

Economic Impact Assessment Independent Review

Luton Borough Council
London Luton Airport

September 2023

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1. Introduction

In September 2023, Genecon were commissioned to provide consultancy support to carry out an independent review of the economic impact assessment work that has been prepared for the Luton Airport DCO examination by the applicant Luton Rising.

1.1 Background

The proposal for expansion of the Airport has been submitted by Luton Rising (re-branded from London Luton Airport Ltd in 2021), owner and operator of the airport. Luton Rising has a sole shareholder owner, Luton Council. Luton Rising's proposals are to increase the airport's handling capacity to 32 million passengers per year (up from current 18mppa) by making the best use of the existing runway. The expansion proposals also include for a new terminal building and new taxiways. Statutory consultation on the DCO began in 2019.

As the project is seeking consent for airport-related development that would expand the permitted capacity of the airport by over 10 mppa, it is of a scale that meets the thresholds to be a Nationally Significant Infrastructure Project (NSIP) for the purposes of the Planning Act 2008, and as such must apply to the Secretary of State for Transport for a Development Consent Order (DCO).

The 2008 Planning Act requires consultation with 'host authorities' (defined as those authorities within which the land for the proposed development is located). There are 5 host authorities (Luton Council, North Hertfordshire DC, Dacorum BC, Hertfordshire CC and Central Bedfordshire Council). Each council contributes to a Planning Officers Coordination Group which meets with Luton Rising.

The Coordination Group has reviewed documentation prepared by Luton Rising informing the DCO and have appointed WSP to provide technical advice during both the consultation period and now that the DCO has been submitted. To supplement WSP's advice, an aviation consultancy specialist, Chris Smith, has reviewed York Aviation's passenger projection forecasts, alongside Genecon's specialist economic impact advice.

1.2 Genecon Review

This review concerns the chapter on economics and employment within the Environmental Statement, and the technical appendices (prepared by Oxford Economics using forecasts provided by York Aviation). The focus of the review is:

- Robustness of the economic assessment prepared.
- The soundness of the assumptions/conclusions informing the needs case.
- To inform the Statement of Common Ground being prepared and help address any written questions from the Examining Authority.

1.2.1 Material Provided for Review

Genecon were provided with six Luton Airport DCO documents to review and comment upon. The tabulation summarises the six documents:

Document	Summary
5.01: Environmental Statement - Chapter 11 - Economics and Employment (February 2023)	<p>Assessment of likely significant effects of the Proposed Development on Economics and Employment. Informed by a detailed study undertaken by Oxford Economics in 2022 (appendix 11.1)</p> <p>This comprises:</p> <ul style="list-style-type: none"> • A review of legislation, policy and guidance relevant to the economic assessment • Explanation of the Scope of the assessment • A summary of engagement with relevant stakeholders, undertaken to inform the EIA • Details of EIA’s methodology, and a description of the assumptions and limitations of the assessment • Examination of the existing conditions in the Study Area, and the future baseline • Results of the assessment of the likely significant benefits.
5.02 Environmental Statement - Appendix 11.1 - Oxford Economics, The Economic Impact of London Luton Airport (November 2022)	<p>An update on previous studies of the impact of London Luton Airport, the report presents estimates of the economic impact of the Airport in 2019 and in future years.</p> <p>The key contents of the report are:</p> <ul style="list-style-type: none"> • Estimates for the current direct and multiplier impacts of the airport • Projections of the future impacts to 2043 • A detailed explanation of the methodology • A comparison to previous studies • Projections under the “Fallback Scenario” • A detailed geographic breakdown of impacts
5.03 Environmental Statement - Chapter 11 Economics and Employment Figures 11.1 - 11.3	<p>Three figures referenced in 5.01</p> <ol style="list-style-type: none"> 1. Plan of the Airport operation areas 2. Map of wider impact area 3. 0 to 60 minute drive time catchment map
7.04: Need Case (economic context and socio-economic benefits only)	<p>Analysis of the economic characteristics of the main sub-regional catchment area served by the airport and the need for air connectivity that this economic activity generates.</p> <p>A breakdown of the socio-economic benefits that will come forward as the airport grows in the future and how these benefits can support the economic aspirations of stakeholders in the regions around the airport, drawing on 5.02.</p>

7.05: Need Case Appendices (socio-economic impact assessment and socio-economic sensitivity tests only)	<p>Details the approach that was taken to assessing the socio-economic impacts of the Proposed Development. It provides information on the assessment of the direct, indirect and induced impacts, collectively referred to as the operational impacts, the wider economic impact, and the high-level socio-economic cost benefit analysis.</p> <p>Details and results of sensitivity analysis which consider the impacts associated with the Faster and Slower Growth Cases.</p>
7.01: Planning Statement (need case and economic development, and planning assessment re socio economic development only)	Summarises the need case for the Proposed Development

1.2.2 Review Approach

Our approach to reviewing this evidence has been to firstly review the methodology of document 5.02 Appendix 11.1 as this is the key source for the employment and GDP impacts presented in the other documents. We have then undertaken a review of the impacts presented in the Chapter 11 of the Environmental Statement, and the Need Case, which do not directly draw upon the estimates presented in Oxford Economics' Report (5.02 Appendix 11.1).

1.3 Impact Estimates – headline results

Document 5.01 Environmental Statement Chapter 11 Economics and Employment presents the results of the assessment of likely significant effects of the proposed developments. The headline results are as follows:

Construction Effects

- Between 2025 and 2040 construction will directly support 6,280 construction job years (equivalent to 628 FTEs) generating an estimated £628m in GVA over the period.
- It is estimated a further 3,140 job years (equivalent to 314 FTEs) will be supported through indirect and induced impacts, generating an estimated £314m in additional GVA over the period.

Operational Effects

Gross impact analysis

- The direct impact by 2043 of the proposed development additional over the without development scenario is estimated to be 5,700 gross jobs, and additional £554m of GDP per annum. Table 11.11 from OE's report is included below.

Table 11.11: Without Development Case vs With Development Case: Gross GDP and Employment Growth (Direct)

Year	With Development		Without Development ³		With Development – Without Development (Net of existing)	
	Jobs	GDP	Jobs	GDP	Jobs	GDP
2027	11,700	£0.9bn	10,500	£807m	1,100	£83m
2039	13,200	£1.2bn	9,600	£873m	3,500	£293m
2043	15,100	£1.5bn	9,400	£902m	5,700	£554m

Note: Rows may not sum due to rounding.

- The total gross impacts (including direct, indirect and induced impacts) of the proposed expansion over and above the without development scenario has been estimated at a number of geographic levels. By 2043 it is estimated the developments will support another 6,100 jobs and £582m of GDP per annum in Luton; 8,600 jobs and £762m of GDP per annum across the Three Counties, and 15,000 jobs and £1.3bn across the whole of the UK.
- Table 11.12 from OE's report summarising this is included below.

Table 11.12: Without Development Case vs With Development Case: Gross GDP and Employment Growth (Direct, Indirect and Induced) Luton and Three Counties

Year	Area	With Development		Without Development		With Development – Without Development (Net of existing)	
		Jobs	GDP	Jobs	GDP	Jobs	GDP
2027	Luton	12,500	£0.9bn	11,300	£0.8bn	1,200	£87m
	Three Counties	17,500	£1.2bn	15,800	£1.1bn	1,700	£115m
	United Kingdom	30,100	£2.0bn	27,300	£1.8bn	2,900	£190m
2039	Luton	14,100	£1.2bn	10,300	£0.9bn	3,800	£308m
	Three Counties	19,700	£1.6bn	14,400	£1.2bn	5,200	£409m
	United Kingdom	34,000	£2.6bn	24,900	£1.9bn	9,000	£684m
2043	Luton	16,200	£1.5bn	10,100	£0.9bn	6,100	£582m
	Three Counties	22,600	£2.0bn	14,000	£1.2bn	8,600	£762m
	United Kingdom	39,200	£3.3bn	24,200	£2.0bn	15,000	£1.3bn

Note: Rows may not sum due to rounding.

Net impact analysis

- The direct net Jobs and GDP impacts by 2043 (after allowing for Displacement adjustment) is estimated to be 5,440 jobs and £526m per annum;
- The total net impact (direct, indirect and induced) by 2043, in Luton is estimated to be £553 million in GDP and 5,795 jobs; around £572 million in GDP and 6,450 jobs across the Three Counties; and £63 million in GDP and 750 jobs nationally (i.e. the majority of impact displaced away at the national level).
- Table 11.14 from OE's report summarising this is included below.

Table 11.14: With Development minus Without Development: Gross and Net GDP and Employment Growth (Direct, Indirect and Induced)

Year	Area	With Development – Without Development Gross		Displacement Adjustment Factor	With Development – Without Development Net	
		Jobs	GDP		Jobs	GDP
2027	Luton	1,200	£87m	95%	1,140	£83m
	Three Counties	1,700	£114m	75%	1,280	£86m
	UK	2,900	£190m	5%	150	£10m
2039	Luton	3,800	£308m	95%	3,610	£293m
	Three Counties	5,200	£409m	75%	3,900	£307m
	UK	9,100	£684m	5%	460	£34m
2043	Luton	6,130	£582m	95%	5,795	£553m
	Three Counties	8,590	£762m	75%	6,450	£572m
	UK	15,000	£1.3bn	5%	750	£63m

Note: Rows may not sum due to rounding.

Wider Impacts – Business Travel

- The impact of increased business travel by 2043 enabled by the proposed developments, is estimated to support an additional £15m in GDP in Luton, £145m of GDP and 500 jobs in the Three Counties, and £635m of GDP and 4,440 jobs nationally. Table 11.15 from OE’s report summarises this.

Table 11.15: With Development vs Without Development: Business Travel Related GDP and Jobs

Year	Area	With Development		Without Development		With Development – Without Development	
		Jobs	GDP	Jobs	GDP	Jobs	GDP
2027	Luton	10	£13m	10	£11m	0	£2m
	Three Counties	530	£132m	440	£111m	90	£22m
	United Kingdom	4,620	£565m	3,980	£487m	640	£79m
2039	Luton	10	£15m	10	£10m	0	£5m
	Three Counties	590	£165m	350	£100m	240	£65m
	United Kingdom	5,380	£740m	3,180	£440m	2,200	£300m
2043	Luton	10	£25m	10	£10m	0	£15m
	Three Counties	810	£235m	310	£90m	500	£145m
	United Kingdom	7,310	£1.1bn	2,870	£415m	4,440	£635m

Note: Rows may not sum due to rounding.

Wider Impacts – Inbound Tourism

- It has also been estimated that the increased visitors using the airport coming to the UK will support GDP and employment via an expenditure injection into the economy. By 2043, within Luton this is estimated to support an additional 90 jobs and £6m of GDP per annum, 890 jobs and £65m of GDP across the Three Counties, and 11,550 jobs and £818m of GDP nationally. Table 11.16 from OE’s report summarises this.

Table 11.16: With Development vs Without Development: Inbound Tourism Related GDP and Jobs

Year	Area	With Development		Without Development		With Development – Without Development	
		Jobs	GDP	Jobs	GDP	Jobs	GDP
2027	Luton	160	£9m	140	£8m	20	£1m
	Three Counties	1,650	£102m	1,380	£85m	270	£17m
	United Kingdom	21,410	£1.3bn	17,920	£1.1bn	3,490	£210m
2039	Luton	180	£11m	120	£7m	60	£4m
	Three Counties	1,790	£125m	1,190	£84m	600	£40m
	United Kingdom	23,190	£1.6bn	15,460	£1.1bn	7,730	£526m
2043	Luton	200	£13m	110	£7m	90	£6m
	Three Counties	2,030	£148m	1,140	£83m	890	£65m
	United Kingdom	26,400	£1.9bn	14,850	£1.1bn	11,550	£818m

Note: Rows may not sum due to rounding.

User Benefits – Journey Time Savings

- Estimates are also presented for the economic welfare benefits to passengers due to the expansion of passenger numbers in line with the with the development scenario, due to journey time savings. These are calculated over 60 years and presented in NPV terms:

Table 11.17: With Development: Net Present Value of Journey Time Savings (60 year period) (£m)

Area	UK Passengers	Foreign Passengers	All Passengers
Luton	£56m	£28m	£85m
Three Counties	£400m	£112m	£512m
UK	£288m	£34m	£322m

2. Review of Oxford Economics' Report [The Economic Impact of London Luton Airport (November 2022)]

The major impacts of the proposed expansion at London Luton Airport on Luton and the Three Counties, are estimated to be the operational employment and GDP benefits. The calculation of these is explained in Document 5.02 Environmental Statement - Appendix 11.1 - Oxford Economics, The Economic Impact of London Luton Airport. The following tables sets out each of the assumptions used to inform Oxford Economics' Impact Assessment, alongside Genecon's commentary on the validity of the approach used.

2.1 The direct impact of London Luton Airport (2019)

Aspect	EIA Approach	Genecon Commentary
<p>Direct Employment</p> <p>Jobs supported by firms which are integral to the operation of the airport. This includes the airport operator, as well as other businesses closely associated with the operation of the airport and which are based on the airport site, or in close proximity to it</p> <p>Estimated impact: 10,900 direct jobs in 2019</p>	<p>The latest estimates build on a 2019 Study by Oxford Economics which used both primary and secondary data sources.</p> <p>Primary – telephone survey of businesses at and close to the airport, did not achieve a particularly high level of responses. (35% businesses and c.10% total employment)</p> <p>Secondary – Utilised 2017 Inter-Departmental Business Register (IDBR) for Luton Borough, to estimate the proportion of employment that related to the airport.</p> <p>A list of companies within the airport boundary provided by GL Hearn and London Luton Airport was cross-checked with IDBR and Google Maps, and a postcode definition of the airport boundary was drawn (11 postcodes).</p> <p>Drawing on Annual Monitoring Reports, airport-related businesses were identified outside the perimeter on seven streets. Consequently, businesses on six other streets the same distance from the airport were also investigated. This area was used to create a long list of businesses, which were categorised into four categories:</p> <ul style="list-style-type: none"> • Direct on-airport employment 	<p>The approach to utilising IDBR data alongside consultation with York Aviation and limited primary business survey data appears to be a sensible method of estimating direct jobs. As such this approach appears reasonable.</p> <p>As a sense check, Genecon has reviewed sector-based jobs estimates for the Lower Super Output Areas (LSOA) covering the geographic area considered, taken from ONS Business Register and Employment Survey (BRES).</p> <p>This analysis shows that in 2019, there were approximately 13,250 jobs present in the two LSOA's spanning the airport estate, of which around 11,800 appear to be in sectors likely to be linked to airport activities, inferring that the Oxford Economics estimates of direct jobs (10,900) appear prudent.</p> <p>The direct employment estimates by broad activity also are consistent with SIC code data from BRES,</p>

	<ul style="list-style-type: none"> • Unrelated on-airport employment • Direct off-airport employment • Unrelated off-airport employment <p>Activities judged unrelated to the operation of the airport were once again excluded from the analysis. They were then split into over 20 sub-sectors to reflect the activities related to the airport. This categorisation was stated as informed by the primary research and consultation with York Aviation.</p> <p>Finally, the number of jobs was upscaled in an attempt to capture activities in businesses not captured by IDBR data, based on the ratio between BRES and IDBR employment totals for Luton.</p> <p>In the 2021 and 2022 updates of the report, primary research was deemed difficult to undertake, and the results were assumed to be distorted, so therefore was not undertaken.</p> <p>An updated IDBR data for 2019 was utilised to update estimates. 2019 was retained as the base year to exclude the impact of Covid-19. Therefore the estimates in the 2021 and 2022 results are the same.</p>	<p>suggesting that the activities of businesses have been correctly categorised.</p> <p>To test the estimates for place of residence of the workforce, Genecon have accessed Census 2011 origin destination for the workforce of the two LSOA's covering Luton airport. This data is clearly somewhat outdated (2021 Census data not yet available), but provides a sense check for the proportions assumed by Oxford Economics. This data suggests the 53% of the workforce in these LSOAs were from Bedfordshire, slightly below the Oxford Economics estimate (58%).</p> <p>This Census data also suggests residents of North Hertfordshire (4% of total jobs), St Albans (3%), Milton Keynes, Dacorum, (all 2%) Stevenage and Aylesbury Vale (both 1%) historically filled over 100 jobs in the LSOAs, which is broadly in line with the estimates shown in Fig.6 in OE's report.</p>
<p>Direct Contribution to GDP</p> <p>GDP contributed by firms which are integral to the operation of the airport. This includes the airport operator, as well as other businesses closely associated with the operation of the airport and which are based on the airport site, or in close proximity to it</p>	<p>Oxford Economics state they have taken a “bottom-up” approach to the modelling by applying a productivity estimate to each worker within the direct employment estimate, to reach a total estimate.</p> <p>The twenty-nine sub-sectors identified in the direct employment estimate were mapped to 5 digit SIC codes. Oxford Economics have applied the most detailed SIC code productivity benchmark for the East of England which could be derived from ONS Regional Accounts, BRES and Annual Business Survey (ABS) data to the relevant sub sector.</p> <p>Oxford Economics also state that GVA impact of the Airport's Operator was cross-checked with financial information provided to them.</p>	<p>This “bottom-up” approach to calculating the GVA impact based on employment numbers is a widely used approach to estimating the economic impact of activities. It does however assume that the productivity of the businesses is in line with regional sectoral averages.</p> <p>The sector mapping exercise and derivation of productivity detailed in the methodology seems logical and a reasonable approach given the data available.</p>

<p>Estimated impact: £789 million to UK GDP in 2019</p>		<p>Although the methodology appears sound, to ensure that the total impact has not been overestimated Genecon accessed ONS small area gross value added (GVA) estimates for the two relevant LSOAs. In 2019 it is reported that the GVA contribution of the two LSOAs (including non-airport related activities) was £1.07bn, which does provide confidence that OE's projection of £789m is not an overestimate of the direct impact of the Airport.</p>
<p>Wages Paid by Airport Employers</p> <p>Estimated impact: £449m in wages in 2019</p>	<p>As with the GDP impact the wage impact of London Luton Airport has been estimated by applying relevant sector-specific regional benchmarks to the estimated direct jobs.</p> <p>4-digit SIC code average gross wages for the East of England has been taken from the ONS Annual Survey of Hours and Earnings (ASHE), it is not clear for which year the data refers to. The wider regional data has been used due to the lack of detailed sector data available at local authority level.</p> <p>To estimate the distribution of wages between residents of different local authorities, data on wages by place of residence from a sample of airport employers relating to 2017 and 2018, was applied to the total impact estimate. (This information covered approximately 36% of total wages paid by airport employers in 2017).</p>	<p>The approach described to estimating the total wages paid by employers is rational, and a common approach used in economic impact assessments.</p> <p>Utilising East of England benchmarks as opposed to less detailed but more local benchmarks could possibly mask lower wages in Luton relative to the wider region. However, Genecon analysis of 2019 ASHE data for East of England compared to Luton, reveals generally that workplace earnings in Luton were above regional averages. This provides some assurance that the benchmark utilised are unlikely to overestimate the total impact.</p> <p>The methodology used to estimate the distribution of the wages geographically, again is a sensible approach given the data available, however given the age of the survey data used and sample size, the detailed breakdown estimates should be treated with caution.</p>

<p>Direct Contribution to Tax Revenue</p> <p>Estimated impact: £ 334 million in tax revenues in 2019</p>	<p>The methodology section explains that the direct tax contribution of London Luton Airport estimated comprise six elements:</p> <p>Corporation Tax – It is stated this has been calculated by applying HMRC corporation tax paid by sector to detailed gross operating surplus estimates for specific sectors.</p> <p>Employment Taxes (NI & Income Tax) – By utilizing ASHE and BRES data on full time and part time splits of employment and income deciles, Oxford Economics state they have estimated the annual tax rate of each worker.</p> <p>Taxes on Production and Taxes on Products - The relationship between these taxes paid and the GVA of each industry is stated to have been derived from the ONS Supply-Use Tables and applied to the estimated GVA of each industry.</p> <p>Passenger Air Duty - The overall number of passengers by APD band and class of travel from Luton Airport were sourced from the CAA Passenger Survey 2019. The number of APD liable passengers was then derived by removing passengers aged under 16, who are exempt from APD, using the age of Luton passengers from the CAA Passenger Survey. It was assumed that any passenger travelling in premium class within the survey is aged 16 or over, to provide a conservative estimate of APD generated at Luton Airport.</p>	<p>Given the complex nature of UK taxation and the multitude of taxes included, without access to the underlying tax model utilised and its inputs, it has not been possible for Genecon to recalculate this figure.</p> <p>The high level general methodology outlined within the EIA, and the mix of taxes considered, does however appear reasonable.</p>
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2.2 Multiplier Impacts in 2019

Aspect	EIA Approach	Genecon Commentary
<p>General Approach</p>	<p>The EIA approaches calculating the airport’s operational “economic footprint” through three “core” channels comprised of the following:</p> <ol style="list-style-type: none"> 1. <i>Direct Impact</i> This relates to the “economic activity supported by firms which are integral to the operation of the airport. This includes the airport operator, as well as other businesses closely associated with the operation of the airport and which are based on the airport site, or in close proximity to it.” 2. <i>Indirect Impact</i> This captures the “activity and employment supported in the UK supply chains of the firms which make up the airport’s direct impact”. This channel includes outputs that become the inputs for the companies included in channel 1. 3. <i>Induced Impact</i> This consists of “economic benefits that arise when those working at the airport and in its supply chain spend their earnings, for example in retail establishments”. <p>The channel 1 Direct Impacts have been addressed in the section above. This section deals with Channels 2 and 3, which together generate an economic “multiplier impact”.</p> <p>Oxford Economics estimates these through the use of “Input-Output” models which map the inputs required at each level of the supply chain all the way up to the companies based at the airport. Through this approach, they are able to estimate how much GDP is being generated through the Indirect channel and the Induced channel.</p>	<p>Splitting the economic impact into the stated three channels is considered a standard and appropriate approach resulting in “Direct” and “Multiplier” impacts.</p> <p>Estimating the value of the GDP generated within the Indirect and Induced impact channels through Input-Output modelling is a well-established approach and considered suitable.</p> <p>Deriving estimates of the Jobs, Wages and Taxes from the calculated GDP values is considered logically sound.</p>

	<p>Additional assumptions and adjustments have then been made to remove the impact of a “Direct company” purchasing inputs from another “Direct company”.</p> <p>The derived GDP is then used as a basis to estimate the number of jobs, wages and tax impacts.</p>	
<p>GDP Estimated Indirect Impact: £434 million contribution to UK GDP in 2019.</p> <p>Estimated Induced Impact: £553 million contribution to UK GDP in 2019.</p> <p>TOTAL Multiplier Impact: £987 million contribution to UK GDP in 2019; equivalent to a 2.3x GDP Multiplier.</p> <p>(For every £1 London Luton Airport contributed to GDP itself, it supported another £1.30 elsewhere in the UK economy.)</p>	<p>“Input-Output” models have been used within the EIA to derive GDP estimates of the Indirect and Induced impacts generated all the way through the London Luton Airport supply chain and the associated spending of wages.</p> <p>Utilising the “Input-Output” model, the value of the supply chain Indirect Impact has been calculated.</p> <p>The ratios generated through this calculation have been used to estimate the value of wages generated through a given level of economic activity. Consequently consumer expenditure has been estimated, and therefore the Induced Impact on GDP associated with that expenditure.</p> <p>In order to generate the Input-Output tables upon which the above calculations are based, Oxford Economics has taken the publicly available UK Input-Output tables produced by the ONS and built their own bespoke Input-Output model.</p> <p>The model has been further refined to take into account that some companies at the airport will make supply chain purchases from other companies based at the Airport. The adjustment to remove the double counting of supply chain expenditures accruing within the airport is based on a number of assumptions and has involved removing between 25% and 100% of direct revenues relating to specific categories of expenditure. The adjustment process resulted</p>	<p>The Input-output methodology employed essentially splits out who buys what and from whom in the economy and can therefore be used theoretically to track each stage of the supply chain and the value added at each step.</p> <p>The approach is widely used and an accepted methodology to derive multipliers which capture the indirect, cascading effects on the economy from a direct change in one sector. The ripple effects, magnified by multipliers, provide a comprehensive view of the total economic impact.</p> <p>The approach offers a detailed and quantifiable means to assess the holistic impact of interventions, making it especially useful for understanding large-scale projects such as the proposed Airport expansion. However, the methodology is not without limitations.</p> <p>Models typically assume static and linear relationships which are rarely observed in real world scenarios and require detailed data inputs to generate reliable outputs.</p> <p>Genecon has not had access to the underlying model or the specific inputs used and can therefore not</p>

	<p>in a 26% reduction in the value of first-round supply chain spending that the airport injects into the rest of the UK economy.</p>	<p>comment on it specifically. However based on the description of the method employed, the approach appears wholly reasonable and appropriate in this context.</p> <p>As a sense check we have compared the calculated multiplier of 2.3x against national GDP multipliers calculated at an aggregate industry level by the ONS. For SIC code H51 – Air Transport, the stated multiplier is 2.6x. When combining this with other sectors typically found at airports (such as retail), the 2.3x multiplier used in the EIA appears reasonable.</p>
<p>Jobs Estimated Indirect Impact: 8,600 indirect jobs in 2019.</p> <p>Estimated Induced Impact: 8,900 induced jobs in 2019.</p> <p>TOTAL Multiplier Impact: 17,500 jobs in 2019; equivalent to a 2.6x Employment Multiplier.</p> <p>(For every 1 job sustained at London Luton Airport, another 1.6 jobs were supported elsewhere in the UK economy.)</p>	<p>In order to arrive at the Indirect and Induced jobs estimate, a number of steps were applied as summarised below.</p> <ul style="list-style-type: none"> • Information was gathered on the geographical distribution of supply chain expenditure from major firms at London Luton Airport for a 2015 study. • This geographical pattern was applied to 9% of supply chain spending with the remaining 91% geographical distribution estimated using location quotients and data on the regional distribution of economic activity by sector. • The impact of the supply chain spend was determined using inter-regional Input-Output models developed by Oxford Economics. • This approach was based on academic techniques by Flegg and Webber and involves constructing regional and county-level input-output models with Oxford Economics provided data on location quotients and employment at regional and county levels. • The assumption was made that most spending is done near the workers' residence, thus supporting GDP and employment in those areas. 	<p>The approach taken to derive the estimated Indirect and Induced jobs appears detailed and well thought out.</p> <p>It employs a number of sophisticated methodologies which are considered by Genecon to be appropriate and technically sound.</p> <p>Techniques developed by Flegg and Webber, which have been referred to as key steps within the overall methodology employed, are highly regarded in the context of developing methodologies that cater to non-survey and partial-survey methods in regional Input-Output analyses.</p> <p>However, Genecon has not seen the underlying calculations or the actual models used in order to generate the estimates, and can therefore not comment on the specific calculations or inputs.</p> <p>As a sense check, we have compared the calculated multiplier of 2.6x against the national Type I FTE</p>

	<ul style="list-style-type: none"> • Data on employees' residential post codes was used to estimate where they live (covering around 40% of airport employees). • If the spending in a local area seemed unrealistically high, some impacts were assumed to move over to neighbouring areas. • To calculate the indirect and induced gross value-added (GVA) contribution to GDP, the expenditure effect from the Input-Output models was multiplied by sector-level GVA to gross output ratios using ONS Input-Output tables. • The impact on employment was then determined by applying the labour productivity of each industry sector in the supply chain to the GVA figures. 	<p>multipliers calculated at an aggregate industry level by the ONS. For SIC code H51 – Air Transport, the stated multiplier is 2.5x. When combining this with other sectors typically found at airports and Type II effects, the 2.6x multiplier used in the EIA appears reasonable.</p>
<p>Employee Compensation Estimated Indirect Impact: £271m in employee compensation in 2019.</p> <p>Estimated Induced Impact: £241m in employee compensation in 2019.</p> <p>TOTAL Multiplier Impact: £510m in employee compensation in 2019.</p>	<p>The same Input-Output model referred to above, was then used to estimate “employee compensation”.</p> <p>This is a broader measure including gross wages, benefits in kind, and employer social security contributions (including pensions).</p> <p>It is assumed that the national level productivity data was refined to reflect average compensation for workers in the geographic areas and industries identified, and then multiplied by the relevant number of Indirect and Induced jobs as outlined above.</p>	<p>The exact methodology to derive employee compensation is set out in less detail than the preceding GDP and Jobs methodology employed.</p> <p>However as the employee compensation is effectively based on those earlier derivations, the approach seems appropriate and reasonable.</p> <p>As a sense check, the EIA implies an average employee compensation figure of c.£29k p.a. per job (£510m/17.5k jobs).</p> <p>This figure is considered reasonable given the regional averages published within ONS data.</p>
<p>Tax Estimated Indirect Impact: £136m in additional tax in 2019.</p> <p>Estimated Induced Impact:</p>	<p>The Indirect and Induced activities are expected to generate a further rounds of tax revenue for the UK government.</p> <p>The estimated tax impacts comprise of income tax, National Insurance Contributions, corporation taxes, other taxes on products (excise duties, and net VAT payments), and taxes on production</p>	<p>The EIA does not disaggregate the impact of various taxed into its constituent parts and states an overall Indirect and Induced impact.</p> <p>Given the complex nature of UK taxation and the multitude of taxes included, without access to the</p>

<p>£121m in additional tax in 2019.</p> <p>TOTAL Multiplier Impact: £257m in additional tax in 2019.</p>	<p>(business rates and motor vehicle duty paid by businesses during production).</p> <p>The corporation tax estimates were derived from HM Revenue & Customs data relating to tax payments by economic sectors and refined using more detailed industry estimates.</p> <p>Employment-related tax payments were based on gross earnings per worker across industries with the data taken from the ONS Annual Survey of Earnings and Hours and the Business Register and Employment Survey (with adjustments made such as accounting for personal allowances).</p> <p>Taxes on products and production were derived from the ONS Supply-Use Tables based on the GVA of each industry.</p>	<p>underlying tax model utilised and its inputs, it has not been possible for Genecon to recalculate this figure.</p> <p>The high level general methodology outlined within the EIA, and the mix of taxes considered, does however appear reasonable.</p>
<p>Geographic Distribution of Impacts</p>	<p>The geographical distribution of the multiplier impacts outlined above, has been analysed to estimate the economic activity in the local and surrounding sub regions.</p> <p>The geographical effects have been calculated using interregional Input-Output models developed by Oxford Economics based on academic techniques developed by Flegg & Webber as further outlined in the Jobs section above.</p> <p>The geographies considered include:</p> <ul style="list-style-type: none"> • Three Counties sub-region (Bedfordshire, Buckinghamshire and Hertfordshire); • Six Counties area (Bedfordshire, Buckinghamshire, Cambridgeshire, Essex, Hertfordshire and Oxfordshire); • London Thameslink Corridor; • Luton; and • Local Authority areas in the region. 	<p>The approach outlined is based on sophisticated academic techniques utilising Input-Output tables (reflecting the interrelationships between the different sectors), Location Quotients (accounting for the relative importance of particular industries within a region) and regional size adjustments.</p> <p>Genecon has not seen the specific calculations or the underlying model and can therefore not comment on it specifically, however the method outlined above appears sensible and appropriate.</p> <p>A high-level review of the geographical attribution of benefits has not highlighted any areas of concern.</p>

2.3 The future impact of London Luton Airport to 2043 (with proposed growth projection)

Aspect	EIA Approach	Genecon Commentary
<p>Direct Employment Contribution</p> <p>Estimated impact: 2027 – 11,700 jobs 2039 – 13,200 jobs 2043 – 15,100 jobs</p>	<p>In order to project future direct employment, Oxford Economics’ assigned each direct employment sub-sector a ‘forecast driver’. Employment in that sub-sector was then projected forwards in line with the growth rate of its respective forecast driver. The allocation is of drivers is as follows:</p> <p>Driver 1: Number of passengers – Bus Services; Car park services; Taxi; Airport facilities maintenance; Border Force; Customs; Police; Aviation related training; Ground Handling; In-flight Catering; Tourist Services; Retail; Hotel; Restaurant; Car Rental; Airport Management; and Other Security employment.</p> <p>Driver 2: Freight Tonnage - Cargo Airline; Freight Forwarder; and Warehousing employment.</p> <p>Driver 3: Business ATMs (Air Traffic Movements) – Aircraft Charter and Fixed Base Operator employment.</p> <p>Driver 4: Total ATMs less Business ATMs – Air Traffic Control; Fire Service; Aircraft Cleaning; and Fuelling Company employment.</p> <p>Driver 5: Passenger airline aircrew requirements – Passenger Airline Employment</p> <p>Driver 6: MRO Space – MRO; Aircraft Parts Supplier; and Aviation-related manufacturing.</p>	<p>The approach described to projecting future employment appears nuanced, and the allocation of sub-sectors to relevant drivers is generally rational.</p> <p>By applying adjustments for productivity gains the direct employment contribution of the airport is projected to fall after 2027, as the airport reached full capacity with one terminal.</p> <p>Given there is no breakdown provided in the document of the projections for each subsector of employment, it is not possible to assess the individual productivity uplifts assumed and to compare to publicly available data.</p> <p>Therefore, initially Genecon carried out headline analysis on the results provided which suggests between 2019 and 2043, in the core scenario the overall passenger per job ratio is projected to improve by 28% (i.e. greater efficiency) from approximately 1,700 passengers per job to 2,100 passengers per job (equating to 0.9% increase per year).</p> <p>It is possible that this may be an underestimate, as historical trends show higher rates of increases in productivity of airlines. Steer Davies Gleave found “if productivity growth is calculated on the basis of EU airline passengers per person employed, there was a 43% increase between 2000 and 2013, or 4.3% per year.”¹</p> <p>However, it should be noted the jobs estimate includes employment in sectors beyond just airlines, and therefore the projected increases in efficiency could well be suitable, and the opening of</p>

¹ Steer Davies Gleave (2015), Study on employment and working conditions in air transport.

Driver 7: Head office employment—separate growth profiles for TUI and easyJet were identified by York Aviation. No annual employment growth was assumed for TUI to 2043. For easyJet, an annual employment growth of 1.5% per year was assumed to 2043.

A forecast for real productivity growth was then applied to each worker within the sub-sector’s direct employment forecast. To do this, each sub-sector was mapped to a 2-digit SIC sector, and the productivity growth rate for that 2-digit sector was applied using forecasts for the East of England region from the Oxford Economics’ regional model.

The methodology State these forecasts have are consistent with an alternative “elasticity-based” approach used in other studies.

To account for the impact of a second terminal opening, Oxford Economic explain they were provided an inefficiency factor of 15% to apply to terminal operation by York Aviation, to account for duplication of roles. This was applied after 2037 to: Airport facilities maintenance; Border Force; Customs; Ground Handling; Retail; Hotel; Car rental; Airport Management; and Other Security employment.

Additional Hotels were also assumed to open in 2035 (145 rooms) and 2039 (634 rooms), and their additional employment impact estimated utilizing HCA employment density benchmarks.

the new terminal will hamper efficiency increases due to duplication of roles in some sub-sectors.

Following a request to York Aviation, Genecon have been provided with annual direct jobs projections between 2024 and 2043, for five broad sectors (Airlines and Airport Operations; Airline Support Services; Ground Transport; Hotels and Restaurants; and Retail).

This reveals that between 2019 and 2043, the direct employment increases will predominantly be in Airlines and Airport operations, whilst the largest proportional increases will be hotel, restaurants, and retail.

Summary of Broad Sector Direct Job Projections 2019-2043

Broad Sector	Increase in jobs	Sector Change	% of Direct Increase
Airlines and Airport Operations	3,000	47%	71%
Airline Support Services	50	2%	1%
Ground Transport	100	43%	3%
Hotels and Restaurants	650	81%	15%
Retail	400	61%	10%
Total Direct Jobs	4,200	38%	100%
Figures have been rounded to the nearest 50 jobs			

	The methodology states that, the modelling assumes that Covid-related disruption has dissipated by 2027, the first year of the forecast assessment.	
Direct GDP Contribution Estimated impact: 2027 – £889m 2039 – £1,166m 2043 – £1,457m	<p>The methodology states that the direct employment forecasts were multiplied the subsector forecasts of productivity of each worker in the respective sub-sectors.</p> <p>To do this, productivity for each sector was mapped to its respective 2-digit SIC sector, and the productivity growth rate for that 2-digit sector for the East of England was applied to the 2019 estimate of subsector. Then an Oxford Economics forecast of the UK GDP deflator was applied to all sub-sector GDP forecasts to derive the direct GDP contribution in constant 2019 prices.</p>	<p>The approach described appears reasonable, however as with the employment projections, there is no breakdown of the individual sector results for the assumed uses, these are difficult to test.</p> <p>The headline result imply to overall GDP per job will increase from £73,400 in 2019 to £96,500 in 2043, an overall increase of 33%, and an average annual growth rate of 1.2%.</p> <p>Notably the projected GDP per jobs increases by 9% (2.2% a year) between 2039 and 2043. This jump in productivity is not fully explained in the report.</p>
Fallback Scenario Direct Employment 2019 – 10,700 2027 – 10,500 2039 – 9,600 2043 – 9,400 Direct GDP 2019 - £789m 2027 - £807m 2039 - £873m 2043 - £902m	<p>The fallback scenario assumes that the activity at the airport will remain constant from 2024 (18m passengers). Therefore when assumptions for labour productivity are applied the total employment is assumed to fall over time.</p> <p>Productivity improvements are deemed to be large enough to increase the direct GDP contribution of the airport despite falling overall employment.</p>	<p>The results provided suggest that in this reference case. Passengers per job would increase by 16% between 2019 and 2043. Whilst GDP per job would increase by 33%.</p> <p>This means the passenger per jobs is expected to lower than in the With Development scenario, reducing the additional jobs estimate than if jobs estimate were just based on a ratio to total passengers.</p>
Indirect and Induced GDP Estimated Indirect Impact: 2027: £498m 2039: £651m	The forecast Indirect and Induced impacts on GDP were estimated using the same approach used in quantifying the 2019 estimates.	Applying a consistent approach to the forecast period in line with the 2019 calculations is logical and appropriate.

<p>2043: £800m</p> <p>Estimated Induced Impact: 2027: £627m 2039: £817m 2043: £1,001m</p> <p>TOTAL Multiplier Impact: 2027: £1,125m 2039: £1,468m 2043: £1,801m</p>	<p>This involved creating Input-Output tables for each of the forecast years.</p> <p>While the primary behavioural patterns of the economy were assumed to remain consistent, expected changes due to different sub-sector growth profiles for direct GDP and direct employment were reflected in the tables.</p> <p>These changes, which stem from variations in the growth profiles, led to modifications in both the level and composition of supply-chain spending and wage income that were associated with the activities of London Luton airport.</p>	<p>The adjustments described, are reasonable in order to arrive at the forecasts.</p> <p>As a sense check, we calculated the GDP multiplier for each of the forecast periods and these were broadly consistent with the original 2019 multiplier of 2.3x as would be expected.</p>
<p>Indirect and Induced Jobs</p> <p>Estimated Indirect Impact: 2027: 9,100 2039: 10,100 2043: 11,700</p> <p>Estimated Induced Impact: 2027: 9,400 2039: 10,700 2043: 12,400</p> <p>TOTAL Multiplier Impact: 2027: 18,500 2039: 20,800 2043: 24,100</p>	<p>As described above, the forecast Indirect and Induced impacts on Jobs, were also estimated using the same top-down approach as used in quantifying the 2019 estimates.</p> <p>The Input-Output tables were created using the same methodology but amended to reflect different sub-sector growth profiles (which in turn impacted Job estimates).</p>	<p>Applying a consistent approach to the forecast period in line with the 2019 calculations is logical and appropriate.</p> <p>The adjustments described, are reasonable in order to arrive at the forecasts.</p> <p>As a sense check, we calculated the Jobs multiplier for each of the forecast periods and these were broadly consistent with the original 2019 multiplier of 2.6x as would be expected.</p>

3. Other Key Impacts from Other Documents Reviewed

Documents 7.04 and 5.01, also present a number of other significant economic benefit streams which are not included in document 5.02 (Oxford Economics Economic Impact Assessment). These are tabulated as follows:

Aspect	Approach	Genecon Commentary
<p>Construction Employment</p> <p>Direct Impact 6,280 person years of employment, equivalent to 628 FTEs.</p> <p>Estimated Indirect & Induced Impact: 3,140 Person Years, equivalent to 314 FTE permanent jobs.</p>	<p>Based on the estimated labour requirements for the construction phase, it is anticipated that the total direct employment requirement during construction is 6,280 person years of employment.</p> <p>This is assumed to be equivalent to 628 FTE permanent jobs being provided over the course of the construction programme.</p> <p>In order to arrive at the estimate of Indirect and Induced jobs, a multiplier of 1.5x has been used resulting in a calculation of 3,140 Person Years or 314 Full Time Equivalent permanent jobs being created.</p>	<p>The conversion from “person years” to Full Time Equivalents is based on HM Treasury’s guidance and approach that ten construction job years is assumed to equate to one FTE job. This is therefore considered an appropriate step.</p> <p>In arriving at the Indirect/Induced jobs created due to the direct employment, a composite multiplier of 1.5x has been used.</p> <p>The 2014 HCA Additionality Guide, which provides guidance on how to assess the additional impact of various interventions, provides a range of “ready-reckoner” values, expressing the general range of multiplier effects at the regional level.</p> <p>The medium level, ready reckoner composite multiple at the regional level is stated at 1.5x in the HCA guide. This relates to projects with average linkages and the HCA guide states “The majority of interventions will be in this category”.</p> <p>Additionally, the HCA guide does refer to some additional multipliers specifically relating to construction which are greater than 1.5x.</p>

		In light of the above, the 1.5x multiplier used in the EIA appears reasonable.
<p>Construction GVA</p> <p>Direct Impact £682m in GVA over construction lifetime.</p> <p>Estimated Indirect & Induced Impact: £341m GVA over construction lifetime.</p>	<p>The Indirect and Induced job figures have been used as a basis to estimate the GVA that will be generated during the construction phase.</p> <p>This has been done using the 2020 national averages for output per worker in the construction industry based on ONS output and employment data for the construction industry.</p>	<p>It is a standard approach to calculate GVA estimates based on the total output within a particular industry and the number of people employed within that industry in order to arrive at a GVA/Job ratio.</p> <p>Genecon has reformed this calculation based on the 2020 ONS construction industry data and has arrived at the same GVA/Job ratio of c.£109k.</p> <p>Multiplying this ratio by the 314 estimated FTEs, does indeed equate to the £341m GVA estimate included within the EIA and is therefore considered reasonable.</p>
<p>Wider Impacts:</p> <p>Business Travel Impacts</p> <p>GDP and job impacts stemming from increased connectivity supporting business travel of the With Development scenario in 2043 will be:</p> <ul style="list-style-type: none"> - c.£15m in GDP in Luton - c.£145m in GDP and 500 jobs in the Three Counties - c.£635 million in GDP and 4,440 jobs across the UK. 	<p>It is explained that these estimates are based on a generalised cost model that examines the number of business passengers that are solely reliant on connectivity via the airport.</p> <p>This has been combined with an econometric relationship developed by Oxford Economics that relates the level of business air travel and air cargo in the UK economy to the level of productivity. This says that a 10% increase in business travel and cargo relative to GDP will raise productivity by around 0.5%.</p>	<p>The productivity benchmark applied is from a recognised source that appears to have been widely used across the air industry to estimate business productivity impacts.</p> <p>The associated employment figure assumes the roles supported have a very high GDP per FTE (£144,000 nationally), this is understandable given that that increased business productivity does not necessarily translate into job outcomes.</p>

<p>Wider Impacts: Inbound Tourism</p> <p>GDP and job impacts stemming from increased connectivity supporting inbound tourism in the With Development scenario in 2043 will be:</p> <ul style="list-style-type: none"> - £6m in GDP and 90 jobs in Luton - £65m in GDP and 890 jobs in the Three Counties - c.£818m in GDP and 11,550 jobs across the UK. 	<p>These impacts have been assessed using analysis of the Civil Aviation Authority (CAA). Passenger Survey, VisitBritain data on typical visitor expenditures, and ONS data on the tourism sector’s characteristics.</p> <p>In broad terms, the number of inbound passengers to the study areas is estimated based on the CAA Passenger Survey and the consequential expenditure impact estimated based on the average expenditure per trip from VisitBritain data.</p> <p>This is then converted to GDP and jobs impacts based on the ratio of GDP to turnover from the Annual Business Survey and the average GDP per job for the tourism sector calculated from the Business Register and Employment Survey. A tourism multiplier is then applied to reflect indirect and induced impacts.</p>	<p>The use of CAA and VisitBritain data are appropriate sources to calculate total visitor spending and the use of CAA data means that estimates for visitors staying in different geographies are likely to be robust.</p> <p>It is noted that indirect and induced multiplier effects have been included within the estimates, although there is no specific breakdown of direct tourism and wider linked jobs.</p> <p>On request the multipliers utilised have been provided by York Aviation and are as follows:</p> <table border="1" data-bbox="1413 678 2024 807"> <thead> <tr> <th>UK</th> <th>6 Counties</th> <th>3 counties</th> <th>Luton</th> </tr> </thead> <tbody> <tr> <td>2.14</td> <td>1.55</td> <td>1.35</td> <td>1.05</td> </tr> </tbody> </table> <p>It has been explained that these are derived from the UK Input Output tables and are appropriate in scale.</p> <p>Any displacement adjustments are not described, and it is not clear whether the modelling includes any consideration of visitors which would otherwise visit via alternative airports.</p>	UK	6 Counties	3 counties	Luton	2.14	1.55	1.35	1.05
UK	6 Counties	3 counties	Luton							
2.14	1.55	1.35	1.05							
<p>Wider Impacts: User Benefits – Journey Time Savings</p> <p>With Development expected impact:</p> <ul style="list-style-type: none"> - NPV £85m in discounted journey time savings over a 	<p>The impact on passengers travel times from the Proposed Development has been considered based on the demand forecasts, CAA Passenger Survey data, travel times derived from Google Maps, and values of time taken from the Airports Commission. The analysis considers the travel time for a passenger to London Luton Airport compared to the travel time for the next most popular alternative for the given passenger segment for the route in question. Where the</p>	<p>The approach is stated to follow the recognised guidance for this nature of assessment.</p> <p>Within the documents reviewed there is not the requisite detail to comment on the estimates further than to note the appraisal period used in appropriate, and over sixty years the impacts are of a sensible magnitude.</p>								

<p>60 year period for passengers travelling to or from Luton; - NPV £512m for passengers travelling to or from the Three Counties; and - NPV £322m for passengers travelling to or from destinations across the UK.</p>	<p>travel time via Luton Airport is shorter, this represents an efficiency gain to passengers and society.</p> <p>Time has been monetised based on guidance on the value of time for business and leisure travellers for air travellers taken from the Airports Commission Final Report. The present value of journey time savings over a 60-year period.</p>	
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4. Economic Impacts Review Summary

4.1 Overview

The Review has shown that the Economic Impact of the proposed expansion of London Luton Airport has been modelled at a detailed level, across multiple strands of direct, indirect, induced and wide benefits streams, with a number of inputs from specialist consultants, particularly including Yorks Aviation (passenger number projections – key driver), Oxford Economics (detailed impact modelling) and Aecom (lead author of the Environmental Statement, including the Transport benefits).

The approaches used to calculate benefit streams generally follow best practice, in some respects going further than many economic impacts assessments (particularly in the estimation of indirect impacts using detailed input-output tables), with care taken to avoid double counting. Genecon generally view the approaches used are sound, and where it has been possible to undertake logic sense-checks and re-estimation from publicly available data, the estimates of impact appear to be in the right order and generally prudent.

Given the level of detailed modelling that has been undertaken, the next level of scrutiny might for example involve an audit of the model (which Genecon has not had access to), to check functionality and detailed assumptions.

From the level of review that Genecon has been able to undertake, we have not identified any Principal Areas of Disagreement that would be of concern.

We have summarised below impact strand summaries from the Review undertaken.

Operational Impacts – Employment and GDP benefits

- The operational impacts of Luton London Airport’s proposed expansion in terms of employment and GDP are the most significant economic benefits to Luton and the Three Counties presented in the Environmental Statement Chapter 11 Economics and Employment.
- The projections for future impacts are based on estimates of the current (using 2019 as the base year) direct and multiplier effects of the Airports’ operations.
- The description of the methodology provided in Oxford Economics’ 2022 report is a thorough and appropriate approach to estimating the Jobs and GDP impact for the base year for the direct, indirect and induced impacts of the Airport’s operations. Genecon have checked the results against publicly available data and all the estimates appear reasonable.
- The projections of the direct impact of the Airport with and without the proposed developments, are stated to have been modelled via a productivity-based approach which considers their specific drivers and projected productivity growth. The approach described again appears appropriate, and the results take account of increased efficiency as airport capacity increases, which will moderate employment growth. However, the subsector productivity growth, and the relationships between each subsector and their drivers of growth are not provided and therefore we cannot conclusively validate these projections.

Other Impacts

- The calculation of the construction impacts is a standard approach based on the estimated labour requirements for the construction phase. The magnitude of multiplier effects estimated are within expected ranges.
- The productivity impacts of business travel have been estimated utilising a standard benchmark. Therefore, the key issue to query with the calculation of these impacts is the forecasting of business travel enabled due to London Luton's Airports' expansion.
- The economic impact of additional inbound tourism also utilises commonly used approach for quantifying these benefits. The information provided in the documents does not however clearly: explain whether these estimates account for displacement from other airports; justify a relatively high GDP to job ratio for the tourism sector; or state the level of multiplier applied. However, information to clarify these issues has been provided by York Aviation.
- The journey time saving benefits of London Luton's proposed expansion have been calculated using an approach based on WebTAG guidance. The detail provide suggests the approach taken is correct however there is limited detail in the documents to validate this.

5. Operational Employment Projections - Summary Tables by Geography

5.1 Impact Area: Luton

Gross Job Impacts				
	2019	2027	2039	2043
Direct	10,900	11,700	13,200	15,100
Indirect	300	300	400	500
Induced	500	600	600	700
Total	11,700	12,600	14,200	16,300

Fallback Scenario (No Expansion)				
	2019	2027	2039	2043
Direct	10,900	10,500	9,600	9,400
Indirect	300	300	300	200
Induced	500	500	500	400
Total	11,700	11,300	10,400	10,000

Additional Jobs				
	2019	2027	2039	2043
Direct	0	1,100	3,500	5,700
Indirect	0	0	100	100
Induced	0	100	200	300
Total	0	1,200	3,800	6,100

Net Additional Jobs (minus 5% Displacement)				
	2019	2027	2039	2043
Direct	0	1,045	3,325	5,415
Indirect	0	0	95	95
Induced	0	95	190	285
Total	0	1,140	3,610	5,795

5.2 Impact Area: Three Counties

Gross Job Impacts				
	2019	2027	2039	2043
Direct	10,900	11,700	13,200	15,100
Indirect	2,100	2,200	2,400	2,700
Induced	3,500	3,700	4,100	4,800
Total	16,500	17,600	19,700	22,600

Fallback Scenario (No Expansion)				
	2019	2027	2039	2043
Direct	10,900	10,500	9,600	9,400
Indirect	2,100	1,900	1,700	1,700
Induced	3,500	3,300	3,100	3,000
Total	16,500	15,700	14,400	14,100

Additional Jobs				
	2019	2027	2039	2043
Direct	0	1,100	3,500	5,700
Indirect	0	200	700	1,100
Induced	0	300	1,100	1,800
Total	0	1,600	5,300	8,600

Net Additional Jobs (minus 25% Displacement)				
	2019	2027	2039	2043
Direct	0	825	2,625	4,275
Indirect	0	150	525	825
Induced	0	225	825	1,350
Total	0	1,200	3,975	6,450

5.3 Impact Area: United Kingdom

Gross Job Impacts				
	2019	2027	2039	2043
Direct	10,900	11,700	13,200	15,100
Indirect	8,600	9,100	10,100	11,700
Induced	8,900	9,400	10,700	12,400
Total	28,400	30,200	34,000	39,200

Fallback Scenario (No Expansion)				
	2019	2027	2039	2043
Direct	10,900	10,500	9,600	9,400
Indirect	8,600	8,200	7,400	7,200
Induced	8,900	8,500	7,900	7,700
Total	28,400	27,200	24,900	24,300

Additional Jobs				
	2019	2027	2039	2043
Direct	0	1,100	3,500	5,700
Indirect	0	900	2,700	4,500
Induced	0	900	2,800	4,700
Total	0	2,900	9,000	14,900

Net Additional Jobs (minus 95% Displacement)				
	2019	2027	2039	2043
Direct	0	55	175	285
Indirect	0	45	135	225
Induced	0	45	140	235
Total	0	145	450	745