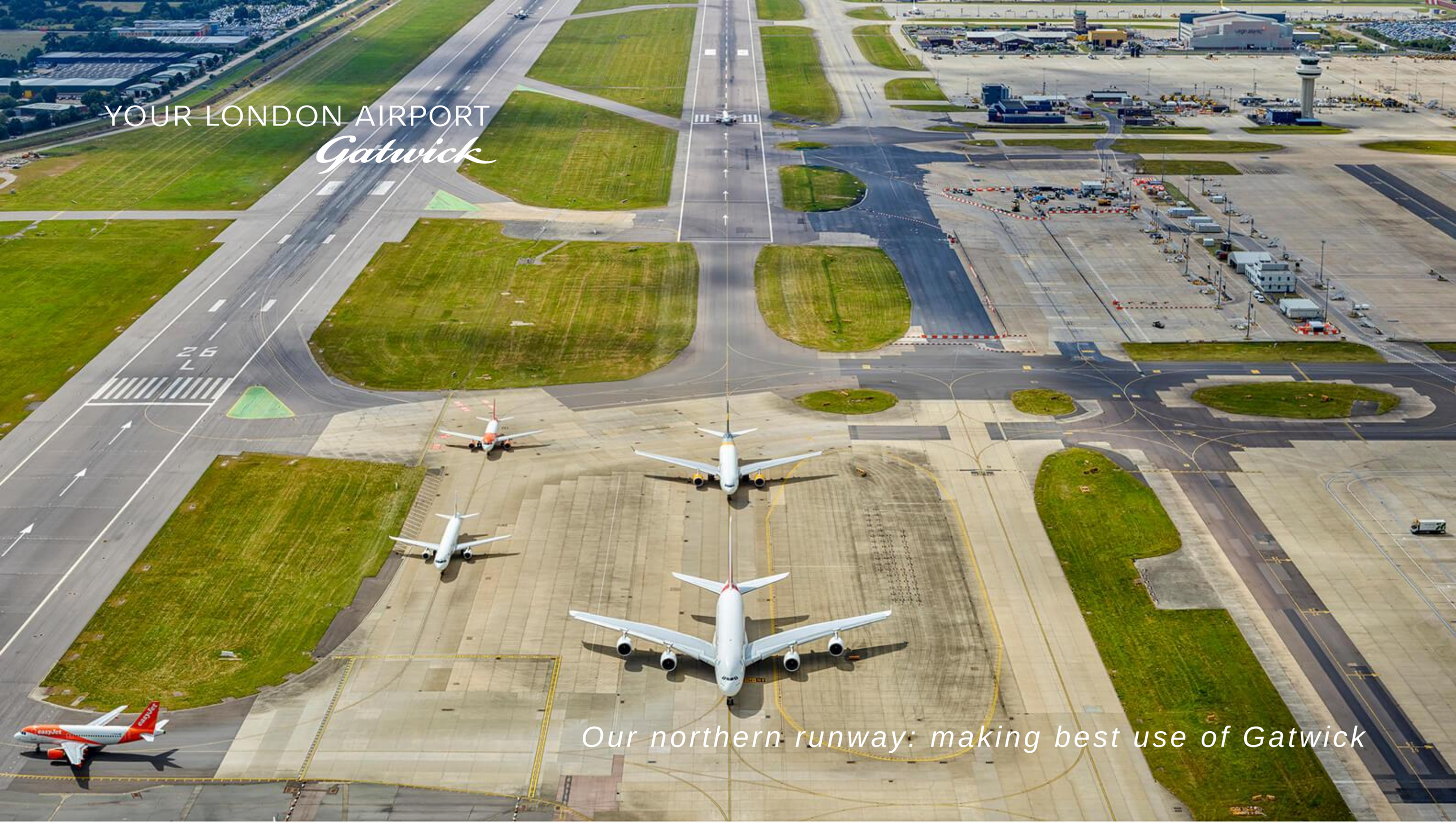

Our northern runway: making best use of Gatwick

Preliminary Environmental Information Report
Appendix 3.3.1: Key Requirements for Optioneering

September 2021

Table of Contents

1 Introduction

1.1 General

1.1.1 This document forms Appendix 3.3.1 of the Preliminary Environmental Information Report (PEIR) prepared on behalf of Gatwick Airport Limited (GAL). The PEIR presents the preliminary findings of the Environmental Impact Assessment (EIA) process for the proposal to make best use of Gatwick Airport's existing runways (referred to within this report as 'the Project'). The Project proposes alterations to the existing northern runway which, together with the lifting of the current restrictions on its use, would enable dual runway operations. The Project includes the development of a range of infrastructure and facilities which, with the alterations to the northern runway, would enable the airport passenger and aircraft operations to increase. Further details regarding the components of the Project can be found in the Chapter 5: Project Description.

1.1.2 This document provides the key requirements for optioneering for the Project.

2 Key Requirements for Optioneering

2.1 Key Requirements

Table 2.1.1: Key Requirements

Consideration	Requirement
Runways	
Safety	All options would need to comply with European civil aviation rules and regulations (European Union Aviation Safety Agency (EASA)) and international standards and recommended practices (International Civil Aviation Organization (ICAO)).
Capacity	All options would need to provide for sufficient capacity for 75.6 mppa.
Resilience	All options would need to ensure operational resilience. This enables continued operations in the event of disruption, eg adverse weather conditions, aircraft emergencies, pavement and/or infrastructure failures, as well as routine maintenance.
Environment	Options would reduce land take and avoid the removal of habitats where possible.
Taxiways (including End Around and Rapid Exit Taxiways)	
Capacity	All options should facilitate 70+ATMs / hour throughput on the airfield considering a varied mix of aircraft types and arrival / departure split.
Resilience	All options should provide sufficient choice of exits for the mix and capability of the aircraft fleet being serviced, to allow full capacity to be delivered in a variety of operational conditions.
Operations	All options should ensure there would be no single points of failure on the taxiway network, ie there should be no part of the taxiway system which, if it fails, would stop the entire system from working. All options should not constrain the runway operations.
Design Flexibility	All options should enable connectivity between all aprons and all runway ends, in all modes of operation.
Environment	Options would reduce land take and avoid the removal of habitats where possible. Consideration would be given to the location of taxiways within the airfield in relation to human.
Aircraft Holding Areas	
Capacity	All options must be capable of providing no fewer than 16 intermediate holding positions.
Operations and accessibility	All options must ensure they are compatible with dual and single runway operations, must minimise impact on taxiway and runway traffic flow and must not infringe on runway safeguarded areas.
Environment	Options would reduce land take and avoid the removal of habitats where possible. Consideration would be given to the location of holding areas within the airfield in relation to human receptors.
Terminals	
Operations	All options would need to be designed to allow for efficient operation of the airport, including considerations of accessibility.
Piers	
Safety	Options would need to be designed in accordance with EASA and ICAO.
Capacity	Options would need to provide for a capacity that allowed for up to 75.6 mppa.
Resilience	Options would need to cognisant of flood modelling and apply appropriate mitigation, meet GAL Technical Standards and meet appropriate building control compliance.
Environment	Options would reduce land take where possible.
Hangars	
Capacity	All options should provide for an area capable of facilitating a Boeing 777-9X hangar and providing the necessary manoeuvring space estimated to be 2.5 hectares in area. All options should provide direct access to the operational apron.
Environment	Options would reduce land take and avoid the removal of habitats where possible. Consideration would be given to the location of hangars within the airfield in relation to human receptors.
Offices	
Accessibility	All options would need to be in convenient locations, easily accessible by all transport modes and the terminals.
Design	All options would need to be capable of providing space for up to 9,000 m^2 of additional office space.
Environment	Options would reduce land take and avoid the removal of habitats where possible. Consideration would be given to the location of the infrastructure in terms of access, visual impact, flood risk, archaeology and community.
Hotels	
Operations and Accessibility	All options would need to be in convenient locations, easily accessible by all transport modes.

Consideration	Requirement
Capacity	Ideally one hotel to serve the north terminal and one hotel to serve the south terminal to balance the demand.
Environment	Options would reduce land take and avoid the removal of habitats where possible. Consideration would be given to the location of the infrastructure in terms of access, visual impact, flood risk, archaeology and community.
Car Parks	
Capacity	Car parks should allow for the maximum potential capacity of spaces within the identified footprint (taking into account constraints such as height restrictions, product viability etc).
Operations and Accessibility	Any options should to be located within the existing airport boundary.
Design	Car parks should allow for efficient transfer to terminals and employment locations, to minimise the volume of vehicle traffic around the airport.
Cost	All costs should be considered to meet the standard cost per built space used for MSCPs and decking (based on current projects in delivery).
Environment	Options would reduce land take and avoid the removal of habitats where possible. Consideration would be given to the location of the infrastructure in terms of access, visual impact, flood risk, archaeology and community.
Foul Water	
Compliance	Options must not result in an increase in flood risk to any receptor in accordance with the ANPS direction to meet the requirements of the National Planning Policy Framework with respect to flood risk.
Cost	All options must represent an affordable and viable solution. Options should also seek to minimise on-going operational costs.
Stakeholder	Guidance from Thames Water on likely restrictions of capacity at Horley treatment works.
Environment	Options would reduce land take and avoid the removal of habitats where possible. Consideration would be given to the location of the infrastructure in terms of disruption to highways/other infrastructure and flood risk.
Surface Water Drainage	
Compliance	Options must not result in an increase in flood risk to any receptor in accordance with the Airports National Policy Statement (Department for Transport, 2018) direction to meet requirements with respect to flood risk.
Cost	All options must represent an affordable and viable solution. Options should also seek to minimise on-going operational costs.
Environment	Options must not result in an increase in flood risk to any receptor. Consideration would be given to the value habitats affected by the options and the effect on upstream/downstream reaches of watercourses. Consideration would also be given to the potential for buried archaeology and visual impacts.
Fluvial Flood Risk Management	
Compliance	Options must not result in an increase in flood risk to any receptor in accordance with the Airports National Policy Statement (Department for Transport, 2018) direction to meet requirements with respect to flood risk and take into account the requirements of the Water Framework Directive (WFD).
Cost	All options must represent an affordable and viable solution. Options should also seek to minimise on-going operational costs.
Environment	Options must not result in an increase in flood risk to any receptor. Consideration would be given to the value habitats affected by the options and the effect on upstream/downstream reaches of watercourses. Consideration would also be given to the potential for buried archaeology and visual impacts.
Waste Management Facilities	
Operations	Options would need to be designed to allow for efficient operation of the airport, including considerations of waste flow and vehicle routing across the site.
Capacity	All options would need to provide for a waste capacity that meets the demands of 75.6 mppa.
Design	All options are to be designed to 'tie in' and be in keeping with the design of the existing airport, be forward thinking (innovative) to support delivery of Gatwick Airport's Sustainability Policy and align with the Governments Waste Management Strategy (Department for Environment, Food and Rural Affairs, 2018).
Environment	Options would reduce land take and avoid the removal of habitats where possible. Consideration would be given to the location of the infrastructure in terms of access, visual impact, flood risk, archaeology and community.
Rail Access	
Operations	All options would need to be designed to allow for efficient operation of the airport, including considerations of accessibility.
Capacity	All options would need to provide for a capacity that allowed for an increased mode share in line with targets and airport growth up to 75.6 mppa.
Cost	All options allow for efficiency to minimise costs in both construction and operation, including the value for money of any investment in third party assets.
Environment	Consideration on the disruption to rail and airport passengers and other airport operations.
Inter-Terminal Transit System (ITT)	
Capacity	Options would need to provide for a capacity up to 75.6 mppa and an increased rail mode share in line with targets.
Operations	Options would need to be designed to allow for efficient operation of the airport, including considerations of accessibility and passenger experience.
Resilience	Options should ensure there is sufficient resilience in the system to cope with variations in demand and availability.

Consideration	Requirement
Cost	Options allow for efficiency to minimise costs in both construction and operation, including the value for money of business decisions.
Other Environmental Impacts	Options should support use of sustainable modes of access and be consistent with an increase in rail mode share.
Environment	Consideration on the disruption to rail and airport passengers and other airport operations. Options would consider visual impacts to on and off airport receptors.
Construction Compounds (airfield and highways)	
Safety	Compound should be located as close as possible to the works to mitigate construction hazards and potential threats to airport operatives and passengers from the movement of vehicles and plant.
Cost	Sites should have access to existing services and utilities.
Site Area	Any option must provide at least 30,000 m^2 in area to provide the above. To deliver the works safely and efficiently, a minimum of two compounds are required – with one located north and the other south of the runways.
Community Impacts	Options would seek to avoid: ▪ congestion to the local roads; ▪ combustion to local communities due to HGV diesel powered engines; ▪ local air pollution such as particle matter from brake and tyre wear; ▪ emission of vehicle noise and light; ▪ damage to the local road infrastructure; ▪ given risks to the increase of accidents due to additional traffic.
Environment	Options would reduce land take and avoid the removal of habitats where possible. Consideration would be given to the location of the infrastructure in terms of disruption to highways/other infrastructure as well as flood risk, archaeology, visual and agriculture/recreation.

3 References

Department for Environment, Food and Rural Affairs (Defra) (2018) Resources and Waste Strategy

Department for Transport (2018) Airports National Policy Statement

4 Glossary

4.1 Glossary of terms

Table 4.1.1: Glossary of Terms

Term	Description
ATM	Air Transport Movement
EASA	European Union Aviation Safety Agency
EIA	Environmental Impact Assessment
GAL	Gatwick Airport Limited
ICAO	International Civil Aviation Organization
ITT	Inter-Terminal Transit System
mppa	Million passengers per annum
PEIR	Preliminary Environmental Information Report
WFD	Water Framework Directive