



Local Economy: Impact Assessment Post Consultation Updates

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1. Update from consultation

- 1.1** In November 2014, the Airports Commission published a *Local Economy Impacts Assessment* and a Literature Review completed by PwC providing an in-depth analysis of the impacts relevant to the local area. This document was intended to support the consultation in providing an assessment considering four key areas: business and employment, housing and social infrastructure, surface access and land.
- 1.2** The primary aim of the Commission's consultation was to test the evidence base it had assembled, understand stakeholders' views as to the accuracy, relevance and breadth of the assessments it has undertaken and seek views on the potential conclusions that might be drawn from them. The consultation received over 70,000 submissions from airport operators, airlines, industry bodies, local councils, environmental and other pressure groups and private individuals.
- 1.3** Following the consultation, several updates have been made to the *Local Economy: Impacts Assessment* as a reply to these responses. The foremost change was to narrow the ranges, which many had deemed too wide and therefore unclear. Analysis has been concentrated on the starting point scenario, *assessment of need* and adopted a mid-range productivity estimate from the ONS forecast of 1.5%. This has been fed through the narrative in the following sections and the new figures aim to clarify the most likely impacts. The full range of results with all five scenarios can be seen in the consultation document¹.
- 1.4** A key point highlighted in the responses was the unemployment figures, where the responses discussed the impacts of different methods of calculation. The different approaches have been explored and it has been concluded that it does not change the key findings regarding the impacts in the local area. For example, in the consultation work, Crawley was reported as having a 9.8% unemployment rate. This was calculated using the Annual Population Survey (APS). Nomis² offers two measurements for the unemployment rate, the one referenced in the consultation and one that uses a model-based estimate of unemployment based upon APS data but also incorporates weighting from the claimant count in order to make the confidence interval lower. This changed the unemployment rate to 7.8% for Crawley. This is a much more significant change than for most other local

1 The consultation document – *Local Economy: Impacts Assessment* that was published for consultation.

2 Nomis – official labour market statistics – www.nomisweb.co.uk

authorities, indeed for places such as Croydon there was only -0.3% change in unemployment rate under the alternative measure. Equally, while there was a change in the rates, this did not change the conclusions of the assessment. Gatwick local authorities still have a relatively low unemployment rate and Heathrow local authorities have a relatively higher unemployment rate. As a result, there has been no change to the results in the pre-consultation work.

- 1.5** Alongside these comments, this report intends to provide additional conclusions to the report published for the consultation, which has been undertaken by the Commission. It draws together information and analysis that is in the *Local Economy: Impacts Assessment* report, to provide clearer conclusions, and sets out further work undertaken since consultation with input from Rory Joyce and Henry Overman on the Commission's Expert Advisory Panel.

2. Background

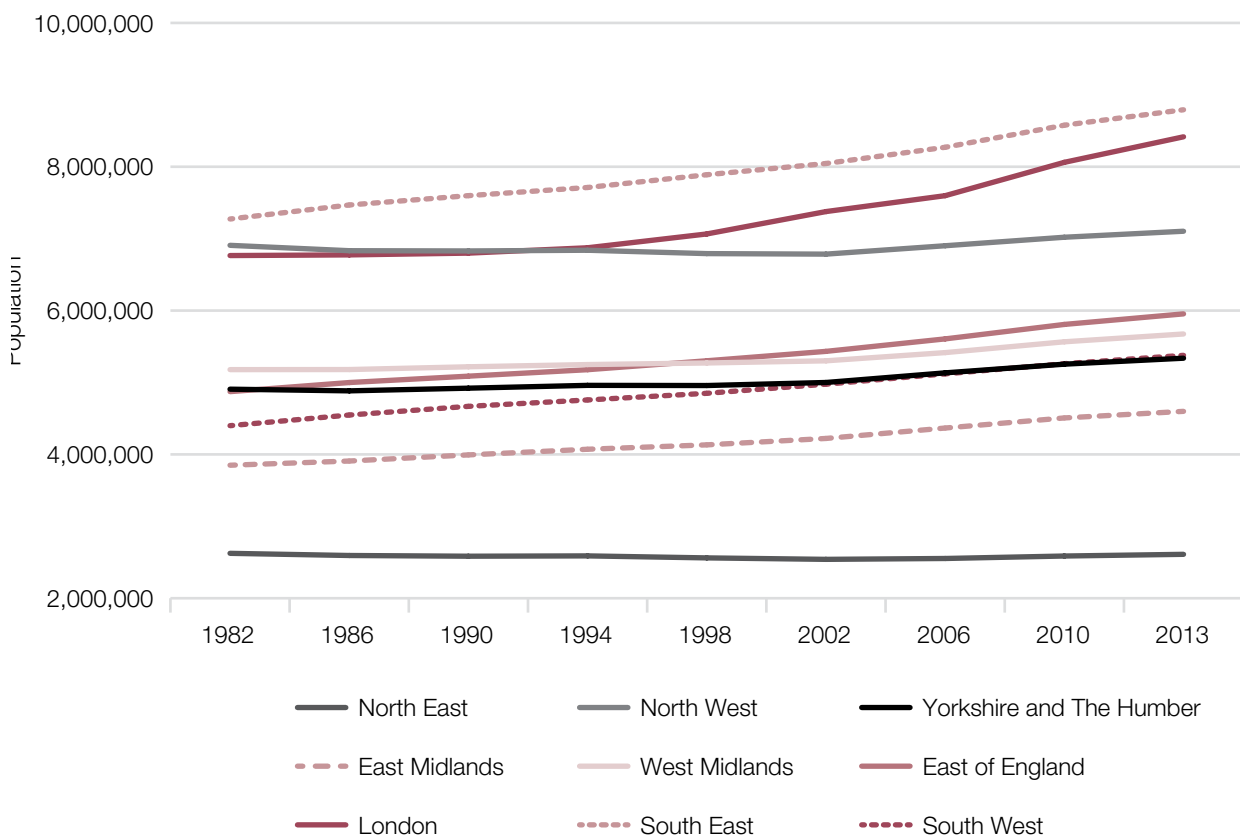
2.1 The assessment of the impact of airport expansion on the local economy before consultation focused predominantly upon the catchment areas where the majority of direct airport employment lies. However, these local authorities lie within the dynamic area of London and the South East, which is fast growing and exhibits a large mobile population. For this reason, the effects cannot always be limited to the previously defined catchment area, and therefore the dynamic nature of the local area must be considered within its wider region.

2.2 *“London’s unique national and global role, and its specialism in higher value sectors of the economy, has resulted in an extended labour market catchment area,”* (London Plan, 2011). London is unique due to its size and transport network, meaning it has a larger impact on its surrounding area, compared to that of a smaller city. This report considers the consultation responses and presents a further analysis of the local economy impacts, within the context of the wider London and South East area.

3. Past trends in London and the South East

3.1 London and the South East have seen substantial population growth over the past 20 years. Focusing on London itself, the London Plan (2011) predictions of an increase of 51,000 per annum for London have already been outstripped – the most recent update showed a population increase for London of 87,000 in 2011³. This is not a recent trend. As demonstrated in **Figure 1**, London, and to some extent the South East, have been experiencing high population growth compared to other UK regions.

Figure 1: Population trends in the UK by region between 1982 and 2013.



Source: ONS⁴

3 The London Plan March 2015 Pg. 23.

4 Midyear estimate ONS (Population Estimates Unit).

3.2 This population growth has put strong pressure on housing availability. London housing stock has increased over time, by 270,000 over the last ten years⁵. This has not matched the growing demand resulting from the large population increases with a growth of over one million in London (2003-2013)⁶. As a solution, there has been a trend towards increasing housing density along with an increase in population density. Housing density increases come about through a number of mechanisms, including the redevelopment of brownfield sites at higher densities, and through adaption of existing housing to accommodate more households such as by converting large houses into flats to utilise the space more efficiently. The change in population density is calculated through population per land area in the local authority and the housing density through dwellings per hectare.

3.3 An example of differences in population density can be drawn from a comparison to similar global cities, and in this London has a relatively low density as demonstrated in **Table 1**. When compared to similar cities, London's highest density of about 200 people per hectare appears relatively low against Paris and Berlin at respective densities of 300 and 400 per hectare⁷. Hong Kong and New York have also been included as a comparison, however it is noted that their building structures are very different i.e. they are all high rise buildings.

Table 1: Highest population density across a range of major world cities (2011)⁸

City	Population density (people per hectare) – based upon Census data ⁹
London (Bayswater)	200
Paris (2nd Arrondissement)	300
Berlin (Prenzlauer Berg)	400
New York (East Village)	500
Hong Kong (Central)	1,100

1 LSE Cities Urban Age publications (2006)

5 Dwelling stock estimates by local authority district: 2001 – 2014 ONS.

6 Estimated Resident Population Mid-Year, ONS.

7 Density and Urban Neighbourhoods in London, Summary Report (2004) Enterprise LSE Cities, Burdett, R et al.

8 World City Living and Working Densities: Poles Apart (2012) based on LSE Cities data.

<http://citygeographics.org/2012/12/12/world-city-living-and-working-densities-poles-apart/>

9 LSE Cities Urban Age publications (2006).

3.4 Although the highest density in London is around 200 people per hectare, this is not an average for London and is an uncommonly high density. **Table 2** demonstrates a sample of London authorities across London, the highest density at 139 people per hectare is Islington and the lowest density at 72 is Brent (the City of London is an anomaly in that few people live here, it is predominantly offices). This shows that there is capacity for further increases in population density to occur in the future with lower density areas moving towards being higher density areas.

Table 2: Population densities in London authorities (2012)¹⁰

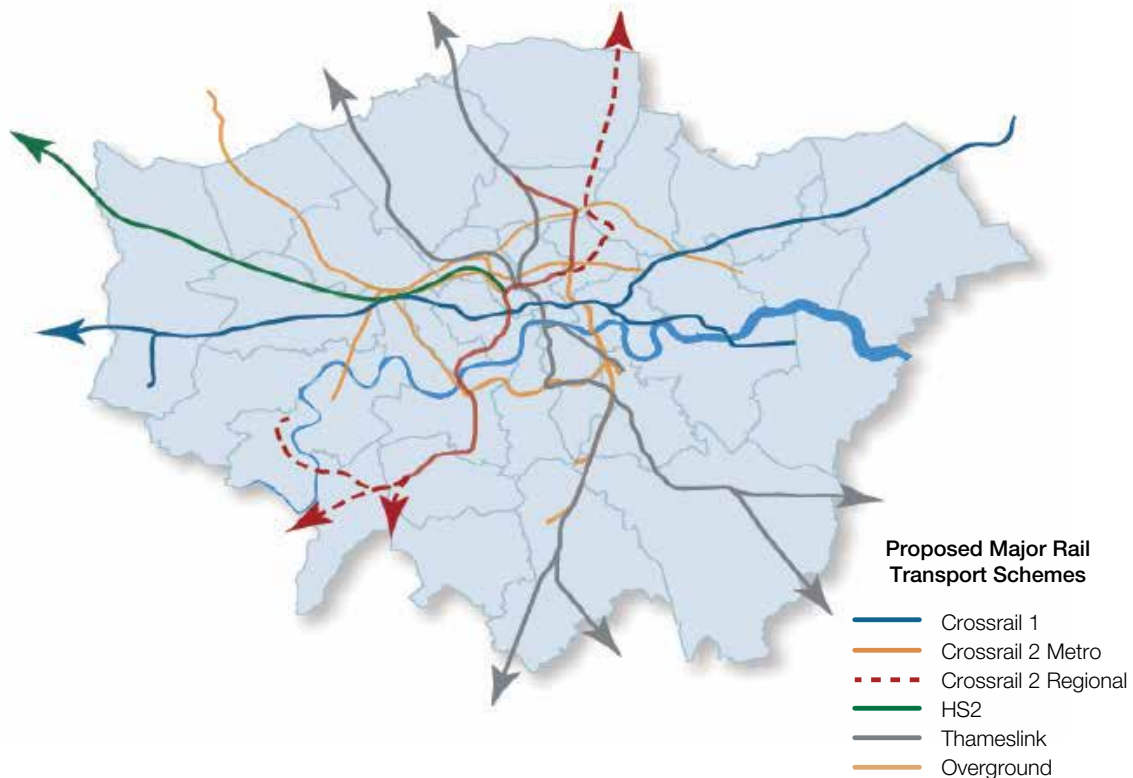
London region	Location	Population density (number of people per hectare)	Employment density (number of workplace- based jobs per hectare)
West London	Hammersmith and Fulham	111	79
	Kensington and Chelsea	131	97
	Brent	72	23
Central London	City of London	26	1,240
	Westminster	102	296
	Southwark	100	64
	Islington	139	128
	Camden	101	133
East London	Tower Hamlets	129	108
	Hackney	129	47
	Newham	85	21

Source: ONS, PwC data from the Local Economy Literature review

4. Future for London and the South East

- 4.1** Looking ahead, the high population growth of London is expected to continue, as highlighted in the London Plan. London has the highest population growth rate compared to the rest of UK and the ONS forecasts a population of 10.6 million by 2037 – up from 8.3 million in 2012, as demonstrated previously in **Figure 1**. This population growth will continue to add pressure to housing and social infrastructure. In 2013, the number of jobs in London grew by 3.9%, which was more than any other UK region¹¹. As stated above, London has a wide geographical sphere of influence, and as the growth pressure continues to rise, it can be expected that more people will look to move out of London to find housing.
- 4.2** One of the defining factors that allow people to relocate is access to good surface transport and good connections to places of employment. As demonstrated in **Figure 2**, the new proposed transport schemes across London greatly expand accessibility for people right across London, with Crossrail expanding East to West and Thameslink opening up North to South, with extended lines for both schemes.

¹¹ The London Plan (2011) updated for 2015 pg. 29 (*London's employment has since risen from a low point of 4.8 million in the last quarter of 2009 to 5.5 million in the first quarter of 2014 (source: Workforce Jobs, ONS)*).

Figure 2: Proposed major rail transport schemes across London, 2013

Source: *The London Plan (2011)*

4.3 “Improving accessibility and capacity within the greater south east of England and beyond will help London maintain its attractiveness as a place to work, visit and do business.”¹² The London Plan (2011) details the vast transport improvements that are anticipated and how they will impact London, including Outer London which it recognises as a key growth area. The knock-on effects of this increased network mean that housing and related social infrastructure requirements will be spread across this wider region.

4.4 Local areas around the South East which come under the airport employment catchment areas¹³, will also see population growth, according to the ONS population forecasts. Across the local authorities around Gatwick, this level of growth translates to between 420 and 3,780 people per year over a 25 year period (2012-2037) (**Table 3**) and between 768 and 3,760 per year across the local authorities around Heathrow over a 25 year period (2012-2037) (**Table 4**).

¹² The London Plan (2011) updated for 2015 pg. 247

¹³ *The Local Economy Impact Assessment* details the employment catchment area as the local authorities from where the majority of the airport employment comes. This was detailed by the scheme promoters from their employment surveys and information.

Table 3: Population forecasts in Gatwick local authorities

	Baseline, 2012	2037	Per year additional (2012-2037)
Adur	61,900	72,400	420
Arun	151,400	183,300	1,276
Brighton and Hove	275,800	324,000	1,928
Crawley	108,300	133,900	1,024
Croydon	368,900	463,500	3,784
Eastbourne	100,000	117,800	712
Epsom and Ewell	76,100	95,900	792
Horsham	132,200	153,200	840
Lewes	98,700	121,700	920
Mid Sussex	141,200	164,900	948
Mole Valley	85,800	99,900	564
Reigate and Banstead	139,900	182,600	1,708
Tandridge	83,700	101,700	720
Wealden	151,000	173,800	912
Worthing	105,700	128,100	896
TOTAL	2,080,600	2,516,700	17,444

Source: ONS population forecasts

Table 4: Population forecasts in Heathrow local authorities

	Baseline, 2012	2037	Per year additional (2012-2037)
Bracknell Forest	115,100	138,800	948
Ealing	340,700	416,000	3,012
Harrow	242,400	304,900	2,500
Hillingdon	281,800	375,800	3,760
Hounslow	259,100	339,700	3,224
Reading	157,100	176,300	768
Richmond upon Thames	189,100	239,400	2,012
Runnymede	82,200	101,400	768
Slough	141,800	179,900	1,524
South Bucks	67,400	82,600	608
Spelthorne	96,700	118,600	876
West Berkshire	154,500	174,900	816
Windsor and Maidenhead	145,800	173,200	1,096
Wokingham	156,700	186,100	1,176
Total	2,430,400	3,007,600	23,088

Source: ONS Population forecasts

4.5 With this in mind, expansion at either airport would represent an employment opportunity that would attract and support the population growth in both local areas. Indeed, **Tables 5** and **6** below demonstrate the increase in population and the anticipated proportion of economically active workers available. The latter is forecast to expand by around 85,000 people in the local authorities around Gatwick. There is a similar story around Heathrow with the economically active population forecast to expand by around 160,000 people in the group of 14 authorities surrounding the airport.

Table 5: Gatwick Local Authorities- Economically active population 2012 to 2030

Local authority	2012			2030	
	Population 16-69 (000's)	Economic activity rate	Working population (000's)	Population 16-69 (000's)	Working population with 2012 economic activity rate (000's)
Adur	42	61%	25.8	44.4	27.3
Arun	99.6	60%	60.2	104.7	63.2
Brighton and Hove	207.8	67%	138.6	230.2	153.5
Crawley	77	68%	52.0	88.2	59.5
Croydon	248	69%	170.4	283.5	194.8
Eastbourne	67.2	57%	38.0	70.1	39.7
Epsom and Ewell	52.8	63%	33.2	60.2	37.8
Horsham	90.5	63%	56.9	92.7	58.3
Lewes	66.1	59%	39.2	71.3	42.3
Mid Sussex	97.3	71%	69.5	101.9	72.8
Mole Valley	58.1	64%	37.4	60.2	38.7
Reigate and Banstead	97.2	67%	64.6	112.9	75.1
Tandridge	57.7	65%	37.7	61.8	40.4
Wealden	101.5	62%	63.3	102.2	63.8
Worthing	71.6	56%	40.1	78.5	44.0
Total	1,434.4		926.8	1,518.4	1,011.0

Source: ONS population forecast and NomisWeb Economic Activity rate

Table 6: Heathrow Local Authorities- Economically active population 2012 to 2030

Local authority	2012			2030	
	Population 16-69 (000's)	Economic activity rate	Working population (000's)	Population 16-69 (000's)	Working population with 2012 economic activity rate (000's)
Bracknell Forest	82.6	72%	59.3	91.3	65.6
Ealing	248	68%	168.4	283.5	192.5
Harrow	172.2	66%	113.8	197.7	130.7
Hillingdon	200.1	67%	134.7	244.9	164.8
Hounslow	189.2	70%	131.5	231.8	161.1
Reading	114.7	67%	76.5	121.4	81.0
Richmond upon Thames	134.7	72%	97.1	156.1	112.5
Runnymede	58.9	66%	39.0	66.3	43.9
Slough	99.9	68%	67.6	119.8	81.1
South Bucks	45.6	69%	31.5	49.2	34.0
Spelthorne	57.1	73%	41.8	64.3	47.1
West Berkshire	108.6	69%	75.4	110.5	76.7
Windsor and Maidenhead	101.1	66%	66.9	108.8	72.0
Wokingham	109.5	70%	76.7	117.5	82.3
Total	1,722.2		1,180.2	1,963.1	1,345.2

Source: ONS population forecast and NomisWeb Economic Activity rate

4.6 But, if it is assumed that additional people move into the area to take up the additional jobs, supplementary housing to support these employment opportunities may be required. It is important that this is considered in context. The airport expansion provides a substantial employment opportunity, which should be seen in the setting of the usual churn of people moving into and out of the area, and the other new employment opportunities that will add their own pressures.

4.7 Current pressures on housing in London are high, and in many cases, higher than those in the areas around the airports, particularly when you consider changing population density (**Table 7** and **Table 8**). Indeed, those with the highest densities in these areas are further away from the airports, such as the London Boroughs of Ealing and Croydon. There is a continuing trend for increasing density over time, and the anticipated population growth will increase housing pressure regardless of airport expansion. If therefore local authorities around the airport were to increase their housing densities to closer to that of their neighbouring London Boroughs, there is a strong potential to reduce pressure and land requirements significantly.

Table 7: Housing densities in Gatwick local authorities, 2011

Local Authority	Housing density¹⁴ (dwellings per hectare of land), 2011
Adur	6
Arun	3
Brighton and Hove	15
Crawley	9
Croydon	17
Eastbourne	10
Epsom and Ewell	9
Horsham	1
Lewes	1
Mid Sussex	2
Mole Valley	1
Reigate and Banstead	4
Tandridge	1
Wealden	1
Worthing	14

¹⁴ Neighbourhood Statistics (density calculated using total dwellings and total land area).

Table 8: Housing densities in Heathrow local authorities, 2011

Local Authority	Housing density¹⁵ (dwellings per hectare of land), 2011
Bracknell Forest	4
Ealing	23
Harrow	17
Hillingdon	9
Hounslow	17
Reading	16
Richmond upon Thames	14
Runnymede	4
Slough	16
South Bucks	2
Spelthorne	8
West Berkshire	1
Windsor and Maidenhead	3
Wokingham	3

4.8 The high population growth will also increase pressure on some services and local infrastructure. However it is reasonable to assume that, in line with past trends, the local authorities will adapt to continue to provide these services.

15 Neighbourhood Statistics (density calculated using total dwellings and total land area).

5. Impacts of airport expansion

5.1 Having considered the background of the local area, the impacts of airport expansion should therefore be considered within this context. As a response to the consultation, the methodology has been updated to reduce the ranges. A focal scenario, *assessment of need*, has been selected as it is based upon historic trends and past data and it is considered the starting point scenario of the five considered. A central productivity estimate, 1.5% (based on ONS forecasts) has been adopted, as this was causing a further expanded range.

Gatwick

5.2 Expansion at Gatwick would increase employment by 6,537 in 2030 and 32,073 in 2050 under the *assessment of need* carbon-traded scenarios. These results assume a central productivity scenario of 1.5% based on ONS historic trends and use the current passenger to employee ratio at Gatwick. Gatwick Airport has less excess passenger demand than Heathrow Airport, therefore the initial increase in passengers is fairly low, however this number picks up substantially by 2050 as demand builds. The carbon-capped case is included to demonstrate the impacts of further carbon constraints as included in *Local Economy Impact Assessment* report published at consultation, to stay within the Committee on Climate Change's (CCC) assessment of how climate change targets can be met.

Table 9: Additional jobs from expansion of Gatwick Airport Second Runway

Year	Carbon-traded	Carbon-capped ¹⁶
2030	6,537	4,053
2050	32,073	12,661

Source: Airports Commission analysis

5.3 It is useful to consider this employment forecast as a proportion of the economically active population in the local area. **Table 10** shows the additional jobs as a proportion of the economically active population. The table shows this under a low and high estimate of the working population to establish the level of pressure that

¹⁶ These forecasts increase the costs of carbon to ensure demand for aviation in the UK is reduced to stay within this planning assumption and as such assume no trading of aviation emissions either within the UK economy or internationally.

would be felt under an airport expansion in a range of scenarios. As is demonstrated, the impact is very small, and absorbing the additional jobs would cause little pressure.

Table 10: Proportion of total airport jobs of economically active population at Gatwick (15 LA's) – 2030

	Additional jobs	Population 16-69	Low working population (60% ¹⁷)	High working population (80%)
Total population	–	1,518,400	911,040	1,214,720
Central (1.5% productivity, AoN carbon-traded)	6537	0.43%	0.72%	0.54%

Source: Airports Commission jobs figures, ONS population forecast, NomisWeb Economic Activity rate

- 5.4** If this number of jobs is considered broken down equally across the local authorities surrounding the airport this equates to 85 jobs per year per authority from scheme opening in 2025 until 2050. The jobs would be easily absorbed in the forecasted population growth for the area. Indeed the average local area population increase is over 1,000 per year, based on ONS forecasts. This ranges from Adur, which is forecast to increase by 420 people each year, up to Croydon, which is forecast to increase by 3,780 people per year.
- 5.5** It is of course likely that some local authorities will absorb more jobs than others, particularly if the commuting distances from places such as Arun are considered. However when the annual forecast population increases in places such as Croydon are consolidated at up to 3,780 per year, 85 jobs does not seem an unachievable target. It is therefore considered that this number of jobs would be easily absorbed into the local area.
- 5.6** One of the concerns from respondents to the consultation has suggested that there would be no local workforce willing to take up these low skilled jobs because of the existing low unemployment rate. Trends show that the low skilled jobs are often taken up by those previously unemployed, however Gatwick has a low claimant count. Still, the passenger numbers have increased substantially in the last 15 years, increasing by around 24% (from around 29 million to 36 million passengers). Over this same time period, the claimant count has remained relatively static, aside from the understandable increase during the recession. An additional runway

17 The low and high economic activity rates were based upon the current range of economic participation across the local authority area data from Nomisweb.

therefore seems unlikely to pose the problem of shortages of workers available to take up the new jobs, particularly as the jobs will be gradually introduced over time as passenger numbers increase.

- 5.7** If it is assumed that all jobs created from the airport expansion (direct, indirect and induced) were to be given to entirely new employees in the 15 local authorities' areas based upon current airport workforce proportions¹⁸, the number of homes required (assuming one worker per household) would be about 5,095, as presented in **Table 11** below. This is unlikely, one worker per household is a high end assumption in the sense that it assumes new workers already have a house in the local area or commute in. However, the intention is to demonstrate that even with this assumption, the local area is able to absorb the additional housing requirements. The forecast is only up to 2030 as it would be inaccurate to assume that the same percentage of workers would be resident in these local authorities up to 2050.

Table 11: Additional homes theoretically required for employees in 2030 of Gatwick Airport Second Runway

2030	Carbon-traded	Carbon-capped
For direct employees	3,475	2,172
For total employees	5,095	3,160

Source: Airports Commission analysis

- 5.8** The results have therefore been tested for low productivity (1%) and high passenger number scenarios and the maximum number of additional homes required would be 18,400. However, it is acknowledged that these are based on the extreme assumptions that none of the current workforce would take up these jobs nor that those living in the surrounding local authorities would commute in for these jobs.
- 5.9** Alongside the improved baseline referenced in the Surface Transport section of the *Local Economy Impact Assessment*¹⁹, it is important to note that the assumption of the local area from which employment and housing may be drawn is smaller than there is the potential for it to be. Currently, the jobs are considered to predominantly fall where the current majority of employment is sourced (15 local authorities). However, if an average commute time is considered such as 45 minutes, the number of local authorities that would be accessible from this time is 21²⁰ local

18 Heathrow and Gatwick employment data and ONS population data.

19 Local Economy Impact Assessment (2014) pg. 77 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/373487/AC09-local-economy-assessment.pdf

20 This is sourced from rail/road total travel times from the National Airport Accessibility Model.

authorities (with current transport schemes). This would help to spread the burden of additional houses and employment over this wider area.

5.10 Having considered the impacts of households in each of the schemes, the effects of increasing the population density have also been considered. As this is a trend that has been seen across London and the South East, as described above, there is extensive potential for the density to increase in the local areas around the schemes.

5.11 This also allows the density that would be required should no further housing be built to accommodate the new workers to be considered. This is demonstrated in **Table 12**, where the workers are assumed to be spread equally. If this is compared to 2001, the population density has increased much more over the last 15 years than would be required for airport expansion. This demonstrates the ability of the area to absorb the additional housing and employment over time. The number of people per hectare would only very marginally increase the overall population density, still keeping it far below the current London averages.

Table 12: Gatwick local authorities: Population density

Local authority	Population per hectare of land, 2001	Population hectare of land, 2011 (difference 2001-2011)	Assessment of need, 2030	Global growth, 2030
Adur	13.9	14.3 (+0.4)	14.4	14.6
Arun	6.3	6.7 (+0.4)	6.7	6.8
Brighton & Hove	30.0	32.8 (+2.8)	32.8	32.9
Crawley	22.2	23.7 (+1.5)	23.8	24.0
Croydon	38.8	42.3 (+3.4)	42.3	42.4
Eastbourne	19.8	21.9 (+2.1)	22.0	22.2
Epsom & Ewell	19.7	22.0 (+2.4)	22.1	22.4
Horsham	2.3	2.5 (+0.2)	2.5	2.5
Lewes	3.1	3.3 (+0.2)	3.3	3.4
Mid Sussex	3.8	4.2 (+0.4)	4.2	4.2
Mole Valley	3.1	3.3 (+0.2)	3.3	3.4
Reigate & Banstead	9.8	10.7 (+0.9)	10.7	10.8
Tandridge	3.2	3.4 (+0.2)	3.4	3.4
Wealden	1.7	1.8 (+0.2)	1.8	1.8
Worthing	28.6	30.8 (+2.2)	30.9	31.2

Source: ONS population data, Neighbourhood Statistics land data & Airports Commission jobs data

Heathrow

- 5.12** Expansion at Heathrow would increase employment by 76,652 in 2030 and 78,361 in 2050 under a Heathrow Airport Northwest Runway scheme, or by 76,652 in 2030 and 65,605 in 2050 under an Extended Northern Runway scheme, both under *assessment of need* carbon-traded scenarios, as shown in **Table 13** and **14** respectively.
- 5.13** These results assume a central productivity scenario of 1.5% based on ONS historic trends.
- 5.14** Heathrow is currently at capacity, therefore the initial increase in passengers is substantial and demand remains high across the whole forecasted period. The carbon-capped case is included to demonstrate the impacts of a constraint on CO₂ emissions to stay within the Committee on Climate Change's (CCC) assessment of how climate change targets can be met.

Table 13: Additional jobs from expansion of Heathrow North Airport Northwest Runway

Year	Carbon-traded	Carbon-capped
2030	76,652	59,343
2050	78,361	74,717

Source: Airports Commission analysis

Table 14: Additional jobs from expansion of Heathrow Airport Extended Northern Runway scheme

Year	Carbon-traded	Carbon-capped
2030	76,652	61,816
2050	65,605	63,783

Source: Airports Commission analysis

- 5.15** If this employment forecast is considered as a proportion of the economically active population in the local area, the additional jobs account for a small, but not insignificant proportion as shown in **Table 15**. This is not unexpected as Heathrow is considered a sizable employer within the local area. The figures are the same for both Heathrow schemes due to the forecast in 2030.

- 5.16** If this number of jobs is considered to be spread equally across the local authorities surrounding the airport, this equates to 228 jobs per local authority per year (for both schemes) from scheme opening in 2026 until 2050. This is well within the growth already forecast based on population growth. As demonstrated in previous tables, the population forecast over 2012-2037 ranges from 768 people per year in Runnymede up to 3,760 people per year in Hillingdon.
- 5.17** It is acknowledged that it is unlikely that each local authority would absorb the same number of jobs, particularly when the unemployment rate is considered in some areas and the commuting distances. However, when the yearly forecast of population increases in places such as Hillingdon is up to 3,760 per year or Hounslow at 3,220 per year, 228 jobs does not appear to be an unachievable target. Therefore, even under an extreme assumption such as all additional employment from expansion being located in Hillingdon, these jobs could be absorbed by the local population growth already forecast regardless of expansion. It is therefore judged that the forecast number of jobs would be easily absorbed into the local area.

Table 15: Proportion of total airport jobs of economically active population Heathrow (14 Local Authorities) – 2030

	Total additional jobs	Population 16-69	Low Working Population (60% ²¹)	High Working Population (80%)
Total population	–	1,963,100	1,177,860	1,570,480
LHR ENR	76,652	3.90%	6.51%	4.88%
LHR NWR	76,652	3.90%	6.51%	4.88%

Source: Airports Commission jobs figures, ONS population forecast, NomisWeb Economic Activity

- 5.18** The additional jobs as a proportion of the economically active population are shown in **Table 15**. The table shows this under a low and high estimate of the working population to establish the level of pressure that would be felt under both airport expansion schemes in a range of scenarios. As is demonstrated, the impact is small, and absorbing the additional jobs would not cause unmanageable pressure.
- 5.19** Under a Heathrow Airport Northwest Runway scheme and Heathrow Airport Extended Northern Runway scheme (as shown in **Tables 16** and **17** respectively), if it is assumed that all jobs created from the airport expansion (direct, indirect and induced) were given to entirely new employees to the 14 local authorities' areas,

21 The low and high economic activity rates were based upon the current range of economic participation across the local authority area data from NomisWeb.

based upon current airport workforce proportions²², the number of homes required (assuming one worker per household) would be about 48,300. This is unlikely, one worker per household is an extreme assumption in the sense that it assumes no new workers already have a house in the local area or commute. However, the intention is to demonstrate that even with this high assumption, the local area is able to absorb the additional housing requirements. The forecast is only up to 2030 as it would be inaccurate to assume that the same percentage of workers would be resident in these local authorities up to 2050.

5.20 The results have also been tested for low productivity (1%) and high passenger number scenarios and the maximum number of additional homes required would be 70,800. As previously stated, these are based on strong assumptions. The forecast is only up to 2030 as it would be inaccurate to assume that the same percentage of workers would reside in these local authorities up to 2050.

Table 16: Additional homes required for employees in 2030 – Heathrow Airport Northwest Runway scheme

2030	Carbon-traded	Carbon-capped
For direct employees	17,745	13,738
For total employees	48,267	37,368

Source: Airports Commission analysis

5.21 Under an Extended Northern Runway scheme, if it is assumed that all jobs created from the airport expansion were given to entirely new employees (direct, indirect and induced) to the area, the number of homes required (assuming 1 worker per household) would be about 48,300.

Table 17: Additional homes required for employees in 2030 of Heathrow Airport Extended Northern Runway

2030	Carbon-traded	Carbon-capped
For direct employees	17,745	14,311
For total employees	48,267	38,925

Source: Airports Commission analysis

22

- 5.22** These results have been tested for low productivity (1%) and high passenger number scenarios and the maximum number of additional homes required would be 60,600²³. As previously stated, these are based on strong assumptions.
- 5.23** Alongside the improved baseline referenced in the Surface Transport section of the *Local Economy Impact Assessment*²⁴, it is important to note that the assumption of the local area from which employment and housing may be drawn is much smaller than there is the potential for it to be. If an average commute time is considered such as 45 minutes, the number of local authorities that would be accessible from this time increases to 35²⁵ local authorities (with current transport schemes). This would significantly spread the need for additional employment and homes over this wider area.
- 5.24** Having considered the impacts on housing in each of the schemes, the effect of increasing the population density has also been assessed. As this is a trend that has been seen in London and the South East, as described above, there is extensive potential for the density to increase in the local areas around the schemes.
- 5.25** This also allows the density that would be required should no further housing be built to accommodate the new workers to be considered. This is demonstrated in **Table 18**, where the workers are considered to have been spread equally. The number of people per hectare would only marginally increase the population density, still keeping it far below the current London averages. If this is compared to 2001, the population density has increased much more over the last 15 years than would be required for airport expansion. This demonstrates the ability of the area to absorb the additional housing and employment over time.

23 Please see consultation document for the full range of results with all five scenarios.

24 Local Economy Impact Assessment (2014) pg.84 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/373487/AC09-local-economy-assessment.pdf

25 This is sourced from rail/road total travel times from the National Airport Accessibility Model.

Table 18: Heathrow local authorities: population density

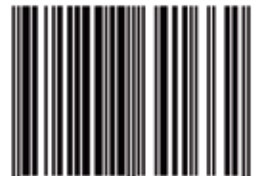
Local authority	Population per hectare of land, 2001	Population hectare of land, 2011 (difference 2001-2011)	Assessment of need, 2030	Global growth 2030
Bracknell Forest	10.1	10.4 (+0.4)	10.8	10.9
Ealing	55.4	61.2 (+5.8)	61.8	62.1
Harrow	41.7	47.7 (+6.0)	48.4	48.7
Hillingdon	21.3	23.8 (+2.6)	24.1	24.3
Hounslow	38.1	45.0 (+6.9)	45.6	45.9
Reading	35.9	38.6 (+2.6)	39.4	39.8
Richmond upon Thames	29.8	32.0 (+2.3)	32.6	32.9
Runnymede	10.0	10.3 (+0.3)	10.7	10.9
Slough	37.5	43.8 (+6.3)	44.9	45.4
South Bucks	4.4	4.7 (+0.4)	5.0	5.1
Spelthorne	17.8	18.9 (+1.1)	19.5	19.9
West Berkshire	2.1	2.2 (+0.1)	2.2	2.3
Windsor & Maidenhead	6.7	7.3 (+0.6)	7.5	7.6
Wokingham	8.4	8.6 (+0.3)	8.8	8.9

Source: ONS population data, Neighbourhood Statistics land data & Airports Commission jobs data

6. Conclusions

- 6.1** Gatwick requires less additional housing and social infrastructure to serve the extension of the airport. This reduces the pressure on the local area to generate these services. There is a greater change for the local area though, as currently the majority of the local authorities are very rural. Therefore the additional employment and businesses, while producing lower numbers than Heathrow, could demonstrate a more pronounced difference. It has also been noted that unemployment is relatively low in the Gatwick local authority areas. It can reasonably be assumed that the jobs will be absorbed by those areas that have the higher unemployment numbers, such as Croydon and Crawley. Although there would be a smaller number of jobs, it would be relatively more pressure on a smaller number of authorities. But only a select number of local authorities were used to assess these impacts and if an average commute time (such as 45 minutes) was used to generate a catchment area from which employment could come, the employment and housing pressure would be further dispersed and diluted.
- 6.2** Heathrow, due to its high passenger forecast and lower passenger to employee ratio, generates very large employment numbers. This would be likely to add pressure to the requirement of housing and social infrastructure to support the airport expansion. But the area around that part of London is growing rapidly and the employment opportunities from the airport provide valuable jobs. Heathrow is further immersed in the London area and benefits from strong transport links across London that also spread to where the current employment comes from. Unemployment is relatively higher around Heathrow, and as a result, although a greater number of jobs would be generated, the area is very capable of absorbing the jobs both considering the current population and the forecasted growth in population. But housing constraints around that area remain an issue regardless of airport expansion, and it is acknowledged that the expansion will not ease that pressure.
- 6.3** The two schemes can both be considered to have manageable impacts. But there are key differences in how the impacts are interpreted, as demonstrated above. Ultimately both schemes provide some pressures as well as the benefits that come with employment generation.

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