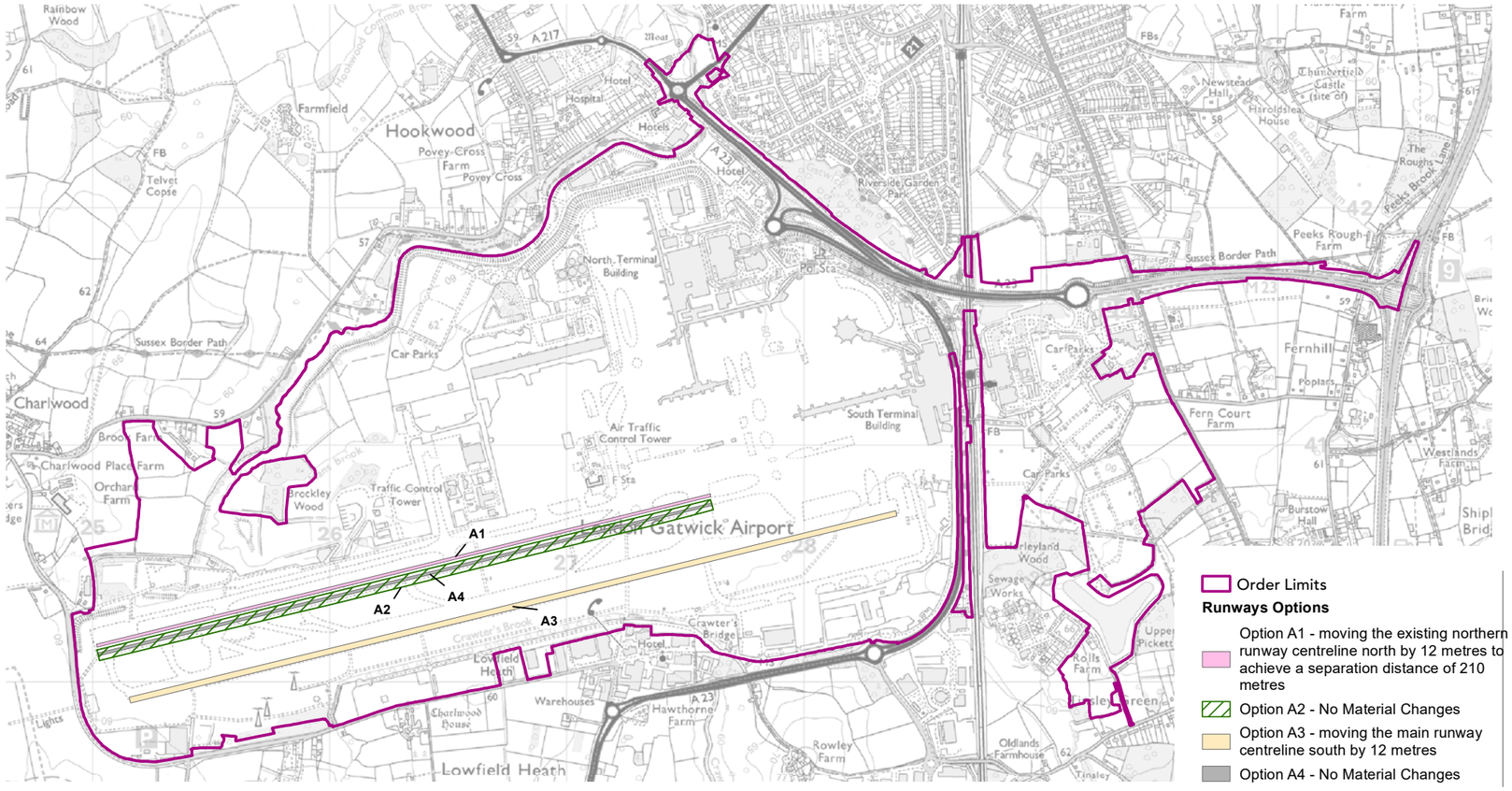


Figure 53. *Runway Arrangement Planshowing the four options considered for the northern runway*

Runways

4.4.4 Following the decision to proceed with Scenario 2 (alterations to the existing northern runway), design development considered safety, capacity and resilience. Four alteration options were appraised which are shown on Figure 53, these included:

i. extending the existing northern runway north by 12 metres,

ii. challenging the separation distances,

iii. extending the main runway south by 12 metres, and

iv. repurposing the northern runway for Code C aircraft only.

4.4.5 Option 4 was considered 'high risk' against operations and consenting criteria due to reduced flow capacity and likely regulatory challenges. Option 3 has a 'high risk' impact on business case due to the anticipated effect on ATM volumes and no capability in low visibility during construction. Option 2 performed best against the environmental criteria as fewer physical works were required, however, it was considered a 'high risk' option due to regulatory non-compliance.

4.4.6 Option 1, whilst presenting challenges to operations during construction, in its end state delivered a dependent runway model that met the safety, capacity and resilience outcomes. Option 1 was also satisfactory against the environmental, planning, land, business case and deliverable criteria.

4.4.7 Feedback arising from the public consultations and stakeholder engagement has not changed the design of the northern runway and Option 1 has been taken forward within the application for DCO.

Core Airfield

4.4.8 The core airfield includes the taxiways, End Around Taxiways and holding areas.

Taxiways

4.4.9 Alterations are were appraised for the core airfield which includes the taxiways. The existing taxiways would require amendment and realignment to accommodate the altered northern runway and to provide sufficient room for safe manoeuvring of aircraft associated with both runways in accordance with international standards. Redundant areas of hardstanding would be removed.

4.4.10 The repositioning of the taxiways is led by the extension of the northern runway north by 12 metres. In some cases, changes to the taxiways were not subject to options appraisal as there were no feasible alternative options as they have a functional need to be located where they have been proposed (such as Taxiway Juliet).

4.4.11 Design modifications were also considered to increase the range of alternative routes for aircraft and provide enhanced operational resilience. This saw consideration of extending existing taxiways rather than relocating them. These extensions were also considered to be 'single option' solutions with no feasible alternative options available as they were driven directly by the increased capacity of other airfield components.

End Around Taxiways

4.4.12 As part of design development, Gatwick Airport recognised that the provision of End Around Taxiways would be an effective measure to introduce within the airfield to de-conflict the flow of aircraft between closely spaced parallel runways.

4.4.13 Correct layout and position of exit taxiways ensures that the runway occupancy is optimised, the flow rate is maximised, and any inherent risk of aircraft conflict is minimised. The location of these End Around Taxiways is driven by the location of the extension to the northern runway and the existing main runway locations.

4.4.14 Six End Around Taxiway options were appraised as shown on Figure 53. A hybrid option was taken forward which combined the three best performing for further design development as part of the DCO application.

Holding Areas

4.4.15 It was identified that there was no provision for a dedicated aircraft hold area to serve the northern runway during westerly runway operations, with aircraft having to hold on the access taxiways, creating congestion. To maximise the efficiency of dual runway operations, and maintain airfield traffic flows, provision of a dedicated hold area serving the northern runway in westerly mode of operation, away from the taxiway network, is required.

4.4.16 Three options were appraised for providing this capacity at different locations around the airfield. The Charlie Box option was selected to take forward for further design development with its construction impacts deemed mitigable.

4.4.17 No significant changes were proposed to the design following the consultations.

End Around Taxiways

Terminals

4.4.18 An increase in passenger numbers will require terminal facilities to be improved. Six options were considered for terminal improvements, this included the consideration of constructing various new terminals at different locations and expansions to the existing North Terminal and South Terminal. The location of the option considered are illustrated on Figure 54.

4.4.19 The two new terminal options (one in the north-west at Pier 7 and one to the south of the existing main runway) were discounted due to cost and feasibility issues. A new terminal north-west of Pier 7 would put greater pressure on surface access and was unlikely to provide adequate forecourt capacity. A new terminal south of the existing main runway would provide the required capacity but this location is currently safeguarded for an additional new runway south of the main runway.

4.4.20 Expansions to the existing North and South Terminals generates the smallest expansion requirement in each terminal as it uses residual capacity in both terminals to offer maximum utilisation of existing infrastructure. As a consequence it has fewer consequential requirements for demolition and re-provision of existing buildings than expansions to either the North Terminal or the South Terminal alone. The location and relatively limited scale of expansion work means the option scores well against environment, planning, water and community criteria.

4.4.21 No changes to the preferred option have been made following consultation. The preferred option for modest expansion to the North and South Terminals has been progressed as part of design development and forms part of the proposals for the DCO application as set out in Volumes 2 to 4 of this DAS.

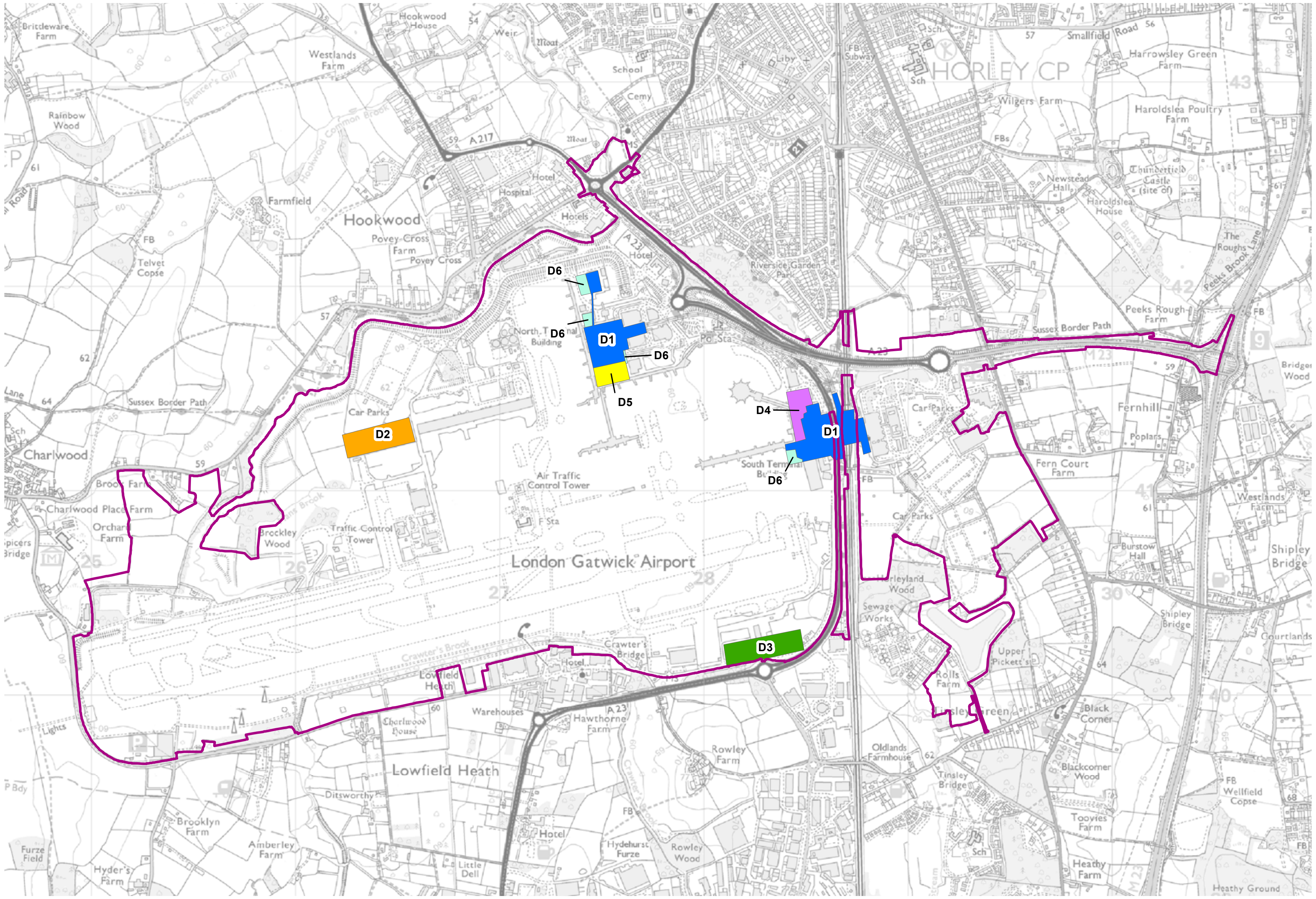


Figure 54. Terminal Options Considered

KEY

Order Limits

Terminal options

- Option D1 - Do nothing approach
- Option D2 - New terminal in the north western part of the site
- Option D3 - New terminal in the southern part of the site
- Option D4 - Expand the existing South Terminal only
- Option D5 - Expand the existing North Terminal only
- Option D6 - Expand both existing south and north terminals

Piers

4.4.22 Gatwick Airport currently supports six piers from which passengers embark and disembark aircraft (Piers 1, 2 and 3 at South Terminal and Piers 4, 5 and 6 at North Terminal). The number of aircraft stands serviced by each pier is dependent on the type and size of aircraft. Twelve options were considered as part of the appraisal process – the locations of these options are illustrated on Figure 55. These options included upgrading of existing piers, new piers that are connected to the terminal buildings and new piers that are reached by bus or by an autonomous vehicle link.

4.4.23 The option selected to take forward to design development was the construction of a new pier – Pier 7 to the south of the cargo area (shown as Option 10 on Figure 55). Due to its siting adjacent to the proposed Taxiway Lima extension, it provides the greatest free-flow of aircraft on the taxiway system, avoiding the risk of delays caused by congestion associated with the vast majority of the other options appraised.

Stands

4.4.24 Gatwick Airport currently operates 136 stands or centrelines, many of which are used flexibly to accommodate Code C and Code E aircraft. Additional stand capacity is required to deliver the increased passenger numbers. Of the options considered (illustrated on Figure 55), no single solution was capable of delivering the required amount of stand capacity.

4.4.25 A combination of options was selected for further design development. These options are Option 3 (Oscar Stands), Option 5 (40s Stands) and Option 8 (Taxiway Lima Extension Stands) which are shown on Figure 55.

4.4.26 This further design development resulted in the identification of additional opportunities to accommodate enhanced stand provision and consequently, Option 9 (single Hangar 7 Stand) and Option 10 (Stands 150-151) (both shown on Figure 55) have been incorporated into the design that forms part of the Project.

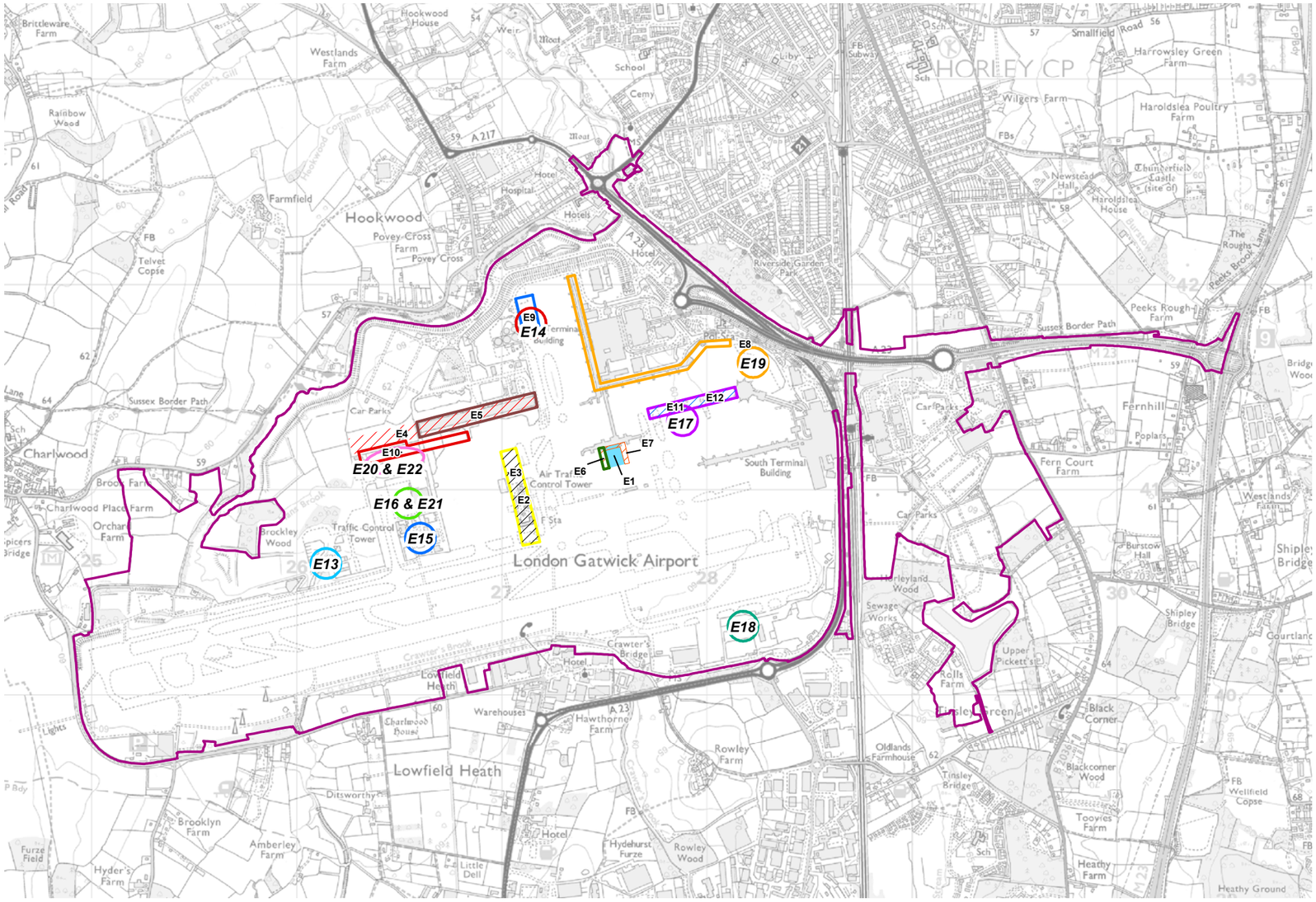


Figure 55. Location of Piers and Stands Considered

Hangars

4.4.27 An additional hangar is required at Gatwick Airport to support the Project. It would be required to accommodate Code E aircraft, with particular attention to the new 777.

4.4.28 9x extended dimensions. Five locations were evaluated for this proposed new hangar as shown on Figure 56. This included locating the hangar at the site of the Long Stay Summer Special Car Park (Option 1 on Figure 56) which was the preferred option as it provided the necessary area for associated infrastructure and manoeuvring, with the loss of parking able to be re-provided through the provision of deck parking elsewhere at the site.

4.4.29 The options that were located adjacent to Hangar 6 and the Oscar area (shown as Options 2 and 3 on Figure 56) were discounted due to potential impacts on operations due to their proximity to the runways. The other two sites considered (Options 4 and 5 on Figure 56 did not provide sufficient space for the necessary infrastructure and manoeuvring of aircraft.

4.4.30 No changes to the preferred option have been made post consultation or in response to detailed design development.

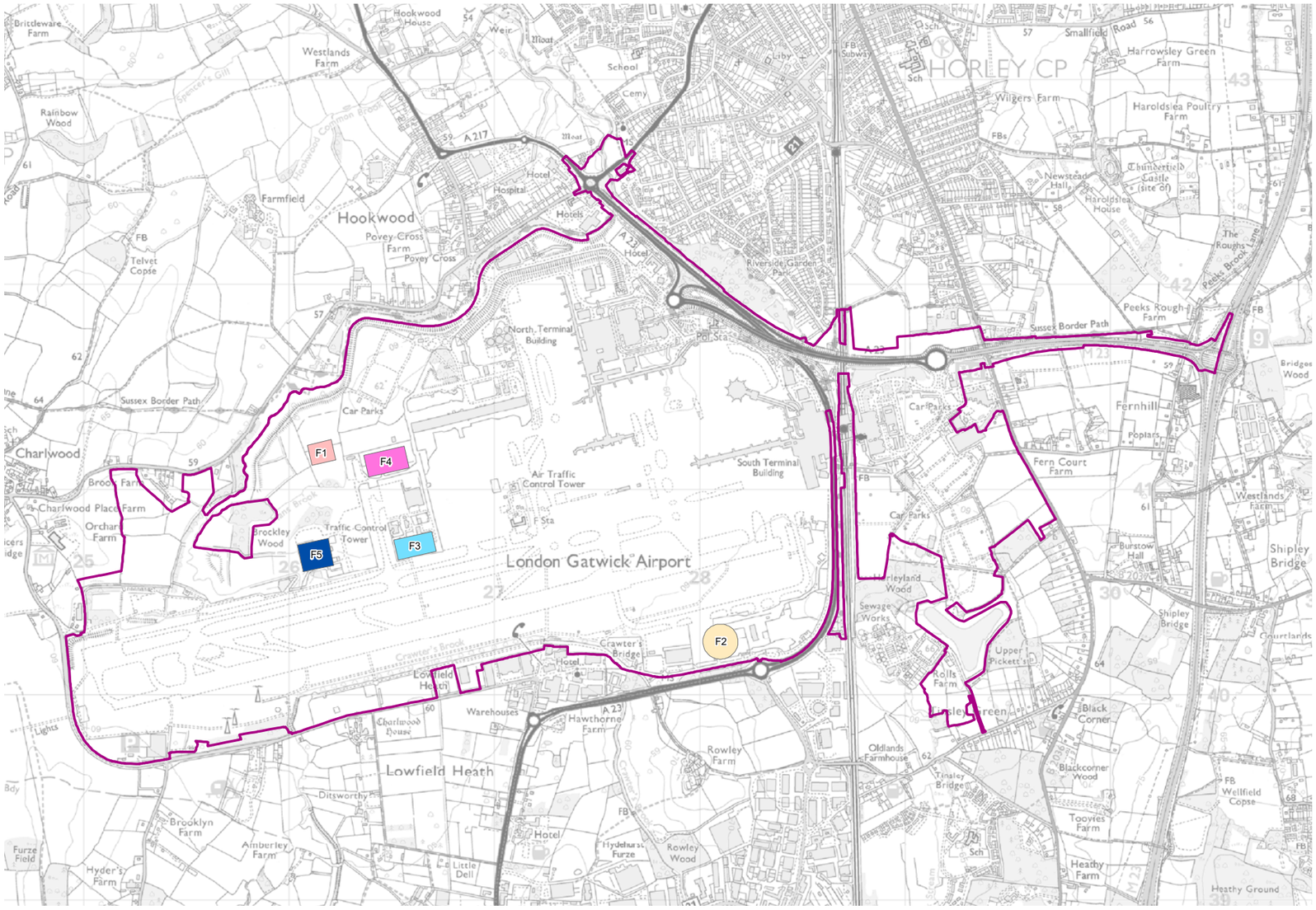


Figure 56. Hangar Options Considered

KEY

Order Limits

Hangar Option

- Option F1 - a site which is currently used for car parking
- Option F2 - a site adjacent to Hangar 6 currently used for car parking;
- Option F3 - a site within an area of the airport known as Oscar, adjacent to the existing Virgin hangar;
- Option F4 - a site currently used for Long Stay Summer Special car parking
- Option F5 - land adjacent to the Boeing Hangar.

Car Parking

4.4.31 The amount of car parking available for passengers is planned to increase as passenger volumes rise, although the ratio of spaces / mppa declines over time. This decrease is due to changes in the seasonality of demand (leading to greater utilisation of existing capacity in the off-peak) and changes in mode share (as future growth is forecast to be greater for the non-UK originating market and passengers who choose public transport over parking).

4.4.32 The Project also results in some areas of the current car parking estate being withdrawn and allocated for alternative use associated with the Project. As a result, there is also a requirement to re-provide these spaces lost. Table 9.3.1 provides a summary of the projected future parking demand. The requirement for parking has been reduced since the original options appraisal was conducted. These options are illustrated on Figure 57.

4.4.33 The requirements for car parking have changed considerably since the original preferred options to accommodate additional and replacement car parking were assessed. These changes have occurred as a consequence of revised modelling, requirements for competing component and design development, and in direct response to comments received as part of the Autumn 2021 and Summer 2022 consultations. This has resulted in several changes to the preferred car parking options.

4.4.34 Engagement with local authorities indicated a target to reduce the current estimate of 6,300 unauthorised off-airport spaces to 3,000 spaces, a reduction of 3,300 spaces. Gatwick Airport therefore included provision for 3,300 additional future car parking spaces in the Autumn 2021 Consultation, to allow for, and to assist the most proximate authorities with the removal of existing off-airport unauthorised parking in the areas around Gatwick Airport.

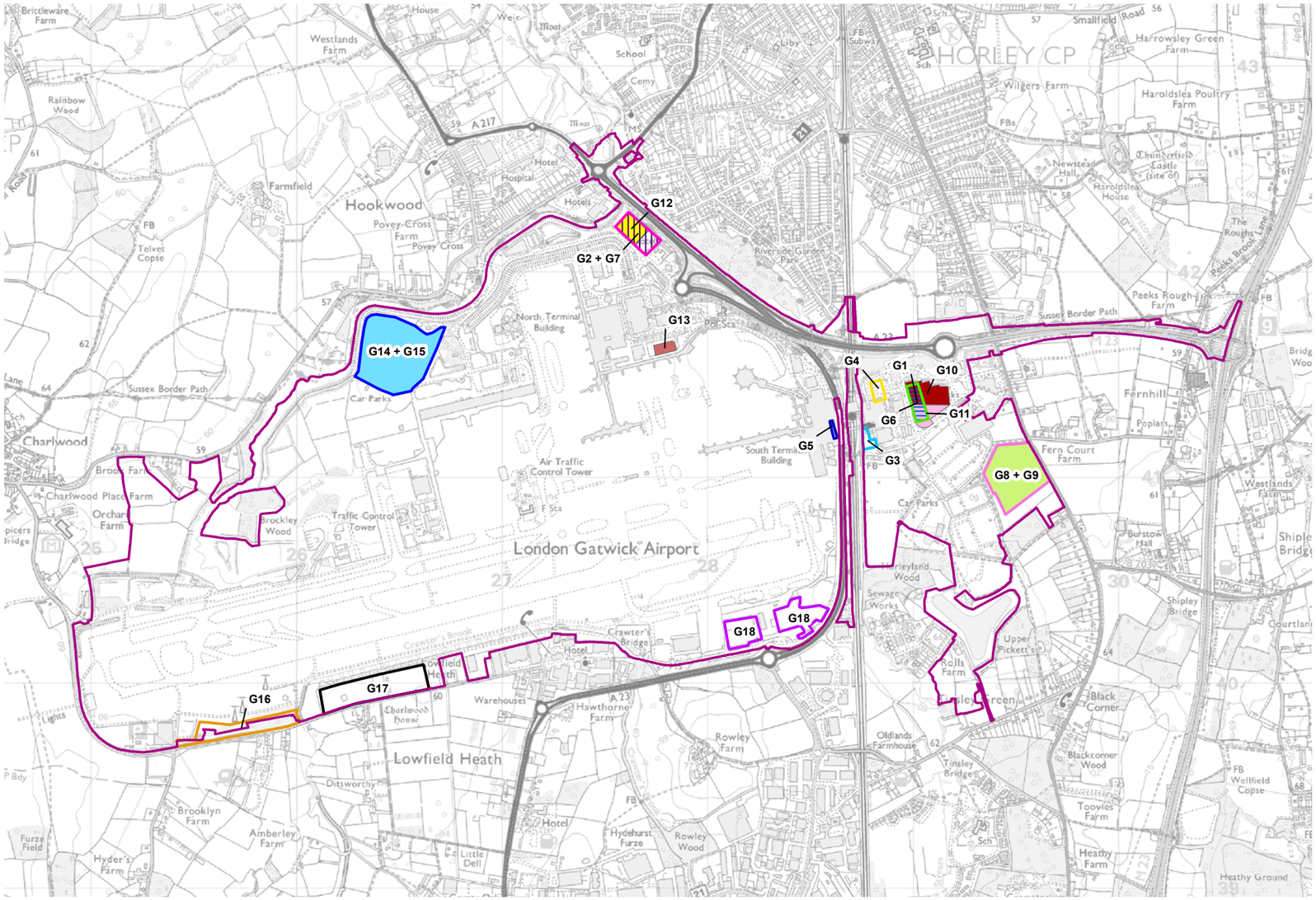


Figure 57. Hotels, Offices and Car Park Locations Considered

4.4.35 A number of comments from stakeholders were received in response to this aspect of our Autumn 2021 consultation. Several of these questioned the need for the additional parking spaces described in that consultation, and whether the assumptions were aligned to Gatwick Airport commitments for sustainable growth.

4.4.36 In response to those concerns, the Summer 2022 consultation proposed a different approach to providing car parking spaces, particularly whether the identified 3,300 spaces that may be needed to replace off-airport unauthorised spaces should be included within the Project.

4.4.37 The Summer 2022 consultation proposed a net reduction of over 8,000 spaces on the previous approach plus additional support for initiatives for sustainable travel. This included the following revisions to the car parking design following the Autumn 2021 Consultation which were consulted upon:

- All proposed parking at Pentagon Field (reduction of 5,800 spaces);
- The deck parking at Car Park X was removed (reduction of 2,300 spaces);
- North Terminal long stay car parking scaled back to 2,000 spaces;
- Decking was added to MA1 (increase of up to 2,400 spaces);
- Multi-Storey Car Park 4 was removed (reduction of 1,500 spaces); and
- Expansion of the car parking at the Hilton Hotel (addition of 820 spaces).

4.4.38 Following the consideration of responses to the Summer 2022 Consultation, further refinements to the car parking strategy have been made. New car parking is proposed on site to meet additional demand generated by the proposed increase in passengers due to the Project, and to replace existing parking spaces that would be lost due to development associated with the Project. Following feedback, the Project no longer takes into account any reduction in unauthorised car parking sites away from Gatwick Airport as part of its on-airport parking provision.

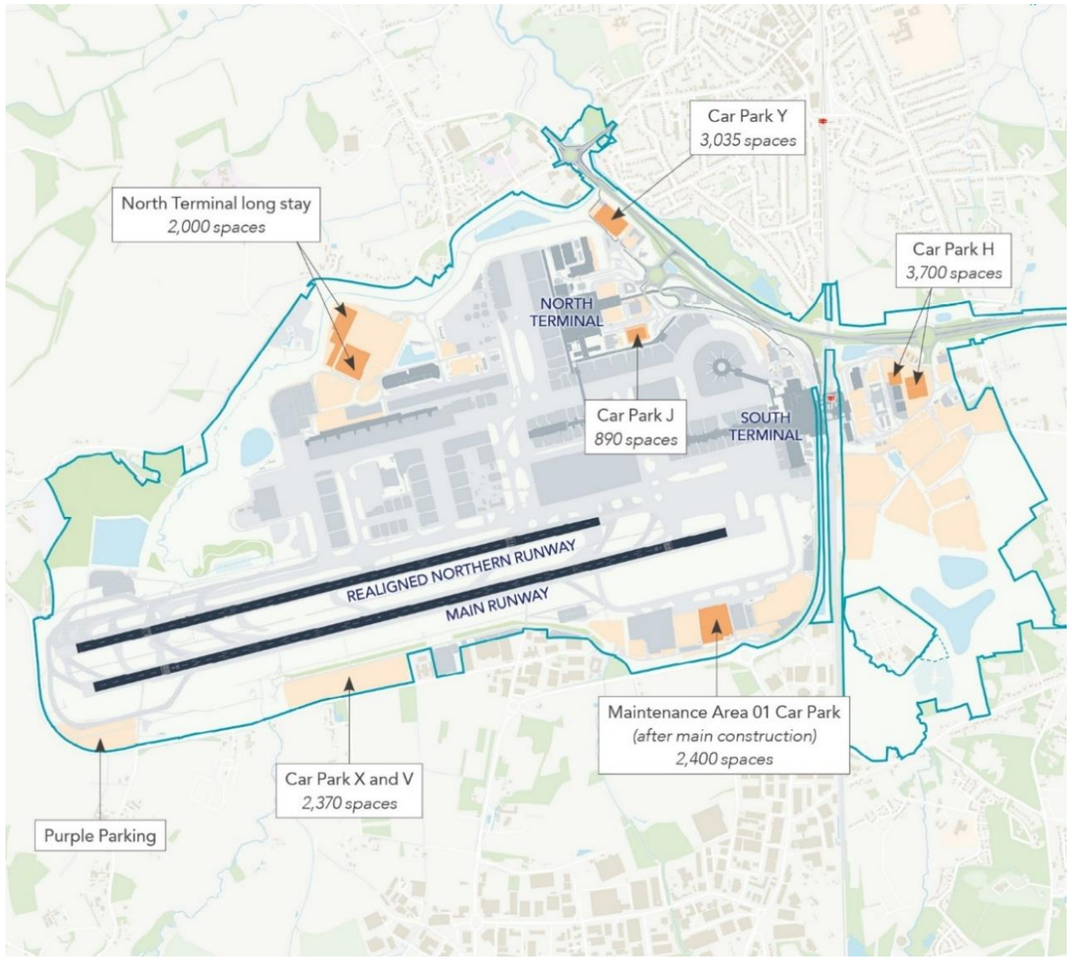


Figure 58. Car Park Provision Strategy

YEAR	MPPA	ON-AIRPORT PARKING SPACES	PARKING SPACES/MPPA
2019 BASELINE	46.5	46,700	1,000
2038 FUTURE BASELINE	62	53,271	860
2038 NRP	75	53,341	765

Figure 59. Table 9.3.1 - Existing and indicative future parking demands at Gatwick

4.4.39 In summary the Project, the following comprises the preferred options for car parking as illustrated on Figure 58:

- Car Park H (South Terminal, walk to terminal) – 3,700 spaces (Options 3 & 4);
- Car Park Y (North Terminal, walk to terminal) – 3,035 spaces (Option 5);
- Car Park J (North Terminal, walk to terminal) – 890 spaces (Option 6);
- North Terminal Long Stay Decking (North Terminal, bus to terminal) – 1,680 spaces (Option 8);
- At the existing Purple Parking site (surface level only) – 700 spaces– (revised Option 10); and
- The relocated Purple Parking is proposed at the eastern section of existing Car Park X. Car Park X is currently used for staff car parking and the relocated Purple Parking would entail the loss of 1,125 car parking spaces (that would be accommodated on the existing Purple Parking site and the North Terminal Long Stay car park. The relocated Purple Parking would accommodate 3,280 car parking spaces (the same number as would be lost from the existing site).

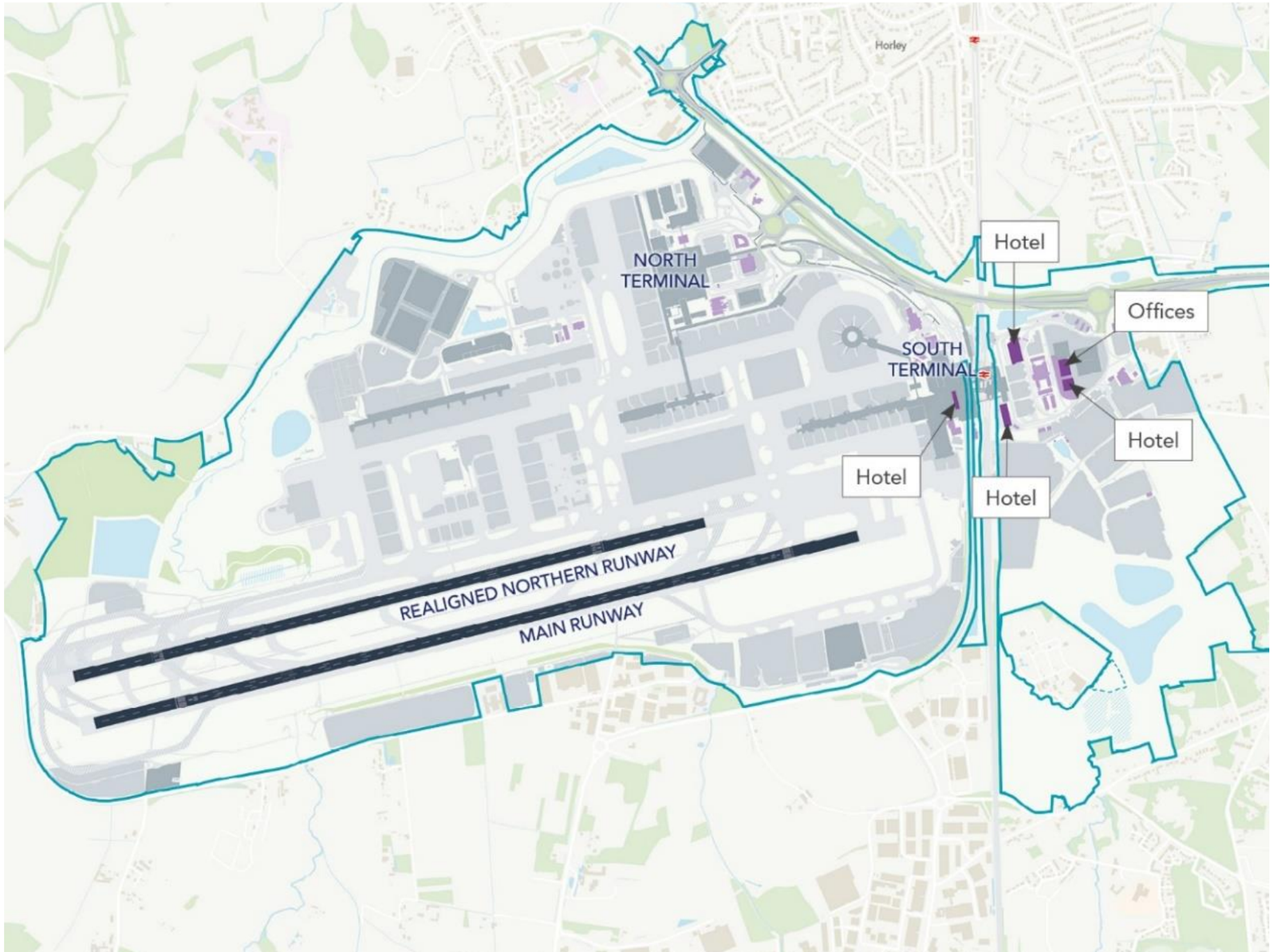


Figure 60. Revised Hotels and Offices Location

Offices

4.4.40 The requirement for additional office provision is being assessed against passenger growth forecasts and benchmarking with other airports. It was originally considered that there could be a requirement for approximately 9,000 square metres of office space.

4.4.41 Two locations were identified as offering potentially suitable options for new office provision (shown on Figure 60) – Car Park H and Car Park Y. Car Park H was assessed as the better option of the two as it was better connected from a sustainable transport perspective nor would it give rise to flooding impacts.

4.4.42 Since the original options assessment was conducted in 2019, the occupation of existing on-airport office floorspace has reduced. This has largely resulted from the impact of the COVID-19 pandemic which has reduced demand for non-airport operations to be located on-airport and on-airport operators seeking

greater efficiencies in space (largely through a shift to hybrid working and maximising on-airport operations via technological improvements).

4.4.43 The demand for offices is now expected to be met through a combination of the take up of existing vacant office floorspace and the displacement of non-airport related occupiers to off-airport locations.

4.4.44 Based on the existing vacancy levels and demand ratios, it is considered that the Project would not itself generate a demand for additional office floorspace until 2038 and by then, only for 350 square metres. Following further design development, Car Park H remains the preferred option to provide for both the additional 350 square metres of demand and to replace office space lost through the conversion of Destinations Place.

Hotels

4.4.45 Initial forecasting indicated that the Project would generate a requirement for a further 2,500 hotel bedrooms by 2038. This was subsequently revised to revised to a requirement for 3,366 hotel bedrooms (rising to 3,861 by 2047) of which 1,250 are to be provided at Gatwick Airport itself.

4.4.46 Five options for the provision of additional hotel facilities were considered as part of the initial appraisal. The location of these sites are shown on Figure 60. Three options which included the provision of a new hotel facilities at existing car parks – Car Park H, Car Park Y and the South Terminal Car Rental site – were taken forward for further design development.

4.4.47 Following the Autumn 2021 Consultation, further detailed design development took place which has included refinement and updating the assessments for additional office (described above) and hotel demand that would be generated by the Project. The updated assessments consider changes to the future baseline position and changes in hotel and office occupancy rates between 2019 and 2022.

4.4.48 Specific account has also been taken of the consultation feedback relating to the hotel proposals, including the

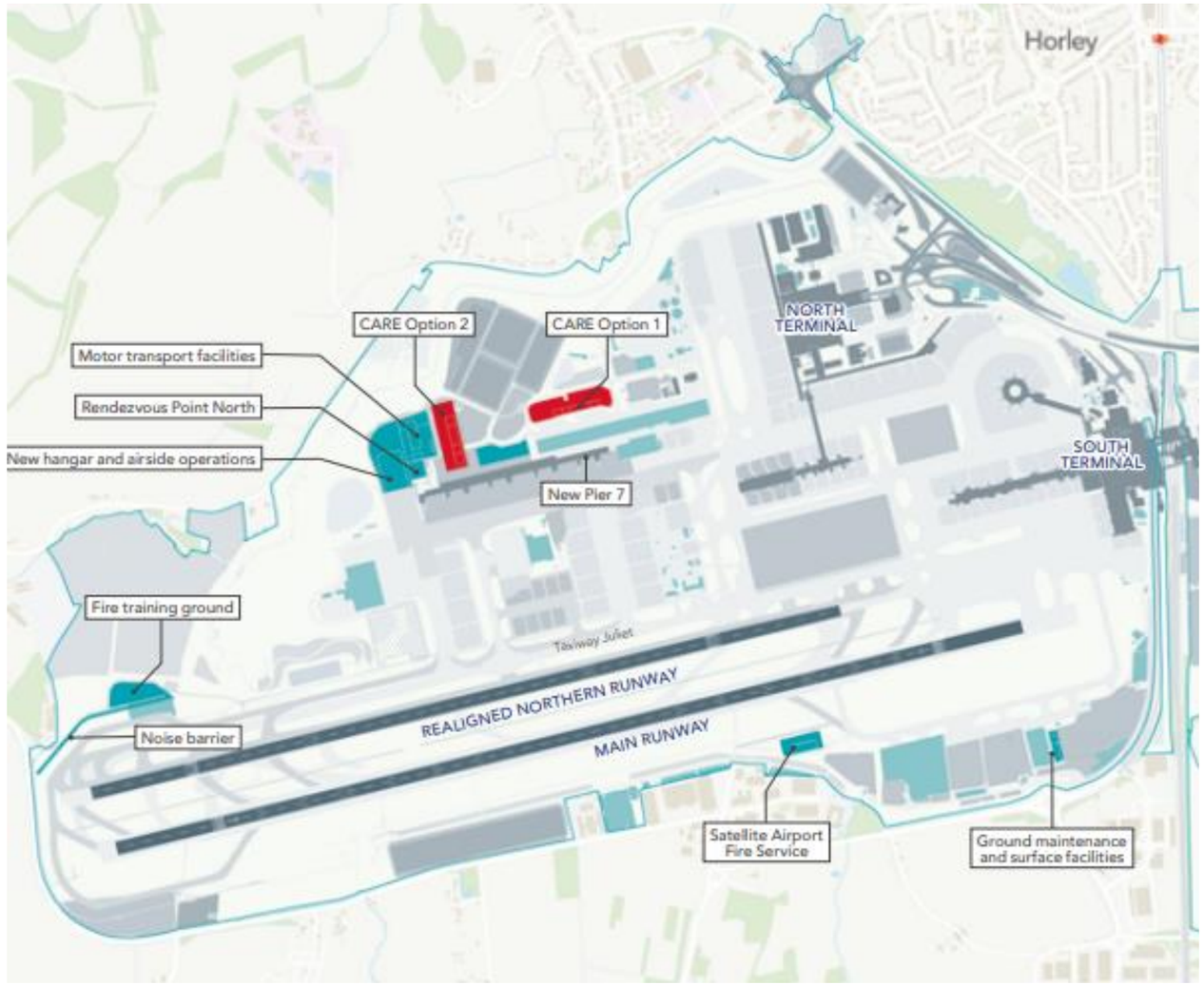


Figure 61. CARE Centre Location Options

need for further clarity on the demand assessment work and how that has determined the proposals.

4.4.49 The Autumn 2021 Consultation presented proposals for 1,000 additional bedrooms in three new hotels located on existing Car park H, Car Park Y, and the former South Terminal Car Rental site as per the initial options appraisal (shown on Figure 61).

4.4.50 Updated forecasting of hotel demand has shown that there is a need to further increase the amount of bed space required to comprise an additional 1,250 bedrooms (approx. 25% increase). The previously appraised options were reconsidered in light of this and Car Park Y was subsequently discounted due to competing demands for surface water storage capacity. The previously discounted options (adjacent to Multi-Storey Car Park 4 and the conversion of the Destinations Place office building) were brought forward in addition to the use of Car Pak H and the South Terminal Car Rental site.

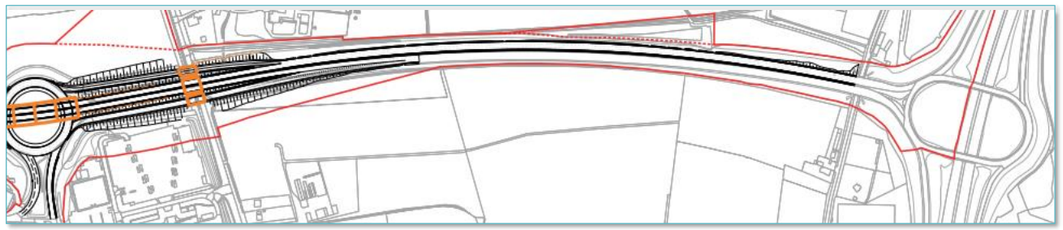
4.4.51 No further changes were proposed following the Summer 2022 Consultation.

CARE Facility

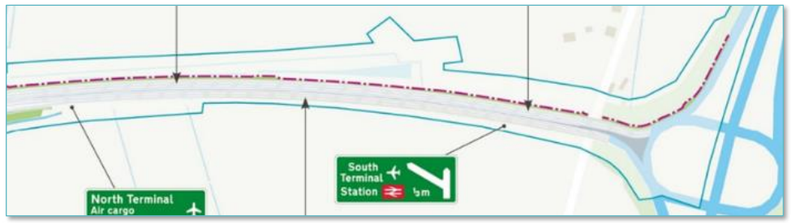
4.4.52 Gatwick Airport's existing waste management facility is located adjacent to the Hangar 7, to the north of Taxiway Juliet. The CARE facility comprises a biomass boiler, a waste processing building, compound area and bin store. There is a requirement to re-provide the CARE facility because of the options appraisal process identifying its current location as a preferred option for the provision of the Taxiway Lima extension which will convert this area of land to airside status.

4.4.53 The proposed CARE building would need to occupy an area of approximately 17,550 square metres. The building would be up to approximately 22 metres in height above ground level and could be up to approximately 5 metres below ground level. The biomass boiler flue heights are likely to be up to approximately 48 metres above ground level. This massing could lead to visual impacts on receptors depending on its location.

Autumn 2021



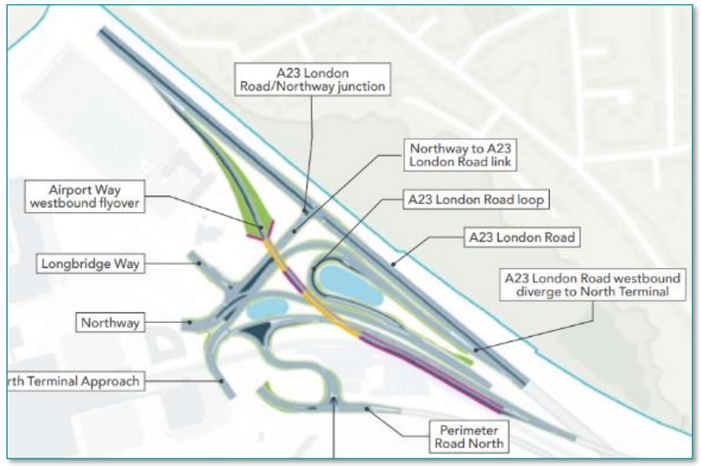
Summer 2022



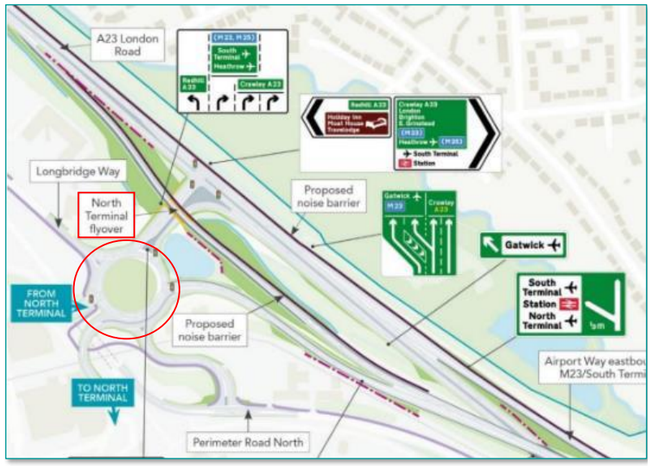
The Order Limits have widened to the north to allow for possible widening of the eastbound spur road to meet National Highways requirements on lane widths, with potential impacts on the Sussex Border Path.

Figure 62. M23 Spur

Autumn 2021



Summer 2022



North Terminal junction reverted to roundabout to address National Highways comments. Extra capacity provided at A23 signalized junction. Flyover shortened by adopting left-hand diverge to North Terminal

Figure 63. Changes propose to the North Terminal Interchange between the Autumn 2021 Consultation and Summer 2022 Consultation

4.4.54 Two options were considered for the siting of the CARE facility, both within the existing cargo area at Gatwick Airport (as illustrated on Figure 61). Option 1 was more centrally located within the site while Option 2 was closer to the indicative location of the proposed motor transport facilities, Rendezvous Point North and new hangar. Both locations were consulted upon as part of the Autumn 2021 Consultation.

4.4.55 Feedback favoured Option 1, which was further from the perimeter of the site lessening the visual impact on neighbouring properties and offered shorter journey times for rubbish vehicles.

Rendezvous Point

4.4.56 The existing Rendezvous Point North, one of three such facilities is located to the south of the existing Motor Transport building and north of the existing Taxiway Juliet within Oscar. In the event of external emergency services needing to attend an incident airside, they are escorted via a dedicated access point directly onto an airside roadway. Relocation of the existing facility is required given that landside access would no longer be available once the Taxiway Lima Extension is completed.

4.4.57 The replacement Rendezvous Point North must provide sufficient holding pavement area to accommodate emergency service vehicles (an area of approximately 4,500 square metres), be accessed from a landside road, be secluded from direct public access and offer line of sight to the airfield. All options are required to be north of the existing runways.

4.4.58 Of the four options considered (illustrated on Figure 61), only Option 2 (north-west zone area, Area 16) met the emergency services requirements while supporting rapid access to the airfield.

4.4.59 This option was therefore taken forward as the preferred option for further design development. No changes to the preferred option have occurred since the original options appraisal for the relocation of the RVPs to improve water quality and reduce discharges to the Sewage Treatment Works facility for disposal.

4.4.60 The indicative design is discussed further in Volume 2 to 4 of this DAS and more detail on the water environment is set out in **ES Chapter 11 Water Environment** (Doc Ref. 5.1).

Surface Access Forecourts

4.4.61 Existing forecourt areas provide the main vehicular access to each terminal, for passengers, staff, operational and emergency vehicles. In this context the forecourt areas include the main vehicle access routes to terminal facilities, including car parks, drop off kerbs and bus / coach or taxi drop off / pick up areas. The configuration of facilities at the North Terminal and South Terminal are different, notably in the arrangement of upper and lower forecourts for passenger drop off and pick up, dictated largely by security regulations in the case of North Terminal and the adjacent Brighton Main Line Railway at South Terminal.

4.4.62 The forecourts and approaches to both existing terminals require enhancements to accommodate the growth in passengers numbers, with routes providing access to the terminal frontage, multi-storey and long stay car parks, hotels and pick-up and drop-off areas for different transport modes.

4.4.63 Future forecourt access is informed by traffic modelling which further influences how space is utilised in this area.

Highways

4.4.64 The identification, assessment, and selection of options and their subsequent refinement for off-airport highways improvements has been subject to a number of iterations. Initially, options considered the need for potential improvements to the Longbridge Roundabout, North Terminal Roundabout and South Terminal Roundabout.

4.4.65 Subsequently the options have been refined taking into account feedback received from the Autumn 2021 Consultation and Summer 2022 Consultation as well as engagement with stakeholders including discussions during topic working groups organised by GAL relating to the project for highway and transportation matters. This further detailed highway design refinement has informed the preferred options being taken forward as part of the Project.

4.4.66 Gatwick Airport has engaged with National Highways throughout this design development process to ensure that, as the operator of the strategic road network, they are content with the proposals put forward. Following the Autumn 2021 Consultation, the road improvement plans were revised to provide a layout that was more intuitive while still meeting the needs of local non-airport and airport traffic. The Project team revisited previous options considered and undertook further assessment against criteria.

4.4.67 A summary of the changes that were proposed to the surface access improvements include:

- M23 Spur: Additional widening of the M23 Spur which would temporarily remove access to the Sussex Border Path (which would be temporarily diverted) (see Figure 62);
- South Terminal Roundabout: Minor design amendments to the South Terminal Roundabout at the westbound on-slip to reflect the changes proposed to Airport Way. Part of the land north of the roundabout would be used as a temporary construction compound which requires access from an additional temporary northern arm off the roundabout. Land take has been refined and reduced;
- Airport Way: A third lane has been introduced to the westbound Airport Way to provide additional capacity and resilience. This would require a short closure period of the railway. Temporary land required for the works has been included within the Order Limits. The Airport Way eastbound link from the North Terminal roundabout would be removed. This traffic would access the M23 Spur via the proposed signalised junction on the A23 London Road;
- North Terminal Roundabout: The North Terminal Roundabout has seen the greatest change (see Figure 63). The flyover connection remains but the roundabout would have a large diameter to increase its capacity with

arms removed or relocated, including the introduction of new signalised junction and a redesigned link to the A23 London Road. There would be a considerable loss of vegetation from within the highway boundary which would be replaced;

- A23 London Road: Proposals for a noise barrier between the highway and southern boundary of Riverside Garden Park have been refined which would require construction activities along the edge of the park, involving temporary vegetation loss and embankment works. To accommodate the westbound widening over the River Mole, alternations to a bridge deck would be required that would also incorporate the new shared path proposed to improve connectivity between Longbridge Road and the terminals;
- Longbridge Roundabout: An additional section of widening to accommodate three lanes from the North Terminal flyover (see Figure 63). Additional environmental mitigation has been included to the north of the road with improved active travel facilities; and
- A23 Brighton Road: Changes to land requirements have been made to facilitate the re-provision of utilities alongside the widening of the bridge over the River Mole.

Active Travel

4.4.68 A range of Active Travel options have been identified to improve walking and cycling around Gatwick Airport and are included within the Project. These options considered the extent and location of the local existing active travel network.

4.4.69 Additional options have been identified and developed following responses provided to the Autumn 2021 and Summer 2022 Consultations as well as on going engagement with stakeholders, including local authorities, through a series of transport focused Topic Working Groups.

4.4.70 The proposed active travel options have been designed in consultation with stakeholders to encourage walking and cycling by improving connectivity and environs in the vicinity of Gatwick Airport thereby providing alternatives for travel.

Open Space

4.4.71 Replacement public open space is required to be provided as part of the Project due to the loss of open space at Riverside Garden Park and Church Meadows by the surface access proposals. The provision of replacement open space is required to comply with planning tests which include that the replacement land must not be smaller in area and must be equally advantageous to the users of the land.

4.4.72 Replacement land has therefore been identified adjacent to the existing areas of open space at Riverside Garden Park and Church Meadows.

Riveride Garden Park

4.4.73 There are limited locations for replacement open space for Riverside Garden Park due to the site being surrounded by residential properties to the north and the A23 to the south. The replacement open space site for Riverside Garden is proposed to the eastern extent of Riverside Garden Park adjacent to the London to Brighton Mainline. Part of the replacement open space is located to the south of the A23 where Car Park B is currently situated.

4.4.74 Consideration has been given to opportunities that improve pedestrian connectivity to the open space area to the Sussex Border Path. Further design development has seen the inclusion of an additional pedestrian route beneath the A23 that links the replacement open space at the Car Park B site to the open space replacement north of the A23, which provides a link between the Sussex Border Path and Riverside Garden Park.

4.4.75 The impacts of noise from the A23 has also been a consideration in the design of the Project at Riverside Garden Park. Several options were considered to provide acoustic mitigation. Without any noise barrier, noise effects to both residential receptors and users of Riverside Garden Park would be worse. The design of the noise barrier at this location requires consideration of landscape and visual effects, impacts on flooding and ecology, and integration with the proposed footway.

Figure 66. Indicative plan of Longbridge Roundabout showing how the design has been integrated into the surrounding landscape, ES Appendix 8.8.1

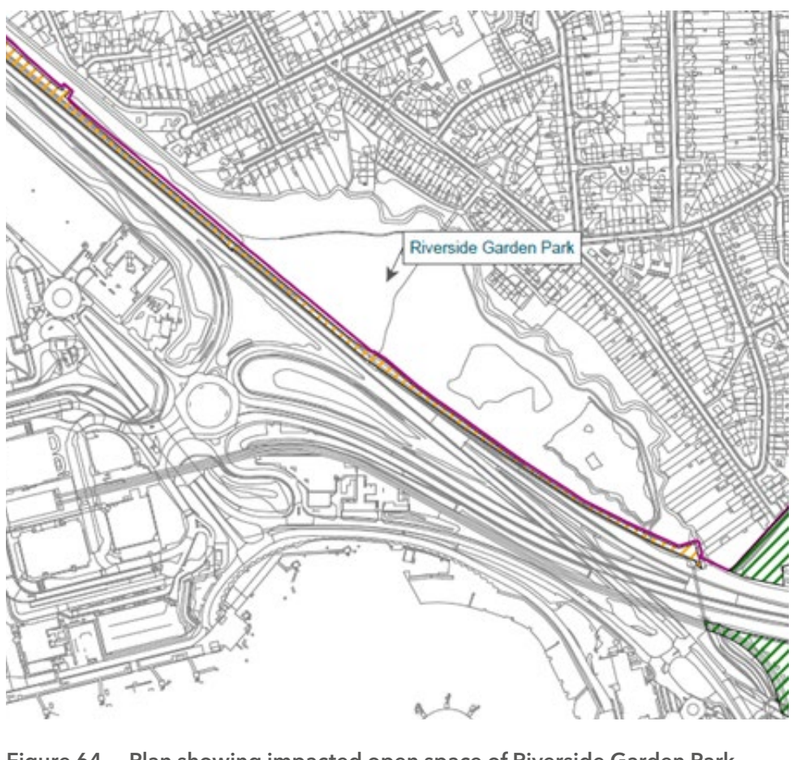


Figure 64. Plan showing impacted open space of Riverside Garden Park

Figure 65. Indicative Plan of Car Park B showing the design considerations for the Riverside Garden Park replacement open space, ES Appendix 8.8.1

Church Meadow

4.4.76 The land required to undertake the surface access improvements at the Longbridge Roundabout will see partial acquisition of the Church Meadow open space site along its southern perimeter where it meets Brighton Road (Figure 67).

4.4.77 Replacement open space was considered within close proximity of the open space area that would be impacted. Directly west of the River Mole at this location, there is a vacant field that is not currently designated as open space which was selected as an appropriate location due to its proximity.

4.4.78 Design development at the Church Meadow replacement site included consideration of options to improve connectivity of the open space areas across the River Mole (the river that severs access between the existing open space and proposed replacement open space area). This has resulted in a footbridge being proposed across the River Mole.

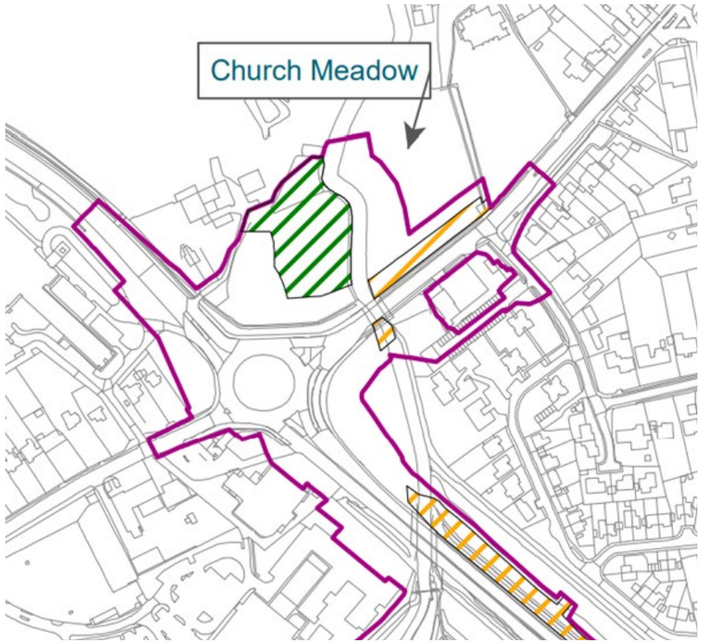


Figure 67. Location of impacted open space at Church Meadow

Pentagon Field

4.4.79 While not formally designated as open space, Pentagon Field was initially identified as a location for car parking. Following feedback from the Autumn 2021 Consultation and the revised car parking forecasts, the car park proposal at Pentagon Field was removed from the masterplan. The site will be required during construction as a spoil receptor site however, the open space at Pentagon Field would be protected from permanent change of use (Figure 68).

Figure 68. Indicative plan of Pentagon Field following removal of car parking proposals, ES Appendix 8.8.1

Landscape and Ecology

4.4.80 The Project has explored measures to maintain and improve the overall biodiversity balance at the site following the adoption of the Environment Act 2021. Vegetation retention has been a core consideration as part of the development of landscaping and ecological planting to ensure that green infrastructure assets are retained wherever possible, important features are protected, and that adverse impacts on important features at Gatwick Airport are minimised.

4.4.81 Design development included identification and protection of existing significant vegetation, including hedgerows, woodland, trees, shrubs, wetland and amenity planting or elements of the Project that lie immediately adjacent to significant vegetation that may be affected during the construction phase or during maintenance activities. These are illustrated in Figure 69.

4.4.82 The design was also informed by the ecological strategy set out within the **ES Appendix 8.8.1 Outline Landscape and Ecology Management Plan** (Doc Ref. 5.3).

4.4.83 Opportunities have also been identified to enhance existing ecological areas as part of developing mitigation proposals. The stretch of the River Mole that runs along the northern extent of the site was created as part of a river realignment project in 1999 within the North West Zone Biodiversity Area. The channel was carefully excavated to mimic naturally occurring river features with riffles, glides and backwaters to benefit fish, plants and invertebrates. Options for environmental mitigation have considered further enhancements at this location.

4.4.84 A parcel of land to the west of Gatwick Airport, east of the Gatwick Aviation Museum would form one of several environmental mitigation areas within the Project. The flood compensation area described previously within the water management section would lie at the heart of this area. This new feature would be linked to the River Mole and provide the opportunity to extend the existing footpath beside the River Mole, into the new mitigation area, via a series of existing pasture fields and two new low key 'farm access' bridges over Man's Brook.

4.4.85 The area would be approximately 17 hectares and link with the existing Gatwick Biodiversity Area that runs alongside the River Mole. Existing landscape features would be retained and enhanced to provide a valuable landscape and ecological resource, accessible to the public.

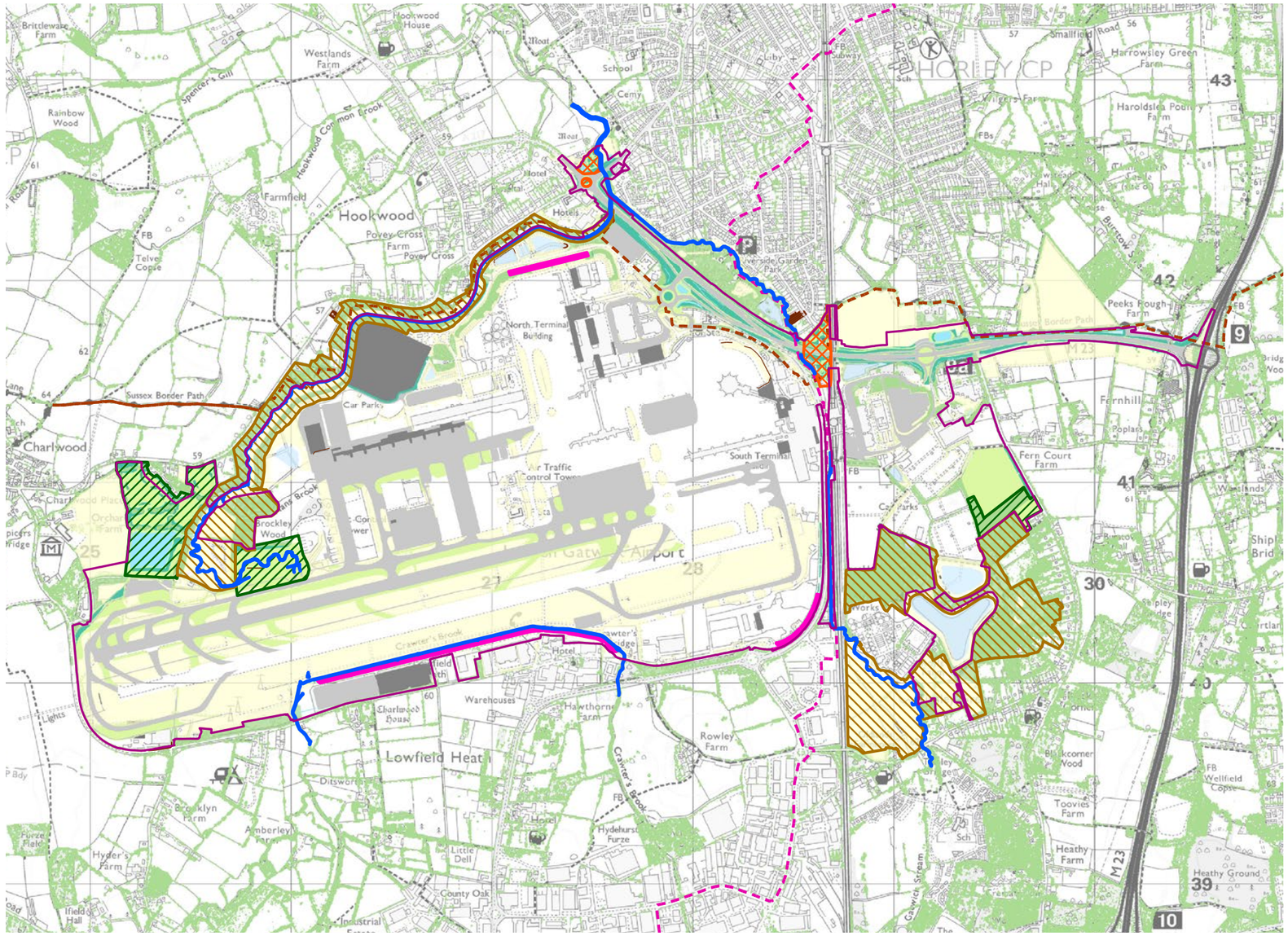


Figure 69. *Existing and Proposed*

Water

4.4.86 Technical engagement with the Environment Agency has been key to developing the indicative design for surface water across the site. Permits for discharge into the River Mole or nearby streams are required for all surface runoff leaving the site and therefore it is important that the proposed drainage design appropriate treats and attenuates surface runoff to minimise adverse impacts on the surrounding water environment and flood risk.

4.4.87 The Autumn 2021 Consultation presented a series of interventions (for example new flood compensation areas) which would store water in flood conditions. The sizing of the interventions was based on detailed computer modelling of flood events using climate change allowances published by the Environment Agency.

4.4.88 Further discussions with the Environment Agency led to changes proposed to the flood modelling and indicative drainage design to reflect updated climate change guidance produced by the Environment Agency. This led to an overall reduction in the amount of flood compensation required as part of the Project.

4.4.89 The design at Museum Field was further refined and would be lowered by up to approximately 2.6 metres below existing ground level. It would have a footprint of approximately 57,600 square metres. This would provide a new flood compensation area connected to the River Mole. The connection would require local lowering of the bank of the River Mole. There would be a landscaped bund along the southern and eastern perimeters that would be approximately 6 metres high and a footpath (including footbridge) around the area. There would be a road to enable maintenance access of approximately 5 metres width.

4.4.90 The existing Car Park X flood storage was also refined and would be lowered by a depth of up to 2 metres. It would be approximately 90 x 300 metres and have a footprint of 27,000 square metres. It would create approximately 50,000 cubic metres flood storage and would be reinstated as a decked car park.

4.4.91 Additional treatment works were also proposed to the east of the Crawley Sewage Treatment Works (shown on Figure 70) to improve water quality and reduce discharges to the Sewage Treatment Works facility for disposal.

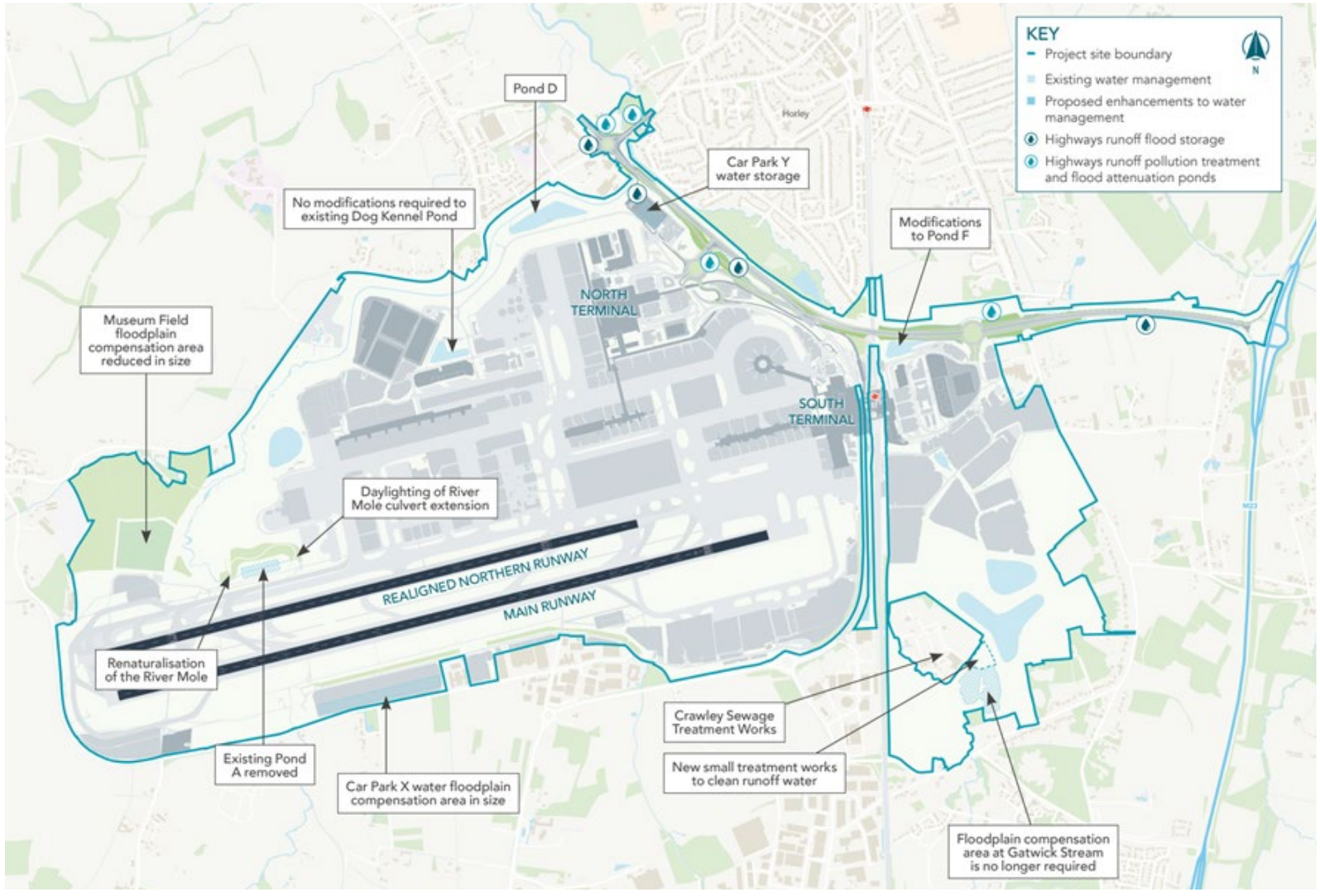


Figure 70. *Plan showing water works changes considered*

4.4.92 The indicative design is discussed further in Volume 2 to 4 of this DAS and more detail on the water environment is set out in **ES Chapter 11 Water Environment** (Doc Ref. 5.1).

GLOSSARY

Glossary

Introduction

1.1.1 This document contains a list of definitions and abbreviations, collectively called the Project Glossary, that are commonly used across the DCO Application. Individual application documents contain separate glossaries with additional terms that are specific to the content of the document.

Definitions

Airport Boundary – the boundary of Gatwick Airport is defined on the Airport Boundary Plan (Figure 72). The airport is divided in two landside and airside areas, described below.

Airside – the area within the Airport Boundary that relates to the aircraft movement area of an airport, adjacent terrain and buildings or portions thereof, and to which access for the general public is restricted. For example, this includes the airfield, runways, taxiways and hangers. The Airside area is shown on the Landside and Airside Boundary Plan (Figure 73).

Air Transport Movement ("ATM") – a landing or take-off of an aircraft.

Application Site – (also referred to as the 'Project Boundary' and 'Site Boundary') – **the application site is defined by the Order Limits shown on the Location Plan** (Doc Ref. 4.1).

Autumn 2021 Consultation – the statutory consultation which ran for 12 weeks from 9 September to 1 December 2021. The consultation set out the key elements required to enable dual runway operations and support increased passenger numbers, along with a Preliminary Environmental Information Report which presented the preliminary findings of the environmental impact assessment of the Project's proposals as at that point in time.

Associated Development – development within the Order Limits that is associated to the Northern Runway Project in line with Section 115 of the Planning Act 2008.

Development Consent Order ("DCO") – the Development Consent Order will secure the extent of the consent and what development can be carried out and grants the undertaker the powers which are necessary to deliver the Project. A draft Development Consent Order is submitted as part of the DCO Application.

DCO Requirements – a requirement under the Development Consent Order which is proposed to control the construction, operation and maintenance of the development (if consented).

Environmental Statement – presents the findings of the Environmental Impact Assessment for the Project and forms Book 5 of the Application. EIA is the process of identifying and assessing the significant effects likely to arise from the Project. This requires consideration of the likely changes to the environment, where these arise as a consequence of the Project, through comparison with the existing and future baseline conditions and describing any mitigation measures which are required.

Gatwick Airport – an international airport located in the county of West Sussex between the towns of Crawley and Horley. Gatwick Airport is majority owned by VINCI Airports, with the remainder owned by a consortium of investors managed by Global Infrastructure Partners.

Gatwick Airport Limited – the company licensed to operate Gatwick Airport (i.e. the 'airport operator') by the Civil Aviation Authority and the Applicant for the Application for development consent for the Project under the Planning Act 2008.

Gatwick Diamond – business led private/public sector partnership promoting economic growth in a defined area between Croydon and Brighton. Part of the Coast to Capital Local Enterprise Partnership.

Landside – the area within the Airport Boundary (and outside the Airside) to which the general public has unrestricted access. For example, this includes access roads, car parking areas, public transport interchanges, hotels, offices and terminal check-in areas. The Landside area is shown on the Landside and Airside Boundary Plan (Figure 73).

Nationally Significant Infrastructure Projects ("NSIPs") – major infrastructure projects relating to energy, transport, water, waste water or waste and which are defined under the Planning Act 2008. The 2008 Act sets out thresholds above which certain types of infrastructure development is considered to be nationally significant and requires permission through a Development Consent Order. The Northern Runway Project is classed as a NSIP due to the passenger increase and the road improvements needed to support it.

National Highways – a government-owned company charged with planning, building, operating, maintaining and improving motorways and major A roads in England (collectively called the strategic road network). National Highways was formerly titled the Highways Agency and Highways England.

Northern Runway Project – (also referred to as the 'Project' or the 'Proposed Development') – comprising the proposals for which development consent is being sought under the Planning Act 2008. The Northern Runway Project proposes alterations to the existing northern runway at Gatwick Airport which, together with the lifting of the current planning restrictions on its use, would enable dual runway operations. The Project includes a range of infrastructure and facilities which, with the alterations to the northern runway, would enable an increase in the airport's passenger throughput capacity.

Off-Airport Land – land falling within the Order Limits of the Northern Runway Project outside the Airport Boundary. This principally relates to the surface access improvement works, including improvements to highways and active travel routes, that are part of the Northern Runway Project.

Order Land – land over which the application is seeking compulsory acquisition or temporary possession powers.

Order Limits – the limits shown on the Location Plan (Doc Ref. 4.1) comprising the extent of the proposed Project boundary.

Passenger Throughput – the number of air passengers that use the airport, including arrivals and departures. The throughput is usually referred to on an annual basis, i.e. the annual passenger throughput.

Preliminary Environmental Information Report ("PEIR") – presents the preliminary findings of the environmental impact assessment. The Autumn 2021 Consultation presented the preliminary environmental information to enable consultees to understand the likely significant environmental effects of the scheme proposals based on the environmental information available at the time and measures proposed to avoid, prevent, reduce or mitigate any residual environmental effects.

Section 106 Agreement – a legal agreement between the Applicant and specific Local Authorities that will set out the planning obligations that are not considered appropriate to be secured as requirements to the DCO.

Summer 2022 Consultation – a hybrid statutory/non-statutory consultation which ran for six weeks from 14 June to 27 July 2022. The targeted, statutory consultation element considered changes to the proposed highway improvement works; and the non-statutory Project update element included an update on other proposed changes to other aspects of the proposals which were not considered to lead to any new or materially different significant environmental effects from those reported in the Autumn 2021 Consultation.

Inter-terminal transit system ("ITTS") – the automatic shuttle service at Gatwick Airport that runs between the North and South Terminals for airport passengers, visitors or staff travelling by foot.

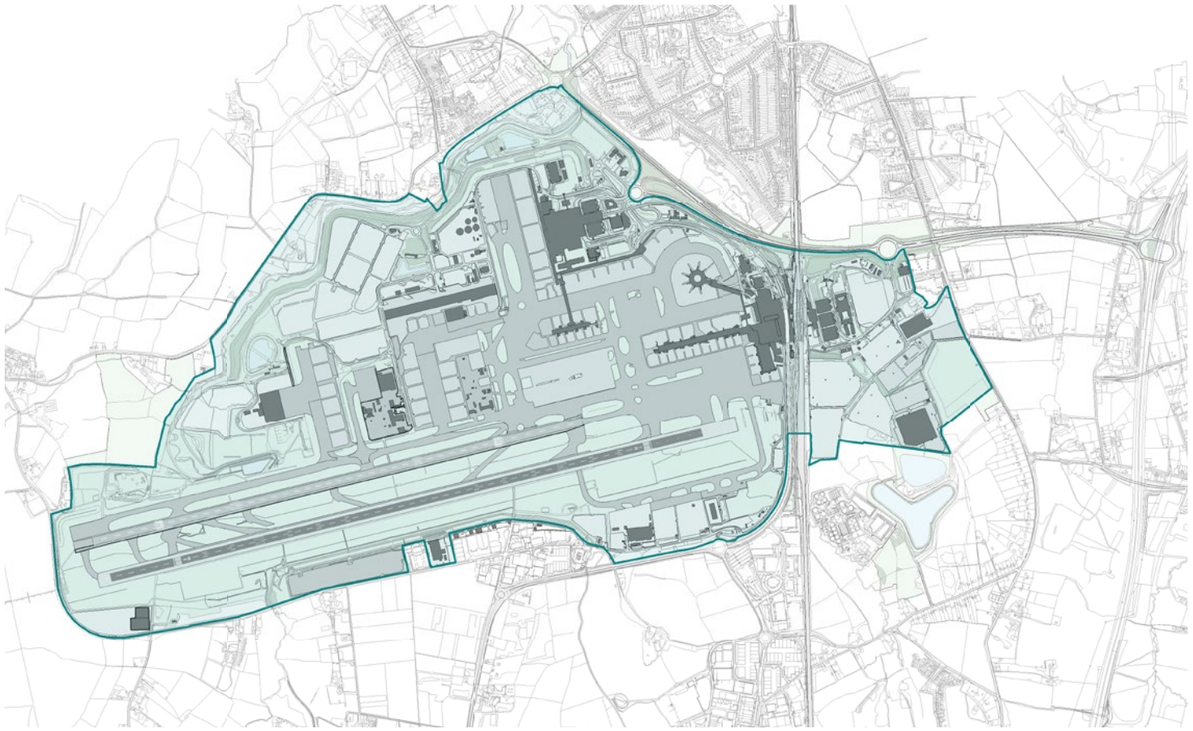


Figure 71. *Gatwick Airport - Airport Extent*

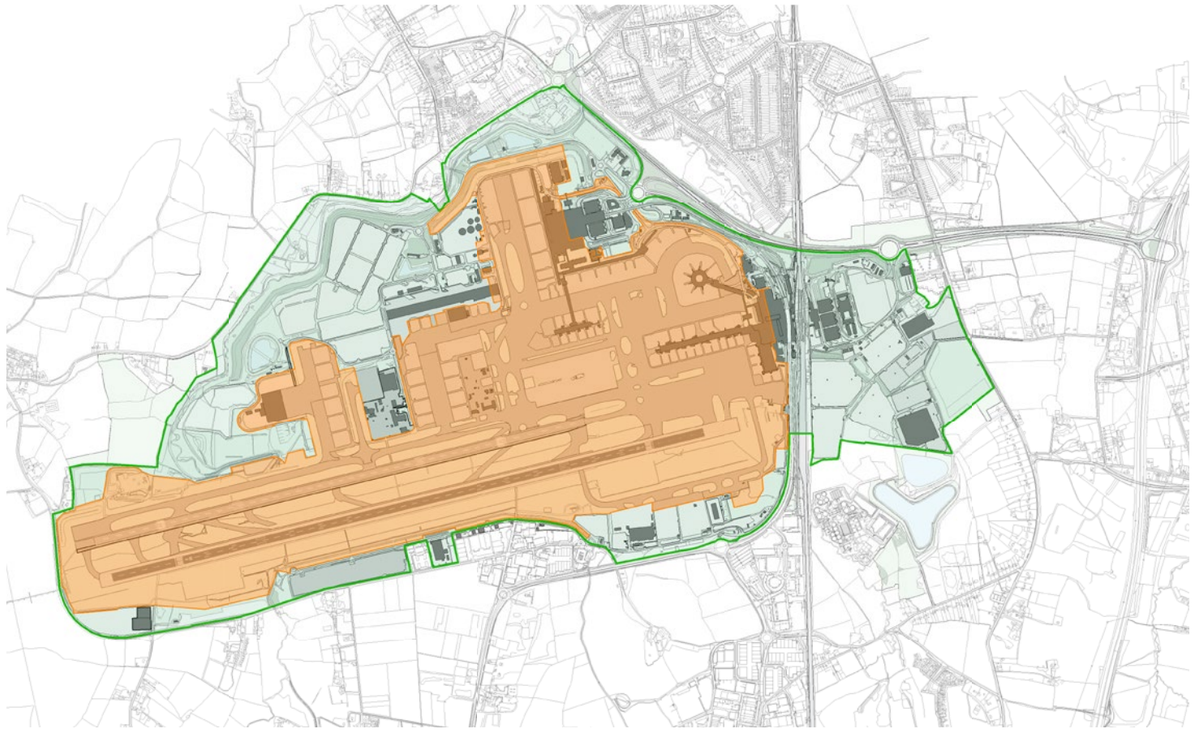


Figure 72. *Gatwick Airport - Landside/Airside*

Abbreviations

ANPS – Airport National Policy Statement
APF – Aviation Policy Framework
ATC – Air Traffic Control
ATM – Air Transport Movement
BAA –British Airports Authority - the former owners of Gatwick Airport
CAA – Civil Aviation Authority
CAP –Carbon Action Plan
CMMP – Construction Materials Management Plan
CoCP – Code of Construction Practice
CTMP – Construction Traffic Management Plan
CWTP –Construction Workforce Travel Plan
DCO – Development Consent Order – the form of planning consent for Nationally Significant Infrastructure Projects
DfT – Department for Transport
EIA – Environmental Impact Assessment
ES – Environmental Statement
FRA – Flood Risk Assessment
GAL – Gatwick Airport Limited
GATCOM – Gatwick Airport Consultative Committee
ICAO – International Civil Aviation Administration
ITTS – Inter-terminal transit system (or 'shuttle')
LEP – Local Enterprise Partnership
LGW – London Gatwick Airport
LTO – Landing and Take-off cycle
mppa – Million passengers per annum
MRM – Mitigation Route Map
MSCP – Multi-storey Car Park
NATS – National Air Traffic Services
NRP – Northern Runway Project
NSIP – Nationally Significant Infrastructure Project
NT – North Terminal
oLEMP – Outline Landscape and Ecology Management Plan
PEIR – Preliminary Environmental Information Report
RET – Rapid Exit Taxiway
SAC – Surface Access Commitments
ST – South Terminal
STW – Sewage Treatment Works
TA – Transport Assessment
WMP – Water Management Plan

List of Figures

DESIGN AND ACCESS STATEMENT

VOLUME 1

LONDON GATWICK