



Gatwick Airport Northern Runway Project

The Applicant's Response to Local Impact Reports
Appendix B – Response to the West Sussex Authorities'
Appendix F Needs Case

Book 10

VERSION: 1.0

DATE: APRIL 2024

Application Document Ref: 10.15

PINS Reference Number: TR020005

Table of Contents

Purpose	1
1 Unconstrained Demand	2
1.2 Recap of Approach	2
1.3 Previous DfT Modelling Comparisons	3
1.4 Jet Zero 2023 Forecasts	3
2 Mix of Traffic Assumed (Transfer Impacts)	4
3 The Relevance of and Approach to London Within the Forecasts	6
Summary	7

Purpose

This document focuses on responding to some specific, detailed elements of York Aviation's critique in relation to top-down forecasting set out in Appendix F of the West Sussex Authorities' LIR [[REP1-068](#)].

Whilst nothing is materially 'new', many of these points are already addressed in GAL's **Needs Case Technical Appendix** [[REP1-052](#)], which was not available to the Authorities at the time Appendix F was drafted. Matters are raised in Appendix F, however, relating to top-down benchmarking and to the size of the forecast market that are worth clarifying in this document.

To assist the review of this section, the main points raised have been addressed in the following three sections:

- 1. The levels of unconstrained demand being assumed.**
- 2. The mix of traffic within the JZ 2023 forecasts.**
- 3. The relevance of and approach to London within the UK forecasts.**

1 Unconstrained Demand

1.1.1 Appendix F states:

- 49: *“Initially, this was undertaken based on the 2017 forecasts then updated to the Jet Zero Forecasts” and “...the more recent Department for Transport projections of March 2023”*
- 50: *“the total UK demand forecast might be and then considering the extent to which other London airports have capacity to meet that demand”*
- 51: *“The more substantive issue is that the overarching UK demand forecasts”*
- 52: *“if the provision of a third runway was not assumed and other airports were not assumed to have additional capacity available, the constrained demand would be lower”*

1.2 Recap of Approach

1.2.1 It is worth capturing the approach taken by the Applicant in its top-down UK aviation demand modelling. Further detail is provided in the **Needs Case Technical Appendix** [\[REP1-052\]](#).

1.2.2 In summary, the starting point is an unconstrained view of aviation demand for the wider UK market capturing the long-term outlook for passenger growth.

1.2.3 The next stage is to define the capacity assumptions across the UK airports, for this work known passenger limits were used relating to planning limits or infrastructure limits.

1.2.4 The final stage is to model the allocation of the unconstrained demand across the UK airports taking into account the preference for travel patterns and the constraints at the UK's airports. For example, in a 'no-expansion' scenario the London airports rapidly reach their operating limits and demand is 'spilt' to other UK airports or lost from the system entirely.

1.2.5 This enables any scenario to be compared to the same baseline for unconstrained demand as well as each other.

1.2.6 It is important to recognise, however, that unconstrained demand is higher than constrained demand.

1.3 Previous DfT Modelling Comparisons

- 1.3.1 The Applicant’s approach to modelling is consistent with the DfT’s own approach. This also starts with a view of unconstrained passenger demand which is then allocated across the UK’s airports.
- 1.3.2 In previous forecasts the DfT have published unconstrained passenger demand forecasts to which the constrained outputs are compared when considering different capacity scenarios.
- 1.3.3 The following table provides the 2017 outputs relating to 1) unconstrained UK demand forecast (excluding transfers) and 2) constrained outputs in a ‘do nothing’ scenario. The difference between the two tables reflects the implications of the capacity limits across the UK’s airports.

Unconstrained (UK demand exc. Transfers)

	2030	2040	2050
<u>International</u>			
UK business	25.9	31.9	38.0
UK leisure	163.7	197.3	235.4
Foreign business	22.2	26.7	31.3
Foreign leisure	63.8	74.9	86.3
Domestic Total	38.0	42.7	50.4
Total	313.6	373.5	441.3



Constrained (base, exc. Transfer)

	2030	2040	2050
	25.6	31.3	36.6
	149.7	179.3	209.9
	22.0	26.4	30.7
	59.5	69.0	78.2
	37.9	42.5	49.2
Total	294.7	348.4	404.7

- 1.3.4 For each scenario the DfT models the same unconstrained demand against different capacity assumptions so that the out turned passengers can be compared against a consistent baseline. For example, in the above outputs, in 2040 the overall levels of constrained demand (348.4m) are below the unconstrained demand (373.5m).
- 1.3.5 In planning future capacity, it would not be sensible to use the constrained demand figures, because real / potential demand would not be captured and the conservative outcome would fail to optimise the UK’s connectivity or economic performance.

1.4 Jet Zero 2023 Forecasts

- 1.4.1 The modelling starts with an unconstrained demand outlook which is based on the UK’s latest JZ 2023 forecasts.
- 1.4.2 It is correct, however, that the Jet Zero Forecasts (2023 outputs) technically present **constrained** demand (i.e. they are influenced by assumptions about

what airports will expand – and what demand can be satisfied) although it is important to note that these outputs assume significant capacity expansion (LHR R3, LGW NR, LTN DCO, LCY Expansion, etc.) and are not therefore significantly constrained.

- 1.4.3 This approach may have been taken because the forecasts were being produced to inform carbon modelling, not to revise UK capacity policy.
- 1.4.4 It is noted that very limited numerical outputs have been provided by the DfT in 2023 compared to previous DfT/Airports Commission outputs (2017 and 2013), which have been useful in the past by providing clarity on the levels of demand split by various segments (e.g. local vs transfer) for constrained and unconstrained outputs.
- 1.4.5 One of the challenges raised in Appendix F is as follows: “52. *In other words, if the provision of a third runway was not assumed and other airports were not assumed to have additional capacity available, the constrained demand would be lower*”.
- 1.4.6 However, properly understood, and for the reasons set out above, this is not a concern and it is appropriate to use the JZ 2023 forecasts as a robust view of future unconstrained demand for the UK market. To use a constrained outlook and then constrain it further by assuming no Heathrow expansion would encourage a self-fulfilling outcome of there being no need for additional capacity (including LHR R3).

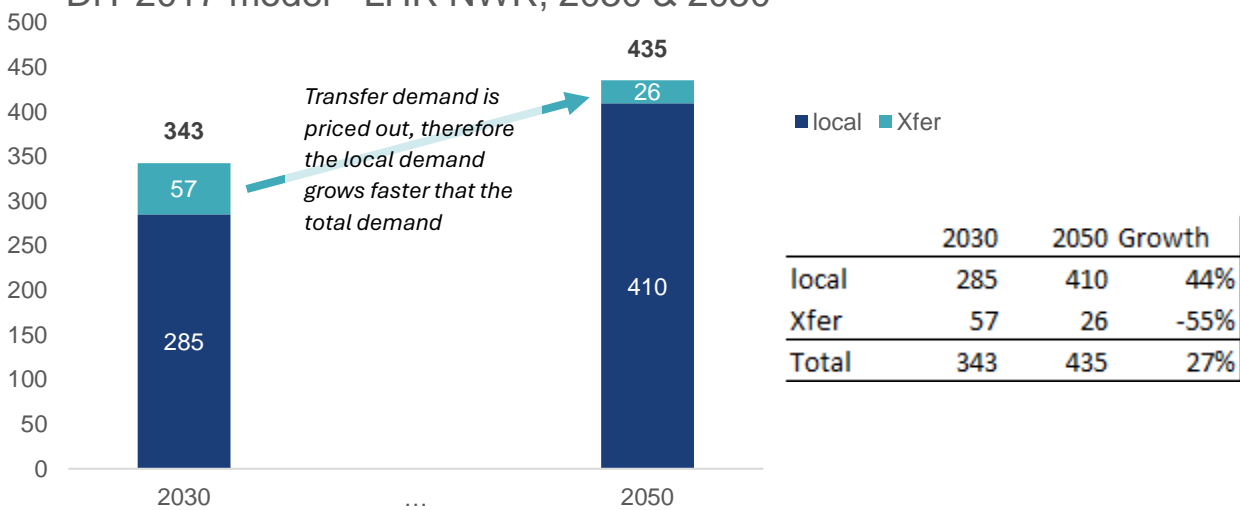
2 Mix of Traffic Assumed (Transfer Impacts)

- 2.1.1 Appendix F, point 54, goes on to suggest that in a constrained forecast, without a LHR R3 expansion scenario that significant transfer volumes would be priced out of the constrained traffic (i.e. under previous DfT forecasts, when LHR has become constrained then the more price sensitive travellers which include transfer passengers, are then priced out of the airport in favour of less elastic demand segments including UK/Foreign business passengers) and overall demand is less (because it is constrained).
- 2.1.2 However, that introduces a technical point which is of no real relevance to the exercise in hand. As a matter of fact, transfer traffic at Heathrow will gradually be priced out if there is no additional runway capacity at Heathrow on in the London market.

2.1.3 This is illustrated in the following chart using DfT 2017 detailed datasets previously released.

- In the 2030-2050 period UK airport demand (constrained) was forecast by the DfT (2017 forecasts) to increase 27% under the LHR NWR scenario. By 2050, transfer demand was forecast to be partly priced out, therefore the share of demand attributable to 'local' passengers grew proportionally more. (44% vs total passengers +27%)

UK Airport Passenger Demand
DfT 2017 model - LHR NWR, 2030 & 2050



2.1.4 If this dynamic is occurring under the latest JZ outputs as suggested in Appendix F, then the potential benefit of the NRP would be even greater in policy terms. It is lack of capacity that would threaten Heathrow’s transfer traffic and hub status, which would progressively be priced out unless point to point demand is met at Heathrow or elsewhere.

2.1.5 The following table summarises the Applicant’s unconstrained demand forecasts split by local and transfer demand. As discussed, the overall long-term projections for UK aviation demand align with those from Jet Zero (1.3% CAGR) and, at an unconstrained view, they still allow for significant growth in hub traffic.

2.1.6 Summary of the Applicant’s unconstrained passenger demand forecasts.

Passengers (m)	2019	2050	2019-50 CAGR
local	228	337	1.3%
Xfer	24	37	1.4%
Total	252	374	1.3%

3 The Relevance of and Approach to London Within the Forecasts

3.1.1 Appendix F point implies that GAL's modelling may overstate demand available to London and asserts⁵ ".....that the London airports' share of the overall UK air passenger market remains the same as in 2019."

Approach and London's Relevance

3.1.2 At the unconstrained demand level, demand is modelled for the main UK airports with demand split across different catchment areas (66 modelled). Demand was forecast to grow at the same growth rates across the UK, for example short haul leisure in West Sussex was assumed to grow at the same rate as short haul leisure in Greater Manchester.

3.1.3 This demand is not considered to 'belong' to a specific airport until the allocation modelling, however at an unconstrained view GAL would expect the London airports' main catchments to grow in line with the rest of the UK's demand.

- GAL views the assumption around future growth rates for London's core catchments as being conservative as population and economic forecasts for the UK continue to favour London and the southeast (Source: ONS). Also, inbound demand from emerging markets is forecast to be stronger at the London airports reflecting London's position as a key tourism destination and business hub. Today London has a much higher share of inbound demand compared to airports like Manchester or Bristol.

- GAL's response in the **Needs Case Technical Appendix Section 6.3** [[REP1-052](#)] provides further detail on the unconstrained demand outlook and how it has been modelled. For example, detailing how macro indicators (GDP, population, inbound traffic) continue to favour growth at the London airports over other parts of the UK.

3.1.4 The 'share' of London demand in the future is dynamic based on the attractiveness of airports, which changes over time (for example, to reflect a larger network resulting from expansion).

3.1.5 It is worth noting that the share of UK aviation demand achieved by the London airports has been relatively stable in the last 20 years at around 60% (Source: CAA) and GAL does not expect any significant shift in the long term.

London Airport Passenger share of total UK Passengers (actual)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
LON %	60%	60%	60%	60%	61%	61%	60%	59%	60%	60%

3.1.6 Most of the London Airports’ demand comes from the Southeast and East of England and Greater London. Even at an unconstrained level a significant change in airport preference should not be expected compared to the 2019 baseline reflecting the importance of Geography/location on airport choice.

Summary

3.1.7 Rather than speculating on some of the detailed nuances of the Jet Zero forecasts the Applicant believes it is more important to consider whether the overall level of growth is considered appropriate in the context of a long term forecast for aviation demand in the UK.

3.1.8 Given the inherent uncertainty in performing long term forecasts and the potential minor implications raised in Appendix F regarding the levels of demand (e.g. transfers vs local splits), GAL views the implied demand from the Jet Zero outputs as appropriate inputs to the top-down UK modelling. This will therefore provide a robust view of the future aviation market in the UK.