

THE ENVIRONMENTAL AND SOCIO-ECONOMIC IMPACTS OF AN EXPANDED GATWICK AIRPORT

Written by: Dr Alex Chapman

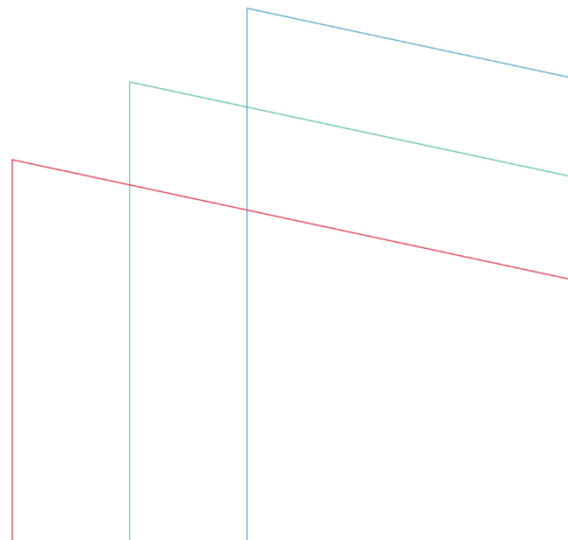
Published: March 2024

New Economics Foundation



NEF is a charitable think tank. We are wholly independent of political parties and committed to being transparent about how we are funded.

Registered charity number 1055254
© 2023 The New Economics Foundation



Contents

Introduction.....	3
Developments since the 2021 consultation	4
Policy.....	4
Appraisal guidance.....	5
Further evidence	6
Climate cost.....	8
Non-CO ₂ emissions.....	8
Inbound flight emissions	10
Costing greenhouse gas emissions	12
Business travel forecasts	16
User and provider impacts.....	22
Wider economic impacts.....	25
Welfare-based benefit-cost analysis	27
Tourism impacts.....	28
Employment impacts	32
Impact equity.....	38

1. INTRODUCTION

- 1.1. Gatwick Airport Limited (GAL) have applied for a Development Consent Order (DCO) requesting permission to bring a second runway into commercial use. The project would facilitate an increase in passenger throughput at the airport, versus the without-development baseline, of around 13 million passengers by 2038.
- 1.2. This report assesses the socioeconomic case for the expansion of the airport, including the social and economic dimensions of the environmental impacts expected to result. The report deals with assessments presented by GAL in its application for a DCO, reviewing these assessments against best-practice appraisal methodology and secondary data sources. In some instances, original analysis has been conducted, but given resource constraints, this is limited to addressing the most pertinent issues relevant to the application.
- 1.3. This report was commissioned by the Gatwick Area Conservation Campaign (GACC) and follows a similar report commissioned by GACC and published by NEF in 2021 which assessed the socioeconomic impacts of the proposed scheme as set out in the consultation documents presented at the time.
- 1.4. Key documents referred to herein include the following application documents presented by GAL to the Planning Inspectorate in 2023:
 - The Needs Case
 - Needs Case Appendix 1: National Economic Impact Assessment (referred to henceforth as the NEIA)
 - Needs Case Appendix 2: The Economic Impact of Gatwick Airport: A Report by Oxford Economics
 - Environmental Statement Chapter 16: Greenhouse Gases
 - Environmental Statement Chapter 17: Socio-economic
 - Environmental Statement Appendix 4.3.1: Forecast Databook
 - Environmental Statement Appendix 16.9.4: Assessment of Aviation Greenhouse Gas Emissions
 - Environmental Statement Appendix 17.19.2: Local Economic Impact Assessment

2. DEVELOPMENTS SINCE THE 2021 CONSULTATION

2.1. A number of important developments have taken place since the 2021 consultation and NEF's previous report. Here we review these developments across the domains of policy, appraisal guidance, and further evidence.

Policy

- 2.2. As regards aviation policy, the *Aviation Policy Framework (APF)*, *Making Best Use of Existing Runways (MBU)* and the *Airports National Policy Statement (ANPS)* all remain the most recent statements from government regarding the expected approach to airport expansion proposals. The primacy of these policy documents was re-established in the Government's 2022 publication *Flightpath to the Future (FttF)*. FttF maintains the government's position of providing conditional support for airport expansion, only where it is "justified" (p. 2 & 9).
- 2.3. NEF notes a slight shift in the emphasis of government in relation to airport expansion in FttF. Repeatedly throughout the document the Government emphasises the need for aviation, and specifically airport expansion, to deliver benefits "for the UK" (p. 7) and "to the UK" (p. 10). This emphasis, NEF would argue, means contemporary assessments should pay closer attention to the geographic distribution of costs and benefits.
- 2.4. Also in the interim, in 2022, the government published its Jet Zero Strategy (JZS). The JZS presents the government's ambition for how aviation will meet its net zero goal by 2050. The JZS implements some initial policies aimed at stimulating progress towards net zero, but the JZS does not, and cannot, turn the government's ambition for 2050 into reality. This ambition is dependent on concerted policy action in a diverse range of domains, much of which has yet to be designed. Ultimately, delivery of net zero air transport also rests on multiple exogenous factors outside of government's control.
- 2.5. In light of this, the principle task of this appraisal remains to weigh up the balance of positive and negative environmental and economic impacts and establish whether expansion of the airport is in the public interest. Given the scale of the impacts likely to result, adherence to best-practice standards is imperative.

Appraisal guidance

- 2.6. Since 2021 there have been two revisions to the government’s guidance on best practice appraisal of aviation interventions, Transport Analysis Guidance (TAG).
- 2.7. NEF’s understanding is that adherence to TAG is mandatory for an application of this nature. This is because the introduction to TAG states that TAG is “*a requirement for all interventions that require government approval*” (p. 1).¹ This same sentiment is repeated on the government webpage introducing TAG.² The DCO application at-hand requires government approval. NEF understands that a decision on the scheme will be taken by the Secretary of State for the Department of Transport (DfT). The Applicant does not share the view that TAG is mandatory to a private sector sponsored planning application.³
- 2.8. Irrespective of whether TAG is mandatory, the aviation unit of TAG (A5.2) is clearly identified as best practice in aviation appraisal (para 1.1.5) and appropriate for use by non-government appraisal practitioners (para 1.1.3).⁴ The Applicant appears to share this view, describing TAG as “*a useful framework*” which has been “*used to conduct a welfare analysis and estimate the NPV [Net Present Value] of the net benefits of the project*” (p.3-12).³
- 2.9. NEF recognises the efforts the Applicant has made to follow government guidance in this manner. Other airports seeking to expand have frequently failed to do so. Nonetheless NEF wishes to highlight a number of critical areas in which the Applicant has deviated from government’s best practice guide.
- 2.10. Some of the most critical deviations from best practice relate to matters which were clarified by the DfT in the November 2023 revision of the

¹ DfT (2014) Transport Analysis Guidance: An Overview of Transport Appraisal. Department for Transport

² DfT (2024) Transport Analysis Guidance. <https://www.gov.uk/guidance/transport-analysis-guidance-tag#introduction> [accessed 23/02/24]

³ GAL (2023) Gatwick Airport Northern Runway Project: Needs Case Appendix 1 – National Economic Impact Assessment. Application Document Ref 7.2, PINS ref: TR020005

⁴ DfT (2023) TAG Unit A5.2: Aviation Appraisal. Department for Transport.

Aviation TAG Unit (A5.2). This document post-dates the Applicant's economic impact assessment. The implications of this latest edition are set out in subsequent sections. Given the materiality of these points to the overall appraisal of the scheme, and the conclusions that can be drawn, NEF recommends that the relevant sections of the Applicant's National Economic Impact Assessment³ be re-calculated. The effort required to do so should be modest.

Further evidence

- 2.11. In July 2023 NEF published its report *Losing Altitude: The Economics of Air Transport in Great Britain*.⁵ The report looks at the most recent evidence and trends in official datasets connecting air transport with the UK economy. The report was peer reviewed by leading UK transport economist John Siraut, Chair of the Transport Economics Committee of the European Transport Conference.
- 2.12. NEF's analysis shows how the relationship between growth in air passenger travel and the economy has changed over time, including since the pandemic. While leisure passenger air traffic has grown, jobs and wages in air transport as well as business-purposes air travel, all peaked in around 2006/07 and failed to recover. Early evidence suggests similar trends are playing out following the pandemic. The report also documents the continued growth of the UK's travel spending deficit, and its impact on cashflow in the UK's wider regions, particularly those reliant on the ailing domestic tourism sector.
- 2.13. The report collates and reviews a range of recent academic evidence connecting air passenger growth with economic growth. The synthesis, which looks particularly at studies covering the UK and other similar economies, challenges the prevailing assumption that there are wider economic benefits to air transport growth in the UK context – that is – an economy with stagnant/declining business-purposes travel and a strong

⁵ Chapman, A. (2023) *Losing Altitude: The Economics of Air Transport in Great Britain*. New Economics Foundation. <https://neweconomics.org/2023/07/losing-altitude>

outbound tourism bias. While there are contexts in which air passenger growth can be beneficial to the wider economy, these are primarily evidenced in less connected/less developed economies. See the report for full references and discussion.

3. CLIMATE COST

Non-CO₂ emissions

- 3.1. Barring extreme exceptions, the taking of one long-haul flight is the most climate-damaging single activity an individual can engage in. Over the period to 2050, aviation is expected to develop into the first, or second most climate-damaging sector, depending on the measure used, in the UK and internationally.⁶ The latest research suggests that between 2000 and 2018 non-CO₂ greenhouse gases made up the majority (two-thirds) of the sector's climate impact (net radiative forcing).⁷
- 3.2. It is striking, therefore, to see that the Applicant has dedicated just six sentences to its section addressing non-CO₂ gases in the Greenhouse Gases Chapter of the Environmental Statement (p.16-21).⁸ This represents an inadequate assessment of a potentially major negative impact of the proposed scheme. In the context of the vast resource which has gone into appraising the project, it is inappropriate that such scant attention has been paid to what may be the single largest negative impact of the scheme.
- 3.3. No mitigation measures are proposed for the non-CO₂ impacts of the project. The Jet Zero Strategy does not propose any specific policies which mitigate the impacts of non-CO₂ gases. The strategy does identify a potential, unquantified, reduction in non-CO₂ impacts as a co-benefit to the role out of 'Sustainable Aviation Fuels' (SAFs).⁹ The Applicant has assumed that 50% of aviation fuels will derive from sustainable aviation fuels in 2050, meaning that 50% will continue to derive from fossil fuel sources.¹⁰ As such, under current working assumptions, very significant climate damage from air

⁶ See Net Zero by 2050 reports of the Climate Change Committee and International Energy Agency

⁷ Lee et al. (2021) The contribution of global aviation to anthropogenic climate forcing for 2000 to 2018. *Atmospheric Environment*, 244: 117834

⁸ GAL (2023) Gatwick Airport Northern Runway Project: Environmental Statement Chapter 16: Greenhouse Gases. Application Document Ref 5.1, PINS ref TR020005

⁹ DfT (2022) Jet Zero Strategy: Delivering Net Zero Aviation by 2050. Department for Transport.

¹⁰ See page 2 of GAL (2023) Gatwick Airport Northern Runway Project: Environmental Statement: Appendix 16.9.4: Assessment of Aviation Greenhouse Gas Emissions. Application Document Ref 5.3, PINS ref TR020005

travel non-CO₂ emissions associated with this project will take place over the period up to 2050 and beyond.

- 3.4. The Applicant has stated that non-CO₂ climate impacts from aviation are “recognised in corporate reporting guidance in the UK” (p.16-21).¹¹ This statement is not referenced, but presumably refers to the DESNZ publication 2023 *Government Greenhouse Gas Conversion Factors for Company Reporting*.¹² The Applicant has not followed this guidance. DESNZ states:

“consideration of the non-CO₂ climate change effects of aviation can be important in some cases, and there is currently no better way of taking these effects into account than applying an aggregate multiplier. A multiplier of 1.7 is recommended as a central estimate, based on the best available scientific evidence” (p.104)

- 3.5. The DfT, in the aviation unit of TAG, suggests that the multiplier referred to by DESNZ (1.7x) can also be applied as a sensitivity test in a scheme’s core socio-economic assessment.¹³

Recommendation 1

The Applicant should present the scheme’s greenhouse gas emissions including non-CO ₂ emissions using the DESNZ multiplier.
--

- 3.6. NEF has performed this test applying a 1.7x multiplier to the carbon emissions data provided by the Applicant in Appendix 16.9.4. Our results are shown in Table 1 below. Table 1 looks only at emissions arising from departing flights, and highlights that the scheme’s total CO₂ equivalent emissions rise from 18.5m tonnes to 31.5m tonnes over the period up to 2050. This represents an adjustment to the emissions data presented by the Applicant. NEF have not inspected the process by which the Applicant has arrived at those estimates in detail.

¹¹ GAL (2023) Gatwick Airport Northern Runway Project: Environmental Statement Chapter 16: Greenhouse Gases. Application Document Ref 5.1, PINS ref TR020005

¹² DESNZ (2023) 2023 Government Greenhouse Gas Conversion Factors for Company Reporting. Department for Energy Security and Net Zero.

¹³ DfT (2023) TAG Unit A5.2: Aviation Appraisal. Department for Transport.

3.7. Given recent studies, such as Lee et al. (2021) have suggested that the non-CO₂ impact of air travel may in fact be as much as three times (3x) the carbon impact alone, this estimate (using a 1.7x multiplier) arguably represents a conservative estimate of the true potential impact.

Table 1: Greenhouse gas emissions from departing flights resulting from the proposed scheme, broken down into traded and non-traded sectors, and non-CO₂ gas impacts using a 1.7x multiplier

	Traded sector CO ₂ (tonnes)	Non-traded sector CO ₂ (tonnes)	Total CO ₂ (tonnes)	Non-CO ₂ (tonnes CO ₂ equivalents)	Total climate impact (tonnes CO ₂ equivalents)
2033-2037 (5 th carbon budget)	1,342,000	4,213,000	5,555,000	3,888,500	9,444,000
2029-2050	4,474,000	14,049,000	18,523,000	12,966,000	31,489,000
2029-2088	9,183,000	28,834,000	38,017,000	26,612,000	64,629,000

Inbound flight emissions

3.8. Table 16.4.2 (p16-22) of ES Chapter 16 shows that the Applicant has excluded all inbound flight emissions from assessment. This decision is carried into the economic assessment in the Needs Case, and justified at footnote 153 of Appendix 1 to the Needs Case (p. 7-48), the NEIA.¹⁴

3.9. It is important to note that, with inbound flight emissions excluded, the Applicant's benefit-cost assessment in the NEIA is internally inconsistent. The results presented by the Applicant in Table 5.6.1 of the NEIA include user and provider impacts which accrue to overseas residents.

3.10. DESNZ guidance on valuing greenhouse gases has advised since at least October 2021 that aviation appraisals should include emissions which occur "*outside the target framework*" (p.20) – that is to say, the UK's emissions accounting framework.¹⁵ Typically, impact appraisals do not stop at a national border, and are not constrained by emissions accounting

¹⁴ GAL (2023) Gatwick Airport Northern Runway Project: Need Case Appendix 1 – National Economic Impact Assessment. Application Document Ref 7.2, PINS ref TR020005

¹⁵ BEIS (2021) Valuation of energy use and greenhouse gas. Department for Business Energy & Industrial Strategy (subsequently republished by DESNZ in November 2023)

frameworks. The role of scheme appraisals and impact assessments is to understand all scheme impacts on society.

3.11. Government policy, as set out in MBU, clearly advises that decision makers take into account “*all relevant considerations*” (p.9). Nothing in the policy suggests that assessments should be limited to impacts within UK accounting frameworks.

3.12. For the avoidance of doubt, this was explicitly clarified in the latest (November 2023) revision to the aviation unit (A5.2) of TAG, which now states:

“the full impact of the transport intervention on emissions should be appraised, including any impacts on emissions from flights departing or arriving in the UK as well as any wider emission impacts.” (p.11)¹⁶

3.13. The DfT go on to state that in some cases proposals may also need to consider the displacement of emissions from other geographies or elsewhere within the sector. However, our understanding is that the Applicant expects there will be negligible displacement (as described at para 6.5 of the ES Appendix 17.9.2) and the new traffic at Gatwick will be additional. This seems plausible, at least in relation to leisure passengers, as air passenger numbers have been growing rapidly at the UK and international levels.

3.14. The Applicant has failed to adequately assess inbound (arriving) flight emissions. In doing so they have not adhered to the best practice standard set out by government.

Recommendation 2

<p>The Applicant should present an assessment of greenhouse gas emissions inclusive of inbound (arriving) flights.</p>
--

3.15. The simplest starting point for such an assessment is to assume that the overall climate impact of the scheme will be double that of the outbound flights alone, as shown in Table 2. Non-CO₂ impacts can also be considered.

¹⁶ DfT (2023) TAG Unit A5.2: Aviation Appraisal. Department for Transport.

Table 2: Total greenhouse gas emissions resulting from the proposed scheme, including departing and arriving flights, broken down into traded and non-traded sectors, and non-CO₂ gas impacts using a 1.7x multiplier

	Traded sector CO ₂ (tonnes)	Non-traded sector CO ₂ (tonnes)	Total CO ₂ (tonnes)	Non-CO ₂ (tonnes CO ₂ equivalents)	Total climate impact (tonnes CO ₂ equivalents)
2033-2037 (5 th carbon budget)	2,684,000	8,426,000	11,110,000	7,777,000	18,887,000
2029-2050	8,949,000	28,097,000	37,046,000	25,932,200	62,978,200
2029-2088	18,367,000	57,667,000	76,034,000	53,223,800	129,257,800

Costing greenhouse gas emissions

3.16. At Table 7.3.1 of the NEIA the Applicant has costed the impact of increasing carbon emissions resulting from the proposed scheme at around - £1.26 billion (central estimate).

3.17. The omission of inbound (arriving) flights from the greenhouse gas impact assessment feeds through into the costing of greenhouse gases in the NEIA. This alone likely doubles the costs reported.

Recommendation 3

The Applicant should recalculate the cost of greenhouse gas emissions including inbound (arriving) flight emissions.

3.18. The Applicant has further chosen not to present, at least as a sensitivity test, the costs of non-CO₂ climate impacts. This would help to inform decision makers as to the scale of the non-CO₂ impacts in relation to the claimed scheme benefits.

Recommendation 4

The Applicant should present the cost of non-CO₂ emissions using the DESNZ-recommended multiplier.

3.19. Furthermore, the Applicant has also used an incorrect method when calculating the traded-sector emissions costs. The Applicant has correctly separated emissions costs into traded and non-traded sector emissions. However, incorrectly, the Applicant has then excluded all traded-sector emissions costs from the calculation. As per the November 2023 TAG guidance, (para 3.3.3, p.10)¹⁷ the Applicant should have calculated the differential between the carbon price paid on traded sector emissions and the carbon value of those emissions and retained the residual in the overall carbon costing calculation. The Applicant has not retained this residual.

Recommendation 5

The Applicant should recalculate the costs of traded sector emissions according with DfT guidance, including retaining the differential between the carbon price paid and social cost of carbon (the carbon value).

3.20. This adjustment reflects the fact that carbon is not currently priced at a level commensurate with its value to society. For example, while the forecast price of carbon in 2024 is around £80 per tonne, the value to society of each tonne is estimated by the government at around £250. The differential between these two figures represents a cost to society which must be kept in the scheme's benefit-cost analysis. Full details of how to apply this method are provided by the DfT at pages 9 to 11 of the TAG Aviation Unit.¹⁸

3.21. The Applicant's approach to non-traded sector emissions is also incorrect. The Applicant, at para 7.3.8, page 7-49, of the NEIA, has excluded 10.5m tonnes of CO₂ from the non-traded total on the basis that these emissions may be covered by a future CORSIA scheme. If this decision is accepted, the method remains incorrect because, as above, the residual difference between the price paid and the carbon value should have been retained.

¹⁷ DfT (2023) TAG Unit A5.2: Aviation Appraisal. Department for Transport.

¹⁸ DfT (2023) TAG Unit A5.2: Aviation Appraisal. Department for Transport.

Recommendation 6

The Applicant should recalculate the costs of non-traded sector emissions retaining the differential between the carbon price paid and social value of carbon.

3.22. However, NEF has some concerns with how the 10.5m tonnes figure was arrived at in the first place. The Applicant addresses this in Annex 1.3 (p. 10-75) of the NEIA. At paragraph 1.3.2 the Applicant advises that this figure was arrived at by looking at emissions arising which exceed a 2019 baseline of 2.9m metric tonnes of CO_{2e}. This baseline is not adequately explained. Presumably, it relates to emissions from all CORSIA-eligible flights departing from the airport. However, CORSIA does not apply to emissions as assigned to airports, it applies to emissions assigned to airlines. As such, whether an airline is liable to pay CORSIA fees will relate not just to activity at Gatwick Airport, but activity across their network. Another way to look at CORSIA eligibility is from a national perspective. According to the Jet Zero Strategy, 2019 is hoped to be the peak year for UK aviation emissions. By 2036 residual emissions are expected to fall below 85% of 2019 levels. As such, taking just UK air travel activity over the horizon of this proposed scheme (i.e. starting in 2029), very few flights are likely to be CORSIA-liable.

Recommendation 7

The Applicant should provide a better explanation and justification for how the figure for CORSIA-liable emissions was arrived at.

3.23. NEF has recalculated the scheme's greenhouse gas costs (air travel-related) using the recommended TAG approach. For the purposes of this analysis our core scenario accepts the Applicant's assumption that 37% of non-traded sector emissions will be liable to pay the CORSIA permit price. We have also presented an alternative total impact estimate assuming none of the non-traded emissions are covered by CORSIA.

- 3.24. We have assumed CORSIA and UK ETS prices as per Jet Zero, and carbon values as per the TAG databook. As assumed by the Applicant, discounting begins in 2010 and 2010 prices are used. A 60-year assessment period is used, beginning in 2029, and emissions post-2050 are assumed constant.
- 3.25. As shown in Table 3 our adjustments result in a significant increase in the scheme's aviation-related greenhouse gas costs. Costs of departing flight emissions rise from the Applicant's estimate of £1.3bn to £2.1bn. When arriving flights are considered this rises to £4.3bn, and when a conservative adjustment is made for non-carbon gases, the total cost rises to £9.1bn. If the Applicant's assumptions around CORSIA are not accepted, this rises to £10.2bn.
- 3.26. Readers should note that in this calculation the use of the 1.7x multiplier adjustment for non-CO₂ leads to a greater than 70% increase in the total scheme cost. This is because the non-CO₂ emissions multiplier is applied to carbon emissions which are otherwise excluded from the calculation as they are covered by the ETS/CORSIA schemes.

Table 3: Net present value (60 years) of greenhouse gas emissions costs linked to air travel resulting from the proposed development

Scenario	Net present value (NPV – 60 years)
GAL estimate of scheme carbon cost (air travel-related) as per Table 7.3.1 of the NEIA	-£1,169m
NEF carbon cost of departing flights	-£2,139m
NEF carbon cost including arriving flights	-£4,278m
NEF total greenhouse gas emissions cost (1.7x non-CO ₂ multiplier)	-£9,086m
NEF total including all non-traded emissions	-£10,208m

- 3.27. These emissions cost estimates are important because they capture the social cost of carbon which arises irrespective of whether emissions are inside or outside the scope of the government's pathway to 2050 (as set out in Jet Zero). All emissions deliver greater global warming, therefore all emissions have a social cost.

4. BUSINESS TRAVEL FORECASTS

- 4.1. From the perspective of the scheme's national impact, as presented in the NEIA, the primary source of claimed benefit arising from the proposed scheme is the savings on ticket prices made by travellers using the London Airport system. These benefits are tightly linked with the forecasts underpinning the application.
- 4.2. Table 5.4.6 of the NEIA shows that with the development, the average ticket price in the London Airport system is projected to fall from £268 to £216 in the year 2047, a 19% decline. This reduction results from an increase of capacity in the London system of 13 million passengers, equivalent to a rise of 6%.
- 4.3. From Table 5.6.1 of the NEIA we can see that the large majority (90%) of the fare savings (user benefits) estimated by the Applicant are expected to accrue to passengers travelling for business purposes.
- 4.4. Given the reliance of GAL on business-purposes air travel to generate the large majority of the scheme benefits, it is important to interrogate the forecasts of business-purposes air travel which act as inputs to this modelling.
- 4.5. We can see from GAL's Forecast Databook¹⁹ that GAL are projecting an increase in business-purposes travellers at the airport of 1.5m in 2047 (Table 4) against the base case (without development). This represents just under 12% of the overall passenger growth projected, and implies there will be significant net growth in business-purposes travel against the 2019 peak at the airport.

¹⁹ GAL (2023) Gatwick Airport Northern Runway Project: Environmental Statement: Appendix 4.3.1: Forecast Data Book. Application Document Ref 5.3, PINS ref TR020005

Table 4: Projected changes in business purposes air travel at Gatwick Airport, as per the ES Forecast Databook

Scenario	2029	2032	2038	2047
Base case (vs 2019)	1,200,000	1,500,000	1,800,000	2,300,000
Northern runway (vs 2019)	1,600,000	2,900,000	3,300,000	3,800,000
Change (base vs NR)	400,000	1,400,000	1,500,000	1,500,000

4.6. The data presented by the airport pertains to passenger traffic at Gatwick Airport. What appears not to be presented is an assessment of business-purposes travel in the London Airport system, nor business-purposes travel in the UK as a whole.

4.7. Across the UK, London, and at Gatwick Airport, business-purposes air travel has seen a long-term decline as a share of the overall market, across indicators of trip numbers, spending, and nights spent. This is shown in Figure 1 below, reproduced from NEF’s *Losing Altitude* report.²⁰

Figure 1: Market share of business-purposes air travel across three indicators.



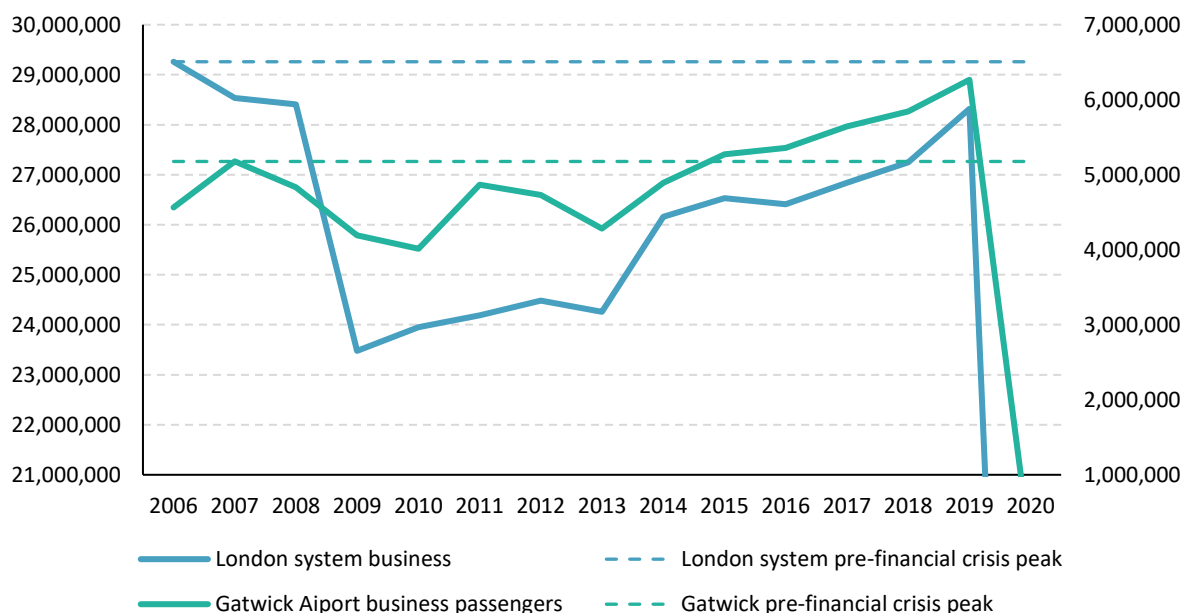
Source: NEF analysis of ONS Travepac

²⁰ Chapman, A. (2023) *Losing Altitude: The Economics of Air Transport in Great Britain*. New Economics Foundation.

4.8. At Gatwick Airport, Civil Aviation Authority data suggests the business passenger share declined from a peak of around 23% in 2007, to around 16% in 2019.²¹ In absolute terms, however, business passenger numbers rose from 5.2m to 6.3m over the same period.

4.9. This growth was as a result of a better-than-average recovery from the 2007/08 financial crisis and recession. However, across the London Airport system there was a weaker recovery. Indeed, business passenger numbers have never recovered to their level in 2006 and 2007 (Figure 2) and have fallen well short of returning to their pre-crisis trend. This comes despite significant real-terms economic growth over the same period.

Figure 2: Trends in business-purposes air passengers in the London Airport system (left axis) and at Gatwick Airport (right axis)



Source: Civil Aviation Authority

4.10. What we can conclude is that rather than generating new business travel, Gatwick Airport has been successful in out-competing other London system airports for a limited pool of pre-existing demand. Considering this dynamic is important for understanding the future contribution of Gatwick Airport. While travellers deciding to switch their point of departure to

²¹ CAA (2023) Passenger Survey Reports 2007-2019. Civil Aviation Authority

Gatwick Airport does imply that they are receiving a welfare gain from doing so, this gain is likely of significantly lower net social value than if entirely new business departures are created.

- 4.11. Footnote 123 of Need Case Appendix 1 states that “*Displacement of business passengers in the London aviation system is taken into account to determine the additional business passengers at the London level.*” (p. 6-42) But we have not been able to locate the corresponding numbers and therefore we do not know what proportion of the forecast growth shown in Table 4 is displaced or additional and whether the assumption is realistic.

Recommendation 8

The Applicant should present and justify its estimates of business-purposes passenger growth at the London system level and corresponding levels of displacement between airports in the with and without-development scenarios.

- 4.12. On the basis of Table 5.6.1 of the NEIA we can assume that in the Applicant’s view, a proportion of the activity created by the scheme is additional and not displaced. However there are two reasons this must be interrogated, one relates to the elasticity of business demand, and the other relates to recent trends in the sector.

- 4.13. Evidence presented by the DfT suggests that in general, airport capacity growth does not create additional business-purposes air travel. In their Aviation Forecasts 2017 the DfT explain this phenomenon with reference to two scenarios, an unconstrained case (assuming no limits on airport capacity) and a constrained case (where airport capacity in which airport capacity is capped at 410 million passengers per annum up to 2050:

“Business passengers remain a low proportion of total travellers, but their numbers are little changed from the unconstrained case, continuing to travel mainly because of their willingness to pay higher fares.” (p.99)²²

²² DfT (2017) UK Aviation Forecasts. Department for Transport

4.14. In other words, because business passengers are willing to pay more than leisure passengers, they will continue to fly in the event of capacity constraints as they out-bid leisure travellers. For the same reason, airlines are likely to show a preference for serving business passenger needs in a capacity constraint context as it will be more profitable to do so.

Recommendation 9

If the Applicant is claiming that the proposed scheme will create net additional business-purposes travel, the Applicant should explain where they have departed from the DfT's model.

4.15. To understand the likelihood of there being net additional business-purposes travel attributable to the project it is also important to examine recent trends. After the 2007/08 financial crisis the market made a structural adjustment. A segment of business travellers dropped out of the market and never returned. Subsequent economic growth has supported some recovery in passenger numbers, but demand never returned to its pre-crisis trend.

4.16. There is strong evidence to suggest that another such adjustment is currently unfolding following the pandemic. While real GDP returned to its pre-crisis level in 2023, evidence from the ONS Travepac dataset covering Q1-Q3 of 2023 suggests that travel for business purposes was at only around 70% of its pre-crisis (2019) level. Not only this, but this data also suggests that there has been a further decline in the market share of business-purposes travel, with business passengers accounting for just 8.4% of the market, compared with 11.4% in 2019.

4.17. In this context it is very difficult to understand how and why the Applicant has arrived at the conclusion that as soon as 2029, business passenger numbers at Gatwick Airport will be 1.2m higher than 2019 levels in the base case, and 1.6m higher in the development case (Table 4). An extraordinarily rapid recovery and subsequent growth is projected to be delivered in only five years, when such growth was not seen in 17 years after the 2007/08 financial crisis in the London Airport system.

- 4.18. Over-estimated short-term business-passenger demand will have a particularly significant impact on the NEIA results presented in net present value (NPV) terms. This is because a discount rate is applied which reduces impacts by 3.5% for every year further into the future, amplifying the relative impact of short-term changes.

Recommendation 10

The Applicant should explain how they have arrived at such an unprecedented rate of business-passenger growth in the next five years, and set out the sensitivity of the economic assessment in the NEIA to this parameter.

- 4.19. Structural adjustments in air travel demand of the type described above are not captured by the elasticities which typically underpin a forecast model. Elasticities can only estimate marginal adjustments in response to changes in factors such as incomes and prices, and not changes relating to the size of the overall demand base. As such it is incumbent upon the Applicant to explain how their model has adjusted, if at all, for such structural shifts.

Recommendation 11

The Applicant should explain how their model has accounted for structural adjustments in the size of the business passenger base following the 2007/08 financial crisis and the 2020/21 pandemic.

5. USER AND PROVIDER IMPACTS

5.1. Overall, the fare savings (user benefits) projected by the Applicant are high – estimated at £150.1bn over the 60-year appraisal period. For reference, when the DfT assessed the user benefits of the proposed second runway scheme at Gatwick Airport in 2017 these benefits were estimated at £69.4bn, less than half.²³ The scheme assessed by the DfT was significantly larger, in the sense that by 2050 it delivered an increase in passenger numbers in the London Airport system of 44m, compared to just 13m in this case (Table 5). GAL appear to have utilised 2010 prices, and begun discounting from 2010, while the DfT based their assessment in 2014. This would suggest that, in a like-for-like comparison, the benefits being claimed by GAL represent an even larger increase against those presented by the DfT.

Table 5: Comparison of expansion schemes at Gatwick Airport assessed by the DfT in 2017 and GAL in 2023 in terms of passenger number increases in the London Airport System

Scheme	2030	2040	2050
Northern Runway (2023) GAL	4m	13m	13m
Second Runway (2017) DfT	5m	21m	44m

Recommendation 12

The Applicant should explain why their estimate of user benefits is more than double that published by the DfT for a larger proposed expansion.

5.2. Of the scheme's £150bn in user benefits, around 90% (£134.6bn) originate from the business-purposes travel segment. This is the case despite the fact that just 12% of new passengers originating from the business-purposes travel market, according to the Applicant. This implies that in the without

²³ See Table 4.1, page 23, of DfT (2017) Updated Appraisal Report: Airport Capacity in the South East. Department for Transport

development scenario, business-purposes passengers experience extreme price inflation.

- 5.3. The Applicant has not presented sufficient information for a reader to be able to accurately verify or replicate this finding. NEF's analysis suggests that to arrive at this level of surplus accruing to passengers, all additional business passengers flying in the expanded airport would need to be newly created (not displaced) and they would need to experience an air fare saving averaging approximately £400-£500 per passenger over the assessment period (pre-discounting). Such a saving seems extraordinarily high. If business passenger demand is so high, it would surely be served somewhere in the London airport system even in the capacity constrained (without-development) scenario, displacing leisure traffic.
- 5.4. At Table 5.4.1 the Applicant has presented the average fares for different market segments of the London aviation market in 2019. While the table includes the average fare for business class passengers, it does not distinguish the average fares paid by passengers travelling for leisure and business purposes. Similarly, Table 5.4.6 which presents the future and with/without-project fares does not split fares between business and leisure-purposes travel.

Recommendation 13

The Applicant should present current and future fare data split between business and leisure-purposes travel.

- 5.5. When presenting the final user benefits of the scheme, the Applicant also does not distinguish between benefits and costs arising to UK and non-UK residents/entities. Given, as set out above, the emphasis in the government's strategic framework *Flightpath to the Future* on airport expansion delivering benefits "for" and "to" the UK, this seems a significant omission.
- 5.6. Disaggregation of impacts was conducted by the DfT and Airports Commission in their prior work on Gatwick Airport, and was conducted by Luton Airport in their ongoing DCO application. Given the significant resource which has gone into the application it does not seem unreasonable

to expect the Applicant to be able to calculate at least an approximation of the UK/non-UK split of impacts.

Recommendation 14

The Applicant should present a version of the scheme's benefit-cost analysis which disaggregates UK and non-UK impacts.

6. WIDER ECONOMIC IMPACTS

- 6.1. Included in the scheme's final benefit-cost analysis at Table 9.2.1 of the NEIA is the category 'wider economic impacts'. Under this umbrella, three impacts are monetised: (i) output change in imperfectly competitive markets, (ii) marginal external costs (resulting from additional congestion), and (iii) government revenue (tax) impacts. Below we take each of these in turn.
- 6.2. Output changes in imperfectly competitive markets (i) represent an additional benefit to businesses above and beyond the savings in air fares they are forecast by the Applicant to experience. This area of economics is not well understood and the Applicant describes facing "*difficulties*" assessing the impact in this case (para 6.2.3). As a stand-in for an economic model of this impact, the Applicant has applied a simple 10% multiplier to the total quantum of business user benefits. This simplified assumption is recommended in TAG Unit A2.2.
- 6.3. The nature of the approach is such that any errors or inaccuracies in the approach applied to arriving at business user benefits (air fare savings) will carry through into the calculation of the benefits arising from imperfectly competitive markets.
- 6.4. Above, in NEF's section dealing with business travel forecasts, we have identified a number of concerns with the Applicant's method for arriving at business user benefits. As such, until these concerns are resolved, we regard the benefits arising from imperfectly competitive markets to be unreliable.
- 6.5. NEF accepts the Applicant's estimation of congestion costs (ii).
- 6.6. The Applicant has not provided sufficient information on their approach to quantifying government revenue (tax) impacts (iii). Section 6.3 of the NEIA presents the results of the analysis and references Annex 1.2 for further detail on the methodology, but scant detail is provided in Annex 1.2.
- 6.7. While the project may increase Air Passenger Duty (APD) revenues to government, it is certain that this gain will be offset by a loss in other consumption taxes (such as VAT) which would have arisen had the passenger spent their money elsewhere in the economy. The Applicant references this fact (para 6.3.1) but does not explain how it is accounted for in

their subsequent analysis. For example, what rate of tax are passengers assumed to pay on their spending in the baseline (without project) scenario (i.e. the counterfactual)? There is a conceivable scenario where the project actually leads to an overall reduction in tax revenues because passenger spending in the baseline scenario is taxed at a higher rate than that implied by APD.

Recommendation 15

The Applicant should set out how they have dealt with counterfactual tax revenue in arriving at their tax impact estimates.

6.8. The Applicant identifies that employment effects and productivity effects are negligible in the context of this application, at least in relation to the scale of the other positive and negative impacts identified. The Applicant also identifies that including trade and foreign direct investment benefits would likely result in double counting of impacts already captured under business user benefits and output change in imperfectly competitive markets. NEF is in agreement with this conclusion.

7. WELFARE-BASED BENEFIT-COST ANALYSIS

- 7.1. According to NEF's analysis the central environmental costs of the scheme are incorrectly calculated. The Applicant's estimate of -£1.4bn should rise to closer to -£4.3bn in the central case. A sensitivity analysis can then be conducted which includes non-CO₂ emissions costs which would see the environmental costs rise to around -£9.1bn. These figures are predicated on accepting the Applicant's assumption that some of the scheme's emissions will be CORSIA-eligible.
- 7.2. NEF does not accept the Applicant current estimation of user benefits arising from business passengers, nor the further benefits to business arising from output changes in imperfectly competitive markets. Once the issues raised with regard to this element of the benefit-cost analysis have been resolved, a net present value (NPV) for the scheme can be arrived at.

Recommendation 16

The Applicant should present a revised welfare-based cost-benefit analysis updated to reflect revisions required following NEF's review.

8. TOURISM IMPACTS

- 8.1. Gatwick Airport's primary function is to service demand for tourism, indeed Gatwick Airport represents a nationally significant transport hub primarily serving the outbound international tourism industry.
- 8.2. As per the Forecast Databook, some two-thirds (67%) of the new passengers generated by the proposed development are expected by the Applicant to be UK residents flying for leisure purposes.
- 8.3. Public willingness to pay for air tickets represents an expression of passengers' desire to travel and the utility they gain from it. The welfare benefit these passengers experience as a result of their increased ability to fly for leisure is therefore represented by the user benefits (air fare savings) modelled by the Applicant and captured in the NEIA.
- 8.4. Beyond the direct welfare benefit to the passenger of the flight, the project will have impacts on subsequent spending in wider tourism industries in the UK and abroad which is facilitated by air travel. This means flows into the UK from the spending of inbound foreign residents and, as recognised by the Applicant, also the potential for "*reduced consumption in the UK as individuals may spend money abroad rather than in the UK*" (NEIA, p.6-44). The Applicant does not recognise this process as a 'welfare impact' of the scheme, rather seeing it as a 'financial impact' and as a result does not quantify either effect in the NEIA.
- 8.5. Analysis of one side of the tourism impact, the incoming flow of spending from foreign residents, is presented by the Applicant in the Needs Case Appendix 2: The Economic Impact of Gatwick Airport: A Report by Oxford Economics. Findings from this analysis are then repeated in the main Needs Case.
- 8.6. Oxford Economics estimate that the increase in inbound foreign tourists spending in the UK resulting from the development will create an additional 28,700 jobs in 2038 (para 4.3.6).
- 8.7. However, for every one passenger that is expected to visit the UK through Gatwick Airport, more than three passengers are expected to fly out of the UK to holiday overseas. Despite this mismatch in impact size, no attempt is

made to model the impact of the increase in overseas spending associated with this project.

- 8.8. The figures presented by Oxford Economics on tourism do not represent a net effect on the UK economy. This is not made clear in the Needs Case where the Applicant states:

“It [the development] will also significantly boost tourism’s contribution to GDP by nearly £2bn and support a further 26,000 jobs.” (para 1.1.12)

Similar inaccuracies in the Applicant’s description of effects are found in other places in the application, such as in Box 6.2 of Appendix 17.9.2 Local Economic Impact Assessment.

Recommendation 17

The Applicant should review their language and clarify when they are/are not talking about net tourism impacts.

- 8.9. Best practice appraisal involves assessing all material scheme impacts, and greater attention should be given to the largest scheme impacts. The potential impacts of the proposed flow of spending overseas must warrant further examination. Indeed, a recent report commissioned by the DfT would suggest that an informed view of the wider economic impacts of an intervention into regional air connectivity cannot be formed without considering this impact. Peak Economics, in a report for the DfT in 2018²⁴ identified three key diagnostic tests in this regard, the third of which asks:

“Is it likely to generate net positive tourism to the region (i.e. the increase in tourism to the region more than compensates for any increase in outbound tourism)” (p.8)

- 8.10. NEF can present a simplistic illustration of the scale of this scheme’s impact, the Applicant should conduct a more sophisticated analysis. Visitors to the UK typically spend around £700 during their visit, while UK residents typically spend a similar amount while overseas.²⁵ On this basis, inbound

²⁴ Peak Economics (2018) Wider Economic Impacts of Regional Air Connectivity. Report to the Department of Transport.

²⁵ VisitBritain analysis of the ONS International Passenger Survey (2023)

foreign residents created by this project (assuming passengers are additional and not displaced) would spend just under £2bn in the UK each year (aligning reasonably well with Oxford Economics estimates of inbound tourism-related GVA at Figure 4.3), while UK residents sent overseas by this project would spend around £6bn abroad. The net effect would be in the order of -£4bn per year. Applying the relationship between spending and jobs used by Oxford Economics, this would imply a potential loss of as many as 50,000 jobs. As, in the counterfactual scenario, not all of the spending would be made on UK high streets, some might be saved or invested, the net employment impact might be lower, but likely still negative.

8.11. NEF has reviewed in some detail the evidence and considerations to be made on the issue of the 'tourism spending deficit' in our report *Losing Altitude*.²⁶ While it is fair to say that the economic flows are complex, and there are mechanisms by which overseas spending by UK residents can find its way back into the UK. There is little evidence so suggest that this money returns to the communities it left from. In the report we highlight academic evidence that domestic and international tourism are partial substitutes, and growth in overseas travel can damage domestic markets. We also highlight evidence that where airport expansion facilitates outbound leisure travel, it can result in negative economic impacts for the sending region. See *Losing Altitude* for detail and references.

8.12. NEF does not find the simple reflections presented by the Applicant at para 6.8.6 of the NEIA to be an adequate justification for otherwise ignoring this substantial potential outflow from the economy. It seems likely that encouraging additional spending to flow overseas will result in some losses both to spending on the high street in London and the South East and to the domestic tourism economy outside of London and the South East.

²⁶ Chapman, A (2023) *Losing Altitude: The Economics of Air Transport in Great Britain*. New Economics Foundation

Recommendation 18

The Applicant should provide a more comprehensive analysis of the flows of tourism spending and how the increase in overseas expenditure by UK residents might affect the UK economy both nationally and regionally.

8.13. It is also worth noting that the growth in outbound international travel incentivised by this development pulls in the opposite direction to UK tourism policy. The 2021 Tourism Recovery plan states *“the government also wants to embed domestic travel as a sustained customer behaviour”* (p.33).²⁷

8.14. The Needs Case includes no analysis of the proposed development’s compatibility with UK tourism policy. This comes despite Gatwick Airport representing the second largest tourism conduit, behind only Heathrow Airport, in the UK.

Recommendation 19

The Applicant should review and describe the compatibility of the proposed development with UK government tourism policy, including its aim of encouraging domestic tourism.

²⁷ DCMS (2021) The Tourism Recovery Plan. Department for Digital, Culture, Media & Sport.

9. EMPLOYMENT IMPACTS

- 9.1. The Applicant's assessment of jobs and employment is spread across four documents: The Needs Case, Needs Case Appendix 2: A Report by Oxford Economics, the ES Socio-economics chapter, and Appendix 17.9.2 Local Economic Impact Assessment. Employment impacts are presented differently across the four documents.
- 9.2. The volume of data presented, the variation in approaches, and the complexity of the methods applied to catalytic effects across reports by Oxera and Oxford Economics make it almost impossible to adequately scrutinise the analysis presented. Each individual study would ideally be subjected to peer review at an academic standard.
- 9.3. Surprisingly, given the volume of information presented, analysis of past trends in employment at Gatwick Airport and its supply chains is limited. NEF is not aware that any of the application documents submitted provide a historical overview of how employment at Gatwick Airport developed over the past three decades. No analysis has been presented of how previous projections of jobs growth in response to previous planning applications and masterplans have ultimately performed. These issues are worth exploring as in similar airport expansion proceedings at other UK airports, including Luton and London City Airports NEF has documented significant underperformance in historic employment projections.

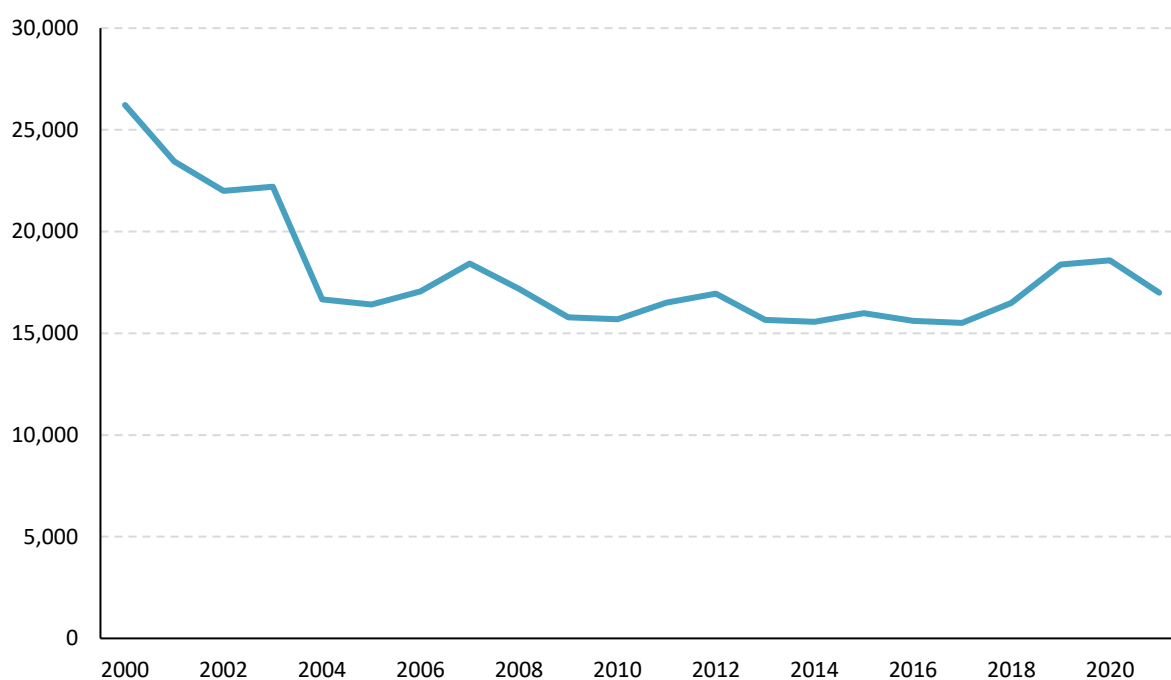
Recommendation 20

<p>The Applicant should provide a review of historic employment trends, and the performance of historic jobs growth forecasts.</p>
--

- 9.4. NEF's understanding is that there was negligible change in direct employment at Gatwick Airport over the period between 2004 and 2019 despite passenger numbers rising by almost 50%. This is based on comparison between data presented in the Oxford Economics report and

data reported by the Aviation Environment Federation (AEF, 2009).²⁸ This estimate is supported by NEF's analysis of Government data in the Business Register and Employment Survey (BRES) as shown in Figure 3 which also suggests minimal change in air transport sector employment in the Gatwick Labour Market Area since 2004 (and indeed a significant fall in employment prior to that).

Figure 3: Employment in air transport and incidental services in the Gatwick Labour Market Area



Source: Business Register and Employment Survey (SIC codes 51/62 and 5223/6323)

9.5. This is also supported by national data set out in NEF's *Losing Altitude* report, which suggests there has been no net growth in air transport employment at the national level since 2007.

9.6. The trends described above have prevailed as efficiency savings across airport and airline operations have been sufficient to offset any potential increased employment resulting from higher passenger volumes. The Applicant has accounted for some future efficiency savings in their forecasts, suggesting there will be a lower proportionate increase in employment

²⁸ Sewill, B. (2009) Airport jobs: False hopes, cruel hoax. Aviation Environment Federation

compared with the increase in passenger numbers. Nonetheless significant employment growth is projected.

- 9.7. Given recent trends including rising airplane capacities and load factors, the decline of business-purposes travel, increased automation of ticketing and baggage handling, and recent developments such as the government's decision to increase Air Passenger Duty on business and first class travel, there are a host of reasons to expect significant efficiency improvements over the short to medium term future.

Recommendation 21

The Applicant should provide a review of how emerging trends are likely to affect employment levels at the airport, and address whether future passenger growth will deliver employment increases given historic growth has not.

- 9.8. The Applicant has presented airport employment forecasts (including direct, indirect, and induced) across a range of geographies. The Applicant has also presented the potential impact that displacement of passengers within the air transport system might have on employment within London and the South East. These forecasts do not, however, represent forecasts of the net change in total employment at the national or regional level. To establish net changes in employment other factors, such as the decisions of workers to move between sectors, and the loss of jobs in other sectors such as domestic tourism would have to be considered.
- 9.9. Pound-for-pound, air transport is a very poor creator of jobs. Data from the Office for National Statistics suggests that in 2019, air transport produced 2.5 full-time equivalent (FTE) jobs per million pounds of turnover.²⁹ The sector ranked 89th out of 105 sectors for job creation per pound of turnover, only ahead of a group of much smaller, highly specialised sectors. As such, at face value, any intervention which diverts spending towards the air transport industry and away from other sectors is likely to reduce the number of jobs available in the economy.

²⁹ ONS (2023) FTE multipliers and effects, reference year 2019. Office for National Statistics.

- 9.10. Despite this feature of the industry, historic studies have sometimes identified a positive correlation between indicators such as air transport connectivity and passenger volumes and employment. This is grounded in the argument that air transport has broader, catalytic, effects on the economy. Challenges have arisen identifying those relationships on a consistent basis, as well as identifying causality in those relationships, i.e. does air transport growth *cause* economic growth and/or employment growth, or vice versa? Ultimately, academic research, as reviewed in NEF's *Losing Altitude* report identifies significant variation across regions and times.³⁰
- 9.11. NEF's synthesis of this literature argues that positive causal relationships running from air transport to economic growth are more commonly identified in *tourism receiving* nations, such as those on the mediterranean. In *tourism sending* nations such as the UK, positive relationships are highly dependent on the presence of business-purposes travel growth, something which is absent in the UK today.
- 9.12. When considering net employment impacts, the default position of the Department for Transport is that changes should be assumed not to be additional, and to be subject to 100% displacement within the wider economy, unless solid contrary evidence is identified.³¹ In order to try and satisfy this requirement, the Applicant has presented two technical analyses aimed at identifying overall net employment effects.
- 9.13. While the two analyses are presented as following different approaches, the fundamentals are the same. Statistical relationships which were established in other contexts, other nations, and past periods of time, are taken and imposed/replicated in the Gatwick context.
- 9.14. The Oxford Economics report applies a top-down statistical analysis to arrive at a relationship between connectivity and labour productivity at a global level. The study uses data from 191 original and destination countries

³⁰ Chapman, A. (2023) *Losing Altitude: The Economics of Air Transport in Great Britain*. New Economics Foundation

³¹ See pages 4 and 18 of DfT (2019) TAG unit A2-1 wider economic impacts appraisal. Department for Transport

over the period 2015 to 2019. It has not been possible for NEF to fully review the method applied by Oxford Economics.

9.15. However, we would note that the approach applied means that the study is heavily influenced by the relationships between air travel and the economy in rapidly developing low-to-middle income countries such as China and India. It seems unlikely that the study is able to adequately isolate the role of saturation (diminishing returns) in already-highly-connected nations such as the UK (the second best connected nation in the study) from the relationship present in major emerging economies.

9.16. The Oxera approach (applied in the Local Economic Impact Assessment) uses a method developed in the academic literature and apply it to the UK context. The study replicated looked at the role of air transport in the economy of Italy and its provinces. Oxera appear to replicate the method at the UK level, but then only present employment results from within the six authorities area. It has not been possible for NEF to fully review the method applied by Oxera. However, we note from Annex 5 that Oxera appear to suggest that a significant proportion (50-60%) of the employment gains described may represent displaced employment from outside the region for which results were presented (the six authorities). If this is correct, then this is not adequately explained or detailed elsewhere in the application.

9.17. Employment displacement associated with growth in air passenger numbers at Gatwick Airport would make sense. In the lead up to the pandemic, the period modelled by Oxera, Gatwick Airport was successful in capturing an increased share of the business-purposes passenger market, particularly from Heathrow Airport.

Recommendation 22

The Applicant should clarify the extent of the displacement taking place in the total net economic impact analysis presented by Oxera.

9.18. The Applicant has presented limited information on the past and future trajectories of wages and real pay levels at the airport and in the air transport industry. As set out in NEF's *Losing Altitude* report, wages paid to

lower and middle earners in air transport have been declining rapidly in real-terms in recent years. Indeed the Air transport sub-sector saw the fastest decline in real wages of any sector in the UK economy between 2008 and 2022, and the second fastest decline over the period 2008 to 2019. Insufficient information is provided by the Applicant to accurately judge the value of the jobs the scheme is proposed to create.

Recommendation 23

The Applicant should present analysis of wages and pay at the airport and in associated industries and information assisting readers to understand the quality of the jobs the scheme may create.

10. IMPACT EQUITY

- 10.1. The equity dimensions of the scheme have not been adequately presented nor analysed by the Applicant. This deficit persists particularly across the welfare-based benefit-cost analysis, and associated analysis of user benefits and environmental costs, as well as in domains such as tourism impacts. There is a risk that this scheme will exacerbate inequity and run counter to the government's levelling-up agenda.
- 10.2. Negative impacts on the domestic tourism industry, which is likely to lose out as spending is encouraged to move overseas, are likely to disproportionately affect less well-off localities on the UK's coastline including those which are the target of the government's levelling-up agenda. Similarly, worsening of climate changes will affect the least well-off communities in the UK and overseas as these groups are typically most exposed to environmental hazards and least able to afford adaptation measures.
- 10.3. On the opposite side, this scheme's benefits primarily accrue as profit to business. Indeed, the largest impact is forecast to be a significant increase in the profit margins of businesses. This is seen in the estimates of output change in imperfectly competitive markets (described in para 6.2.2 of the NEIA and valued at £13.5bn), in the airport's profitability (estimated at £2.2bn in table 5.6.1), and as implied by the user benefits accruing to business passengers, net of airline losses (worth around £9bn in Table 5.6.1). As business profits ultimately drive earnings for the wealthiest in UK society through routes such as dividends, pension wealth, and capital gains, the bulk of the scheme benefits are expected to accrue to the wealthiest in UK society. In 2021/22 some two-thirds (66%) of all investment income in the UK accrued to households in the top 10% by income.³²
- 10.4. While the benefits of the scheme to leisure passengers claimed by the Applicant are modest in size it is also worth highlighting the distribution of

³² ONS (2024) The effects of taxes and benefits on household income, UK, 2021/22. Office for National Statistics

these benefits. As set out in *Losing Altitude*, the large majority of UK flights are taken by a minority of frequent flyers, individuals who typically have higher incomes and more wealth. Half of Britain does not fly in any given year, and most individuals in the lower-middle income groups fly infrequently. A large proportion of the growth in passenger numbers in recent years has been captured by repeat flyers – i.e. those who already receive the welfare benefits of international leisure trips.

10.5. On the basis of the evidence presented to date, the scheme represents a straight welfare transfer from those worst affected by climate changes and other environmental impacts, as well as those dependent on domestic tourism and high street expenditure, to those individuals who benefit from business profitability. As detailed above, NEF has significant concerns that the size of the climate costs is understated, and the size of the business profitability benefit is overstated.

Recommendation 24

<p>The Applicant should present the equity dimensions of the scheme's welfare impacts, particularly the distribution across wealth/income groups.</p>
