



Gatwick Airport Northern Runway Project

The Applicant's Response to Deadline 5 Submissions –
Fleet Mix Assumptions

Book 10

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1 Fleet Assumptions

1.1 Introduction

1.1.1 The purpose of this section is to respond to Appendix I “Review of Updated Fleet Mix Assumptions” from Joint Local Authorities (JLAs) Response to the Applicant’s Deadline 4 documents [\[REP5-094\]](#). This appendix focuses on the aircraft types and generation assumptions regarding the fleet forecasts.

1.1.2 Some of the comments are already covered in the **Updated Central Case Aircraft Fleet Report** [\[REP4-004\]](#) where several answers are already explained, although this document will summarise the main points where relevant.

1.1.3 The Updated Central Case fleet forecast is considered robust, capturing the impacts of Covid as well as future realistic long term transition rates to next generation aircraft types.

1.2 Central & Slow Transition Fleet Mixes

1.2.1 In paragraph 2, clarification is sought by York Aviation regarding the timing of the respective forecasts and the different mixes arising between next generation Airbus and Boeing fleets, where they suggest there may be some anomalies. This is covered in **Updated Central Case Aircraft Fleet Report** [\[REP4-004\]](#) paragraph 2.2, but in summary:

1.2.1.1. The original central fleet case was prepared in 2019;

1.2.1.2. The slow fleet transition case was prepared in 2022;

1.2.1.3. The updated central case fleet was commissioned in 2023 and progressed during 2024.

1.2.2 The differences between the respective manufacturers primarily relates to the assumptions being prepared at different times and capturing latest fleet orders available at the time. The main variance is driven by assumptions regarding BA’s short haul fleet replacement programme.

1.2.3 When the original central fleet case was prepared in 2019 BA had recently exited all of its older Boeing narrow body aircraft types from operations replacing them with the Airbus A320 series fleet which it currently operates at Gatwick.

1.2.4 This resulted in fleet commonality across all of IAG’s airlines (i.e. BA, Aer Lingus, Vueling, and Iberia). When the original Central Fleet Case was prepared it was

assumed that BA's short haul narrow body fleet would transition from Airbus 'current generation' (CG) to Airbus 'next generation' (NG) aircraft types.

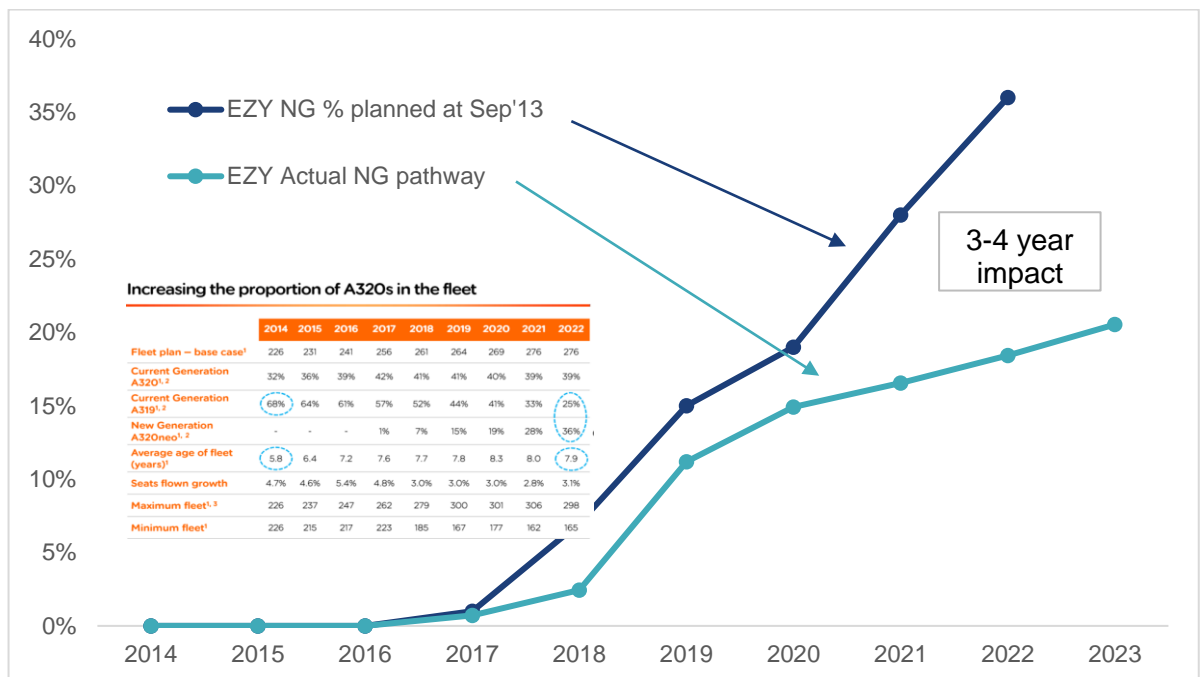
- 1.2.5 After the initial Central Case forecasts were prepared, IAG which owns BA, Vueling, Aer Lingus, Iberia and Vueling announced a potential Boeing narrow body order (737MAX). BA's Gatwick operation and Vueling were identified as likely to receive these aircraft. This was captured in the subsequent 'Slow Fleet Transition' and 'Updated Central' cases although delivery dates were far from certain.
- 1.2.6 The JLAs' paper expresses concern that there are '*.....unexplained anomalies in terms of the assumed mix between new generation B737MAX and Airbus A320 family neo aircraft between the original Central Case Fleet Mix and the Slower Transition Fleet mix*'. This arises from capturing the IAG order for Boeing 737MAX aircraft in the Slower Fleet transition, versus an assumed order for Airbus A320neo aircraft in the original Central Case. It should be noted that modelling a higher mix of Boeing Next Generation narrow body aircraft has limited impact on the noise envelope, i.e. the change related to aircraft manufacturer (Airbus or Boeing) not to assumptions about performance.
- 1.2.7 This order has now been 'firmed' although delivery dates continue to remain uncertain. For example, the Boeing 737 MAX10, which forms part of BA's order assumed in the updated central case, has not even been certified to fly yet, with significant uncertainty about when this may be granted.

1.3 Updated Central Case Mix

- 1.3.1 It is worth noting that the previous responses from the JLAs regarding fleet assumptions have until now suggested that the transition to next generation fleets assumed in the original central case forecasts was too optimistic [*"...we consider that the fleet mix assumed in the Central Case for assessment is somewhat optimistic, particularly in the early years given the deferral of aircraft orders that has occurred during the pandemic, but that the Slower Transition Case represents a robust worst case"* [CONSULTATION REVIEW carried out by York Aviation for the Host and Neighbouring Authorities, November 2021].
- 1.3.2 The Updated Central Case was prepared in 2023 (although noise modelling was not undertaken until later), prior to the latest fleet plans of some of the Gatwick's main carriers being announced. It is noted that the latest easyJet fleet plan (November 2023) does provide some updated information around their current plans over the next 5+ years.

- 1.3.3 GAL notes, however, that airline fleet plans are routinely impacted, with the assumed delivery profiles often being delayed for reasons beyond the airline’s control.
- 1.3.4 For example, easyJet’s original planned transition to next generation aircraft types was already lagging their original plans pre-Covid. For example, in easyJet’s 2013/14 fleet plan they were forecasting a next generation share of 15% for 2019 whilst only just over 10% was achieved in reality.
- 1.3.5 The following chart (Figure 1) demonstrates the lag between out-turned fleet and planned fleet deliveries for easyJet (Actual NG share vs fleet plan from 2013/14).

Figure 1: easyJet fleet plan vs actual profile (Source: easyJet investor)



- 1.3.6 This is not uncommon; many airlines may defer/delay deliveries whilst many industry examples highlight other challenges impacting aircraft delivery schedules:
- 1.3.6.1. Entry into service of new aircraft types is often delayed. This has impacted all recent major aircraft programmes, for example, Boeing 787s and Boeing 737MAX programmes.
- 1.3.6.2. Delays have also recently impacted aircraft variants, for example the 737MAX7 and 737MAX10 are many years behind schedule and continue to await certification. Also, Airbus’ entry into service for its “XLR” A320 model has recently experienced delays.

- 1.3.7 Currently, aircraft production continues to run well below planned levels and levels that were achieved pre-Covid. Much of this was covered in chapter 2 of the **Updated Central Case Aircraft Fleet Report** [[REP4-004](#)], but in summary:
- 1.3.7.1. Over three thousand narrow body deliveries were 'lost' during Covid.
 - 1.3.7.2. Ongoing production issues persist and fewer next generation aircraft will be available than was previously being forecast.
 - 1.3.7.3. Latest data highlights how Boeing remain capped at artificially lower monthly production rates, and Airbus are currently facing challenges in increasing their planned production rate. For example, Airbus had been targeting 60 deliveries per month in May 2024 but only delivered 53 (Reuters, June 2024). Boeing had plans to ramp up towards 60 737MAX aircraft per month but are currently capped by the FAA (Federal Aviation Administration) at a maximum of 38 per month.
 - 1.3.7.4. Over one thousand wide body deliveries were 'lost' during Covid, again ongoing delivery rates of wide bodies are well below pre-Covid levels. The introduction of the 777X was previously being planned by airlines for 2020, although this is not now expected until late 2025 at the earliest.
- 1.3.8 In view of the above, and whilst noting there will always be residual uncertainty that will inevitably attach to fleet transition, the Updated Central Case is robust. It is based on more recent data than the original Central Case fleet assumptions. The transition rates assumed are consistent with previous industry cycles and align with fleet patterns seen at Gatwick today and expected to continue through the forecast.

1.4 Transition Rates

- 1.4.1 Regarding future Gatwick next generation share assumptions, the JLAs suggest that:
- 1.4.1.1. *Those airlines with high percentage new generation use in 2024 are assumed to reach 100% by 2027;*
 - 1.4.1.2. *those at around 50% to reach 75% (i.e. >8% points per year in 2024-27 period (25% divided by 3 years));*
 - 1.4.1.3. *those at lower percentages to roughly double new generation usage, with an assumption of 10% fleet transition on average over the remainder of the fleet.*

1.4.2 Beyond the JLA’s 43% NG figure for 2027, this would appear to suggest c100% next generation aircraft share by the mid-2030s, however:

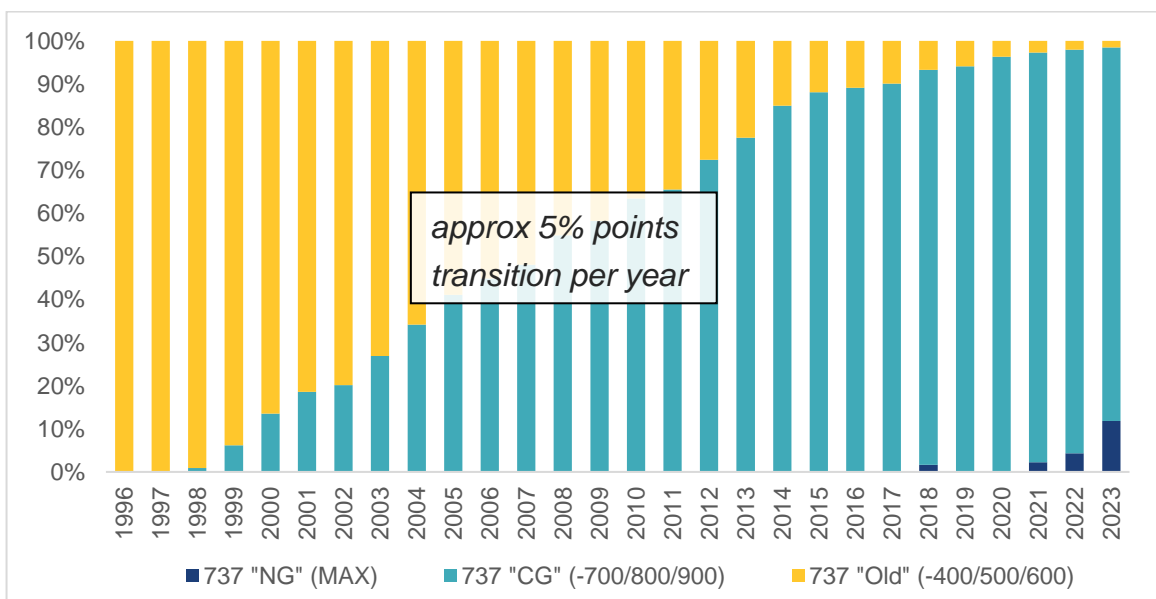
1.4.2.1. Sustaining a transition rate of 10% would mean that even if Gatwick had 0% NG share today, then a 10% transition rate per year would mean full conversion by 2034 from 2024

1.4.2.2. Also, a transition rate of fleets at 10% would imply an average aircraft age of approximately 5 years (i.e. the fleet is replaced every 10 years, so the average would be 5 years). This does not align with airline fleet ages or airline plans. For context, the average fleet age at Gatwick is around 12 years (2023). This is comparable to the average fleet age of easyJet at Gatwick.

1.4.2.3. Airlines also operate a wide range of aircraft, for example easyJet’s aircraft at Gatwick ranged from ‘new’ to 18 years of age in 2023.

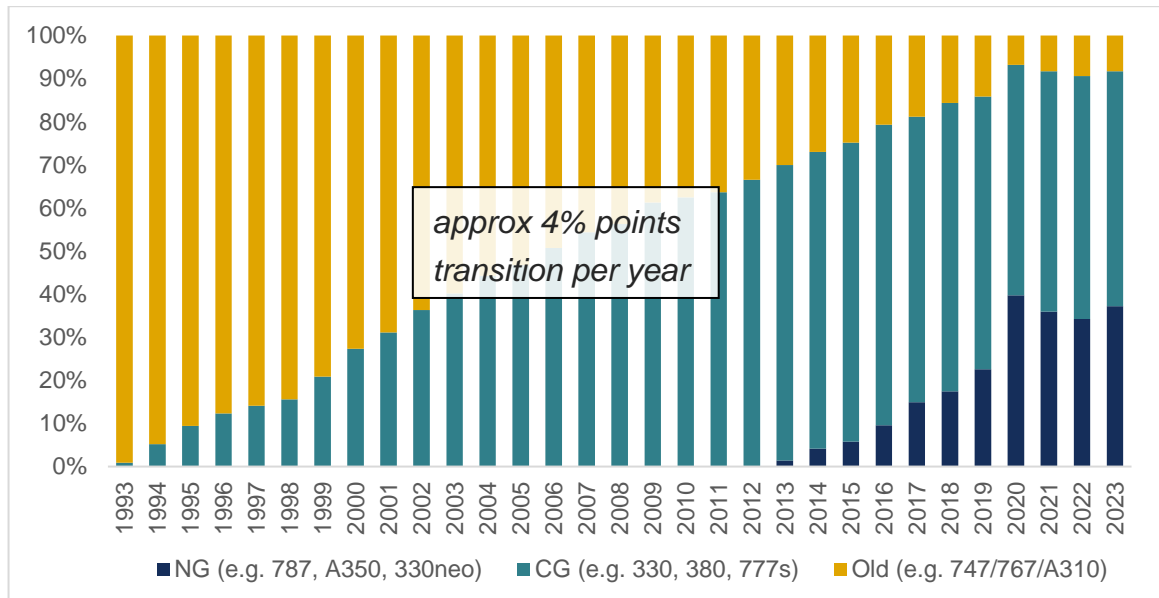
1.4.3 Examining historical fleet transition rates, more conservative rates of transition are apparent than that implied by the JLAs. At a European level, the transition from Boeing 737 Classic aircraft (737-400/500/600 which entered service in the 1980s and early 1990s) to Boeing 737 Current generation (737-700/800/900, which entered service in the late 1990s) is shown in the following figure (Figure 2). The transition took over 20 years, suggesting an average transition of ~5% each year (compared to the JLA 10% each year).

Figure 2: Industry Transition, Boeing 737 Classic, to 737 Current Gen, to 737 Max (Source: OAG, European ATMs)



1.4.4 This analysis has been repeated for wide body aircraft where a slightly slower transition rate was found. As the chart shows, historical transition averaged 4% points per year in the 1995-2010 period.

Figure 3: Industry Transition, Wide bodies (Source: OAG, European ATMs)



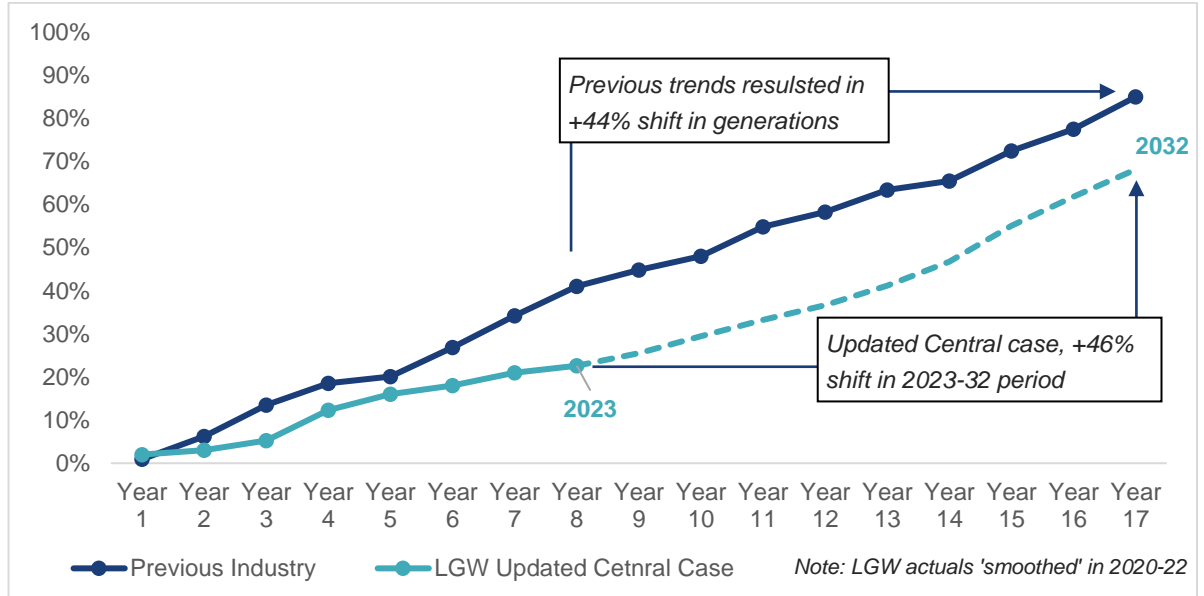
1.4.5 The chart (Figure 3) shows that more recent transition of the next generation widebodies has averaged a similar rate in the 2013-2023 period at 3.5% points shift per year.

1.4.6 Comparing historical transition rates with Gatwick’s latest Central Case provides strong alignment. The following chart profiles the historical transition of narrow bodies shown earlier, alongside the annual shift in NG share forecast for Gatwick’s updated Central case¹.

1.4.7 Looking ahead, from an ‘actual’ position of 23% NG share in 2023 (year 8 on Figure 4) the updated Central Case assumes a +46% shift to 68% NG share in 2032 (year 17 on chart). This shift is comparable to any 9-year period achieved in the benchmark provided.

¹ Short term actuals adjusted for Covid (2020-2022)

Figure 4: Comparison of Updated Central Case to previous industry transition, NG Aircraft shares



1.5 Luton Comparisons

1.5.1 Comparisons to Luton made by York Aviation do not reflect the wide range of airlines flying at Gatwick, for example >40%² of Luton’s passenger aircraft ATMs are flown by Wizz which is a relatively young airline currently expecting a 100% next generation share by 2029.

1.5.2 Gatwick has a wide range of aircraft types and ages using the airport. In 2023 c8% of ATMs were operated by aircraft over 20 years old. Again, with many current generation aircraft entering service leading up to 2020, it is unrealistic to assume 100% transition by the mid-2030s (i.e. no current generation aircraft >20 years old would be flying).

1.6 Summary

1.6.1 In summary, the fleet transition rates assumed by GAL in the **Updated Central Case Aircraft Fleet Report** [REP4-004] are robust. They have been updated recently to reflect the impacts of Covid on aircraft production rates, airline fleet plans, as well as relevant fleet orders from Gatwick’s main airlines. The transition rates assumed are also consistent with previous industry cycles and align with fleet patterns seen at Gatwick today and expected to continue through the forecast.

² 44% Q1 2024 (Source: CAA)