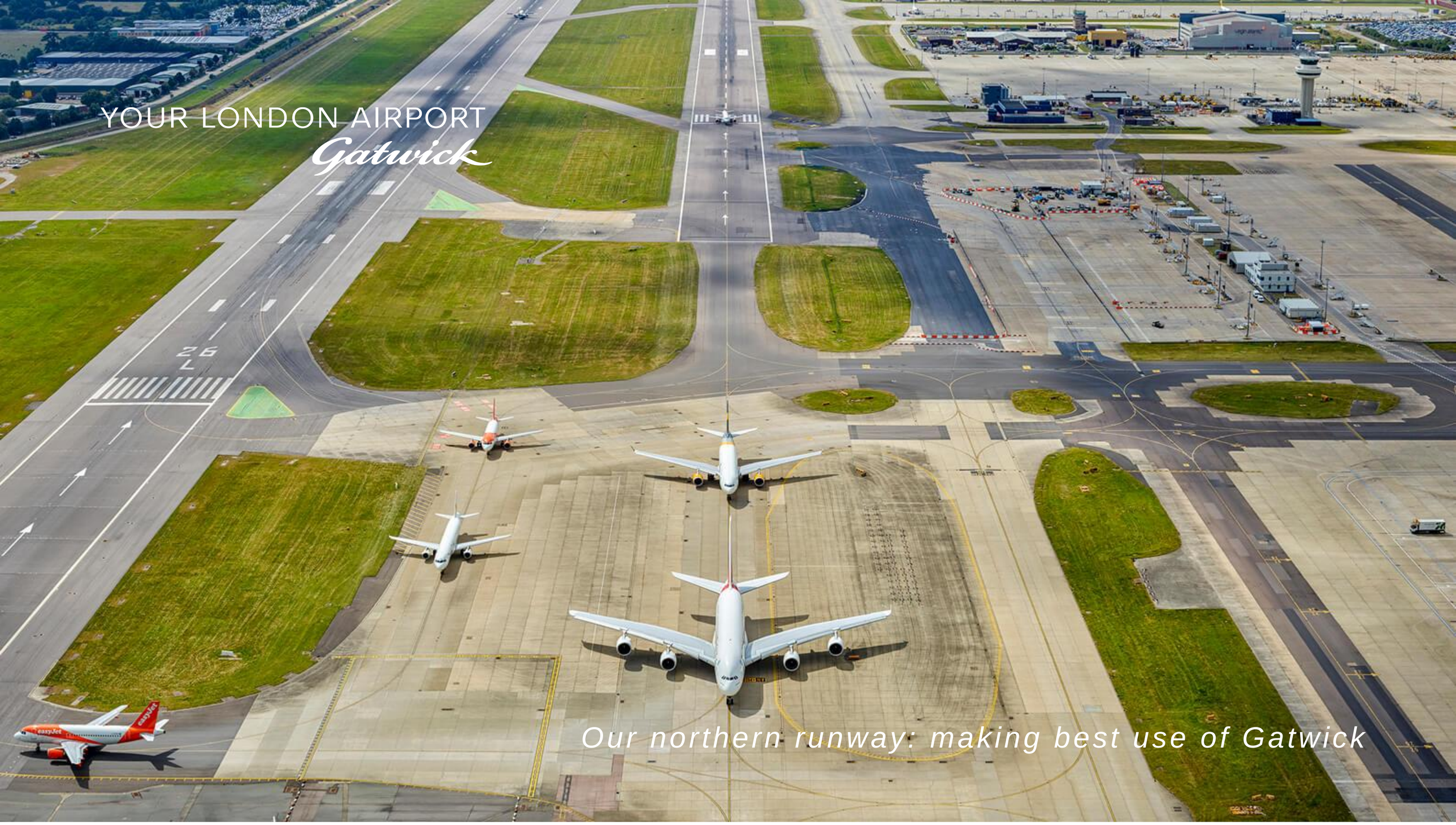


Preliminary Environmental Information Report
Appendix 4.3.1: Forecast Data Book

September 2021

Table of Contents

1 Introduction

1.1. Introduction

1.1.1 This document forms Appendix 4.3.1 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 Northern Runway Project (or '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 data book presents air traffic and other forecasts that have been prepared for the purpose of assessing the economic, environmental and social impacts of the Project.

1.1.3 For the purposes of the assessment, two scenarios (or cases) have been formulated.

1) Existing Runway Case – assumes continued growth of Gatwick Airport based on continued use of Gatwick's existing main runway (referred to as the **'Baseline'** or **'Base' Case**)

2) Northern Runway Project Case - making best use of Gatwick's two existing runways - by bringing Gatwick's existing northern (standby) runway into operation alongside the existing main runway and operating the two runways simultaneously (referred to as the **'Northern Runway Case'**)

1.1.4 The Northern Runway Case represents the airport as it is expected to develop if development consent is granted for the Project.

1.1.5 The Baseline Case represents the airport as it is expected to develop if development consent is not granted for the Project. In this case, some further growth in airport passengers and air traffic movements would still occur on the existing runway in the years ahead, but not as much growth as would occur under the Northern Runway Case.

1.1.6 The following sections provide an overview of Gatwick's recent performance alongside wider market conditions, as well as providing insight on the future drivers and assumptions that relate to these forecasts.

2 Implications of COVID-19 Pandemic

2.1.1 The COVID-19 pandemic had a very severe impact on the global aviation industry in 2020. Gatwick, along with all other UK airports, experienced a significant reduction in passenger traffic levels as a result of both Government-imposed restrictions on air travel and reduced passenger demand driven by low consumer confidence. UK passenger volumes for the calendar year 2020 were 75% down on volumes for 2019 (75 mppa[1] v 300 mppa), with passenger numbers at Gatwick falling from 46.6 mppa in 2019 to 10.2 mppa in 2020. It is expected that Government travel restrictions will continue to have an impact on passenger demand and traffic levels throughout 2021, but that by the end of 2021 traffic levels will be starting to recover.

2.1.2 Beyond this, whilst recognising the current market uncertainty and potential structural impacts around business travel, the pandemic is not expected to alter consumer behaviours in a way that will have a significant permanent impact on the long-term demand for air travel. Therefore, it is expected that overall demand for air travel will recover to previous levels as consumer behaviours return and are driven by factors such as global and UK economic growth, disposable income, consumer confidence and the relative cost of air travel.

2.1.3 While the immediate outlook therefore remains challenging, there is confidence that passenger and airline demand at Gatwick will return to previous levels over the course of the next few years and then continue to grow thereafter.

2.1.4 Overall, the updated forecasts presented in this data book predict that it will take approximately five years for passenger traffic at Gatwick to return to levels seen in 2019 and that by the end of the 2020s, passenger levels at Gatwick will have returned broadly to where they would have been had the pandemic not occurred. This reflects the combination of ongoing capacity constraints already experienced before and during 2019 and underlying market growth across the London system. For example, Gatwick has been operating very close to its full potential in the peak summer months for several years. Gatwick's slot capacity has been oversubscribed for many years with significant levels of unmet demand from a range of airlines and business models.

3 Implications of Heathrow's Third Runway

3.1.1 An important factor that will affect the level of air traffic at Gatwick in the future is whether a third runway is brought forward at Heathrow (Heathrow R3).

3.1.2 National policy, as set out in the Airports National Policy Statement (NPS) (Department for Transport, 2018), supports the construction of Heathrow R3, and when it was published expected the new runway to be provided by 2030.

3.1.3 Since its designation, the Airports NPS has been subject to numerous legal challenges. In February 2020, the Court of Appeal ruled that the designation of the NPS was unlawful and its effect was suspended pending further Government action. In December 2020, however, the Supreme Court overturned the Court of Appeal's earlier judgement, ruling that the designation of the NPS was lawful, so reinstating its effect as Government policy.

3.1.4 During 2020, as a result of the COVID-19 pandemic, Heathrow Airport Holdings Ltd (HAHL) – the owner and operator of Heathrow and the promotors of R3 - suspended the work it had been doing to seek development consent for R3.

3.1.5 Following the Supreme Court ruling, HAHL has indicated that it will now be consulting with investors, government, airline customers and regulators on its next steps. HAHL has not provided any timeframe for recommencing its process for seeking development consent. Even if HAHL does restart the consenting process, it is considered unlikely that R3 could be operational much before the early / mid-2030s.

[1] mppa, million passengers per annum

3.1.6 Notwithstanding the Supreme Court judgement there is, therefore, still very significant uncertainty surrounding when, or indeed if, a third runway will now be developed at Heathrow.

3.1.7 The environmental studies undertaken by Gatwick in 2019 in support of the Project, prior to the pandemic, had assumed that the Gatwick northern runway would open in 2026, and that Heathrow R3 would open in 2030. Circumstances have now changed and revised forecasts have accordingly now been prepared.

3.1.8 Due to delays arising as a result of the COVID pandemic, Gatwick's northern runway is now assumed to open in 2029, three years later than originally presented. Due to uncertainty regarding when, or if, Heathrow R3 will come forward, the forecasts are now based on a 'no Heathrow R3' scenario. This approach is considered robust as it provides a realistic worst case assessment of the environmental impacts of the Project. This is because if Heathrow R3 was to come forward, traffic levels at Gatwick would be likely to decline in the period immediately following the opening of R3 and this would mean that the environmental impacts of the Project, including in relation to noise, traffic and emissions, may have been understated were Heathrow R3 to have been included in the future baseline.

3.1.9 However, as Heathrow R3 remains Government policy, it is considered within the PEIR as a cumulative development (where appropriate), in line with other proposed developments, based on the information available at this time. As GAL progresses its work and prepares its final documents, including the formal Environmental Statement in support of development consent, the status and information available regarding Heathrow R3 will be considered and taking this into account, the approach to forecasting scenarios will be kept under review.

3.1.10 Section 4 explains the basis for the updated forecasts.

4 The Basis of the Updated Forecasts, Assessment Cases and Assessment Years

4.1. Realistic Forecasts

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

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

4.2. Opening Date of Northern Runway Project

4.2.1 Gatwick's Northern Runway Project is now being planned to be open in 2029.

4.3. Heathrow R3 Assumption for Northern Runway Project

4.3.1 As set out in Section 3, given the continuing uncertainty surrounding Heathrow R3, careful consideration has been given to the most robust assumption to be made in the traffic forecasts and environmental studies for Gatwick about Heathrow R3. It has been decided that the most robust assumption to adopt, at least for the purpose of preparing the PEIR, is to assume that a third runway does not come forward at Heathrow.

4.3.2 This approach is considered robust as it provides a realistic worst case assessment of the environmental impacts of the Project. This is because if Heathrow R3 was to come forward, traffic levels at Gatwick would be likely to decline in the period immediately following the opening of R3 and this would mean that the environmental impacts of the Project, including in relation to noise, traffic and emissions, may have been understated were Heathrow R3 to have been included in the future baseline.

4.3.3 The forecasts prepared by GAL for the Northern Runway and Baseline cases therefore adopt a 'No Heathrow R3' assumption.

4.3.4 As GAL progresses its work and prepares its final documents, including the formal Environmental Statement in support of development consent, the status and information available regarding Heathrow R3 will be considered and taking this into account, the approach to forecasting scenarios will be kept under review.

4.4. Northern Runway Project Assessment Cases

4.4.1 The assessment cases for the Project are therefore as follows:

- Existing Runway Case – assumes continued growth of Gatwick Airport based on continued use of Gatwick's existing main runway (referred to as the **'Baseline'** or **'Base' Case**)
- Northern Runway Project Case - making best use of Gatwick's two existing runways - by bringing Gatwick's existing northern (standby) runway into operation alongside the existing main runway and operating the two runways simultaneously (referred to as the **'Northern Runway Case'**)

4.5. Assessment Years

4.5.1 In respect of each of these two cases, forecasts have been prepared for four primary assessment years – 2029, 2032, 2038 and 2047:

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

4.5.2 For operational effects, the PEIR assessment concentrates on the period 2029 to 2038, with modelling topics focussing on 2029, 2032 and 2038 as the primary assessment years. In addition, for some topics it is a requirement to assess the effects of the highways improvements 15 years after completion.

Therefore, for these topics, an assessment is provided for 2047, where appropriate. Therefore, forecasts for 2047 are included in this data book.

4.5.3 Forecasts are therefore set out in this data book for the following four 'design' years:

Cases	Design Years			
	Year 2029	Year 2032	Year 2038	Year 2047
Base Case	✓	✓	✓	✓
Northern Runway Case	✓	✓	✓	✓

4.5.4 Data are also presented for the year 2019 – the most recent full year of operations pre-COVID. Subsequent outputs are typically presented as annual numbers but represent financial years (eg where this data book quotes Year 2029, this represents forecasts for the financial year 2029/30).

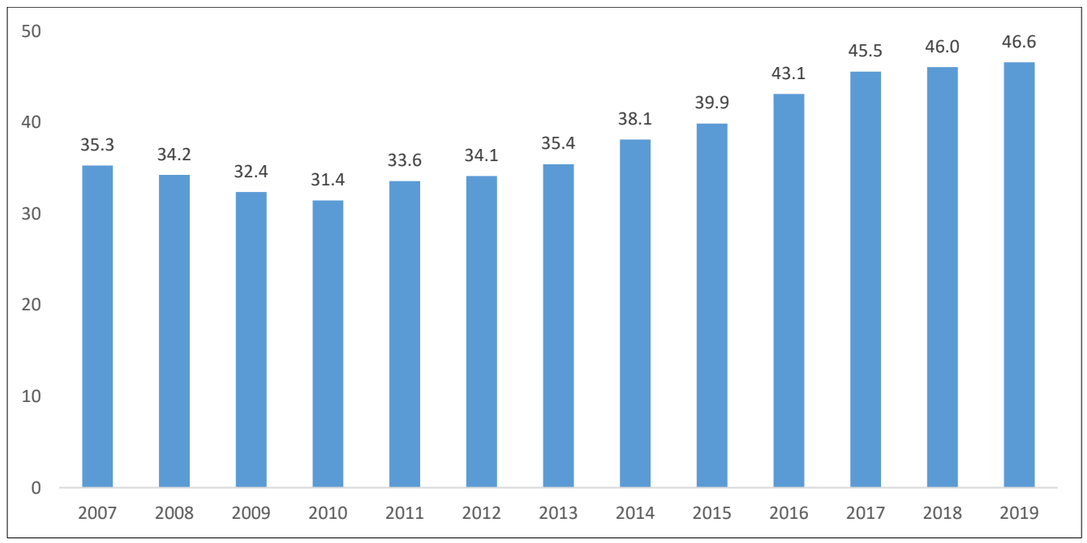
5 Recent Growth of Gatwick Airport Ltd

5.1. Introduction

5.1.1 Despite operating with a high degree of slot constraint, Gatwick has still been able to provide significant levels of growth in the years before the COVID-19 pandemic and, as explained above, GAL expects traffic to recover as the effects of the pandemic decline.

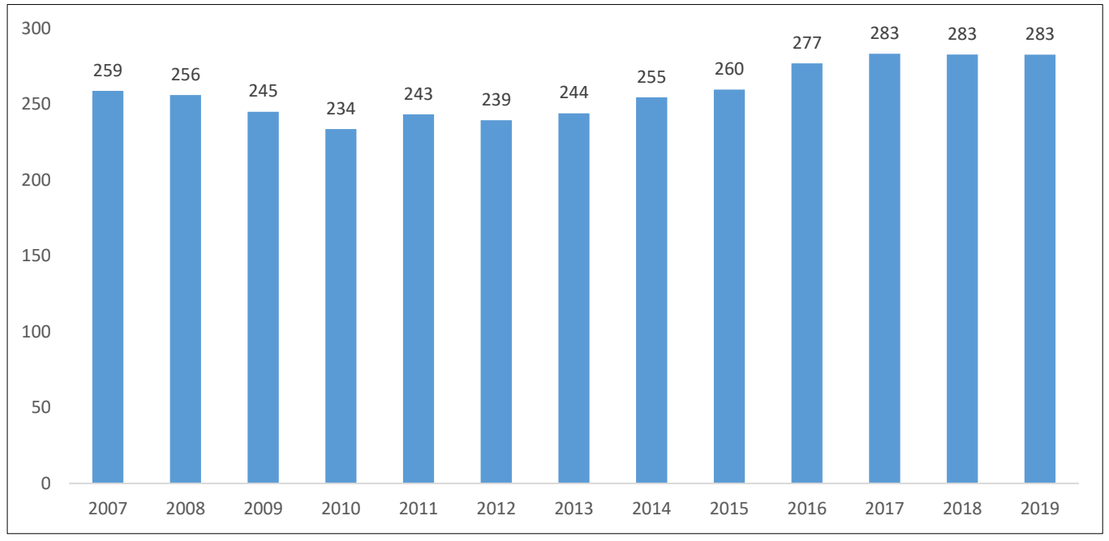
5.1.2 Over the last decade Gatwick has grown by over 14 million passengers, reaching 46.6 million in the most recent full year of operations (2019). This 44% growth in passengers resulted in a 15% growth in commercial air traffic movements (ATMs)[2] reflecting the larger and fuller aircraft now in operation.

Figure 5.1.1: Gatwick Airport Passengers (m)



Source: CAA Statistics

Figure 5.1.2: Gatwick Airport Commercial ATMs (000s)

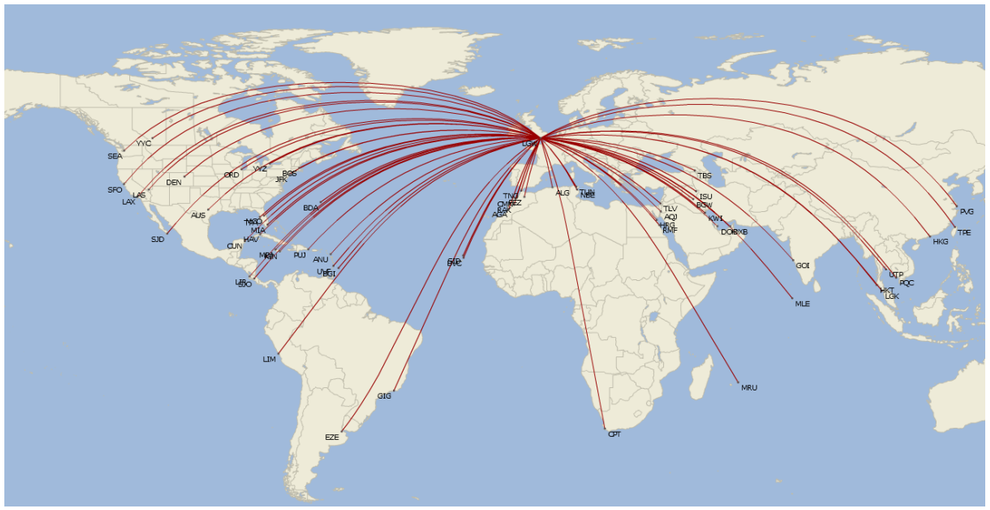


Source: CAA Statistics, Commercial (Passenger) ATMs

[2] Commercial air traffic movements (ATMs), or passenger ATMs, exclude non-commercial flights such as positioning flights and business aviation. In 2019, non-commercial flights accounted for approximately 1% of Gatwick's movements and are forecast to remain at about this level.

5.1.3 During this period, domestic volumes have remained relatively flat whilst over 10 million and 4 million passengers have been added in the short haul and long haul market categories respectively. The growth in short haul markets has been driven by ongoing growth from low cost carriers (LCCs)[3], which continue to account for a significant share of growth in the European aviation market. The long haul growth has been driven by many new intercontinental markets being added by a range of carriers (full service and LCCs) as Gatwick continues to expand its long haul connectivity.

Figure 5.1.3: Gatwick Routes (outside Europe)



Source: IATA Schedules, March 2020

5.1.4 Gatwick has also experienced several recent shocks, notably the relatively recent collapses of Monarch and Thomas Cook which have had short term impacts on Gatwick's traffic growth.

5.1.5 There have been three main drivers of growth over the past decade.

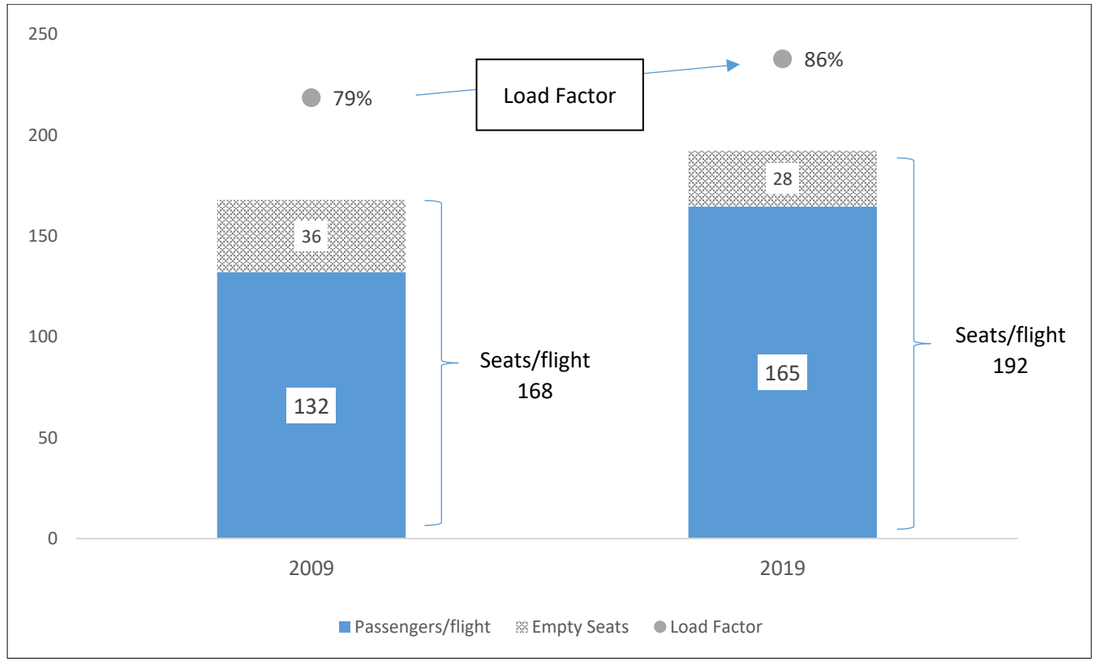
i) More passengers per flight: Average passengers per aircraft movement have grown from 132 in 2009 to 165 in 2019. This has been driven by higher load factors (the percentage of seats filled), and an increase in the average size (and therefore number of seats) of aircraft used.

ii) Peak spreading: There has been a change in the profile of flights over the year, with a higher level of growth in the traditionally quieter periods of the year. This 'peak spreading' makes use of spare capacity on the runway outside of peak months and leads to a higher level of annual utilisation of the existing assets on the airport. Gatwick is still busier in the summer months than the winter months and so there is further potential for this peak spreading to continue.

iii) Growth in peak runway capacity: The maximum number of scheduled aircraft movements that can be accommodated on the runway has grown from 53 an hour in 2012 to 55 an hour in 2019. This increase has allowed more flights, even during the busy summer period.

5.1.6 Growth in average loading and aircraft size is summarised in the following chart.

Figure 5.1.4: Gatwick Growth in Average Aircraft Size & Load Factor

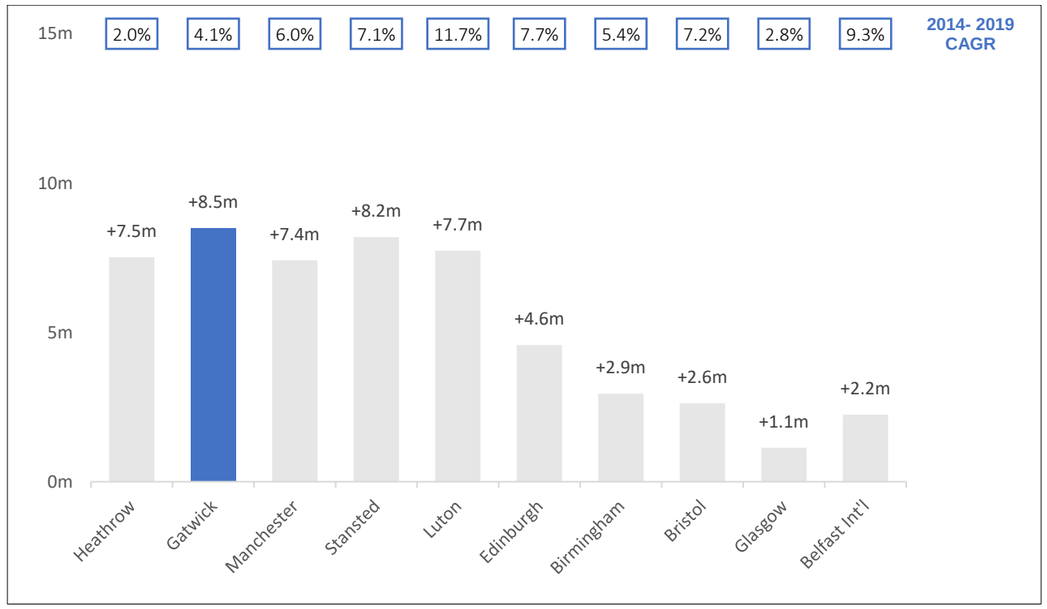


Source: CAA/GAL Statistics

5.1.7 Traffic growth has been supported by the continuing growth and diversification of airlines, including low cost carriers. Growth over the last five years (2014-2019) has averaged 4.1% per annum compared to the UK average of 4.5% over the same period. In 2019 Gatwick reached 46.6 million passengers and remained the second largest airport in the UK by passenger volume.

[3] LCCs = Low Cost Carriers (eg easyJet, Ryanair etc.)

Figure 5.1.5: Passenger Growth Comparisons, UK Market (Last 5 years: 2014 – 2019)

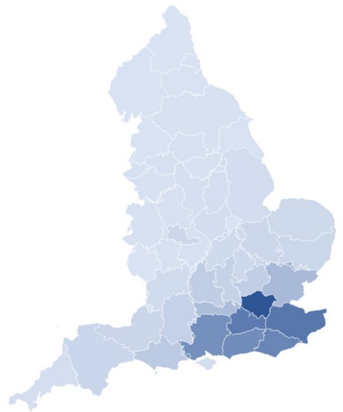


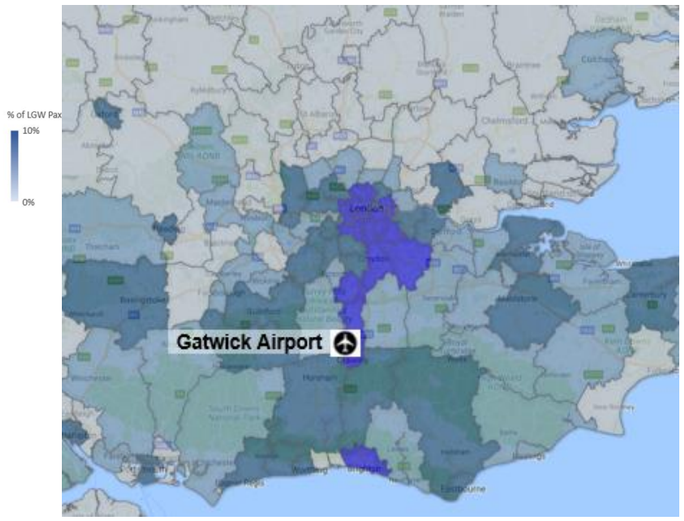
Source: CAA Statistics (Top 10 UK airports chosen based on passenger ranking in 2019)

5.2. Catchment Area

5.2.1 Gatwick's proximity to London and surface access links to the wider South East (and beyond) provide a wide catchment area. According to CAA Survey data, 81% of Gatwick's terminating passengers (ie excluding transfer passengers) were travelling to/from destinations in London or the South East. Greater London is the largest source market (42%), but the nearby counties Kent, Surrey and Sussex account for a further 27%. Of the 19% of passengers travelling to/from destinations outside of the South East, the majority were travelling to the East or South West of England.

Figure 5.2.1: Gatwick Catchment





Source: CAA Survey

6 UK Aviation Demand and Key Assumptions

6.1. Introduction

6.1.1 The UK airports handled a record 300 million passengers in 2019[4], of which the London airports[5] accounted for 181 million or 60% of total activity. Demand in the London system continues to post strong growth as over 34 million passengers have been added in just the last 5 years, representing a compound annual growth rate (CAGR) of 4.3%.

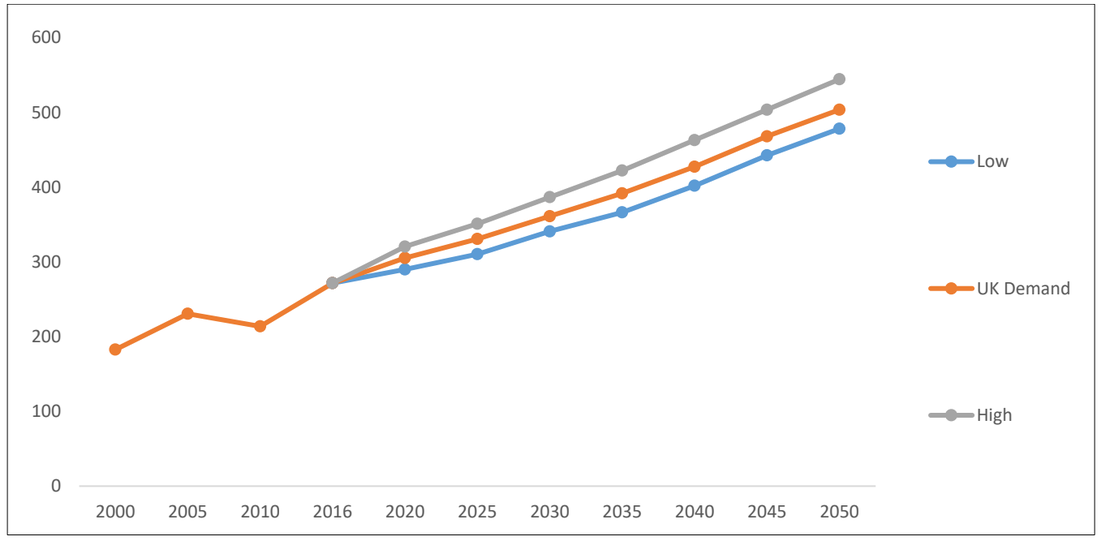
6.1.2 Some of this growth has come through up-gauging (larger) aircraft and higher load factors (seat occupancy rates), as during the same period aircraft movements grew at a rate of 2.5%.

6.1.3 The latest demand forecasts from the UK DfT[6] indicate that demand will continue to grow at around 1.7% in the long term (2016-2050). This period will therefore see demand increase by an additional 230 million passengers across the UK's airports.

[4] UK CAA Statistics for aviation activity
[5] London Airports (LHR, LGW, STN, LTN, LCY, SEN)

[6] UK DfT Forecasts October 2017

Figure 6.1.1: UK Aviation Passenger Demand Forecast (million)



Source: CAA, DfT UK Aviation Forecasts, 2017 (Note: re-based to include all UK airports)

6.1.4 Recent short-term performance prior to COVID-19 has already outperformed the DfT's projection. Annual growth rates since 2016 have been stronger than forecast (3.4% vs 2.8%[7]) resulting in demand already being at least one year ahead of the DfT's central case forecast.

6.1.5 The DfT assumes an annual capacity limit of 200 million[8] passengers for the London airports which is just 19 million above the annual throughput in 2019. Heathrow and Gatwick are already assumed 'full', whilst Luton is now operating at its planning limit. By 2030 an additional 50 million+ passengers are forecast in the London market which will be far in excess of the current available capacity, indicating significant need for capacity development.

6.2. Capacity at Other London Airports

6.2.1 In this section some of the other capacity developments within the London airport system are set out, that are assumed in the forecasts. Over the next 10 years a wide range of outcomes potentially exist, reflecting the range of capacity developments being sought as well as the likelihood of their approvals.

Heathrow

6.2.2 As has been noted in Sections 3 and 4 above, the effect of national policy support for the third runway at Heathrow has recently been reinstated, but there remains significant uncertainty surrounding when, or indeed if, a third runway will become operational.

6.2.3 In addition to these growth prospects, demand at Heathrow will continue to grow, reflecting larger and fuller aircraft as demand was approaching 81 mppa in 2019, up from 73 mppa just 5 years ago[9].

6.2.4 As set out above, the forecasts assume a third runway is not brought forward. The reasons why this approach has been adopted is described in Section 4.3 above.

6.2.5 During the next stage of its work, GAL will consider the information available and status of the potential 3rd runway at Heathrow. As GAL progresses its work and prepares its final documents, including the formal Environmental Statement in support of development consent, the status and information available regarding Heathrow R3 will be considered and taking this into account, the approach to forecasting scenarios will be kept under review.

Other Airports

6.2.6 Aside from Heathrow, other London airports have also revealed growth plans to develop beyond today's current capacity and planning limits.

- Stansted has been granted planning permission to increase its planning cap to allow growth to 43 mppa.
- An application for development consent is being progressed for growth at Luton. Its forecasts predict that it could handle 32 million passengers per year by 2038 should its current planning cap of 18 million passengers be lifted and development consent granted to support this growth.
- London City Airport as part of their development programme is seeking to increase their current planning cap of 6.5 million passengers or 111 k flights.
- Southend is also pursuing expansion plans. Whilst accounting for around 2.0 mppa in the London market (in 2019), they have plans to grow this over the next five years.

6.2.7 With the exception of Stansted, these plans do not currently have approval, whilst the planning permission granted for passenger growth at Stansted is currently the subject of a legal challenge. There is therefore little that can be concluded about these plans with any degree of certainty. Further, Gatwick Airport is, to a large extent, isolated from the impact of these plans. This is because growth at these other airports would not have any material effect on forecasts at Gatwick due to their much smaller share of London market. In contrast, Gatwick is firmly established as one of the top two airports for serving the London system as demonstrated both by the over-subscription of its slot capacity and by the sizeable long haul component.

6.2.8 Geographically, Gatwick also serves a mostly distinct catchment area when compared to Stansted, Luton and Southend, resulting in a relatively small amount of overlap in outbound (ie UK originating) markets. There is more overlap in inbound markets where a large proportion of passengers are travelling to central London destinations, but here Gatwick has the advantage of faster transport links to the centre than these other airports.

Night Flight Regime

6.2.9 In preparing these forecasts, GAL has assumed that the existing controls on night flying, as set out in the Government's 2017 Night Flight Restrictions for Heathrow, Gatwick and Stansted, which cover the period to 2022, will continue to be carried forward, with no changes to the current regime for Gatwick. This

[7] 3.4% for period 2016-2019
[8] 200m considered limit in 2030 (SEN added to DfT LON total)
[9] HAL Statistics, 73.4m in 2014.

assumption aligns with proposals set out in the Government's most recent consultation on night flying restrictions, which will establish the controls and limits until 2024[10].

6.3. Market Outlook

6.3.1 Early in 2020, the COVID-19 pandemic spread worldwide. Like other industries, aviation has been significantly impacted having experienced dramatic drops in traffic, activity and revenues threatening the viability of many companies.

6.3.2 Up until the impact of COVID-19 the UK had continued to witness strong growth across the aviation market supported by ongoing macro-economic and supply/demand side factors.

6.3.3 In the short-medium term there is expected to be significant uncertainty relating to market demand arising through a combination of travel restrictions and the underlying market demand. In the longer term the demand for aviation is expected to return to previous drivers of demand including a country's economic performance (including gross domestic product (GDP) per capita, disposable incomes, etc.) and airline strategy.

7 Gatwick's Growth With and Without the Northern Runway Project

7.1. Introduction

7.1.1 Even without any further capacity developments, it is clear that Gatwick will continue to experience further growth. Firstly, demand across Gatwick's core and wider catchment is forecast to grow in line with wider UK aviation projections of around 1.7% per annum in the long term. Secondly, the ongoing supply side trends highlighted earlier, including larger and fuller aircraft whilst making better use of the runway, will continue to deliver increased annual throughput.

7.2. Baseline Growth to 62 mppa in 2038 and 67 mppa in 2047

7.2.1 In the Baseline Case, (ie without the Northern Runway Project), it is estimated that Gatwick will be able to handle approximately 318,000 commercial ATMs in 2038, reflecting an increase of around 10% compared to the 2019 throughput. This increase in movements will be achieved through better year-round slot utilisation and further capacity release, whilst up-gauging (the use of larger aircraft) and load factor growth will also support higher passenger volumes. These trends include the impact of changes in the market mix at Gatwick, for example growth in long haul markets (larger aircraft types and less seasonal operations) and reductions in seasonal charter traffic. Beyond 2038 modest growth is assumed as approximately 326,000 commercial annual ATMs are assumed in 2047, reflecting modest improvements in capacity utilisation.

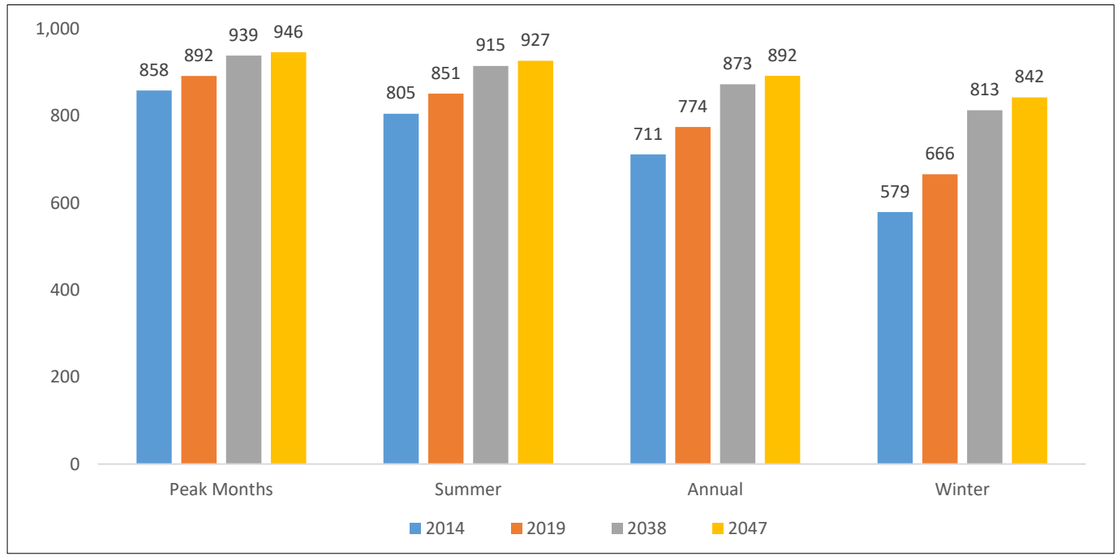
7.2.2 Growth in the Baseline Case from the current 46.6 mppa to the future forecast of 62.4 mppa in 2038 and 67.2 mppa in 2047 is anticipated to come from three main and well-established factors, set out below.

1. Growth in Runway Utilisation in Off Peak Periods

7.2.3 In the busy summer months (July, August and September), Gatwick is often already operating at, or close to, its peak capacity. In the Baseline Case GAL is anticipating only modest growth during this period as daily commercial ATMs are forecast to increase by 4% from an average of around 900 in 2019 to 939 in 2038 and to 946 in 2047.

7.2.4 For the total summer season (Apr-Oct), daily commercial ATMs are forecast to increase 7% from an average of 851 in 2019 to 915 in 2038 and to 927 in 2047. In contrast, the less utilised winter period is forecast to increase from an average of 666 in 2019 to 813 daily commercial ATMs in 2038 and to 842 by 2047. By 2038, this represents an increase of 22% versus 2019. By comparison, Gatwick's winter utilisation has increased by 15% in just the last 5 years as daily commercial ATMs have grown from 579 to 666.

Figure 7.2.1: Gatwick Daily Movement Growth – Base Case



Source: CAA Commercial/Passenger ATM Statistics

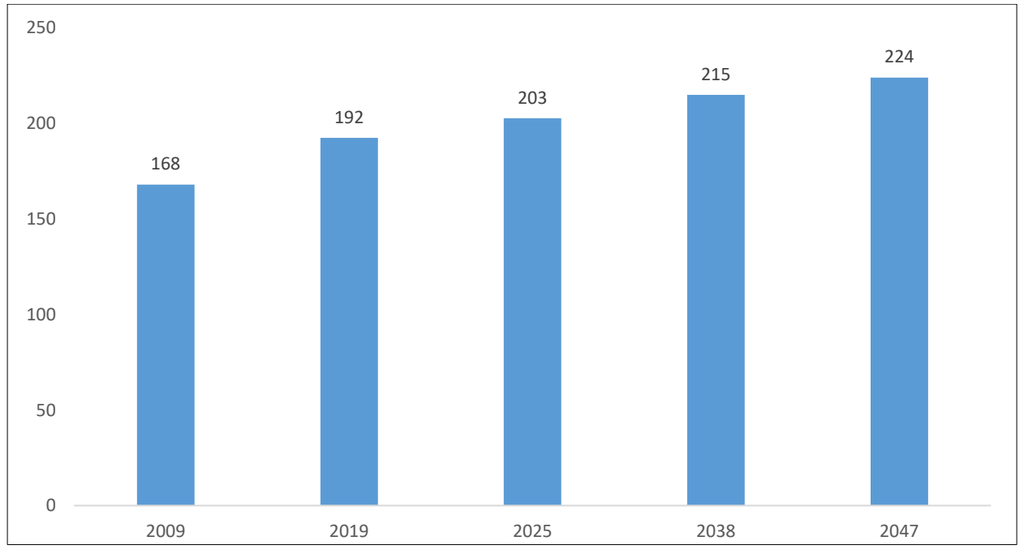
7.2.5 The increase in runway utilisation during off peak periods will result in annual traffic profiles flattening as demand spreads to the less utilised periods of the year, although some seasonality would remain. In 2038, busy month commercial ATMs are forecast to be 7% higher than the annual average compared to 17% in 2019 and 23% in 2014.

2. Up-gauging of Fleet over Time to Larger Aircraft

7.2.6 The second important and year-round factor that will drive passenger growth is the trend for airlines to up-gauge their fleets with larger aircraft. Seats per ATM are expected to increase from an average of 192 in 2019 to 215 by 2038 and to 224 in 2047, as shown in the charts below.

[10] https://www.gov.uk/government/consultations/night-flight-restrictions-at-heathrow-gatwick-and-stansted-airports-between-2022-and-2024-plus-future-night-flight-policy/night-flight-restrictions

Figure 7.2.2: Average Seats per ATM - Base Case



Source: CAA/GAL Statistics

7.2.7 Two good examples of this can be seen in Gatwick's two largest airlines easyJet and British Airways - which currently account for over 60% of Gatwick's passengers.

7.2.8 For example, easyJet is moving towards A320 and A321 aircraft (with 186 seats and 235 seats respectively) from current A319 (156 seats) and the A320 fleet (previously 180 seats). Similarly, British Airways is continuing to 'densify' its Boeing 777 fleet alongside longer term fleet replacement plans for their short haul fleet (eg the B777 densification will result in seat configurations growing from 220/275 to 232/336) which will result in significant increases in average seats per aircraft[11].

7.2.9 New long haul markets and the usage of Boeing 787s (often replacing 757/767) and Airbus A350s entering airline fleets are other examples of airlines up-gauging.

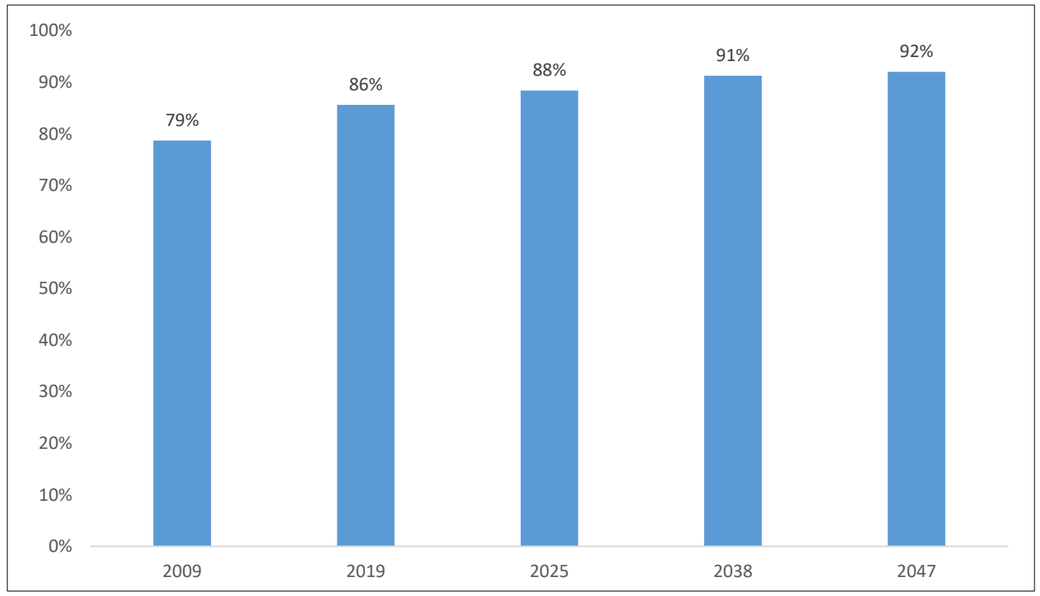
7.2.10 The above changes are already underway for easyJet and British Airways and other large carriers such as Tui and it is realistic to assume this would continue, especially as new slot capacity at UK airports continues to become scarcer and the UK aviation market demand continues to grow.

3. Higher Average Load Factors

7.2.11 Allied to the increase in average aircraft size is a predicted increase in average seat occupancy rates across the year, also referred to as load factors. In 2019, average load factors ranged between of 78-92% (averaging 86%) across the year and have increased from 79% to 86% over the previous 10 years. This increase has been supported by the growth of LCCs who have been actively increasing load factors across their networks.

7.2.12 Over the next 20 years load factors are forecast to increase at a slower rate, with the gains seen in the last 10 years not being repeated in the next 15-20 years. Factors such as seasonality, directional imbalances and no shows would continue to present challenges for airlines to increase their seat occupancy rates further. By 2038 and beyond, average load factors are forecast to increase to just over 90% which is comparable to Gatwick's most efficient carriers operating today.

Figure 7.2.3: Average Load Factor - Base Case



Source: CAA/GAL Statistics

7.2.13 When combined, the aircraft size and load factor assumptions result in the average number of passengers per flight increasing from the current 165 (in 2019) to 196 in 2038 and 206 in 2047.

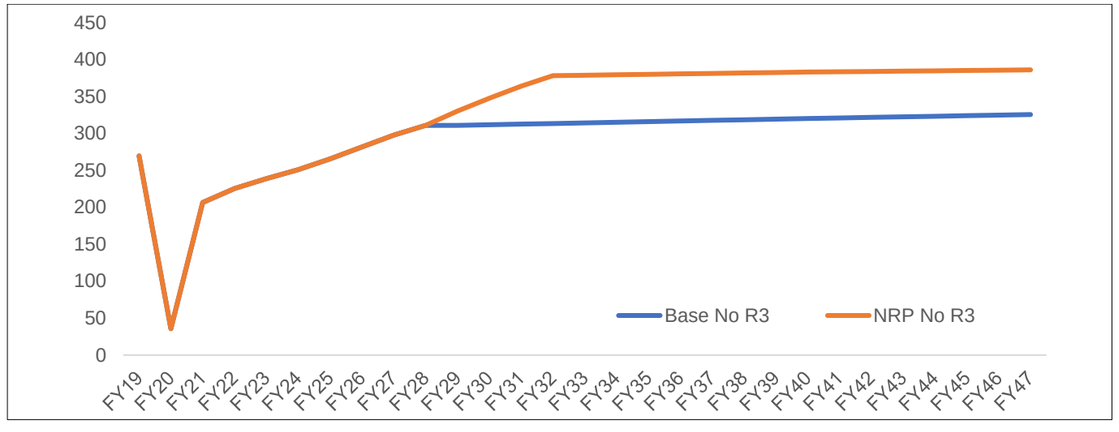
7.3. Growth with the Northern Runway Project

7.3.1 The introduction of the Project would allow both of Gatwick's runways to be used concurrently. This would release an existing capacity constraint on the airport, to allow it to receive additional aircraft movements. The northern runway would be used for departing aircraft (mostly Code C or smaller) whilst the main runway would be capable of handling all movements as it is today. This has the potential to add significant levels of capacity and accommodate the ongoing growth in demand for aviation across the wider UK market.

7.3.2 With the Project, it is estimated that approximately 63,000 additional commercial ATMs will be possible in the Baseline Case in 2038, resulting in around 382,000 commercial ATMs, and that by the end of the forecast period in 2047 the number of commercial ATMs could increase to approximately 386,000.

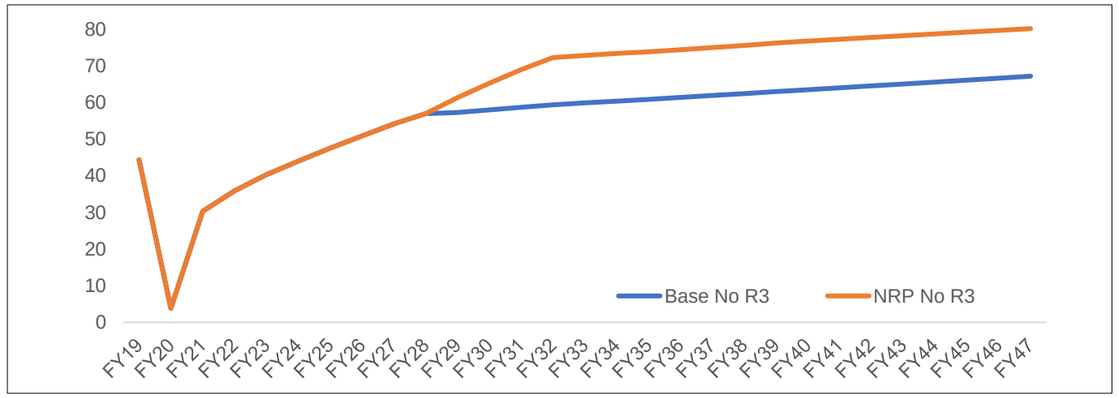
[11] BA's 777 economy class seating being reconfigured from traditional 3-3-3 configuration to 3-4-3 - increasing seating from current 220/275 seats per aircraft towards 232/336 seats. IAG announced plans to replace Gatwick fleet with larger sized short haul aircraft such as the 737Max from the early/mid 2020s

Figure 7.3.1: Gatwick Commercial Annual Air Traffic Movements ('000s)



Source: CAA/GAL Statistics (Total Commercial ATMs)

Figure 7.3.2: Gatwick Annual Passengers (million)



Source: CAA/GAL Statistics

7.3.3 In addition to the increased commercial ATM throughput, larger and fuller aircraft will be operating from Gatwick providing a larger increment in passenger throughput. By 2038 a 20% uplift in average aircraft loadings is forecast meaning that Gatwick will be able to achieve around 75.6 mppa with the Project. Further incremental growth will be possible as these trends continue resulting in the passenger forecast of approximately 80.2 mppa by 2047.

8 Annual Passengers

8.1. Introduction

8.1.1 GAL has prepared detailed annual passenger and movement forecasts for the period 2019-2047. This approach captures detailed market and airline assumptions reflecting Gatwick's pipeline of demand under various capacity scenarios. Gatwick's assumed performance has also been validated against wider London level passenger and ATM forecasts taking into account the dynamics of the wider London market including airline and supply side assumptions at the other airports.

8.2. London Market

8.2.1 As can be seen in the following table, Gatwick currently has a 26% share of the London aviation market which is forecast to decline to under 25% in 2038 and 23% in 2047 under the Baseline Case (ie without the Project).

8.2.2 In the Northern Runway Case, Gatwick would increase its market share to nearly 30% by 2038 which is equivalent to 75.6 million passengers. By 2038 with the Project, Gatwick is forecast to achieve an incremental 13.2 million passengers compared to the Baseline Case. In the 2038-47 period, Gatwick's market share is assumed to decline to 27%, which is comparable to 2019.

Table 8.2.1: Gatwick and London System Passengers 2019, 2029, 2032, 2038 and 2047 (passengers, millions)

Year / Case	Gatwick	London Total	Gatwick as % of London Total
2019 Actual	46.6	181	26%
2029 (Base Case)	57.3	218	26%
2029 (Northern Runway Case)	61.3	218	28%
2032 (Base Case)	59.4	230	26%
2032 (Northern Runway Case)	72.3	230	31%
2038 (Base Case)	62.4	255	25%
2038 (Northern Runway Case)	75.6	255	30%
2047 (Base Case)	67.2	294	23%
2047 (Northern Runway Case)	80.2	294	27%

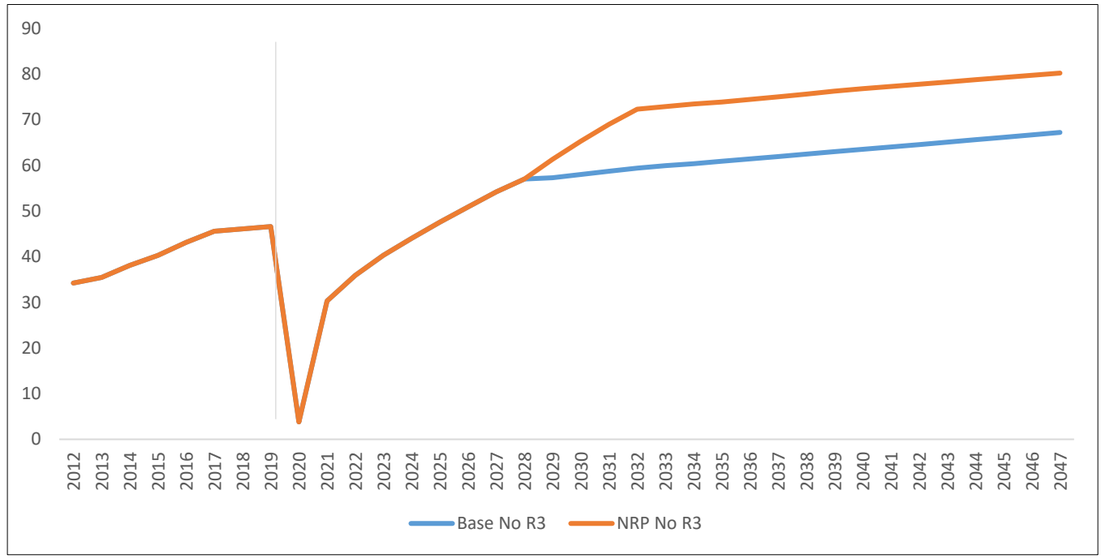
Note: London volumes taken by applying the DfT's UK growth rate to a 2019 London baseline on an unconstrained basis

8.2.3 The following chart highlights the annual growth profile assumed at Gatwick for the Baseline and Northern Runway cases. In both scenarios, passengers are assumed to return to 2019 levels around 2025 before growing towards 57 million by 2028 making best use of the existing runway / infrastructure. Beyond 2028 the growth path differs depending on whether additional capacity offered by the Project is released.

8.2.4 Under the Northern Runway Case the northern runway offers significant additional capacity. Demand is forecast to grow strongly when capacity is assumed to be released in 2029. Through the early 2030s Gatwick is forecast to grow towards 70 million passengers capturing a greater share of London demand as other airports will have relatively limited capacity to grow further. Once the majority of incremental

runway slots are full, further growth is anticipated with passenger numbers predicted to grow to some 80 million by 2047.

Figure 8.2.1: Gatwick Annual Passengers by Scenario (million)

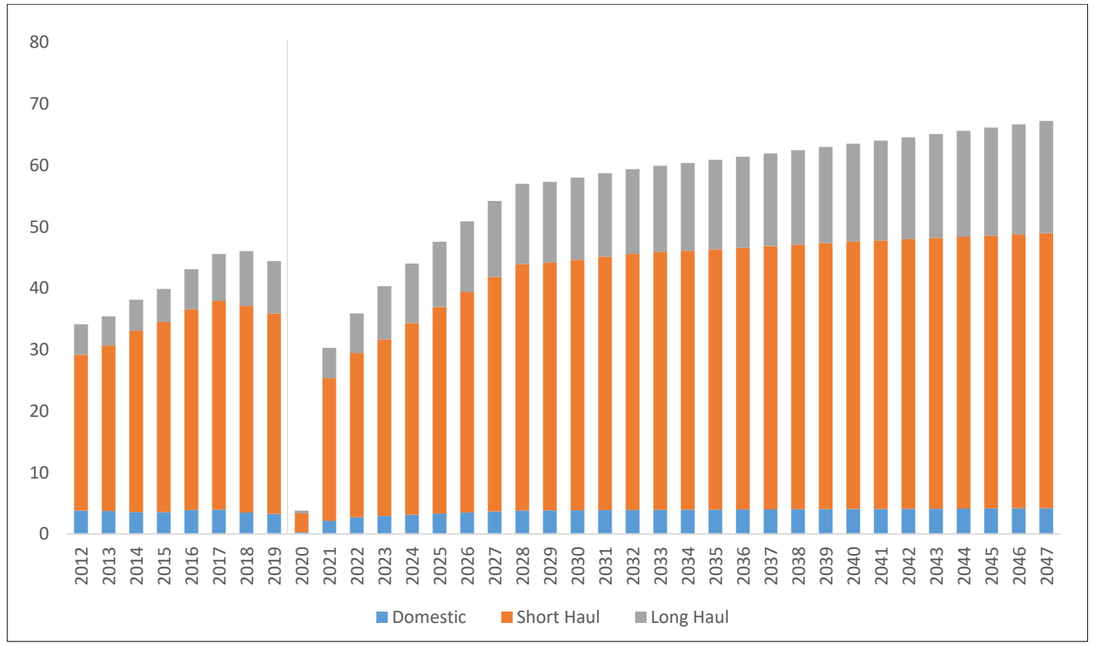


Source: CAA/GAL Statistics

8.3. Market Mix – Haul

8.3.1 In 2019, just under 20% of Gatwick's passenger demand was long haul traffic which has grown from a share of 13% just 5 years before. This period has seen long haul passengers grow from under 5 m to 9 m reflecting a CAGR of 12% which is ahead of the wider London average.

Figure 8.3.1: Gatwick Annual Passengers, Base Case (million)



8.3.2 Looking ahead, growth in long haul volume is forecast to continue taking share away from domestic and short haul markets. Long haul demand is forecast to increase to a 23% share before the introduction of any new capacity. In the Baseline Case, beyond 2029 the long haul share is assumed to remain relatively flat at around 23% as Gatwick continues to accommodate growth in this segment through substitution. In the Northern Runway Case Gatwick's share of the long haul market is forecast to grow to 26% by 2038 and 27% by 2047.

Table 8.3.1: Gatwick Passengers, Market Mix (%)

	2019 Actual	2029		2032		2038		2047	
		Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case
Domestic	7%	7%	6%	7%	5%	6%	5%	6%	5%
Short Haul	73%	70%	70%	70%	70%	69%	69%	67%	67%
Long Haul	19%	23%	23%	23%	25%	25%	26%	27%	27%
Total (m)	46.6	57.3	61.3	59.4	72.3	62.4	75.6	67.2	80.2

8.4. Market Mix – Purpose/Residency

8.4.1 Passenger type forecasts have been prepared for Gatwick's local demand however the respective shares are assumed to remain comparable to 2019.

- **Business share**: This is forecast to remain at around 15% through the forecast period reflecting a combination of new routes and growth on established markets. This remains the case in both scenarios.
- **Foreign resident share**: This share is also forecast to remain relatively static at around 25% through the forecast period. Again, this holds for both scenarios.

Figure 8.4.1: Gatwick Purpose of Travel and Residency (2019)

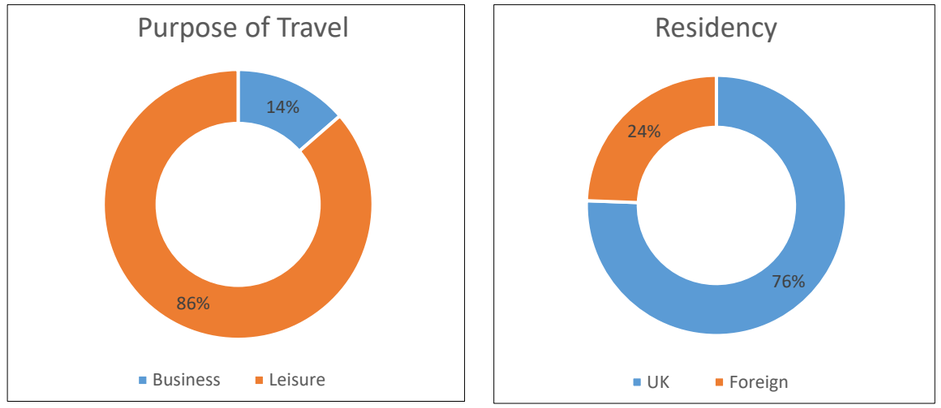


Table 8.4.1: Passenger Type: UK / Foreign / Business / Leisure split (million)

	2019 Actual	2029		2032		2038		2047	
		Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case
UK Resident									
Business	4.0	4.7	5.0	4.9	5.7	5.1	6.0	5.4	6.3
Leisure	29.9	36.7	39.2	38.1	46.7	40.1	48.9	43.3	51.9
Total	33.8	41.4	44.2	42.9	52.4	45.2	54.8	48.7	58.1
Foreign Resident									
Business	2.1	2.6	2.7	2.7	3.3	2.8	3.4	3.0	3.6
Leisure	8.8	10.9	11.7	11.3	14.0	11.9	14.7	12.9	15.6
Total	10.9	13.5	14.4	14.0	17.2	14.7	18.0	15.9	19.1

Note: Excludes Transfer Passengers

8.5. Market Mix – Transfers

8.5.1 In 2019, transfer passengers were estimated to account for approximately 4% of demand, equivalent to 1.8 million passengers. These volumes reflect flows via traditional connecting itineraries[12].

8.5.2 No significant change is forecast in the future with Gatwick remaining predominantly a point-to-point airport. Therefore, the number of connecting passengers is forecast to grow in line with the total growth as they maintain a share of around 4% of total demand across all scenarios in future years.

Table 8.5.1: Transfer Passengers (million and %)

	2019 Actual	2029		2032		2038		2047	
		Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case
Transfer Passengers	1.8	2.5	2.7	2.5	2.7	2.6	2.7	2.6	2.9
% of total Passengers	3.9%	4.5%	4.7%	4.4%	3.8%	4.3%	3.7%	4.0%	3.8%

8.6. Terminal Splits

8.6.1 Terminal splits have been considered reflecting airline allocation assumptions for each scenario and the assumed growth by airline. In 2019, approximately 25 million passengers were handled in the North Terminal, with the remaining 21 million handled by the South Terminal.

8.6.2 Over the forecast horizon and respective scenarios, airlines are forecast to grow at different growth rates and the resulting passenger volumes by terminal will change. With the Project, the North Terminal is forecast to serve some 37 million passengers in 2038 whilst the South Terminal would serve some 38 million. By 2047 40 m passengers are assumed to be using each terminal.

Table 8.6.1: Passengers by Terminal (m)

	2019 Actual	2029		2032		2038		2047	
		Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case
North	25	31	32	32	36	33	37	36	40
South	21	27	29	28	36	29	38	31	40

[12] Whilst other passengers make their own connections, due to lack of available data these have not been included. This would only have a relatively minor impact on the surface access assumptions, potentially over estimating access requirements.

8.7. Surface Access Splits

8.7.1 Surface access estimates for local[13] demand have been prepared reflecting Gatwick's extensive catchment which is forecast to continue drawing on demand from the surrounding area. Greater London contributes by far the largest share of demand reflecting inbound and outbound demand and accounts for 19 million passengers, equivalent to a 42% share. Over the forecast, the splits are assumed to remain relatively stable, reflecting similar catchment characteristics as 2019, and no major changes in surface access to Gatwick.

Table 8.7.1: Passenger Surface Access Split (million, excludes transfers)

	2019 Actual	2029		2032		2038		2047	
		Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case
Greater London	19	23	28	24	30	25	31	27	33
South East	17	21	25	22	27	23	28	25	30
East England	3	4	4	4	5	4	5	4	5
Other	6	7	8	7	9	7	9	8	9
Total	45	55	66	57	70	60	73	64	77

9 Annual Aircraft Movements

9.1. Introduction

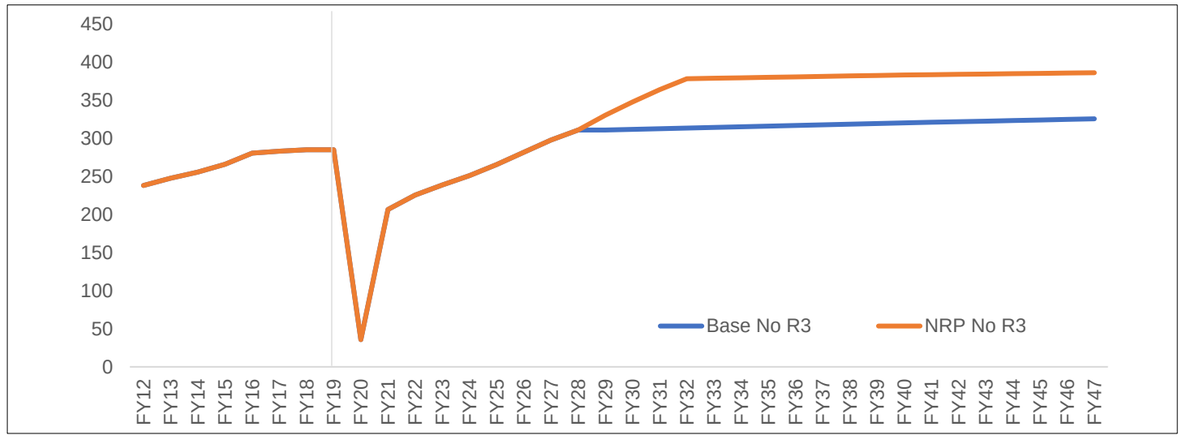
9.1.1 In addition to passengers, aircraft movements have also been forecast capturing supply side trends within the industry and of Gatwick's major airlines. Over the last five years whilst Gatwick's passengers have grown over 22%, movements have grown by 11%, reflecting a trend towards larger and fuller aircraft. In this period the average passenger loading has increased from 150 to 165, a 10% increase.

9.1.2 Looking ahead, growth in average aircraft sizes is forecast to continue recognising the aircraft order books of some of Gatwick's largest carriers. They are forecast to take delivery of aircraft with larger capacities than those currently in operation, this combined with ongoing industry growth in load factors and a growing LCC share will drive further improvement in average passenger throughput. In the next 10 years average passengers per ATM are forecast to increase by a further 12% to 184.

9.1.3 Consequently, Gatwick's annual growth in air traffic movements is lower than its passenger growth. In the Baseline Case annual commercial ATMs (excluding non-commercial flights such as positioning flights) are forecast to reach approximately 311,000 by 2029 up from around 283,000 in 2019 representing a CAGR of 0.9% compared to 2.1% for passengers.

9.1.4 The annual commercial ATM forecasts are compared in the following chart taking a comparable path to that of passengers. In both cases commercial ATMs are forecast to pass 300,000 by the late 2020s and by 2038 are able to grow towards 382,000 in the Northern Runway Case whilst reaching 318,000 in the Baseline Case. In the final period of the forecast only modest growth is assumed as by 2047 the Northern Runway Case is forecast to provide 386,000 commercial ATMs compared to 326,000 in the baseline scenario.

Figure 9.1.1: Gatwick Annual Commercial ATMs (000s)



Source: CAA/GAL Statistics, excludes non-commercial ATMs

[13] Excluding transfers

Table 9.1.1: Gatwick Commercial Air Traffic Movements and Non-Commercial Air Traffic Movements (rounded to nearest 000s)

	2019 Actual	2029		2032		2038		2047	
		Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case
Commercial ATMs	283k	311k	330k	313k	378k	318k	382k	326k	386k
Non-Commercial Air Traffic Movements	2k	2k	3k	2k	3k	2k	3k	2k	3k
Total Annual Aircraft Movements	285k	313k	333k	316k	381k	321k	385k	328k	389k

9.1.5 The above table uses the following definitions.

- ATMs: Commercial Air Traffic Movements: Landings or take-offs of aircraft engaged on the transport of passengers, freight or mail on commercial terms (ie scheduled, charter and dedicated freighter flights).
- NATMs: Non-Commercial Air Traffic Movements: Landings or take-offs of aircraft movements, excluding ATMs. Includes positioning flights by commercial operators, business aviation and recreational / military flights.
- TAMs: Total Aircraft Movements = ATMs and NATMs.

9.1.6 NATMs include positioners, business aviation and other categories. Their share of movements has been falling over time whilst total movements have continued to grow. In 2019, they accounted for approximately 1% of total movements and this share is forecast to remain relatively stable.

9.1.7 The commercial ATMs are broken down into the main market types namely domestic, short haul and long haul.

Figure 9.1.2: Gatwick Commercial ATMs by Haul

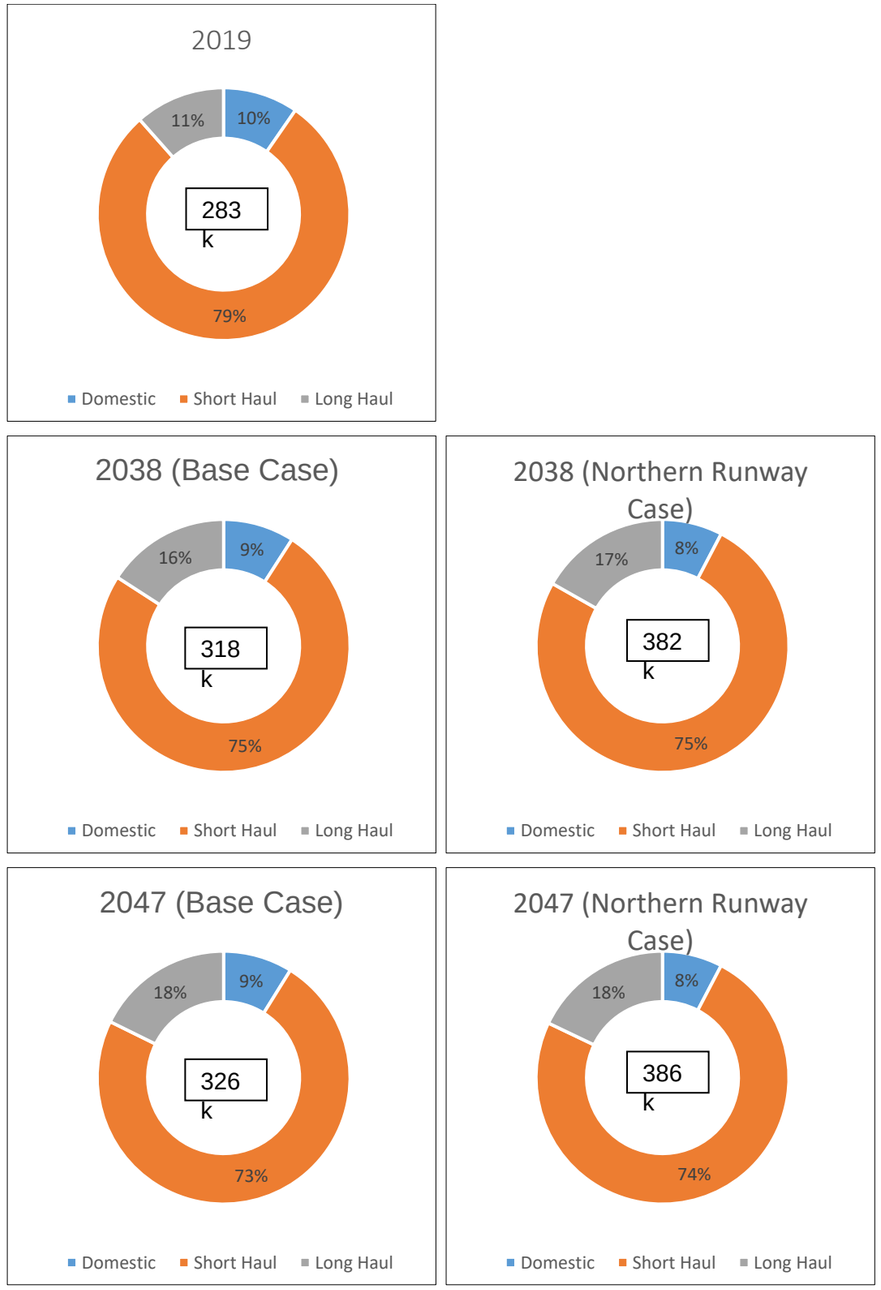


Table 9.2: Gatwick Commercial Air Traffic Movements by Market Mix (000s)

	2019 Actual	2029		2032		2038		2047	
		Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case
Domestic	28k	29k	29k	29k	29k	29k	29k	29k	30k
Short Haul	222k	237k	252k	237k	288k	239k	288k	239k	287k
Long Haul	32k	45k	49k	47k	61k	51k	64k	58k	69k
Total Commercial ATMs	**283k**	**311k**	**330k**	**313k**	**378k**	**318k**	**382k**	**326k**	**386k**
Non-Commercial Air Traffic Movements	2k	2k	3k	2k	3k	2k	3k	2k	3k
Total Annual Aircraft Movements	**285k**	**313k**	**333k**	**316k**	**381k**	**321k**	**385k**	**328k**	**389k**

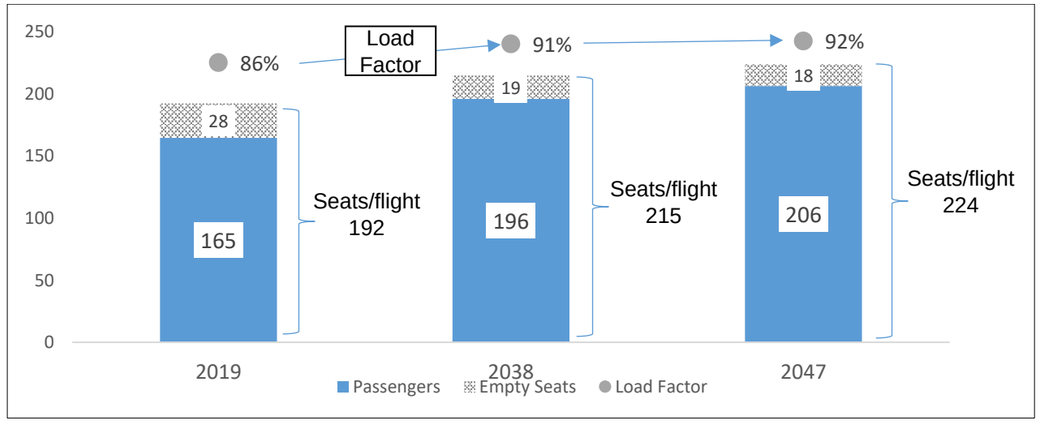
9.2. Average Aircraft Size and Passenger Loading

9.2.1 In 2019, Gatwick's average aircraft size of 192 seats per movement reflected a wide range of aircraft types (regional, narrow body and wide body) across many airline business models. This metric has been steadily increasing having grown from 180 in 2014 to the 2019 level, representing 7% growth in just 5 years. In the future, reflecting the main airlines' order books and trends for larger and more densely configured aircraft this is forecast to increase to 205 by 2029 representing a further 7% growth. By 2038 average aircraft are forecast to have increased to between 215 and 218 seats (depending on scenario) which would be approximately 15% above 2019.

9.2.2 Alongside the trend for larger aircraft, the rate at which airlines fill this capacity has also been improving. In 2019, average load factors of 86% were achieved, which is more than 3% points higher than 5 years ago. Looking ahead, the rate at which this will continue to grow is assumed to slow down, but some growth will still occur. These positive trends will be achieved through better year-round capacity management alongside the higher proportion of LCCs which operate with higher load factors. By 2038 and 2047 average load factors are assumed to pass 90%.

9.2.3 Growth in average loading and aircraft size through the forecast is summarised in the following chart.

Figure 9.2.1: Gatwick Growth in Average Aircraft Size & Load Factor (2019, 2038 & 2047 Base Case)



Source: CAA/GAL Statistics

Table 9.2.1: Gatwick Commercial Air Traffic Movements Average Loads

	2019 Actual	2029		2032		2038		2047	
		Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case
Average Aircraft Loads - Seats	192	206	208	210	213	215	218	224	227
Average Aircraft Loads - %	86%	89%	89%	90%	90%	91%	91%	92%	92%

10 Air Cargo

10.1. Cargo Summary

10.1.1 High level annual cargo forecasts have been prepared considering Gatwick's evolving traffic mix. The supply side dynamics of the routes and carriers play a pivotal role in the airport's cargo performance with long haul widebody movements to markets such as Asia/Middle East providing significant opportunity.

10.1.2 Gatwick's cargo performance has been increasing in recent years reflecting the growth in the number of long haul markets and carriers. Future growth in cargo tonnage is linked to supply side assumptions around the carrier and market types being served.

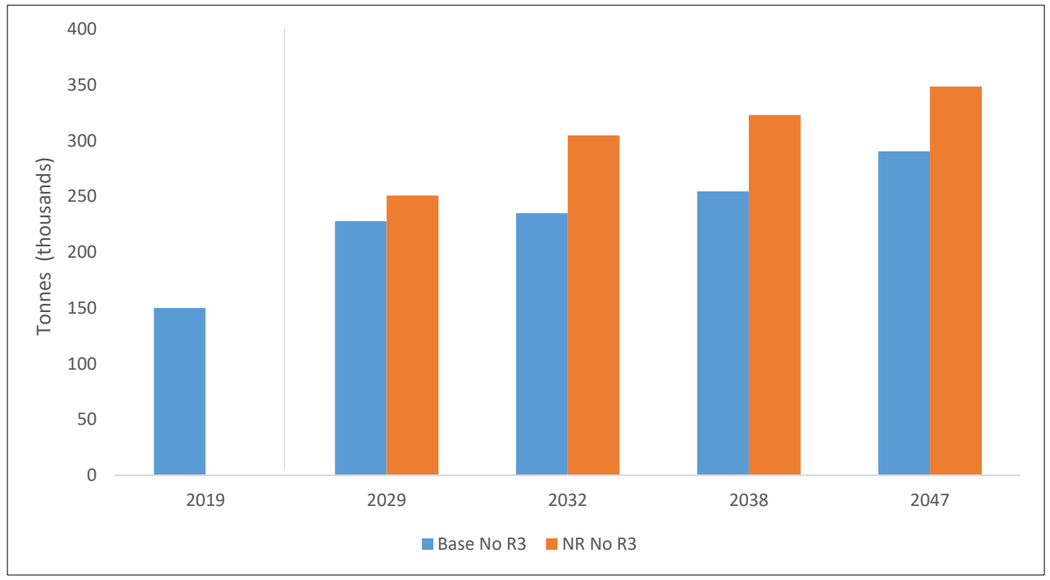
10.1.3 Published statistics for Gatwick's cargo performance have historically been unreliable, typically understating volumes as a result of many flights reporting zero when in fact they carried material volumes of cargo. To ensure the application for development consent is based on accurate figures, GAL has undertaken a one year validation exercise to identify the magnitude of this. Adjusting for the figure in 2019/20 results in an increase from the reported 118,000 tonnes to 150,000 tonnes (ie approx. 30% higher than the published figures).

10.1.4 Under the Northern Runway scenario cargo tonnages are forecast to increase to over 200 k tonnes as the northern runway enters service. Beyond this they grow steadily to over 300 k tonnes by 2038 primarily through increased long haul connectivity offered by the additional runway capacity. By 2047 cargo tonnages are forecast to be approaching 350,000 tonnes per year.

Table 10.1.1: Air Cargo (tonnes, 000s)

	2019		2029		2032		2038		2047	
	Reported	Adjusted	Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case
Cargo	118	150	228	251	235	305	254	323	290	348

Figure 10.1.1: Gatwick Annual Cargo, Tonnes



Source: CAA/GAL Statistics

11 On Airport Employment

11.1. Employment Summary

11.1.1 Future employment has been forecast by correlating each employee grouping to an appropriate traffic metric – for example ground handling staff is most closely linked to ATMs, while cleaning staff is more closely linked to passenger volumes.

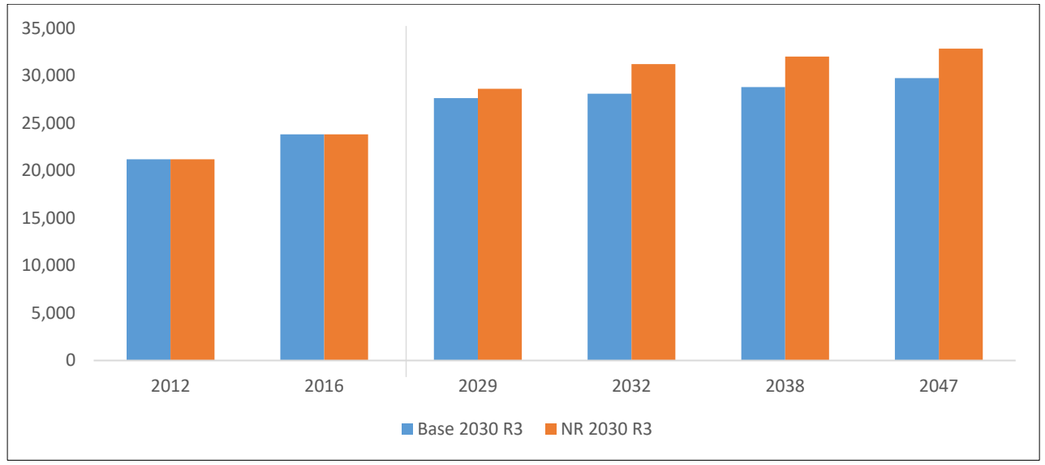
11.1.2 Around 24,000 employees worked on site in 2019 of which approximately 3,300 were employed directly by Gatwick Airport Limited (GAL). In 2020 with the prevailing pandemic conditions, the number of GAL staff fell to approximately 1,900 although this is expected to return to previous levels in line with recovering passenger numbers in the coming years and the total number of employees on site is forecast to increase to over 27,000 by 2029 and then grow towards 28,800 under the Baseline Case, or up to 32,000 under the Northern Runway Case in 2038. Modest growth is assumed in the 2038-2047 period as a further 2-3% employees are added taking the total to 29,000 under the Baseline Case or to 32,800 under the Northern Runway Project scenario.

11.1.3 This growth takes into account future efficiency gains driven by ongoing automation and new technologies. For example, ground handling technologies such as autonomous vehicles and terminal robots will drive operational efficiencies on the ground. Passenger and baggage processing technologies will continue to make the security and customs/immigration processes for passengers and luggage screening more efficient.

11.1.4 Further gains are achieved through larger aircraft and higher aircraft loadings meaning that on site employment grows at less than half the rate of passengers (1.2% vs 2.6% under the Northern Runway Project scenario). Average passengers per employee increase from 1,800 to over 2,300 by 2038 and around 2,450 by 2047 representing an increase in this ratio of 35%.

11.1.5 For comparison similar efficiency gains have been made since 2002 when average passengers per employee was 1,300, 25% below 2019 levels.

Figure 11.1.1: On-Airport Employment Forecasts (employees)



Source: GAL Statistics, baseline year of 2016 was most recent year available for analysis

Table 11.1.1: On Airport Employment

		2029		2032		2038		2047	
	2016 Employment Survey	Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case
Total	23,807	27,609	28,596	28,077	31,199	28,770	31,985	29,721	32,822

12 References

Department for Transport (2018) Airports National Policy Statement: New Runway Capacity and Infrastructure at Airports in the South East of England. [Online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/714106/airports-nps-new-runway-capacity-and-infrastructure-at-airports-in-the-south-east-of-england-web-version.pdf

Annex 1

Data Tables

A1.1 Employment

Table A1.1.1: On Airport Employment (by type)

	2016 Employment Survey	2029		2032		2038		2047	
		Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case
Air Cabin Crew	5,791	7,066	7,378	7,227	8,225	7,464	8,481	7,791	8,775
Airline/Airport Management	671	756	777	767	834	783	851	805	871
Apron, Ramp, Cargo, Baggage Handling and Drivers	2,434	2,549	2,605	2,556	2,744	2,571	2,754	2,588	2,760
Catering, Cleaning and Housekeeping	3,061	3,896	4,101	4,001	4,656	4,157	4,823	4,371	5,016
Customs, Immigration, Police and Fire Staff	1,073	1,383	1,459	1,422	1,665	1,480	1,727	1,559	1,799
Information Technology	234	260	266	263	283	268	288	274	294
Maintenance Tradesmen	1,899	2,227	2,308	2,269	2,526	2,330	2,592	2,414	2,667
Management and Professional - General	1,374	1,480	1,506	1,493	1,577	1,513	1,598	1,541	1,623
Passenger Services/Sales and Clerical Staff	3,915	4,158	4,218	4,189	4,380	4,234	4,429	4,297	4,485
Pilots/Air Traffic Control/Flight Operations	1,533	1,645	1,700	1,652	1,836	1,667	1,846	1,684	1,852
Security, Passenger Search, Security Access Control	1,822	2,189	2,278	2,235	2,522	2,303	2,596	2,397	2,680
Total	23,807	27,609	28,596	28,077	31,199	28,770	31,985	29,721	32,822

A1.2 Noise

A1.2.1 Forecasts have been produced as inputs into other workstreams in order to assess air and ground noise. These forecasts for air and ground noise have been produced on an annual (Lden) basis and for the summer 92 day 'Leq' period (defined as 16 June - 15 September).

A1.2.2 Forecasts for the noise assessments have been disaggregated into the day, evening and night periods. These are defined as follows (all times are local time):

- Day = 0600 – 1759
- Evening = 1800 – 2159
- Night = 2200 – 0559

A1.2.3 The following tables provide the annual outputs relating to the 'Lden' period.

Table A1.2.1: Annual Total Movements (including Non-Commercial Movements), Noise Lden

	2019 Actual	2029		2032		2038		2047	
		Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case
Annual	285k	313k	333k	316k	381k	321k	385k	328k	389k
Day	198k	222k	238k	224k	270k	229k	274k	234k	277k
Evening	56k	60k	63k	61k	76k	61k	76k	64k	77k
Night	31k	31k	31k	30k	35k	31k	35k	31k	35k

A1.2.4 The following tables provide the outputs relating to the 92 day 'Leq' period.

Table A1.2.2: Total Movements (including Non-Commercial Movements), Noise Summer Period Leq

	2019 Actual	2029		2032		2038		2047	
		Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case
Leq Period	82k	86k	90k	87k	102k	87k	103k	88k	104k
Day	55k	59k	62k	59k	70k	60k	71k	60k	71k
Evening	16k	16k	16k	16k	20k	16k	20k	17k	20k
Night	12k	12k	12k	11k	13k	11k	13k	11k	13k

A1.3 Fleet Mix

A1.3.1 Fleet mix assumptions have been made to provide input to the noise and environmental analysis capturing ongoing fleet modernisation programs amongst Gatwick's airlines. Next generation aircraft include those currently entering service and benefiting from the latest engine technologies. Aircraft included in this grouping include narrow bodies such as the A320neo series and Boeing's 737Max[14], widebody aircraft include the Airbus A350 and Boeing 787 series of aircraft.

A1.3.2 In 2019 just over 12% of movements were operated by next generation aircraft with this share forecast to steadily increase. As the 737Max returns to service alongside further deliveries of other next generation aircraft, this share will continue to increase each year.

[14] In January 2021 EASA (European Union Aviation Safety Agency) gave approval for the return to service

A1.3.3 Over the forecast period the next generation share is forecast to steadily increase approaching 60% in 2029 and we expect virtually all current generation aircraft to be phased out by 2038.

A1.3.4 Beyond the mid-2030s there is the potential for future generation aircraft types to enter service (e.g. neo and MAX replacements) as well as other modes of propulsion (e.g. electric, hydrogen). Given the uncertainty surrounding these types it was assumed that future fleet transitions were relatively minor. Notwithstanding this expectation, some sensitivity testing is being undertaken in relation to the rate of fleet mix transition in the noise assessment.

Table A1.3.1: Fleet Generation (Movements & Mix) (including Non-Commercial Movements)

	2019 Actual	2029		2032		2038		2047	
		Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case
Next Gen	12%	59%	59%	80%	82%	100%	100%	100%	100%
Other	88%	41%	41%	20%	18%	0.4%	0.4%	0.2%	0.2%
Total	285k	313k	333k	316k	381k	321k	385k	328k	389k

Detailed Fleet Tables

Table A1.3.2: Fleet Types (ATMs and NATMs)

	2019 Actual	2029		2032		2038		2047	
		Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case	Base Case	Northern Runway Case
Narrow Bodied									
A320s ceo	178k	101k	107k	55k	61k	0k	0k	0k	0k
737 series	42k	11k	12k	2k	2k	0k	0k	0k	0k
Other NB CG	12k	1k	1k	1k	1k	1k	1k	1k	1k
A320s neo	20k	113k	119k	158k	192k	215k	254k	215k	254k
737 Max	0k	36k	39k	46k	51k	48k	52k	48k	52k
C Series	2k	8k	8k	9k	15k	8k	16k	8k	15k
Wide Bodied									
A330 series	5k	3k	3k	1k	1k	0k	0k	0k	0k
777 series	9k	9k	10k	2k	2k	0k	0k	0k	0k
747	2k	0k	0k	0k	0k	0k	0k	0k	0k
A380	2k	2k	3k	2k	2k	1k	1k	0k	0k
Other WB CG	2k	0k	0k	0k	0k	0k	0k	0k	0k
787 series	12k	23k	25k	33k	43k	38k	49k	44k	52k
A350 series	1k	6k	6k	6k	9k	8k	10k	9k	11k
Other WB NG	0k	0k	1k	1k	1k	3k	3k	4k	4k
All	285k	313k	333k	316k	381k	321k	385k	328k	389k