

# THE ECONOMIC IMPACT OF REDUCED ACTIVITY AT HEATHROW AIRPORT

A REPORT FOR THE HEATHROW COMMUNITY  
ENGAGEMENT BOARD

SEPTEMBER 2020

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## September 2020

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# TABLE OF CONTENTS

Executive summary .....	1
1. Introduction.....	6
1.1 The coronavirus crisis has significantly reduced air traffic at Heathrow ..	6
1.2 Objectives of this study .....	7
1.3 Report structure .....	8
2. Understanding Heathrow's contribution to the local economy .....	9
2.1 Introduction .....	9
2.2 The economic contribution of Heathrow pre-lockdown.....	9
2.3 Direct on-airport activity .....	9
2.4 Direct off-airport activity .....	12
2.5 Indirect and induced activity.....	13
2.6 Resident employment .....	17
2.7 Summary .....	18
3. The economic impact of reduced activity at Heathrow .....	19
3.1 Introduction .....	19
3.2 Outlook for the recovery of the aviation sector .....	19
3.3 Our modelling approach.....	21
3.4 Central scenario .....	22
3.5 Alternative scenarios.....	26
3.6 Summary .....	29
4. Who might be most vulnerable? .....	30
4.1 Introduction .....	30
4.2 Characteristics of the workforce.....	30
4.3 Summary .....	35
Technical Annex.....	36

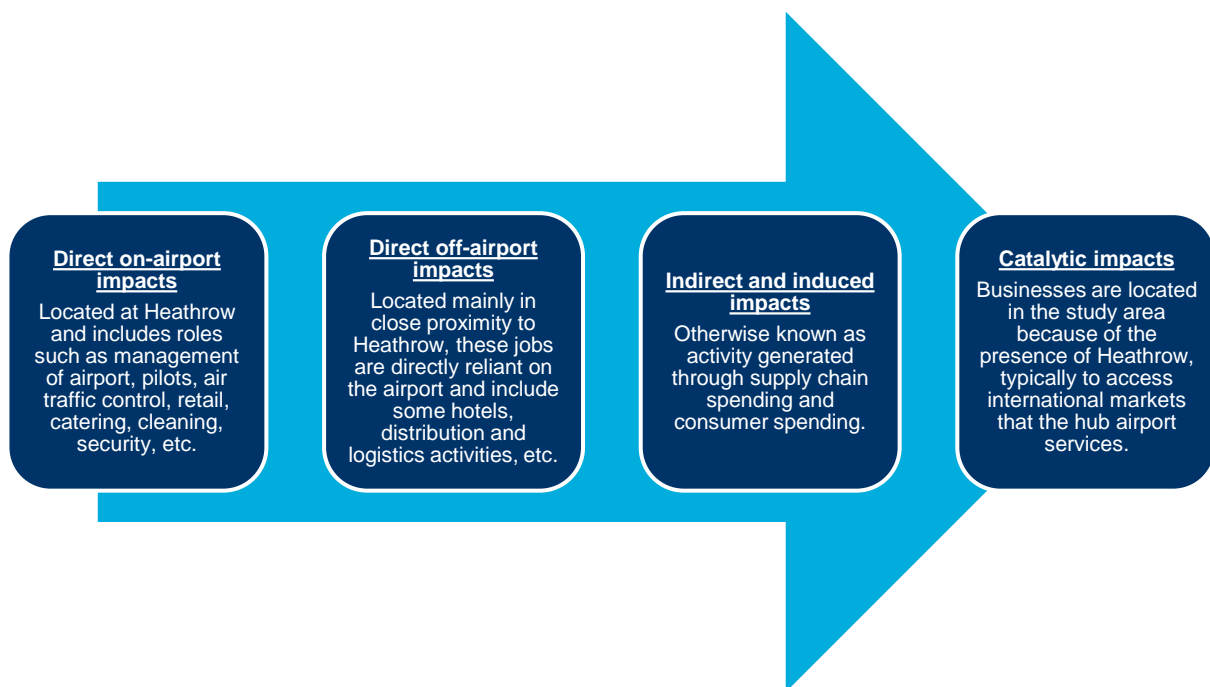
# EXECUTIVE SUMMARY

**The coronavirus crisis is having an unprecedented impact on national and local economies.** Measures put in place to stop the spread of the virus have led to a sharp contraction in economic activity. While all sectors of the economy have been affected, aviation is among the worst hit, as lockdowns across the globe have effectively cut off demand for passenger travel, which has in turn reduced the capacity for air cargo. At the peak of lockdown, Heathrow saw a 97% drop in passenger numbers, and 62% fall in cargo movements.

**Reduced activity at Heathrow will have a significant impact on the local economy.** Heathrow Airport is a key source of employment for Hillingdon (where it is based), but also for neighbouring and nearby local authority areas. Given the importance of Heathrow to the local economy, the Heathrow Community Engagement Board commissioned Oxford Economics to estimate the economic impact of reduced activity at Heathrow, now and in the future. Our study area consists of six local authority areas: the London Boroughs of Ealing, Hillingdon and Hounslow, Slough, South Bucks, and Spelthorne.

The airport supports employment through four main channels of activity (see Fig. 1). The dramatic fall in passenger numbers and cargo at the airport threatens the security of many of the direct jobs located at Heathrow and surrounding it, which in turn affects supply chains and subsequently those supported through the spending of wages. It could also impact on businesses that have located around the airport because of the international destinations it serves.

**Fig. 1. Channels of economic impact supported by Heathrow Airport**



## HEATHROW AIRPORT'S CONTRIBUTION TO THE LOCAL ECONOMY

**Heathrow Airport makes a significant contribution to the study area economy.** We estimate that Heathrow directly supported 88,900 workplace-based jobs across the study area in 2019, of which 76,000 were located at the airport itself. When accounting for the supply chain (indirect) and consumer spending (induced) effects, we estimate that Heathrow supported 133,600 jobs across the study area in total—equivalent to around one in six jobs within the local workforce. Employment associated with Heathrow formed a £12.5 billion gross value added (GVA) contribution to GDP (in 2016 prices),<sup>1</sup> equivalent to almost a quarter of economic output across the study area in 2019—reflecting the comparatively more productive activity associated with the airport.

**Alongside workplace impacts, Heathrow is a key source of resident employment.** In total, Heathrow supported the employment of 59,700 residents across the study area in 2019, of which 32,600 were employed directly at the airport. Heathrow therefore accounted for almost a tenth of all resident employment across the study area, with Hillingdon (16,300 workers) and Hounslow (16,000) supporting the most workers.

**Fig. 2. Summary of Heathrow's economic contribution to the study area, 2019**



<sup>1</sup> Gross value added (GVA) measures the contribution to the economy of each individual producer, industry, or sector in the United Kingdom. Gross domestic product (GDP), the headline indicator of economic output at a national level, is equal to GVA plus taxes minus subsidies.

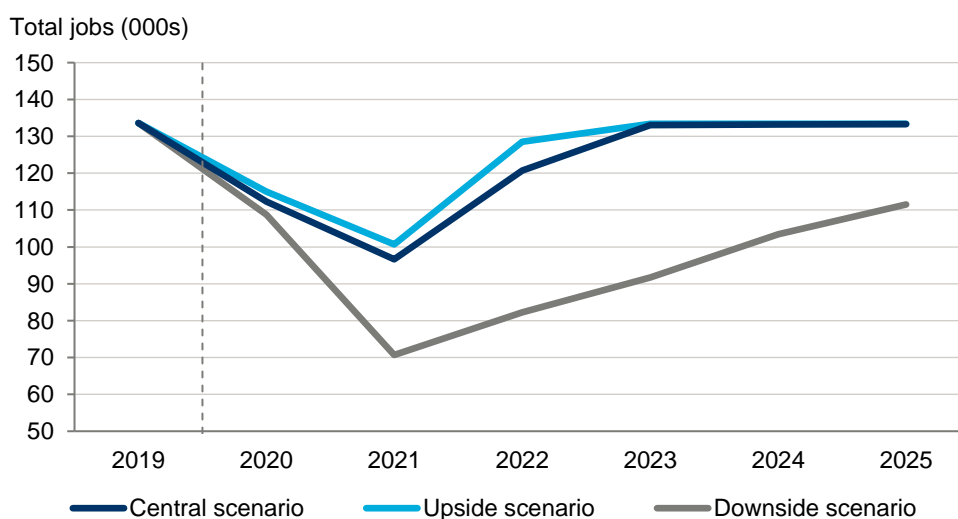
## THE ECONOMIC IMPACT OF REDUCED ACTIVITY AT HEATHROW AIRPORT

Tourism Economics and IATA forecasts for the British air passenger market suggest the volume of passenger flows will return to 2019 levels by 2023, while Oxford Economics' trade forecasts indicate that non-fuel imports and exports (a proxy for air cargo) may not return to pre-crisis levels until 2026 and 2027 respectively. Such an unprecedented fall in activity would normally have led to substantial job cuts across the aviation sector, including at Heathrow. To consider the future economic impact of reduced activity, we have developed three scenarios.

Our **central scenario** is the most plausible based on the forecasts and announcements from the sector. We estimate that workplace-based employment reliant on Heathrow will fall by 21,300 jobs in 2020. Job losses will be concentrated in the transportation & storage sector, particularly in air transport activity. However, the Coronavirus Job Retention Scheme has so far helped mitigate against mass unemployment. Although the scheme will be in place until at least October, major airlines have announced their intention to cut jobs (by as much as 30%), and if passenger numbers do not return quickly, more jobs could be vulnerable.

Our central scenario therefore sees employment fall further in 2021—equivalent to **37,000 fewer jobs than in 2019, or a loss of £4.0 billion GVA contribution to GDP** across the study area (in 2016 prices). This will result in a loss of 16,000 resident jobs across the study area in 2021. However, we expect activity to recover thereafter, with activity at the airport broadly recovering to pre-crisis levels by 2023.

**Fig. 3. Total jobs, alternative scenarios, 2019 to 2025**



Source: Oxford Economics

In the **upside scenario**, passenger numbers and trade recover faster than in our central scenario. At the peak in 2021, employment will fall by 32,900 jobs, equivalent to £3.6 billion less GVA contribution to GDP. The recovery will be at broadly the same pace as the central scenario, with employment effectively recovering to 2019 levels by 2023.

Under the more pessimistic **downside scenario**, however, passenger numbers fall more steeply in 2020, with a more prolonged recovery. At the peak in 2021, employment will fall to 70,700 workplace jobs, 62,900 fewer than in 2019. This amounts to a £6.9 billion fall in the GVA contribution to GDP (in 2016 prices), equivalent to 12.6% of total output across the study area pre-crisis, and 27,200 fewer residents in employment. By 2025, Heathrow will continue to support 22,100 fewer jobs than in 2019.

**Fig. 4. Summary of the economic impact of reduced activity at Heathrow Airport across the study area**



#### WHO MIGHT BE MOST VULNERABLE?

Reduced activity at Heathrow Airport is likely to impact some population groups more than others. The balance of evidence suggests that **male, older, full-time**, and **less well-qualified workers** are most vulnerable. However, job losses will not be confined to those matching these characteristics alone: many jobs that we expect to be lost in the distribution, hotels & catering sector will affect younger workers, and those more likely to work part time.

Many older on-airport workers support economic dependents, such as children, while Heathrow is such a key employer locally that many households derive more than one source of income from working at the airport. Many workers have also been employed at the airport for a considerable time, which may affect their abilities to find alternative work. The geographical distribution of on-

airport jobs may also leave some communities across the study area more vulnerable to a significant reduction in employment than others.

The impact of reduced activity at Heathrow will lead to a permanent loss of growth and investment that may otherwise have occurred in the local economy. With an increase in the duration of the crisis, a loss of employment risks turning cyclical unemployment into structural unemployment. And given the reliance of local employment on Heathrow, a significant fall in jobs as set out in each of our scenarios may lead to a **worsening of living standards and quality of life**, resulting in longer-lasting adverse effects on the local economy.



# 1. INTRODUCTION

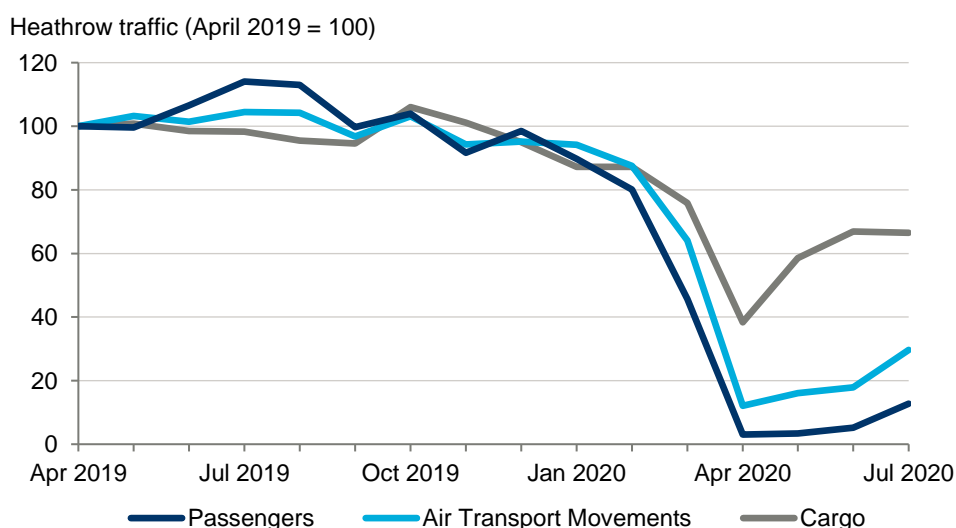
## 1.1 THE CORONAVIRUS CRISIS HAS SIGNIFICANTLY REDUCED AIR TRAFFIC AT HEATHROW

The coronavirus pandemic is having a significant impact on national and local economies. As governments have introduced lockdown measures and stringent social distancing guidance to contain the spread of infection, all sectors of the economy have suffered, leading to an unprecedented contraction in economic activity. UK GDP is estimated to have contracted by more than 20% in the second quarter of 2020 alone.<sup>2</sup>

Among those sectors most impacted has been air travel. Data for air traffic at Heathrow Airport demonstrates the dramatic slowdown in activity through 2020.<sup>3</sup> At the peak of lockdown, through March and April 2020, passenger numbers had fallen by 97% on the preceding year. In addition, air transport movements were down over 88%. Cargo movements were comparatively more resilient, falling by 62% on the previous year, due in part to the significant movements of personal protective equipment throughout this period.

While a subsequent easing of lockdown restrictions has led to a partial improvement in passenger numbers and movements, the recovery has so far been minimal: the latest data for July 2020 show passengers and air transport movements remain 87% and 30% down on April 2019 respectively.

**Fig. 5. Air passenger flows, Heathrow, April 2019 to July 2020**



Source: Heathrow Airport

<sup>2</sup>

<https://www.ons.gov.uk/economy/grossdomesticproductgdp/bulletins/gdpfirstquarterlyestimateuk/apriltojune2020>

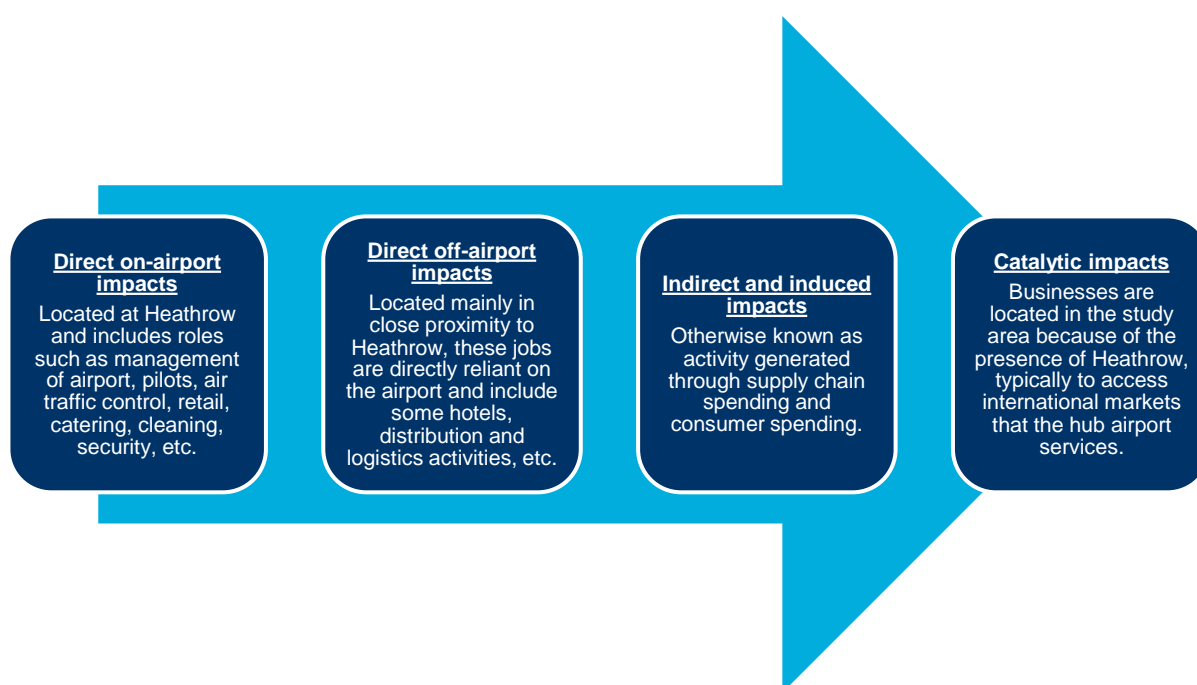
<sup>3</sup> <https://www.heathrow.com/company/investor-centre/reports/traffic-statistics>

## 1.2 OBJECTIVES OF THIS STUDY

Heathrow Airport is a key source of employment for Hillingdon (where it is based), but also for nearby local authority areas. This study focuses on six local authority areas: **Ealing, Hillingdon, Hounslow, Slough, South Bucks, and Spelthorne.**

The airport supports employment through four main channels of activity, presented in Fig. 6 below. The drastic fall in passenger numbers and cargo at the airport threatens the security of many of the direct jobs located at Heathrow and surrounding it, as well as those linked to supply chains and supported through the spending of wages. It could also impact on businesses that have located around the airport because of the international destinations it serves.

**Fig. 6. Channels of economic impact supported by Heathrow Airport**



Given the importance of Heathrow to the local economy, and the scale of reduced activity at the airport, the Heathrow Community Engagement Board (HCEB) has commissioned Oxford Economics to estimate the impact of reduced activity on the local economy. While it is outside the scope of this study to undertake a comprehensive assessment of the local economic impact of Heathrow on the local economy, we draw on existing studies and recently published data to estimate the current scale of impacts. Given the high degree of uncertainty facing Heathrow Airport, the aviation sector, and the UK economy more broadly, we have developed three recovery scenarios—a central, upside, and downside scenario—over the period 2020 to 2025. When presenting the impacts of these scenarios, we compare with pre-crisis estimates for 2019.<sup>4</sup>

<sup>4</sup> The focus of this study is to isolate the impact of reduced activity at Heathrow Airport, decoupling it from the broader impacts of the coronavirus crisis and recovery across the study area economy as a whole.

We consider two different measures of employment in this paper, workplace-based and resident-based:

- **Workplace-based employment** relates to jobs that are located in a given local authority area. For Hillingdon, this will include the on-site jobs at Heathrow. For other local authorities, this may include “off-site” jobs associated with the airport, or indirect, induced, and catalytic employment that form Heathrow’s overall economic footprint. Workplace jobs can be taken up residents who live in the same local authority area, but are often filled by labour commuting in from elsewhere.
- **Resident-based employment** reflects the jobs taken by residents of a given local authority area. Throughout this report, we consider a people-based measure of resident employment (workers). Resident employment reflects the employment of workers who live in a given local authority area, regardless of whether/where they out-commute.

### 1.3 REPORT STRUCTURE

The report takes the following structure:

- **Section 2** sets out to estimate the economic importance of Heathrow to the local economy pre-lockdown, which forms the benchmark for our recovery scenarios;
- **Section 3** then considers three scenarios exploring the economic impact of Heathrow’s recovery; and
- **Section 4** considers the characteristics of workers most likely to be affected by job losses at or linked to the reduction in activity at Heathrow.

## 2. UNDERSTANDING HEATHROW'S CONTRIBUTION TO THE LOCAL ECONOMY

### 2.1 INTRODUCTION

This section establishes the economic contribution that Heathrow made to the local economy in 2019, reflecting its impact prior to the coronavirus crisis. With that understanding, we can then estimate how reduced activity from 2020 onwards might impact the local economy. We start by explaining our approach to estimate the 2019 impacts.

### 2.2 THE ECONOMIC CONTRIBUTION OF HEATHROW PRE-LOCKDOWN

To fully understand how the coronavirus crisis and recovery at Heathrow Airport will influence the study area economy, we first need to understand:

- **Direct on-airport activity:** the scale of activity (employment, GVA<sup>5</sup> contributions to GDP and wages) at Heathrow Airport, commonly referred to as direct on-airport activity, and how much of this is taken by residents of the local borough.
- **Direct off-airport activity:** we then need to understand the scale of direct off-airport activity (employment, GVA, and wages) across the six local authority areas.
- **Indirect and induced impacts:** using a bespoke economic impact model developed for this study, we then estimate the indirect and induced effects of this activity. **Indirect impacts** are the economic benefit and employment supported by the supply chain of those companies operating directly on-airport and off-airport, as a result of the procurement of goods and services. **Induced impacts** are the wider economic benefits that arise when those in the direct on-airport, direct off-airport, or supply chain spend their earnings, for example in local retail establishments.
- **Catalytic impacts:** finally, we will discuss the catalytic impacts that arise from the presence of Heathrow Airport and the access it offers to international markets.

### 2.3 DIRECT ON-AIRPORT ACTIVITY

Despite there being previous analysis on the impact of Heathrow Airport, there does not seem to be a commonly accepted recent measurement of the jobs, wages, and GVA sustained by operations at Heathrow. Using a mix of previous estimates and published Business Register & Employment Survey (BRES)

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<sup>5</sup> Gross value added (GVA) measures the contribution to the economy of each individual producer, industry or sector in the United Kingdom. Gross domestic product (GDP), the headline indicator of economic output at a national level, is equal to GVA plus taxes minus subsidies.

employment data for selected sectors in local authority areas in and around the airport, we have estimated the scale of economic benefits for 2019.

Heathrow's Surface Access Proposal report (2019)<sup>6</sup> contained on-airport employment estimates for 2013 and 2017. Direct on-airport employment (described as "colleagues") in 2017 was reported to be 72,700. More recent estimates of pre-crisis levels of employment indicate **on-airport employment at Heathrow Airport at 76,000 jobs in 2019**, an increase on 2017.<sup>7</sup> We assume that the breakdown of employment by job types remains in line with the Surface Access Proposal report.

In the absence of any up-to-date data, we assume the share of employment taken by local residents remains unchanged from 2017 to 2019. We estimate that **32,600 employees reside in the study area**, 43% of the total, with Hounslow (9,500) and Hillingdon (9,300) supporting the highest shares.

**Fig. 7. Estimated direct on-airport employment at Heathrow Airport by location of residence, 2019**

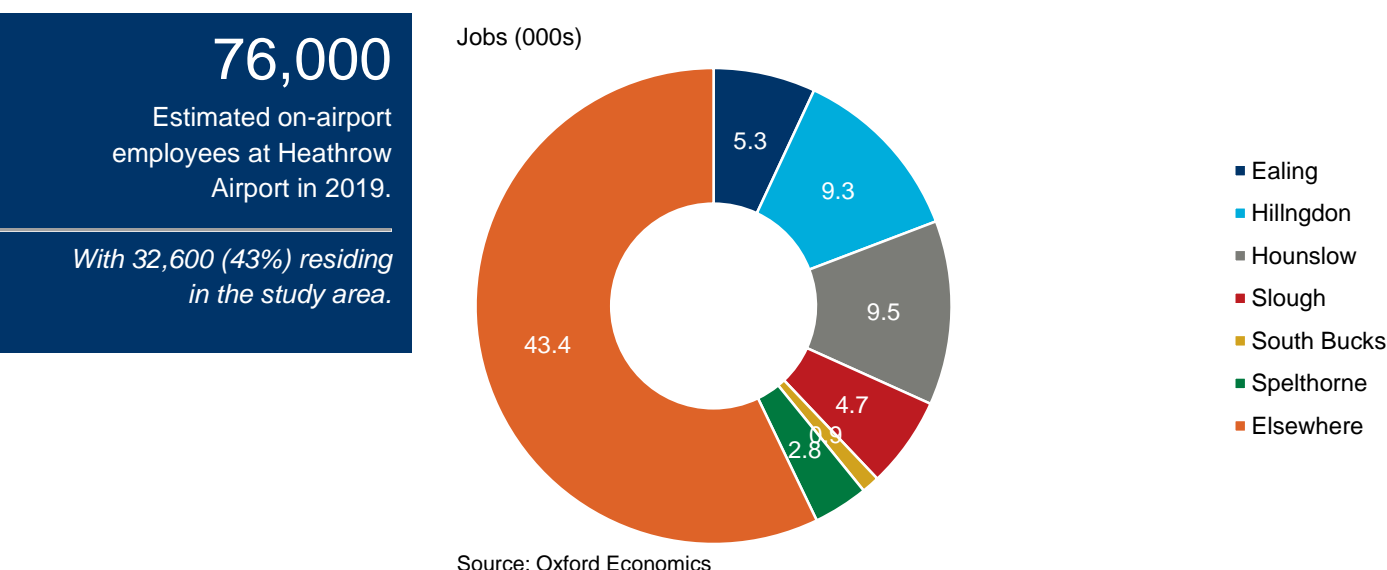


Fig. 8 below provides a breakdown of the on-airport employment by job type. Air cabin crew represents the largest group with nearly one in every five on-airport employees at Heathrow Airport, while passenger services, sales & clerical staff is close behind with 17.3%. Relatively well-paid employment in management, pilots/air traffic control/flights operation, and information technology accounts for 15.1% of all direct on-airport employment in Heathrow Airport.

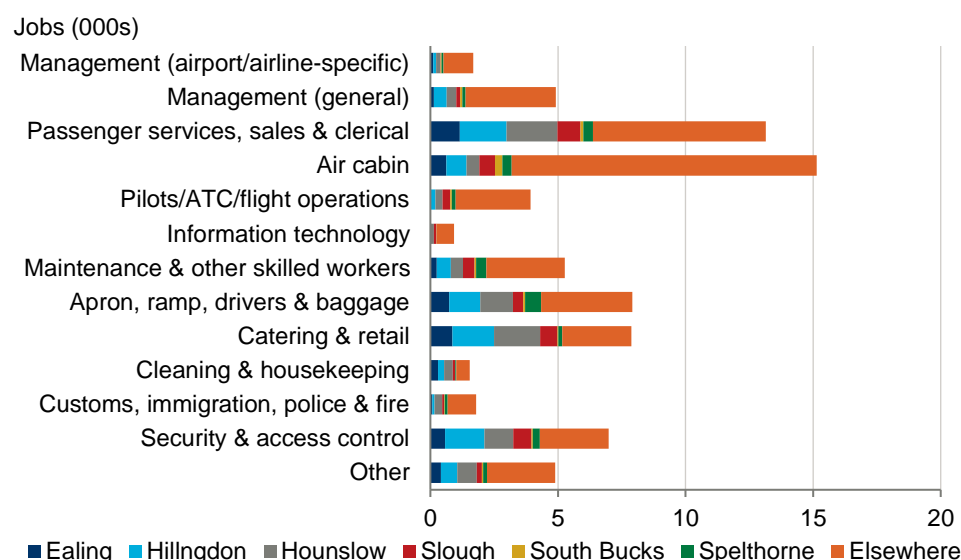
However, when comparing the location of residence, we see that **workers living in the study area tend to be employed in lower value-added roles** that are typically less well paid. Less than a third of managerial, pilots/air traffic

<sup>6</sup> Heathrow Airport Ltd, (2019); *Surface Access Proposal: travelling to and from the Airport*.  
<https://assets.heathrowconsultation.com/wp-content/uploads/sites/5/2019/06/Surface-Access-Proposals.pdf>.

<sup>7</sup> <https://www.heathrowexpansion.com/uk-growth-opportunities/job-opportunities/>

control/flights operation and information technology roles are taken up by local residents. By contrast, two-thirds of catering & retail and cleaning & housekeeping roles are taken up by residents of the study area.

**Fig. 8. Direct on-airport employment by type of job, 2019<sup>8</sup>**



Source: Oxford Economics

Fig. 9 below shows a breakdown of direct on-airport employment at Heathrow Airport by the subset of broad sectors that reflect on-airport employment, along with corresponding average sectoral weekly wages in London.<sup>9</sup> In reality, employment in information & communication is likely to fall within the transportation & storage sector, as are the administrative & support services jobs as they are located at the airport. However, for the purpose of considering relative wages, we have split these out from the transport sector.

The sectoral mix of on-airport jobs suggests that the Heathrow workforce tend to be relatively well paid. Around 80% of jobs at the airport taken up by residents of the study area are in the transportation & storage sector, which at £677 per week is typically slightly better paid than average earnings as a whole. However, most of the remaining on-airport employment filled by local residents are in relatively less-paid sectors including wholesale & retail trade, accommodation & food, and administrative & support services.

<sup>8</sup> Heathrow Airport Ltd, (2014); *Taking Britain Further*.

[https://www.heathrow.com/content/dam/heathrow/web/common/documents/company/about/airports-commission/taking\\_britain\\_further.pdf](https://www.heathrow.com/content/dam/heathrow/web/common/documents/company/about/airports-commission/taking_britain_further.pdf)

The information presented in Fig. 8 is derived using a mix of data published in this report and Oxford Economics' modelling assumptions.

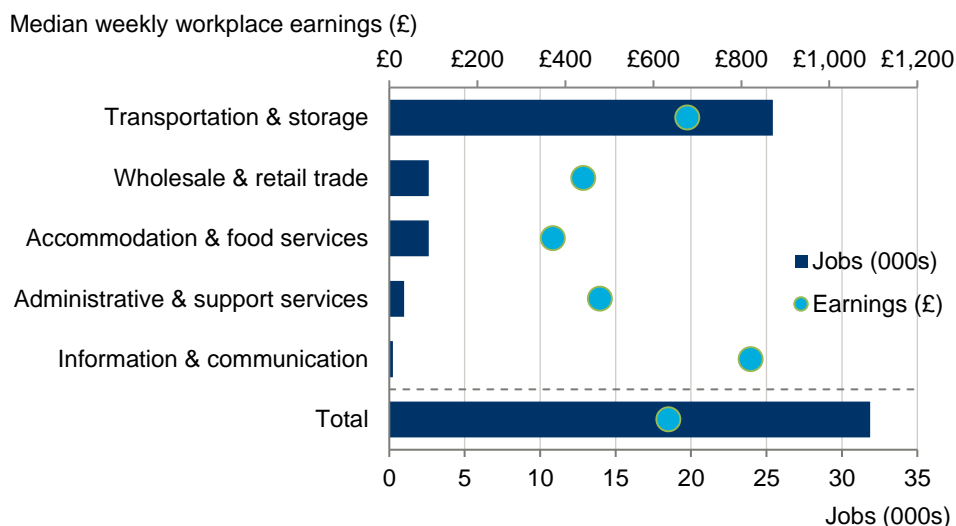
<sup>9</sup> The job types, as presented in Fig. 8, are mapped to broad industrial sectors and aggregated.

**Fig. 9. Direct on-airport employment and average weekly earnings by sector in London, 2019**

**£677**

Median weekly earnings of transportation & storage workers in 2019.

*Slightly above the London average (£634 per week).*



Source: ONS, Oxford Economics

## 2.4 DIRECT OFF-AIRPORT ACTIVITY

In addition to the above, there is a pool of businesses and workers based in Hounslow that are directly sustained by the presence of Heathrow Airport. These include hotels, cargo/freight services, airline services, car parking, and couriers, which are commonly referred to as direct off-airport activity.

Optimal Economics in its 2011 paper estimated direct off-airport activity in 2010 in the London Boroughs of Ealing, Hillingdon, and Hounslow, as well as Spelthorne and Slough, using a survey of local businesses. This was subsequently used in the Parsons Brinkerhoff (2013) paper.<sup>10</sup> Meanwhile, a Regeneris (2013)<sup>11</sup> study drew on the Optimal Economics (2011)<sup>12</sup> data to estimate the number of off-airport jobs across the Buckinghamshire Thames Valley LEP (including South Bucks).<sup>13</sup>

Applying detailed industry employment trends published by the ONS BRES at a local-authority level to these estimates, assuming growth in off-airport jobs matches the relevant detailed sector, we estimate **direct off-airport employment across the study reached 12,900 jobs in 2019**, up from 7,900 in 2010. Of this, we estimate that the majority of jobs are located in Hillingdon (9,100). However, Parsons Brinkerhoff (2013) note that off-airport estimates could be larger and are open to subjectivity.

<sup>10</sup> Parsons Brinkerhoff and Berkeley Hanover Consulting, (2013); *Heathrow Employment Impact Study*. This study estimated estimate 7,700 direct off-airport employment in Ealing, Hillingdon, Hounslow, Slough, and Spelthorne.

<sup>11</sup> Regeneris Consulting, (2013); *London Heathrow Economic Impact Study*.

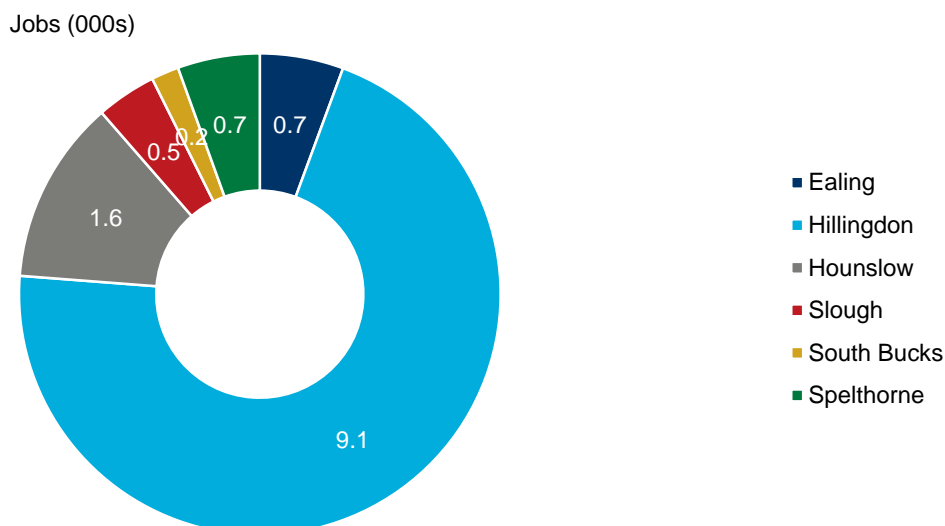
[https://www.buckstvllep.co.uk/?wpfb\\_dl=98](https://www.buckstvllep.co.uk/?wpfb_dl=98)

<sup>12</sup> Optimal Economics, (2011); *Heathrow Related Employment*.

<sup>13</sup> We assume that all 200 off-airport jobs identified across the Buckinghamshire Thames Valley LEP are located in South Bucks.

In total, Heathrow Airport therefore supported **88,900 direct jobs** across the study area in 2019.

**Fig. 10. Direct off-airport employment, 2019**



Source: Oxford Economics

## 2.5 INDIRECT AND INDUCED ACTIVITY

The direct activity, both on- and off-airport, at Heathrow will sustain further rounds of economic activity across the study area, through its supply chain and consumer spending. We have developed an economic impact model to estimate the indirect and induced impacts of these direct (on- and off-airport) jobs, as presented in the preceding section, and the economic activity on the study area economy.

The supply chain (or indirect) impacts arising from the direct activity generate and sustain multiple rounds of spending including the initial round of spending in the supply chain, but also by the suppliers' suppliers, and so on. In addition, there are induced impacts as those employed directly (on- and off-airport) and indirectly spend a proportion of their income in the economy, supporting further employment in sectors such as retail and personal services.

On a workplace-based measure of employment we estimate that the airport supported a further 36,700 indirect and 8,100 induced jobs across the study area in 2019. As a whole, we therefore estimate that Heathrow **supported 133,600 workplace-based jobs across the study area in 2019**, amounting to 18.7%, or more than one in six, of all jobs across the study area.

Activity associated with Heathrow also formed an **£12.5 billion GVA contribution to GDP** (in 2016 prices), equivalent to almost a quarter (22.9%) of all economic activity across the study area. That Heathrow's share of GVA exceeds employment is indicative of the typically more productive jobs associated with the airport and its supply chain, relative to the rest of the study area economy.

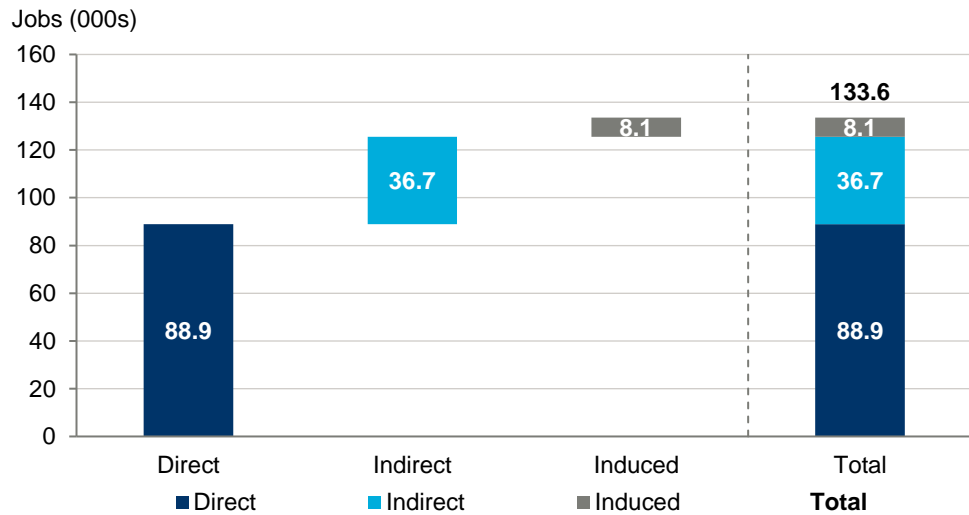


**133,600 jobs**

Heathrow supported across the study area in 2019.

*Of which 36,700 are supported through the supply chain, and a further 8,100 as a result of consumer spending.*

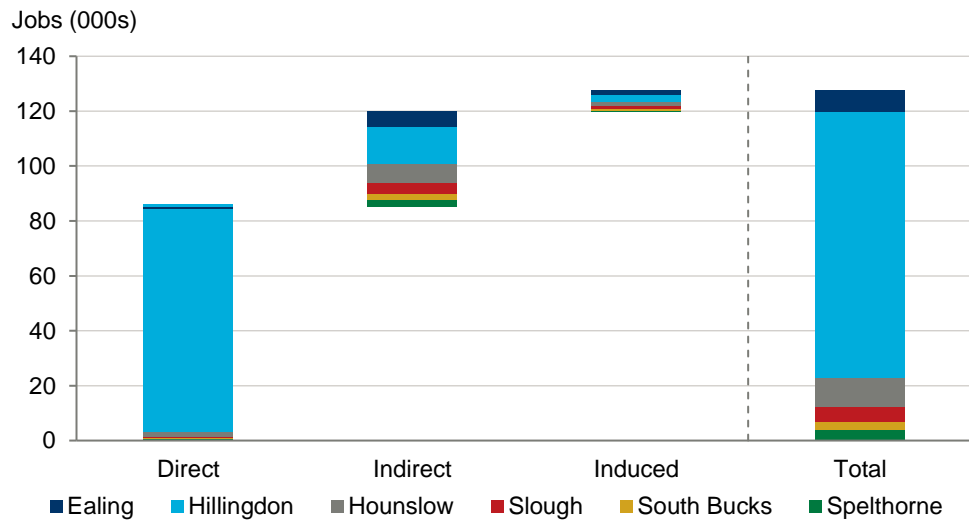
**Fig. 11. Total employment, study area, 2019**



Source: Oxford Economics

A further breakdown by local authority area highlights the geographical spread of workplace employment. Just over three-quarters of all employment is located in Hillingdon (101,500 jobs)—equating to half of all jobs in the borough. Of the remaining workplace jobs across the study area, Hounslow (11,000 jobs) and Ealing (8,400) support the next most. As a share of the workforce, Heathrow's contribution ranges from 9.1% of jobs in Spelthorne to 5.5% in Ealing.

**Fig. 12. Total job impacts, study area, 2019**



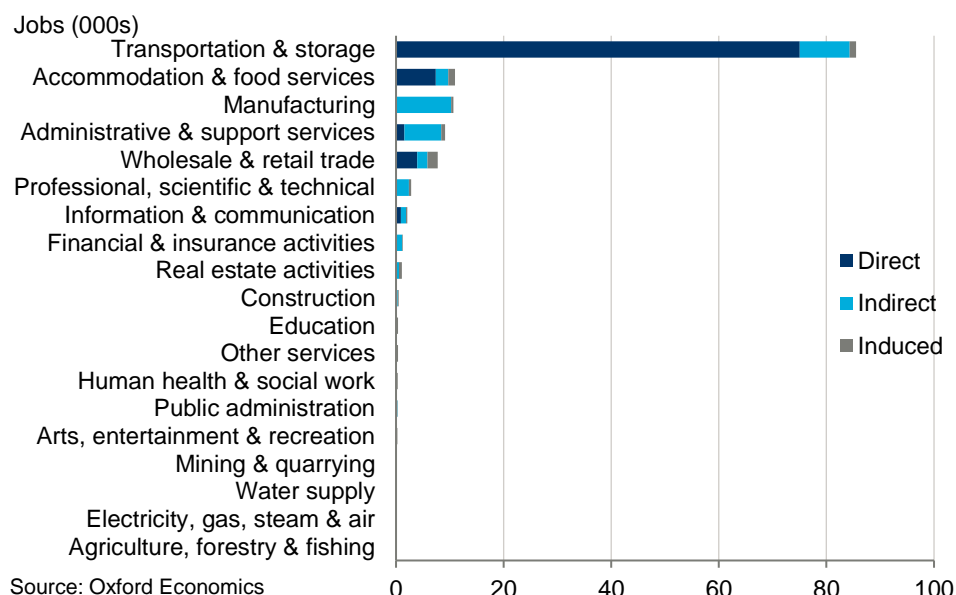
Source: Oxford Economics

Through the numerous rounds of supply chain and consumer spending, all sectors in the economy experience some degree of benefit. The majority of employment, 85,500 jobs (64%), is in the **transportation & storage** sector. While largely driven by direct employment either on- or off-airport, around 10,500 jobs arise as a result of indirect and induced effects.

Accommodation & food services (11,000 jobs), manufacturing (10,600) and administrative & support services (9,100) are the next largest sectors. While accommodation & food services and to a lesser extent administrative & support

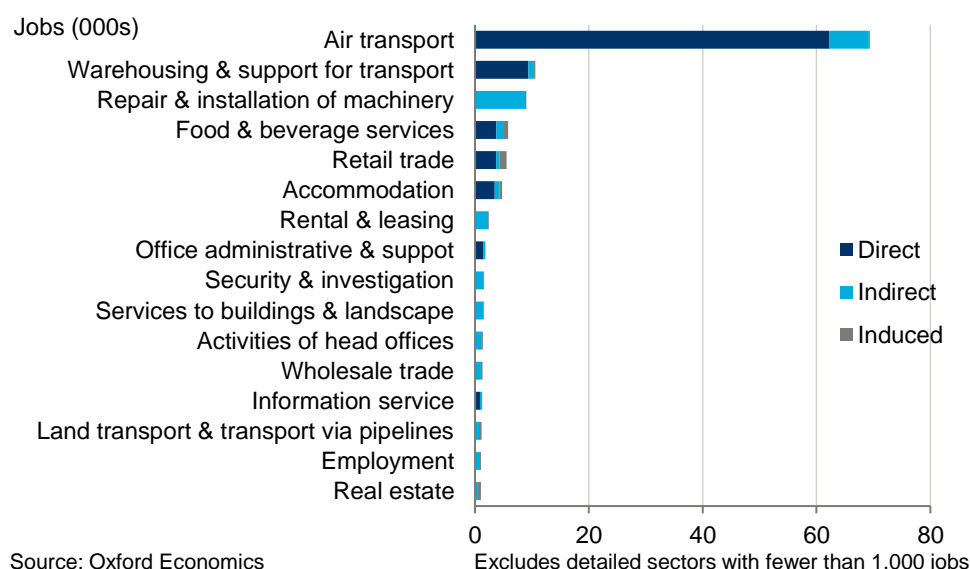
services are partly driven by direct on- and off-airport jobs, manufacturing jobs wholly arise through indirect and induced effects.

**Fig. 13. Total job impacts by broad sector, study area, 2019**



We may also consider the contribution of Heathrow at a more granular sectoral level. Fig. 14 demonstrates that **air transport** (73,100 jobs) and **warehousing & support for transport** (10,600 jobs) are the largest sectors—both sit within the transportation & storage broad sector. Despite not accounting for any direct jobs, owing to its supply chain relationships with on- and off-airport jobs, repair & installation of machinery (9,500 jobs) was the third most-reliant sector on Heathrow. Food & beverage services (6,100 jobs), retail trade (5,800 jobs), and accommodation (4,800 jobs) are the next largest. Collectively, these five sectors accounted for 82% of jobs reliant on Heathrow across the study area in 2019.

**Fig. 14. Total job impacts by detailed sector, study area, 2019**



**85,500 jobs**

Heathrow supported in transportation & storage across the study area in 2019.

*Accommodation & food services, manufacturing and administrative & support services are the next largest sectors.*

**73,100 jobs**

Heathrow supported in air transport across the study area in 2019.

*Over half (55%) of all jobs reliant on Heathrow across the study area.*

## CATALYTIC ACTIVITY

In addition to the above, Heathrow also provides catalytic benefits to the local economy. Businesses are attracted to the study area to benefit from proximity to and the connectivity offered by Heathrow Airport, but have no links, either directly or indirectly, to the airport itself.

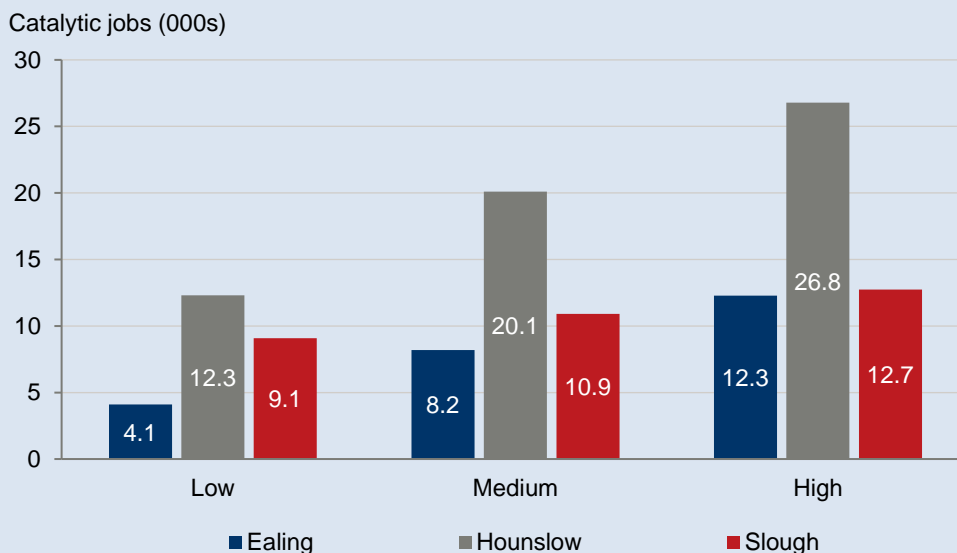
It is outside of the scope of this study to provide a detailed survey of local businesses, required to estimate the scale of catalytic impacts.

However, we may draw on a Parsons Brinkerhoff (2013) estimate that catalytic employment across Ealing, Hounslow, and Slough could have ranged between 26,600 and 51,800 in 2010, with a mid-point estimate of 39,200 jobs—which would equate to an additional 31% of jobs, on top of our estimate of the direct, indirect, and induced effects.

Even excluding three of the local authority areas in our study area, this highlights the potentially significant number of additional jobs in the local economy that may wholly or at least in part owe their location to Heathrow that are not captured in this estimate.

However, we do not attempt to quantify the overall catalytic impacts as part of this study. In part, this is due to the methodological issues in measuring these impacts: proximity to a major airport is typically among many factors, alongside access to a suitably skilled pool of labour and broader infrastructure and connectivity considerations, that determine where businesses locate. Difficulties arise in attempting to disentangle these various factors. But largely, we expect that catalytic impacts are unlikely to be affected by a slowdown in activity at Heathrow. This is particularly if, as expected, passenger numbers recover in the short-to-medium term.

**Fig. 15. Parsons Brinckerhoff catalytic employment, Ealing, Hounslow and Slough, 2010**



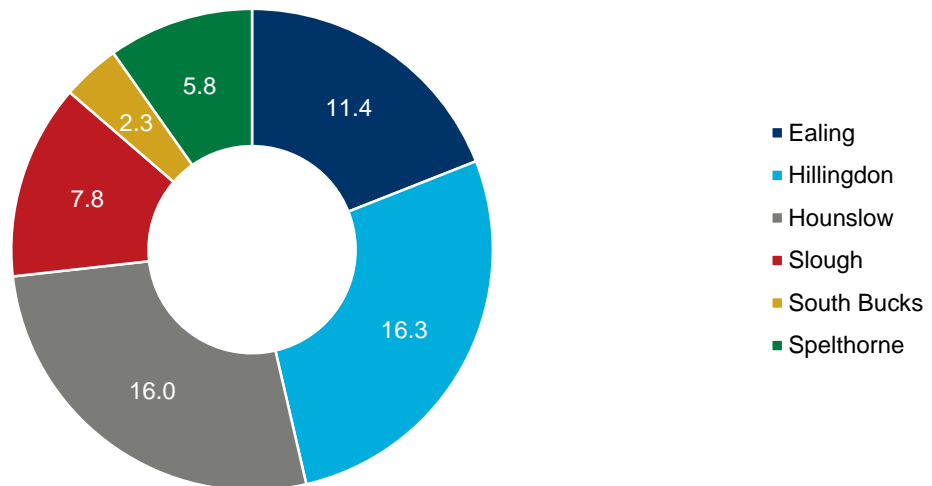
Source: Parsons Brinckerhoff

## 2.6 RESIDENT EMPLOYMENT

In total, Heathrow supported the employment of **59,700 resident workers** living across the study area in 2019. Alongside the 32,600 employees directly employed at the airport, a further 27,100 residents of the study area are employed in either off-airport, indirect, or induced jobs.

**Fig. 16. Resident employment, study area, 2019**

Resident employment (000s)

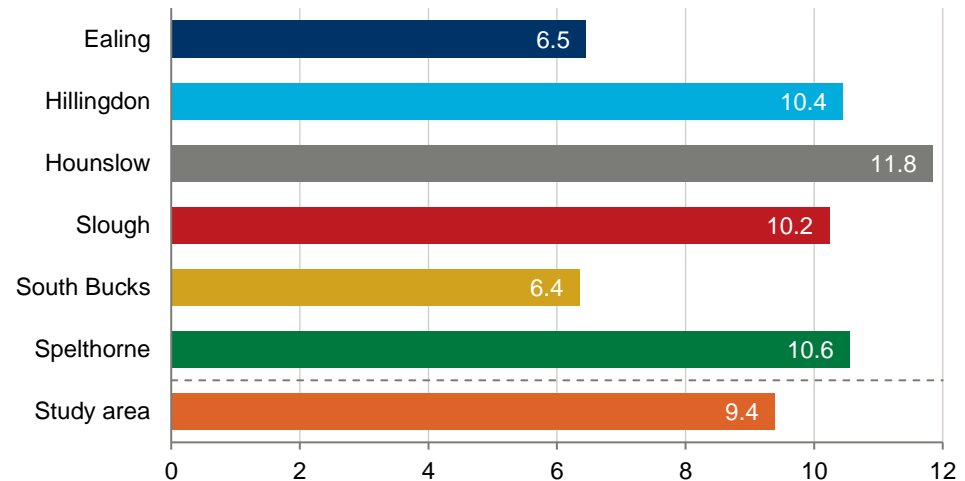


Source: Oxford Economics

While workplace jobs are concentrated in Hillingdon, commuting patterns indicate that resident employment is more evenly distributed. Hillingdon supported the most resident workers (16,300), just over a quarter of the total, followed closely by neighbouring Hounslow (16,000). In total, Heathrow supported **9.4% of resident employment** across the study area.

**Fig. 17. Share of total resident employment, study area, 2019**

Resident employment (%)



Source: Oxford Economics

**16,300**

Residents of Hillingdon employed as a result of activity at Heathrow in 2019.

*Followed by Hounslow (16,000) and Ealing (11,400).*

**9.4%**

Resident employment across the study area reliant on activity at Heathrow in 2019.

*Ranging from 11.8% in Hounslow to 6.4% in South Bucks.*

## 2.7 SUMMARY

Our analysis shows that, before the onset of the pandemic and the subsequent lockdown, Heathrow Airport provided a considerable economic contribution to the study area economy, summarised in Fig. 18 below.

**Fig. 18. Heathrow's economic contribution to the study area, 2019**



## 3. THE ECONOMIC IMPACT OF REDUCED ACTIVITY AT HEATHROW

### 3.1 INTRODUCTION

The future of Heathrow Airport is uncertain and subject to changes in UK Government policy, as well as national travel policies around the world. It will also be influenced by general perceptions of the safety and need to travel, changes in air travel costs, and changes in working habits (e.g., more remote working and adoption of IT).

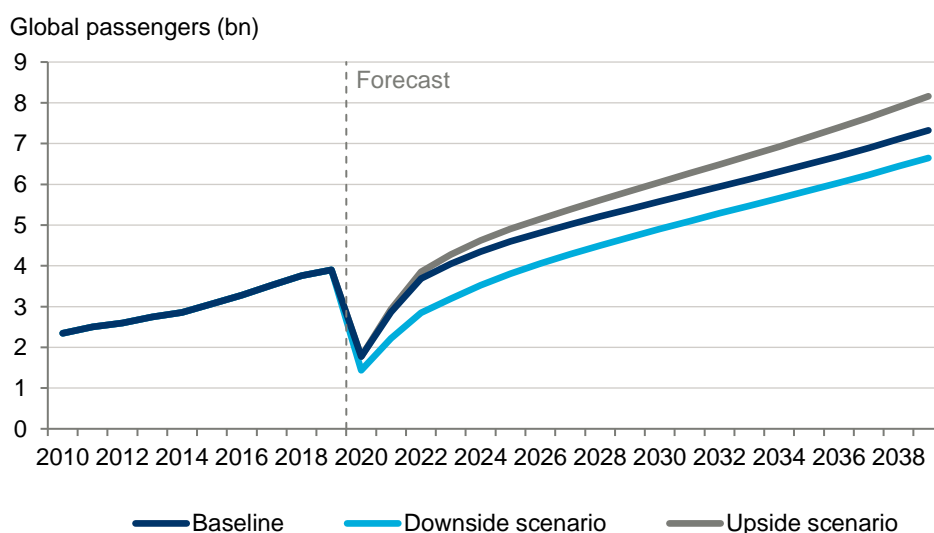
The full impact of these issues will be revealed in due course, but to model the impact of reduced activity at Heathrow Airport, we have made a number of assumptions that drive three alternative recovery scenarios and hence impact direct jobs, both on- and off-airport, over the next five years.

### 3.2 OUTLOOK FOR THE RECOVERY OF THE AVIATION SECTOR

Tourism Economics (TE) and the International Air Transport Association (IATA) forecast that the number of global air passenger journeys will grow by 3.2% per year over the next 20 years (as of July 2020). However, these forecasts are subject to uncertainty, with risks particularly in the short term weighing on the downside.

The baseline forecast expects global passenger numbers to fall by 55% in 2020, followed by a strong bounce back in 2021. However, passenger numbers are not expected to surpass 2019 levels until 2023—in either the baseline scenario or the upside scenario, which assumes a quicker return to pre-crisis trends. However, the downside scenario, which reflects an intensification of the crisis, results in a steeper contraction in passenger numbers in 2020 (63%) and a slower and more prolonged recovery, eventually returning to pre-crisis levels in 2026.

**Fig. 19. Air passenger flows, global, 2010 to 2039**



Source: Tourism Economics

**54.6%**

The fall in global air passenger numbers in 2020 in the baseline forecast.

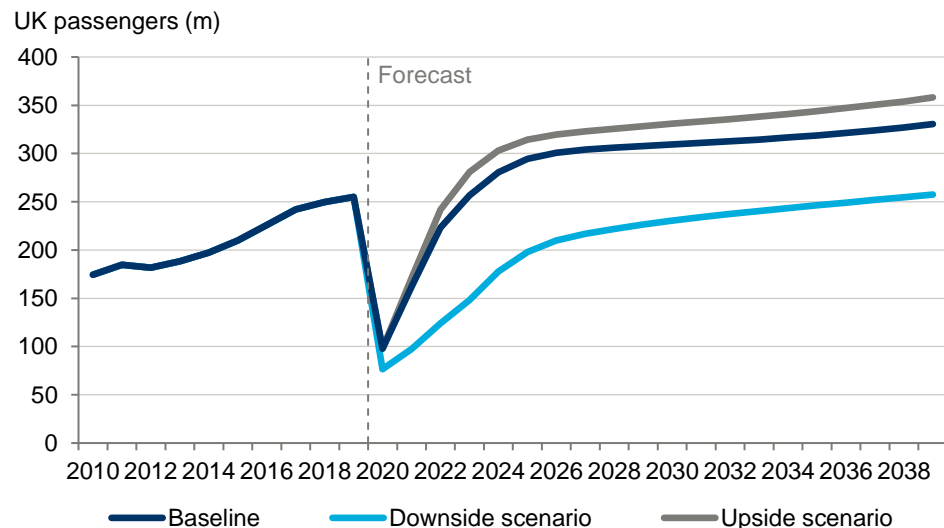
*Air passenger flows are not expected to recover to pre-crisis levels until 2023.*

**UK air passenger flows are expected to be more severely affected by the crisis.** In both the baseline and upside scenario, passenger flows are expected to fall by over two-fifths (62%) in 2020, before recovering in 2023—or late 2022 in the upside scenario. The downside scenario, however, reflects a more permanent change in the nature of air travel: it reflects both a steeper contraction in 2020, with passenger flows falling by three-quarters, and a slower recovery that will not see passenger numbers return to pre-crisis levels for another two decades.

**Fig. 20. Air passenger flows, UK, 2010 to 2039**

**61.7%**  
The fall in UK air passenger numbers in 2020 in the baseline forecast.

*Air passenger flows are not expected to recover to pre-crisis levels until 2023.*



Source: Tourism Economics

Jobs in cargo, distribution, and storage activities are also vulnerable given a significant volume of air cargo travels through passenger planes. Oxford Economics' baseline outlook for UK trade in non-energy goods provides an approximate measure of how air cargo movements may change over time.

Our forecasts (as of July 2020) indicate that non-fuel imports are expected to fall by 19% in 2020, with non-fuel imports similarly contracting by 12%. While the magnitude of contractions in 2020 is not as severe as air passenger flows, we expect non-fuel trade to take longer to recover: imports and exports will not return to pre-crisis values until 2026 and 2027 respectively, in real terms.

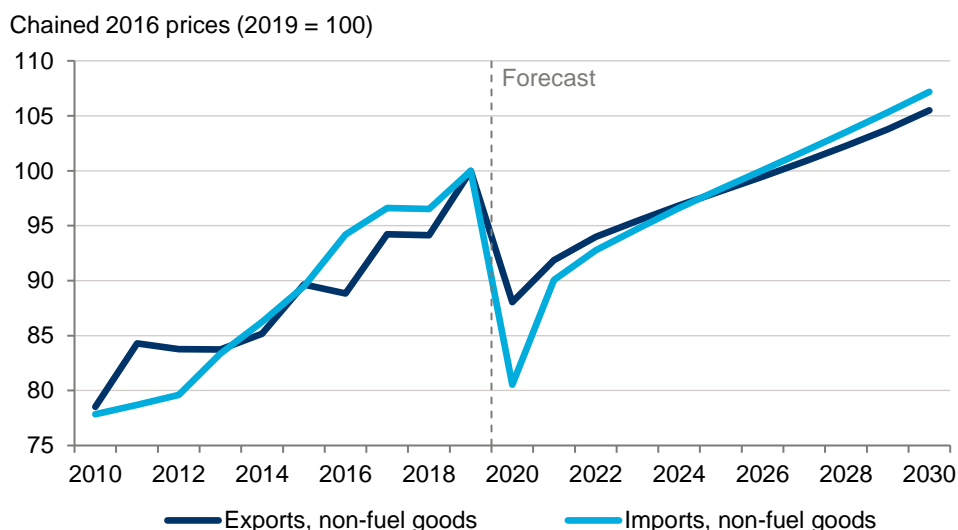
It is therefore reasonable to assume that activity linked to cargo, distribution, and storage could experience a more prolonged reduction in employment, compared with other activities at or linked to the airport.

19%

The fall in non-fuel imports in 2020.

*Non-fuel imports will not return to pre-crisis levels until 2026.*

**Fig. 21. Volume of exports and imports of non-energy goods to the UK**



Source: ONS, Oxford Economics

### 3.3 OUR MODELLING APPROACH

Despite the expectation of a recovery in passenger numbers over the coming three years, major aviation businesses have announced their intention to cut their workforces. British Airways<sup>14</sup>, Virgin<sup>15</sup>, and EasyJet<sup>16</sup> have all suggested they might cut the size of their workforces by around 30%. It is therefore reasonable to assume that once the Coronavirus Job Retention Scheme has been removed (or even as the nature of financial support changes) there could be job losses at Heathrow in the businesses that operate directly at the airport and/or in the direct off-airport activity.

However, it is not clear how exposed Heathrow Airport is to these reductions. As the UK's main hub airport, there is potential for airlines to consolidate international flights at Heathrow, and hence it is reasonable to expect that the airport could be somewhat insulated from the full scale of these cuts. As a result, in our central scenario we assume a 25% reduction (from 2019 estimates) in the following roles in 2020:

- Passenger services, sales and clerical staff;
- Air cabin crew;
- Pilots/air traffic control/flights operations; and
- Apron, ramp, cargo, drivers, baggage staff.

In our downside scenario we change our assumption to a 30% reduction, while the upper scenario factors in a 20% reduction. There is no suggestion of when these cuts will happen and as such, we assume all of them take place in 2020.

Beyond 2020, employment in these roles has been grown forward using TE/IATA forecasts on passenger flows. In doing so it allows employment in

<sup>14</sup> <https://www.ft.com/content/abc6355a-3801-4e32-a992-f55e475d4454>

<sup>15</sup> <https://www.bbc.co.uk/news/business-52542038>

<sup>16</sup> <https://www.theguardian.com/business/2020/may/28/easyjet-plans-to-cut-up-to-30-per-cent-of-staff-because-of-covid-19-crisis>



roles associated with airlines to react to the gradual recovery in air passenger travel that is expected across the UK.

Given that other roles at the airport, such as catering & retail, are more closely related to the volume of passengers flowing through the airport, we link employment in these roles to the change in TE/IATA's passenger flow forecasts. We use TE/IATA's baseline outlook on passenger flows to drive our central scenario, while the upper and downside scenarios feed into our alternative futures.

We assume that a critical mass of the rest of the on-airport jobs is required for the airport to operate, and although employment is vulnerable to such a significant fall in activity at the airport, certain jobs are relatively more insulated from cuts by the airlines and/or by reduced passenger volumes. We therefore link employment growth in our central scenario to Oxford Economics' baseline forecasts for air transport employment in the London Borough of Hillingdon. The roles affected include:

- Management/professional;
- Cleaning & housekeeping;
- Customs, immigration, police & fire;
- Security, passenger search, access control; and
- Other.

We use Oxford Economics' upside and downside scenario forecasts to drive our two alternative upside and downside recovery scenarios. For direct off-airport employment we use Oxford Economics' sectoral forecasts for the transport & storage sector to push forward jobs closely linked to this broad sector, and use the growth profile for accommodation & food services to inform our forecasts for the hospitality industry. Once again, we use Oxford Economics' upside and downside forecasts to drive our faster and more prolonged recovery scenario respectively.

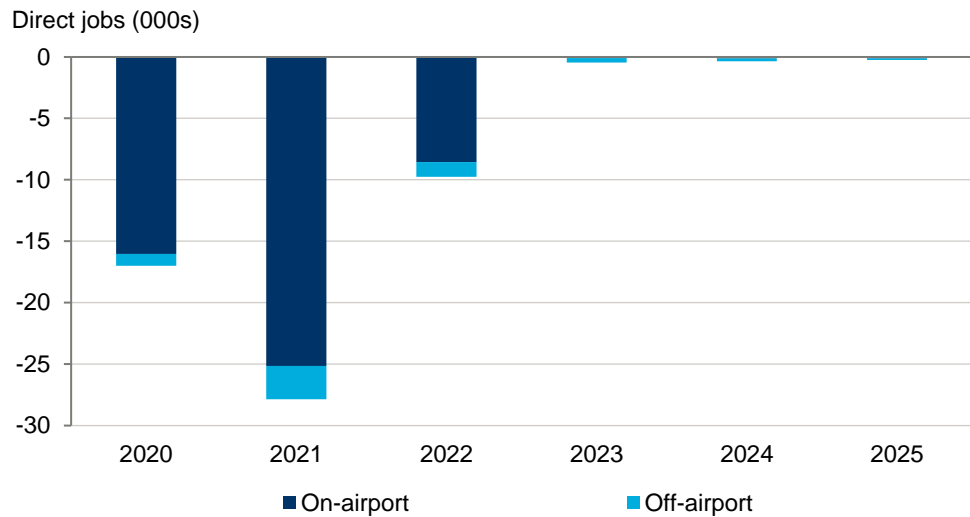
### 3.4 CENTRAL SCENARIO

In the **central scenario**, we estimate that the direct impact associated with Heathrow will fall to around 71,800 jobs in 2020, 17,000 fewer than 2019 levels, equivalent to a 19% fall. The loss of jobs will be largely at the airport (16,000 jobs), with an additional loss of 1,000 off-airport jobs.

Employment in 2020 is to some extent protected by the Coronavirus Job Retention Scheme. Our central scenario assumes a further fall in employment in 2021, to 61,000 jobs. This represents a fall of **27,900 direct jobs**, 31% fewer than in 2019.

**Fig. 22. Direct jobs impact, central scenario, 2020 to 2025**

**27,900**  
Fewer direct jobs in 2021,  
relative to 2019.  
  
*Mostly due to a loss of  
25,100 (33%) of on-airport  
jobs.*



Source: Oxford Economics

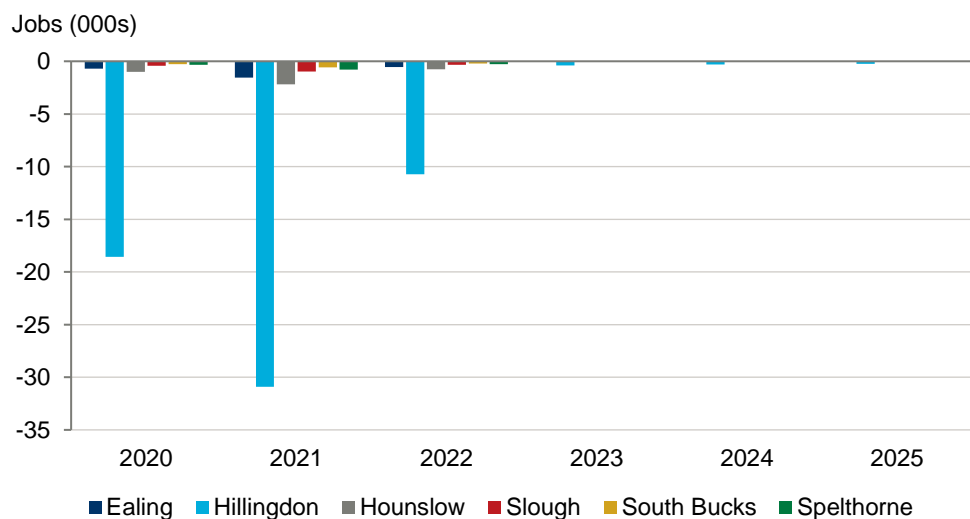
When accounting for the indirect and induced effects, in the central scenario we estimate that employment associated with Heathrow will fall by 21,300 jobs in 2020. A significant majority of jobs will be lost in Hillingdon (18,600).

Our central scenario assumes a further fall in employment 2021, resulting in **37,000 fewer jobs** than 2019, a fall of 28% levels. Indeed, such a loss of employment amounts to over 5% of all jobs across the study area in 2019. Heathrow's contribution to GVA falls to £8.4 billion in 2021 (in 2016 prices), £4.0 billion lower than in 2019. This amounts to a loss of 7.4% of pre-crisis GVA across the study area economy as a whole in 2019.

However, our central scenario assumes a sharp rebound in 2020. Indeed, employment is expected to broadly return to pre-crisis levels by 2023.

**Fig. 23. Total jobs impact, central scenario, 2020 to 2025**

**37,000**  
Fewer total jobs in 2021,  
relative to 2019.  
  
*Mostly located in Hillingdon  
(30,900 fewer jobs).*



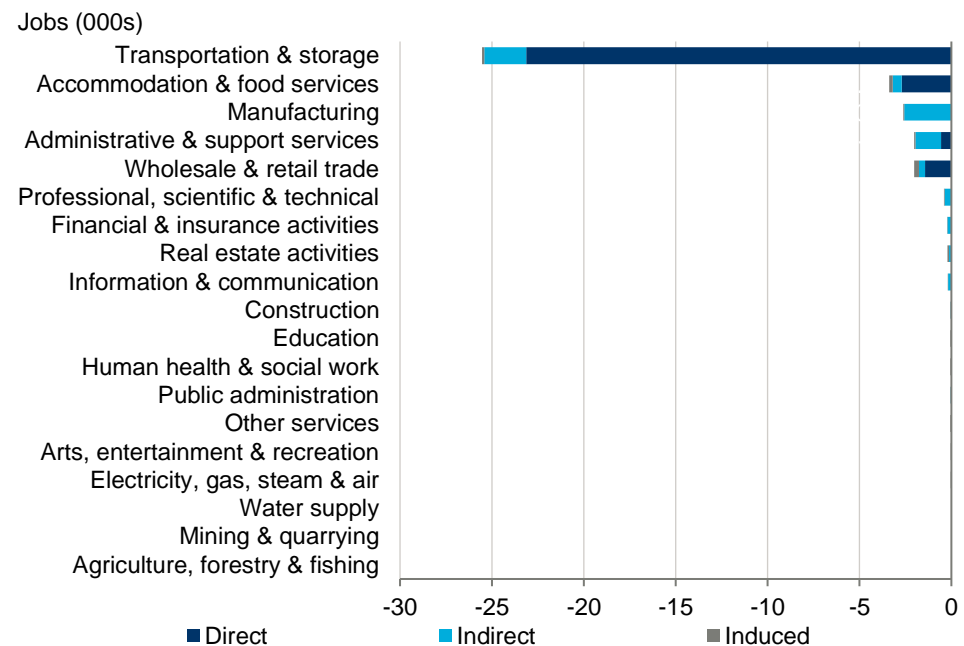
Source: Oxford Economics

Job losses in 2021, at the peak of the drop in activity, will be concentrated in the **transportation & storage** sector. Alone it will account for 25,500 job losses, equivalent to 69% of the overall total, which are mostly direct on-airport jobs in Hillingdon.

Other larger sectors—accommodation & food services, manufacturing, administrative & support services, and wholesale & retail trade—will see most of the remaining job losses.

Although all sectors of the economy will be affected, job losses elsewhere are mostly associated with lower induced impacts—the consumer spending arising from direct and indirect employment associated with Heathrow—and will be relatively low in magnitude.

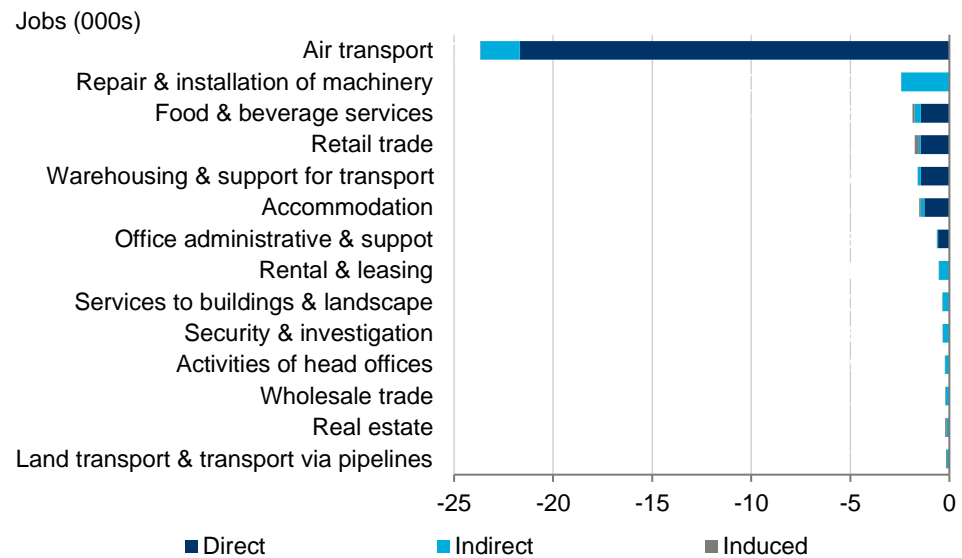
**Fig. 24. Total jobs impact by broad sector, central scenario, 2021**



A more granular analysis of job impacts, considering the 88 detailed sectors of the economy, indicates that almost all job losses in the broader transportation & storage sector will be in **air transport**, which will see 23,700 fewer jobs in 2021 than in 2019. Air transport alone amounts for almost two-thirds of all jobs lost as a result of the slowdown at Heathrow.

A loss of jobs in air transport will result in a further loss of 2,400 mostly supply chain jobs in the **repair & installation of machinery**—the second most-impacted detailed sector. Warehousing & support for transport (1,600 jobs) will be proportionately less impacted by the downturn at Heathrow. This in part reflects the comparative resilience of cargo operations at the airport.

**Fig. 25. Total jobs impact by detailed sector, central scenario, 2021**

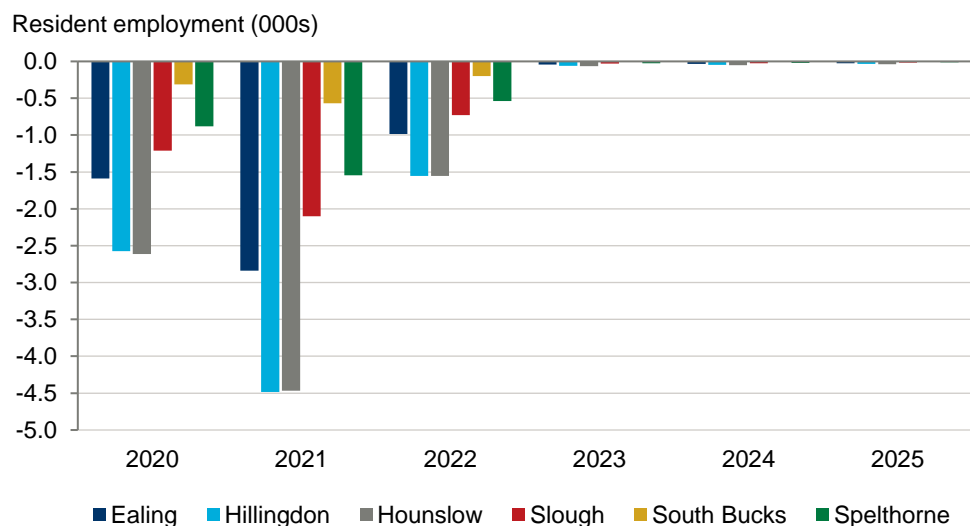


Source: Oxford Economics

Excludes detailed sectors with fewer than 100 job losses in 2021.

While we have so far considered workplace job impacts, reflecting the location in which jobs exist, we may also consider resident employment. We estimate that resident employment will fall by 9,200 workers in 2020, and **16,000 fewer resident workers in 2021**. This equates to a loss of 27% of employment linked to Heathrow in 2019, and 2.5% of all resident employment across the study area economy in this year. Resident employment impacts will be concentrated in Hillingdon and Hounslow, both amounting to around 4,500 fewer workers in 2021, relative to 2019.

**Fig. 26. Resident employment impact, central scenario, 2020 to 2025**



Source: Oxford Economics

Approximately 11,200 of the lost resident jobs will be “direct”, most of which will be direct on-airport. Our economic impact model draws on commuting patterns of workers both on-airport and across the economy as a whole to estimate

**23,700**

Fewer air transport jobs in 2021, relative to 2019.

*Most job losses in the broader transportation & storage sector will be in air transport activities.*

**16,000**

Fall in resident employment in 2021, relative to 2019.

*Equivalent to 27% of employment reliant on Heathrow in 2019.*

resident employment impacts. As this approach does not differentiate between different occupation types or sectors of the economy, we do not specifically measure the sectoral composition of jobs lost by residents.

However, as the types of jobs residents tend to take up (Fig. 8) broadly correspond to the sectors that are most affected (Fig. 24), we can infer that the sectoral mix of resident job losses will be broadly similar to the workforce. Job losses will be concentrated in the transportation & storage sector, which alongside accommodation & food services, wholesale & retail trade and, to a lesser extent, administrative & support services contribute most direct job losses. Further job losses are likely to occur in the manufacturing sector as a result of reduced supply chain activity.

### A NOTE ON CATALYTIC IMPACTS

The catalytic effects of Heathrow Airport are likely to be significant. As set out in Section 2, previous estimates place the catalytic impacts at between 26,600 and 51,800 jobs in 2010, across just three of the local authority areas in our study area.

Clearly most businesses will have suffered from the lockdown and disruption to global supply chains, and may continue to face challenges as local, national, and global economies gradually recover. Changing working practices driven by widescale remote working over recent months may also influence businesses' location decisions in the long run. But how might these businesses be impacted by reduced activity at Heathrow in the short-to-medium term?

It is unlikely that "catalytic" businesses already located in the study area will relocate over our time horizon (to 2025) as a consequence of a reduction in air travel, cargo volumes, and/or destinations served by Heathrow Airport. Many such firms benefit from proximity to a major airport: with a reduction in activity across the aviation sector, few viable alternative locations may exist domestically—particularly if airlines seek to consolidate activities at Heathrow. Similarly, assuming the UK air travel policies are not materially different from others in the world, businesses are unlikely to benefit from moving elsewhere. However, a more "permanent" reduction in activity at the airport—such as in the downside scenario set out in Section 0—could cause local firms to assess where they locate and how they operate.

Instead, catalytic impacts may exist in relation to the loss of investment that would otherwise have occurred across the local economy, due to it being either cancelled or redirected elsewhere as a result of a reduction in air travel, cargo volumes, and/or destinations served by Heathrow Airport. However, as there is no meaningful way to disentangle the impacts of reduced activity of Heathrow from the wider impacts of the pandemic-driven recession and broader behavioural changes, we do not attempt to quantify the catalytic impacts of reduced activity at Heathrow over our study time horizon.

### 3.5 ALTERNATIVE SCENARIOS

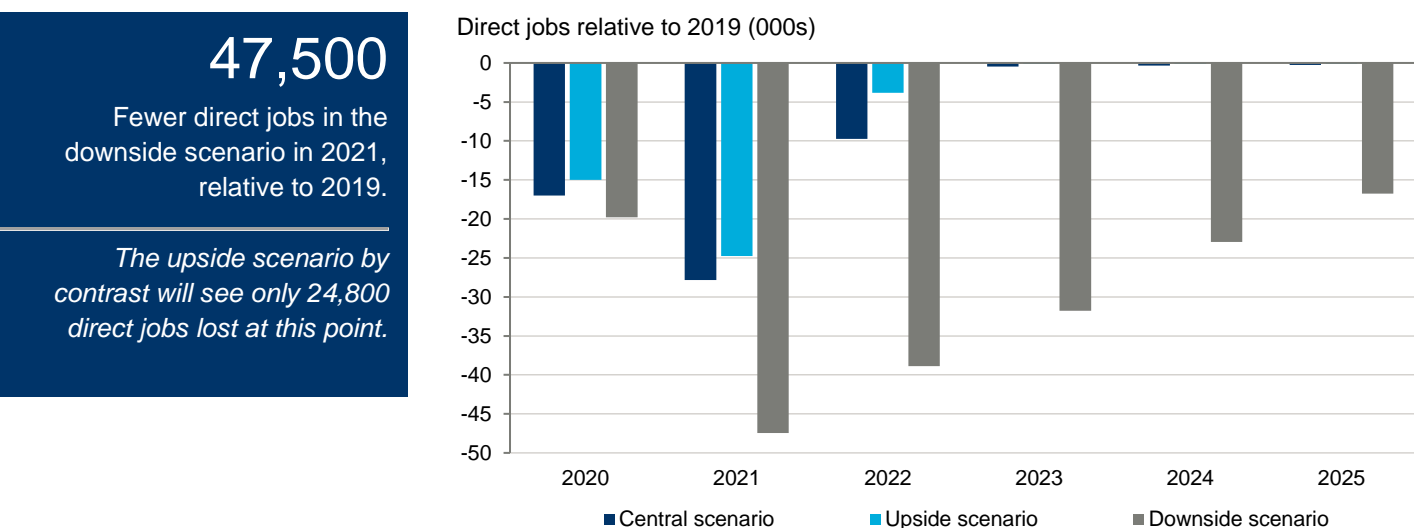
Mirroring our assumptions on the impact on airline workforces, and our economic and passenger flow forecasts, we consider two additional scenarios.

In the **upside scenario**, we estimate a dampened direct job impact: employment will fall by 15,000 direct jobs in 2020, and 24,800 direct jobs in 2021. The upside scenario reflects an accelerated recovery from this point

onwards, with only 3,800 fewer direct jobs in 2022 relative to pre-crisis levels, compared with 9,800 in the central scenario.

While the **downside scenario** reflects both a deeper loss of jobs in 2020—19,800 fewer than in 2019—the greatest impacts arise in 2021. With the loss of employment otherwise protected by the furlough scheme, and the aviation sector adjusting to both lower passenger numbers and a weaker rate of recovery, direct employment will fall to 41,400 jobs in 2021, 47,500 or 53% fewer than pre-crisis levels. While both the central and upside scenarios see direct employment broadly return to pre-crisis levels by 2023, the recovery in the downside scenario is somewhat lower: by 2025, the airport will continue to support 16,800 fewer direct jobs than in 2019.

**Fig. 27. Direct jobs, alternative scenarios, 2020 to 2025**



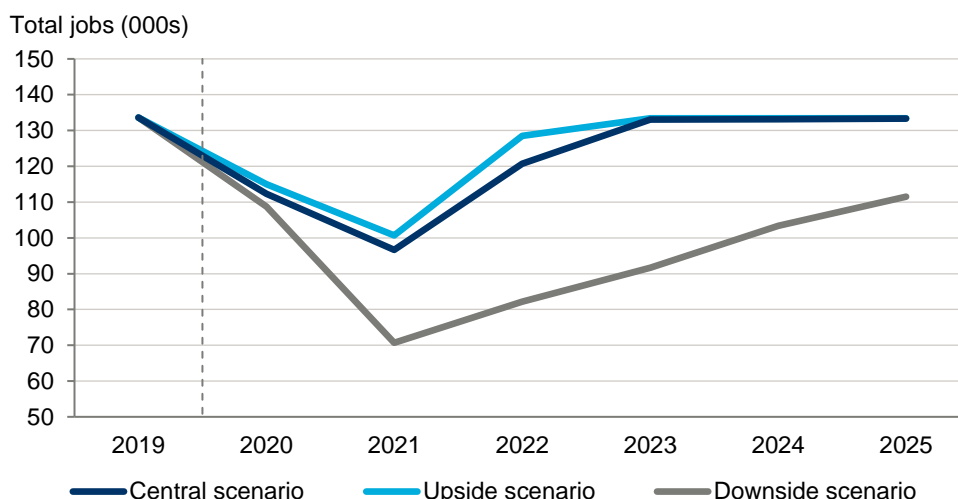
Source: Oxford Economics

The impacts of a loss of on- and off-airport employment will cascade through the local economy, resulting in less supply chain and consumer spending. Overall employment broadly reflects the direct job impacts outlined above.

The **upside scenario** will see total employment fall to 100,700 jobs in 2021, 32,800 fewer than pre-crisis levels, but supporting 4,100 more jobs than at the same point in the central scenario. The profile of recovery will be broadly similar, with total employment supported by the airport returning to pre-crisis levels in 2023.

The **downside scenario**, however, reflects a sharper downturn in employment. By 2021, the airport will support just 70,700 jobs across the study area, representing just over half the pre-crisis levels. A slower recovery of activity at the airport in this scenario will see 22,100 fewer jobs by 2025 than pre-crisis levels, or either of the alternative scenarios.

**Fig. 28. Total jobs, alternative scenarios, 2019 to 2025**

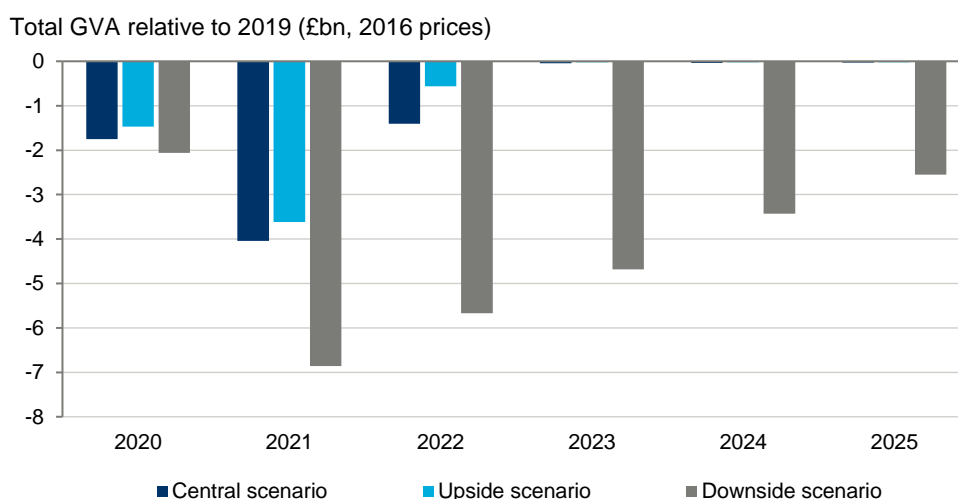


Source: Oxford Economics

The impact of these scenarios can also be measured in terms of GVA contribution to GDP. At the peak in 2021, the loss of GVA associated with reduced activity at Heathrow will range from £3.6 billion in the upside scenario to £6.9 billion in the downside scenario (in 2016 prices). When compared with pre-crisis levels, this amounts to **a contraction of 6.6% to 12.6% of overall economic activity** across the study area.

However, the true impact of reduced activity at Heathrow will be compounded by contracting output elsewhere in the study areas in activities unrelated to Heathrow. Although our economic forecasts do not fully incorporate the three scenarios set out above, and hence are not directly comparable, they nevertheless indicate that overall GVA will sharply contract in 2020 and will not recover to pre-crisis levels for a number of years. As a consequence, the overall fall in GVA across the study area is likely to be of a greater magnitude than our Heathrow-specific estimates alone suggest.

**Fig. 29. Total GVA impact, alternative scenarios, 2020 to 2025**



Source: Oxford Economics

**62,900**

Fewer jobs across the study area in the downside scenario in 2021, relative to 2019.

*The study area will support 22,100 fewer jobs reliant on Heathrow by 2025.*

**£6.9bn**

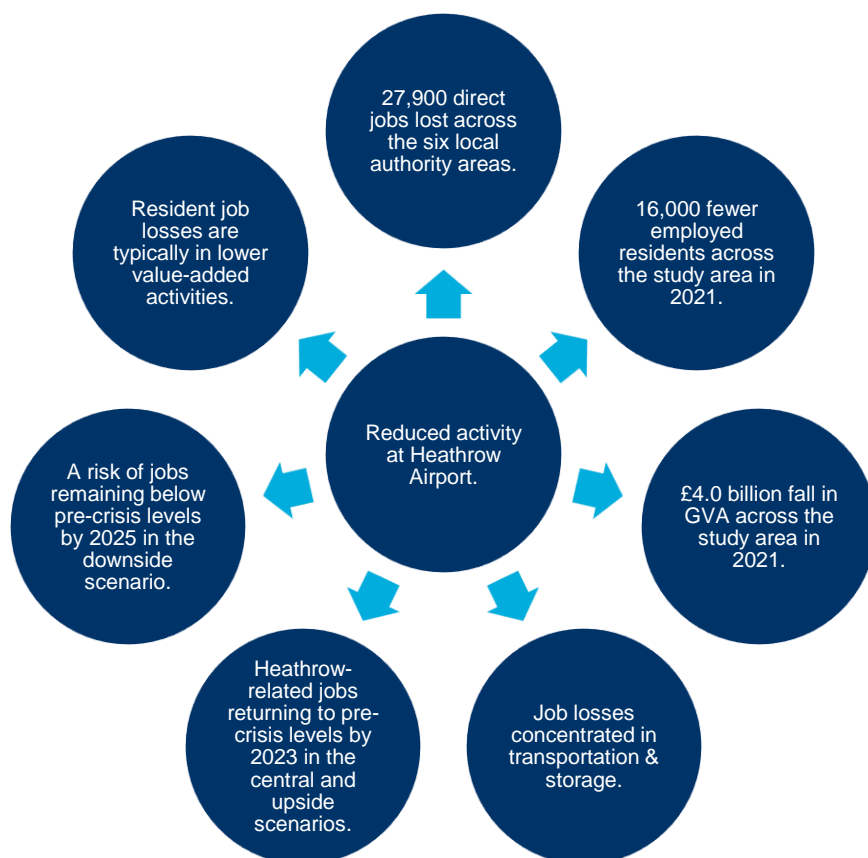
Fall in GVA across the study area in the downside scenario in 2021, relative to 2019.

*Equivalent to 12.6% of the pre-crisis study area economy.*

### 3.6 SUMMARY

Our analysis shows that, across various scenarios, reduced activity at Heathrow Airport will have a significant impact on the study area economy, summarised in Fig. 30 below.

**Fig. 30. The economic impact of reduced activity at Heathrow Airport across the study area**





## 4. WHO MIGHT BE MOST VULNERABLE?

### 4.1 INTRODUCTION

While estimating the scale of job losses in the preceding section, we may also explore the **characteristics of workers** likely to be most affected by reduced activity at Heathrow.

We know from historical survey information that a lower proportion of high value-added on-airport jobs (such as management and IT) are taken by local residents. Similarly, most off-airport jobs are in the lower value-added accommodation & food and transportation & storage sectors. Meanwhile, induced jobs, and to a lesser extent indirect jobs, tend to occur in less productive activities. This suggests that some groups of the population may be more vulnerable to the economics of reduced activity than others.

To explore the characteristics of those most affected by reduced activity at Heathrow Airport, we draw on various sources of information that characterise the workforce. First, we draw on the Heathrow Employment Survey (2013)<sup>17</sup>, which provides an indication of characteristics of the on-airport workforce, which we estimate will account for two-thirds of overall job losses. But this does not capture the characteristics of the off-airport, indirect, or induced jobs that may be lost. We therefore draw on official statistics from the ONS Annual Population Survey (2019) and ONS Census 2011 to explore the characteristics of the study area as a whole and to determine which population groups are most at risk.

As data on the characteristics of the population do not provide the same broad or detailed sectoral disaggregation presented in the preceding chapters, we consider a narrower group of eight sectors. The majority of job losses are expected to occur in the transport & communication sector (25,700 jobs in 2021)—largely in air transport activities—while distribution, hotels & catering (5,400 jobs) will be the next most-affected sector. Collectively these sectors account for six in seven jobs lost as a result of the slowdown at Heathrow.

### 4.2 CHARACTERISTICS OF THE WORKFORCE

#### 4.2.1 Gender

Evidence drawn from the Heathrow Employment Survey demonstrates that more **male workers than female** are employed at the airport. Overall, 62% of respondents were male.

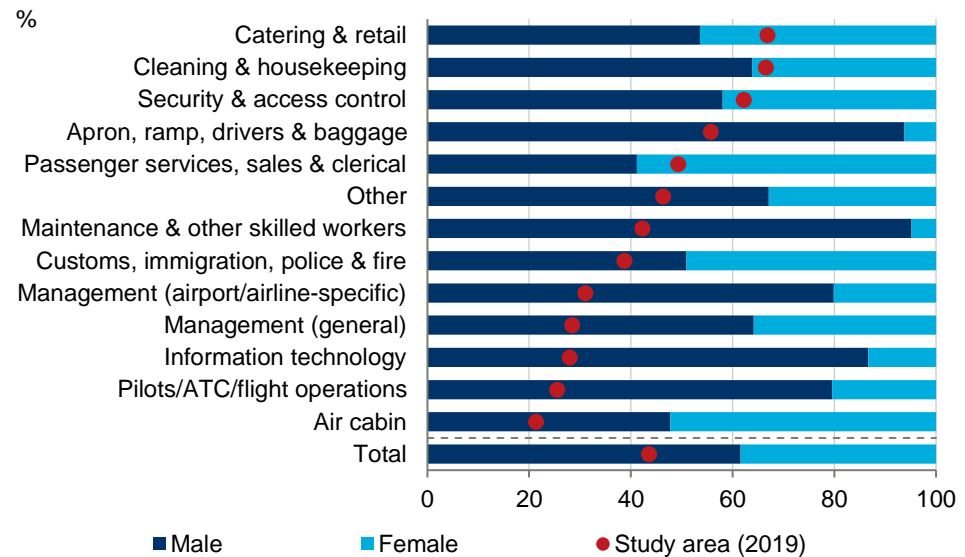
The mix of job types that tend to be taken up by residents shows no overall gender bias. In general, residents of the study area tend to be underrepresented in higher-value occupations, such as managerial,

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<sup>17</sup> Ipsos MORI, (2014); *Heathrow Employment Survey 2013*.  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/368780/02\\_Heathrow\\_Taking\\_Britain\\_Further\\_-\\_Volume\\_2.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/368780/02_Heathrow_Taking_Britain_Further_-_Volume_2.pdf)

pilot/ATC/flight operations, and information technology, that are disproportionately taken up by male workers. However, this is largely offset by a notably higher share of male employment in apron, ramp, drivers & baggage occupations—the majority of whom live locally—and maintenance workers.

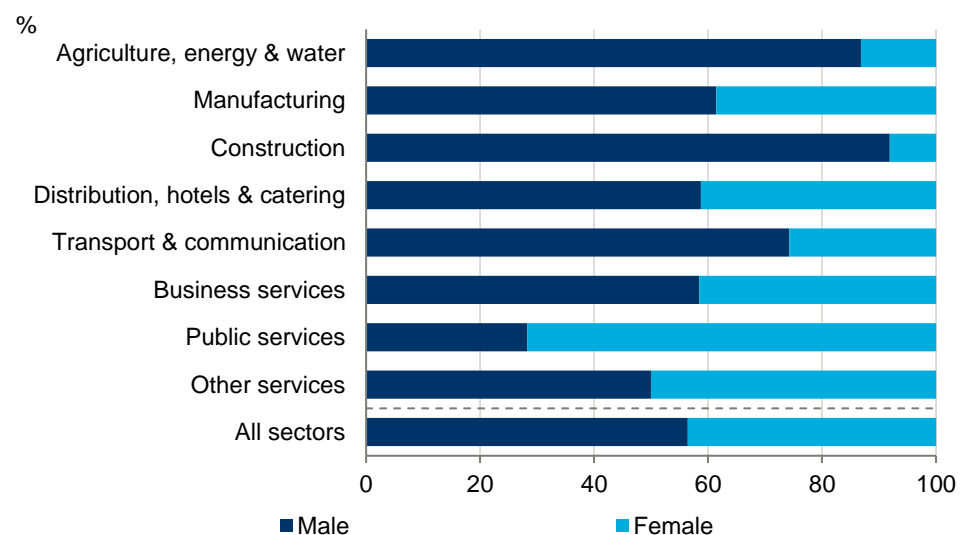
**Fig. 31. Job type by gender, on-airport jobs, 2013**



Source: Heathrow Employment Survey, Oxford Economics

Data on the workforce characteristics across the study area as a whole reinforces the evidence that **male workers** may be most vulnerable. According to the ONS Annual Population Survey, three-quarters of workers in the transportation & communications sector were male in 2019. The gender split in distribution, hotels & catering—the second most-impacted sector—is by comparison broadly representative of the study area economy as a whole.

**Fig. 32. Industry by gender, study area, 2019**



Source: ONS Annual Population Survey

62%

On-airport jobs taken up by men.

*The overall mix of job types taken up by residents implies a share of male workers in line with the total.*

74%

Jobs in transportation & storage taken up by men.

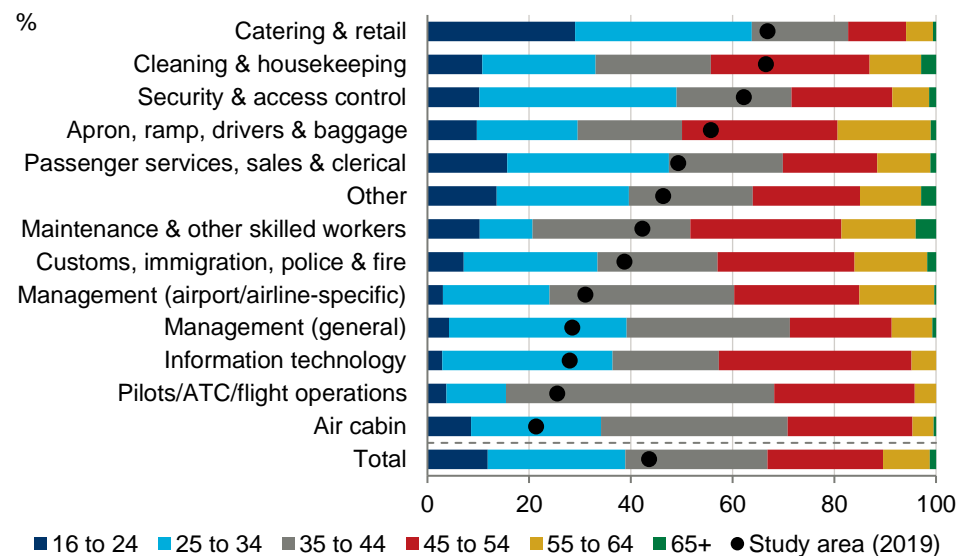
*Only construction (92%) and agriculture, energy & water (87%) employ a higher proportion of males.*

#### 4.2.2 Age and households

The Heathrow Employment Survey provides the age distribution of on-airport workers by job type. When combined with data on the jobs taken by residents, it suggests that residents of the study area are typically employed in job types that support relatively larger shares of **older workers**. This is largely due to a higher proportion of cleaning & housekeeping and apron, ramp drivers & baggage workers, who are typically older in age, although a significant share of catering & retail jobs are taken by residents of the study area and it has a largely young demographic. We also know from the preceding analysis that these job types are more vulnerable to job loss from reduced activity at the airport.

Fig. 33 presents the age profile of on-airport workers by job type. It also shows the share of jobs by type that are taken by residents (e.g. residents of the study area account for almost two thirds of catering and retail jobs at the airport).

**Fig. 33. Job type by age, on-airport jobs, 2013**

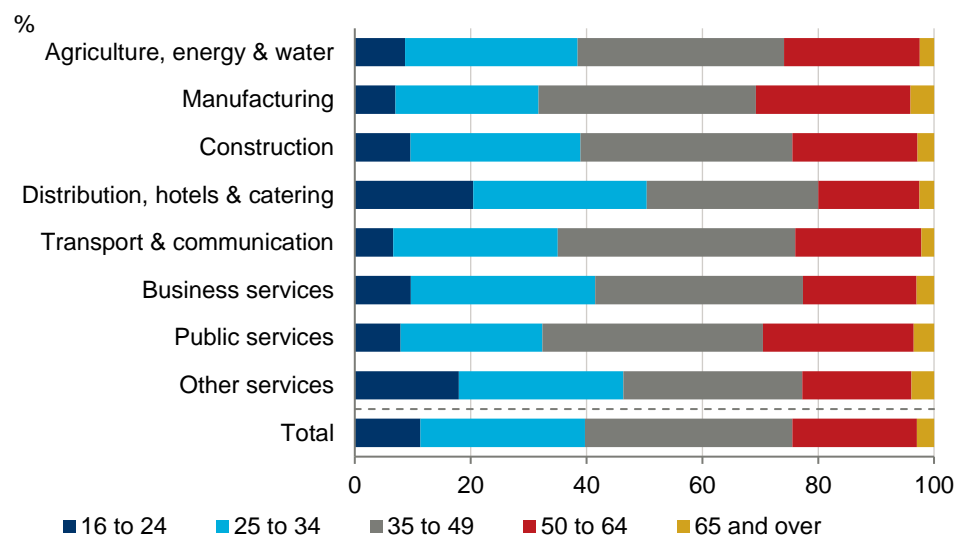


Source: Heathrow Employment Survey, Oxford Economics

The distribution of workers by age adds further evidence that older workers will be most affected. According to the 2011 Census, around a third of workers in transportation & storage across the study area are aged under 35, implying that job losses in this sector will mostly impact older workers.

However, as with on-airport catering & retail jobs, **younger workers will also be affected by losses in distribution, hotels & catering**, which supports the youngest workforce of all sectors of the study area economy.

**Fig. 34. Industry by age, study area, 2011**



Source: ONS Census 2011

**50%**

Distribution, hotels & catering jobs by under 35s across the study area.

*Although comparatively few transport & communication workers are in this age group (35%).*

The loss of employment felt by those in middle-to-older age groups draws into question the extent to which households rely on Heathrow for employment. Evidence from the Heathrow Employment Survey shows that 49% of 35- to 44-year-olds, and 36% of 45- to 54-year-olds, employed at the airport had children under 18 living at home, compared with just 31% across the workforce as a whole. A loss of employment in these age groups may have broader negative implications for households, including those **economic dependents** of workers at Heathrow.

Similarly, the Heathrow Employment Survey considered the prevalence of multiple members of a household relying on the airport for employment. In total, 21% of workers lived with other Heathrow employees, with shares particularly high in Slough (38%), Hillingdon (32%), and Hounslow (31%). A reduction in activity at the airport may lead to multiple job losses within **multiple-income households** where multiple earners are reliant on Heathrow for employment.

#### 4.2.3 Economic activity

The evidence for economic activity varies by sector. According to Census 2011 data, a notable characteristic of the distribution, hotels & catering sector is a high prevalence of part-time work, which accounts for over a third of the workforce, compared with 24% overall. Indeed, this sector amounts to one in three part time workers across the study area—many of whom are likely to be younger in age.

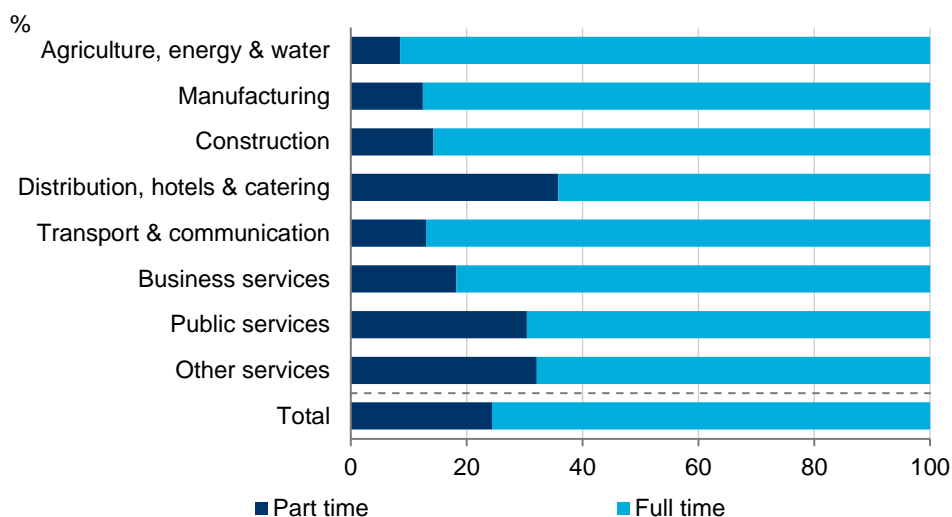
However, just 13% of workers in transport & communication worked part time, implying that **full-time workers** will overall tend to be more vulnerable. Indeed, the Heathrow Employment Survey found a similar proportion of on-airport workers were employed full time (88%).

87%

Proportion of full-time transport & communication jobs across the study area.

*Although more than a third of distribution, hotels & catering workers are part time.*

Fig. 35. Industry by economic activity, study area, 2011



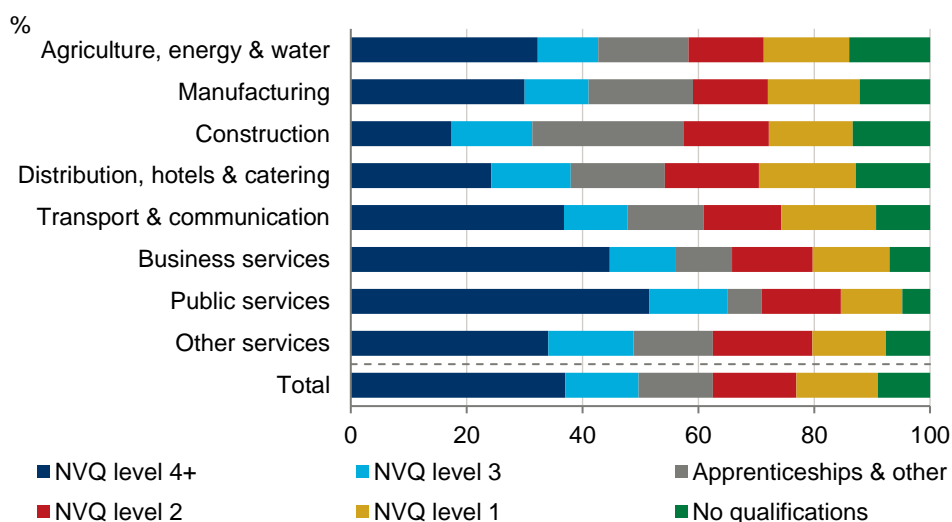
Source: ONS Census 2011

#### 4.2.4 Qualifications

**Less well-qualified workers** will also be more vulnerable. According to the 2011 Census, both the transport & communication and distribution, hotels & catering sectors support a higher share of workers qualified to NVQ level 2 or lower than the economy as a whole. By contrast, more highly qualified workers typically work in sectors such as business and public services that are less exposed to reduced activity at Heathrow.

Less qualified workers losing employment may face greater challenges in finding alternative sources of work, and may require support in **reskilling** to do so. This is especially the case for those workers who have been employed at Heathrow for a considerable period of time—the Heathrow Employment Survey found that two-thirds of workers had been employed at Heathrow for more than three years.

Fig. 36. Industry by qualification level, study area, 2011



Source: ONS Census 2011

46%

Distribution, hotels & catering workers qualified to NVQ level 2 or below.

*The transport & communication workforce (39%) is also relatively less well qualified.*

#### 4.2.5 Geography

Location is also a key component of understanding the potential impacts of a significant loss of resident employment. The Heathrow Employment Survey explored the location of residence of on-airport workers. Analysis of the results at a ward level indicate particular clusters where residents are typically more reliant on Heathrow as a source of employment. A significant loss of employment at the airport may have a particularly **acute impact on these communities**.

#### 4.3 SUMMARY

Reduced activity at Heathrow Airport is likely to impact some groups of the population more than others. Given the concentration of overall job losses that are expected to occur in transportation & storage activities such as air transport (a subset of the transportation & communications sector), the balance of evidence indicates that **male, older, full-time and less well-qualified workers** are most vulnerable. However, this is not to say that job losses will be confined to those matching these characteristics alone. Indeed, many jobs will be lost in distribution, hotels & catering, whose workforce is more evenly balanced between genders, is younger, and supports a relatively high share of part time work.

The characteristics of on-airport workers more specifically indicate that a high proportion of workers support **economic dependents**, such as children, which implies a loss of income may impact multiple household members. Similarly, many **multiple-income households** are formed of more than one worker at the airport, and hence risk being acutely affected by the loss of multiple sources of income as a result of job losses at the airport. Many workers have also been employed at the airport for a considerable **duration**, which may affect their abilities to find alternative work. Meanwhile, the observation that some areas support a higher concentration of on-airport workers indicates that some **communities** may be more vulnerable to job losses at the airport than others.

While both the central and upside scenarios indicate that employment levels will broadly return to pre-crisis levels by 2023, the reduction in activity will lead to a **permanent loss of growth and investment** that may have otherwise occurred. But the economic costs of the sharp downturn in activity at Heathrow may be even more long-lasting. For individuals losing their jobs, a prolonged period out of work can in turn risk weakening the likelihood of finding new work, turning cyclical unemployment into structural unemployment. And in aggregate, high levels of unemployment throughout local communities can lead to a **worsening of living standards and quality of life**. Indeed, severe economic shocks such as the coronavirus crisis, and significant job losses at a major local employer such as Heathrow, can lead to persistent impacts, such as higher levels of unemployment, even once activity has recovered—a factor economists term “hysteresis”. Both local and national policy should recognise these issues in formulating its policy response to reduced activity at Heathrow.

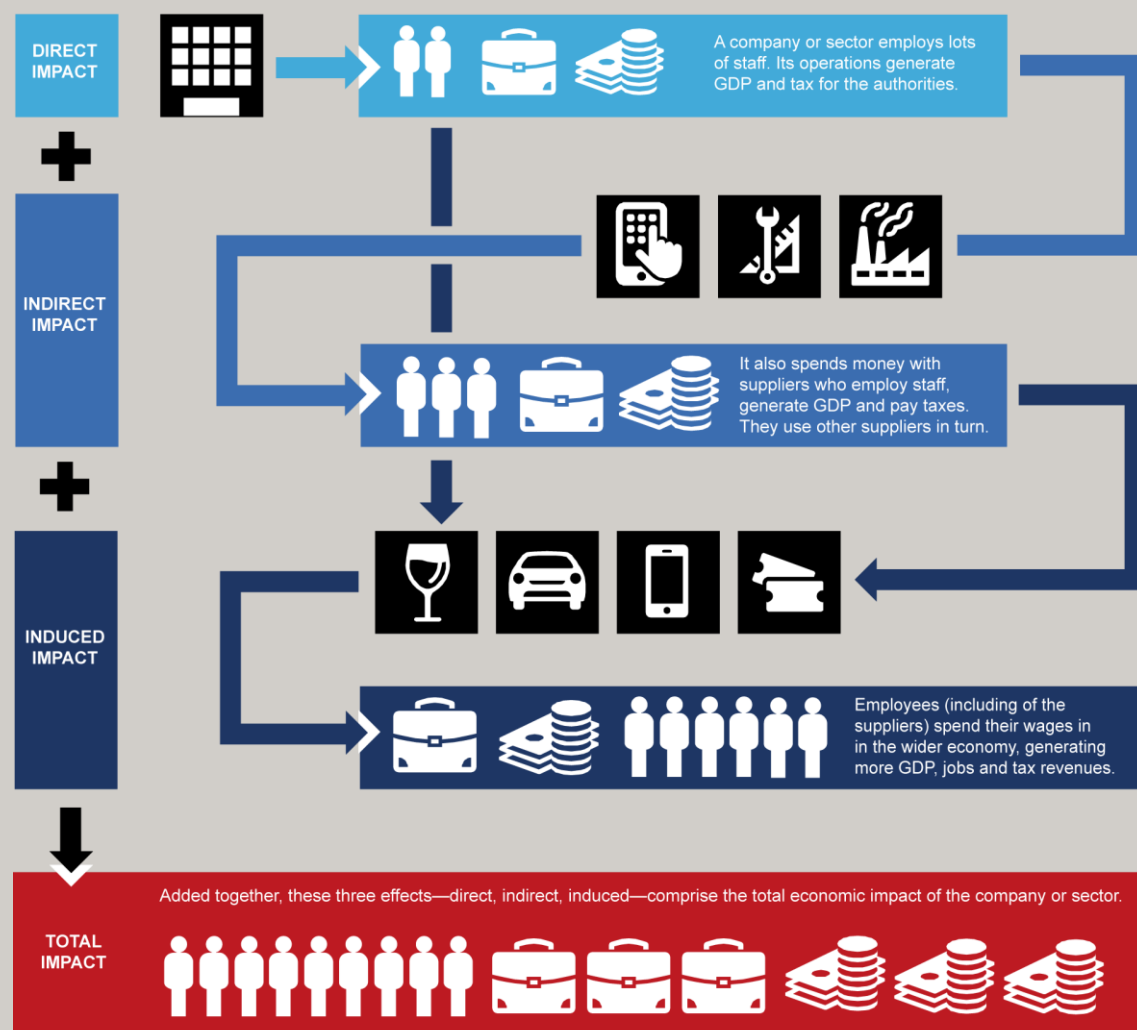
# TECHNICAL ANNEX

## ECONOMIC IMPACT MODELLING

Economic impact modelling is a standard tool used to quantify the economic contribution of a company or, in this case, a group of companies operating at and around a key local asset. Impact analysis traces the economic contribution through three separate channels:

- **Direct impacts:** refer to the direct activity of on-airport businesses and those based off-airport and includes all employees, their wages, and output;
- **Indirect impacts:** consist of activity supported because of the procurement of goods and services by the businesses above. It includes not just purchases by those based at Heathrow and around it, but the subsequent rounds of spending throughout the supply chain.
- **Induced impacts:** refer to activity supported through the consumer spending of those employed directly or indirectly.

Fig. 37. Economic impact assessment



Indirect and induced impacts were estimated using an input-output model. An input-output model gives a snapshot of an economy at any point in time. The model shows the major spending flows from “final demand” (i.e., consumer spending, government spending investment, and exports to the rest of the world); intermediate spending patterns (i.e., what each sector buys from every other sector—the supply chain in other words); how much of that spending stays within the economy; and the distribution of income between employment and other forms such as corporate profits.

In building our impact model we adjusted the UK input-output tables to account for the local characteristics of the local economies of Hillingdon and Hounslow. In doing so we used academic guidelines like those contained in academic papers such as Flegg & Tohmo (2013).<sup>18</sup>

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<sup>18</sup> Flegg, A. T. and Tohmo, T., (2013); “*Regional input-output tables and the FLQ formula: A case study of Finland*”, (Regional Studies, 47 (5). pp. 703–721).



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