

# STAGE 4 REPORT

## JOINT EVIDENCE BASE AND INFRASTRUCTURE STUDY

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# 1 Introduction and Brief

This draft report is part of the Joint Evidence Base and Infrastructure Study, prepared jointly by Arup and Quod. This work is in draft. The findings and conclusions in this draft report represent the views of consultants. They do not form part of the evidence base for any current or draft Local Plans. No policy conclusions can be drawn from this report; it is necessary background work to inform joint working associated with a potential Development Consent Order (DCO) application relating to the expansion of Heathrow Airport.

## Introduction

- 1.1 The Joint Evidence Base and Infrastructure Study (JEBIS) has been commissioned by Heathrow Airport Limited (HAL) and the Heathrow Strategic Planning Group (HSPG).
- 1.2 The intention of the Study is to provide an evidence base for the authorities in the study area, in the context of the wider region and sub-region, concerning the potential impacts of the expansion of Heathrow Airport. The evidence base looks principally at potential impacts on the local economy, labour market and associated demand for employment land and housing. It will assess associated infrastructure requirements to support this level of development.
- 1.3 It is not intended to provide a planning framework for the authorities – it will be up to them, individually, and collectively, as to how they wish to use the evidence base. The work is intended to be ‘non-spatial’ in that it will not make any specific recommendations on the distribution of any growth – this will again be a decision for the authorities arising from the JEBIS evidence, their own evidence and local plans and future joint working.
- 1.4 As agreed by the HSPG, the JEBIS will cover two main parts:
  - Assessment of the potential impact of the Heathrow proposals on local economic development, demand for employment floorspace and on demand/need for housing resulting from increased employment; and,
  - Infrastructure and infrastructure funding to support this development.
- 1.5 The JEBIS is a five-stage study. It is an iterative process, with the findings of each stage tested through consultation and formal workshop sessions with HSPG partners. This is to ensure all key data is being considered and to further define required outputs for future stages through findings of the completed stages. The intention is for an effective and useable evidence base to be produced as a final output, supported by interim reports. This Draft Report is the fourth of five interim reports and follows directly from the Draft Stage 3 Report.
- 1.6 Stages 1 and 2 defined the economic development scenarios for the JEBIS Core Area, bringing together current projections with those for Heathrow to produce combined scenarios, which enabled potential labour and property demand to be identified. Stages 3 and 4 involve testing the implications of these scenarios for their economic impacts and the planning of the local area. Stage 5 will identify what infrastructure is planned and might be required based on these implications.
- 1.7 Stage 2 reviewed Heathrow employment impacts in order to establish the breakdown of current and future Heathrow employment into direct, indirect and induced categories and used the Oxford Economics model to produce central employment growth forecasts.

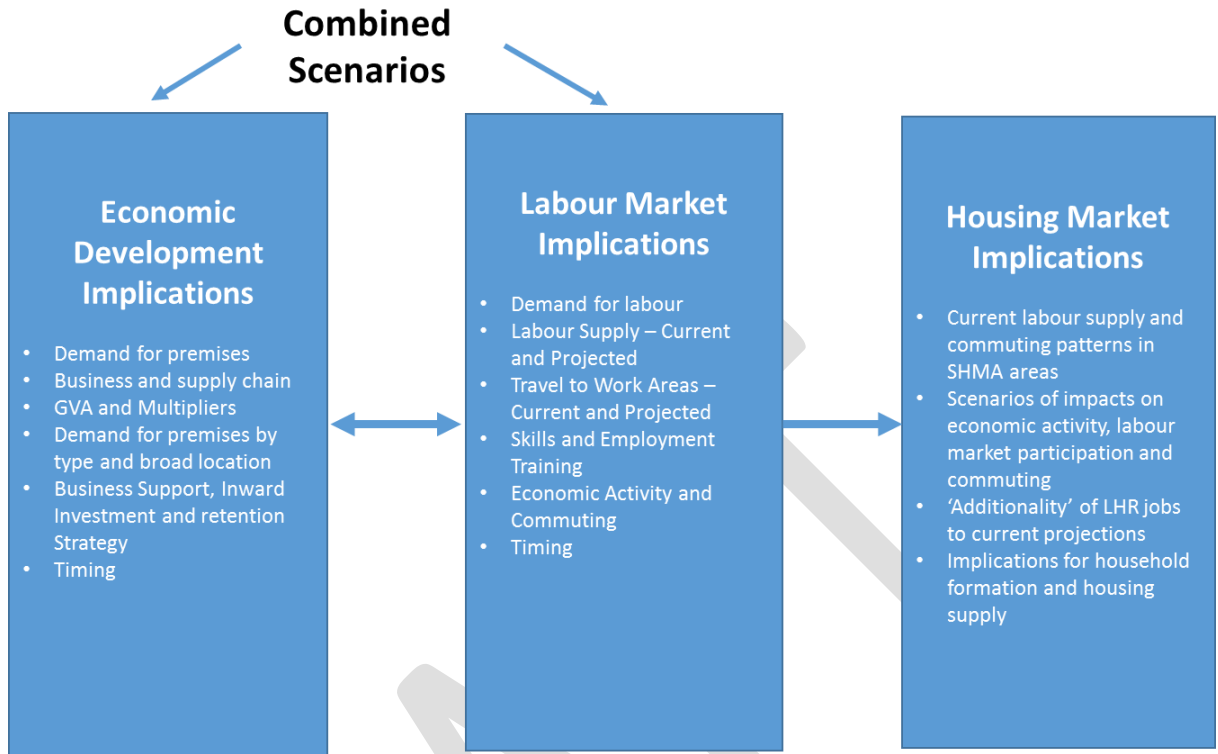
- 1.8 Stage 3 tested the implications of these combined employment growth forecasts on economic development, local labour markets and commercial property markets in the JEBIS Core Area. It presented the outputs of the study's assessment of employment growth in the JEBIS Core Area by borough. It also presented outputs from the Oxford Economics model which forecast how population and labour market characteristics such as total population, commuting and rates of economic activity will respond to employment growth as a result of Heathrow expansion. It also examined how employment growth will be broken down by sector and what commercial development and property market impacts this would have, including examining existing centres of employment and some possible means and locations for accommodating growth.

## **Stage 4: Implications for Housing Growth and Housing Market Areas**

### **Brief**

- 1.9 The purpose of Stage 4 is to examine how employment growth as a result of Heathrow expansion will affect housing need and local housing markets in the JEBIS Core Area. This is closely linked to Stage 3, as both explore how new employment as a result of Heathrow expansion will be filled. New jobs could be filled by future baseline capacity or 'slack' in local labour markets, by increased in-commuting to Heathrow and the JEBIS Core Area, or by new residents moving to the JEBIS Core Area in order to work there. The latter possibility would impact on demand for housing in the JEBIS Core Area and on local housing markets. The purpose of Stage 4 is to examine what the nature of this potential impact could be. Figure 1 below summarises Stages 3 and 4, including the links between the stages.
- 1.10 Each authority (or group of authorities in a Housing Market Area) has its own assumptions about the relationship between jobs, the supply of labour, employment rates and housing need. These are set out in their Local Plan evidence bases and are used as the basis for planning levels of housing growth in each borough.
- 1.11 Stage 4 has reviewed these assumptions and the boroughs' own assessments of future housing need, in order to establish existing Objectively Assessed Housing Need (OAHN). This has been used to establish the degree to which any uplift in housing need as a result of Heathrow expansion would be beyond that which is already planned for. This report will also examine the implications of the Government's new proposals for a set methodology for determining OAHN and the Mayor of London's new housing targets set in the Draft New London Plan (December 2017).
- 1.12 It is also important to understand and model baseline future population and household growth within the JEBIS Core Area. This will provide an important context for how local labour markets will respond to employment growth and how much housing demand will need to be planned for regardless of Heathrow expansion. This will also provide a context for understanding 'additionality' in terms of increased need for housing as a result of Heathrow expansion.

Figure 1: Stages 3 and 4



## 2 Housing Need Impacts and Issues

### Employment Growth

- 2.1 Housing market and housing need implications of Heathrow expansion studied in this report ultimately arise from increased employment, which was studied in Stage 3 and is briefly summarised here. Heathrow expansion will lead to uplift in employment within the Core Area above future baseline growth.
- 2.2 Overall, modelled growth using the Oxford Economics model indicates that employment uplift from Heathrow will consist of approximately 48,175 direct, indirect and induced jobs within the nine JEBIS boroughs, mostly within Hillingdon and Hounslow. This is a 'policy-off' modelling of employment impacts and location which does not account for potential policy interventions that JEBIS authorities could make to attract or direct growth to particular areas.

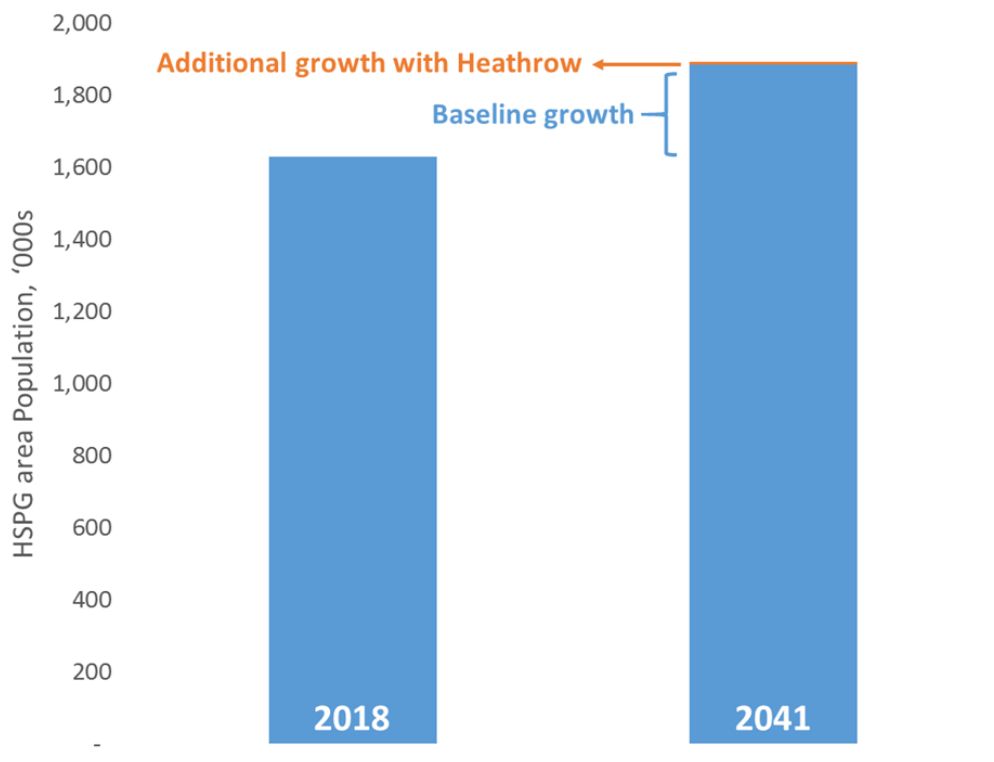
Figure 2: Oxford Economics modelled employment growth (baseline and additional, central case scenario)



### Population and Household Growth

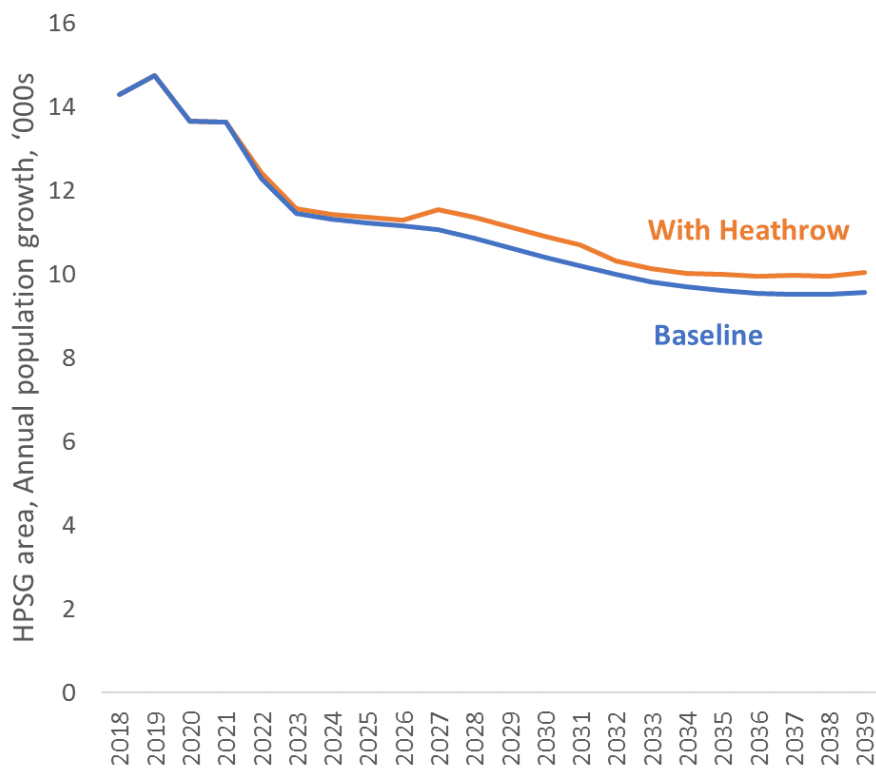
- 2.3 Over the study period to 2041, there will be baseline growth in the population and number of households within the JEBIS Core Area regardless of Heathrow expansion. The Oxford Economics model has forecast this baseline growth based on a variety of measures, including Office for National Statistics ONS national statistics. It forecasts strong baseline population growth in the JEBIS Core Area between 2018 and 2041, rising from 1.63 million residents in 2018 to 1.88 million residents in 2041.

Figure 3: Oxford Economics modelled population growth (baseline and additional, central case scenario)



- 2.4 In the central employment case scenario, the additional growth as a result of Heathrow expansion will only lead to a relatively small additional uplift in population growth over this period, amounting to 10,000 residents (1.89 million residents in 2041 compared to 1.88 million in the baseline scenario). In terms of annual population growth, the difference between the baseline and the “with Heathrow expansion” scenarios is also small, and in both cases annual population growth is expected to peak in 2019 and gradually fall, with Heathrow expansion leading to a small uplift following the opening of the expanded airport:

Figure 4: Oxford Economics modelled annual population growth



- 2.5 A similar uplift is forecast in terms of household growth in the JEBIS Core Area. As with population growth, there is forecast to be strong baseline growth in the number of households up to 2041, with 795,000 additional households in the baseline scenario and 798,000 with Heathrow expansion. With Heathrow expansion, this would amount to on average approximately 7,000 new households per year over the study period.



Figure 5: Oxford Economics modelled household growth

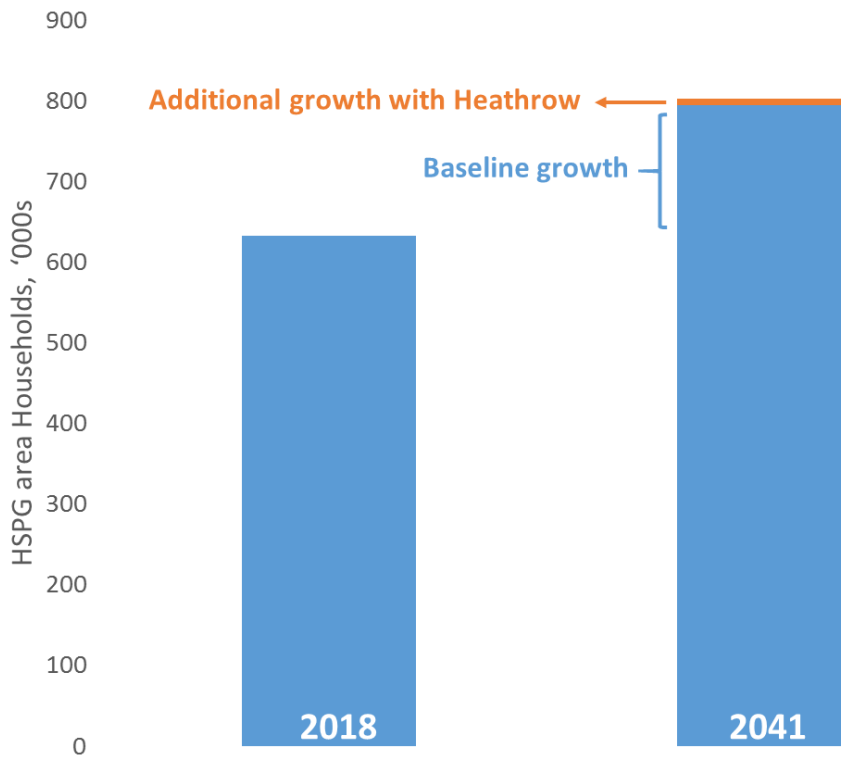
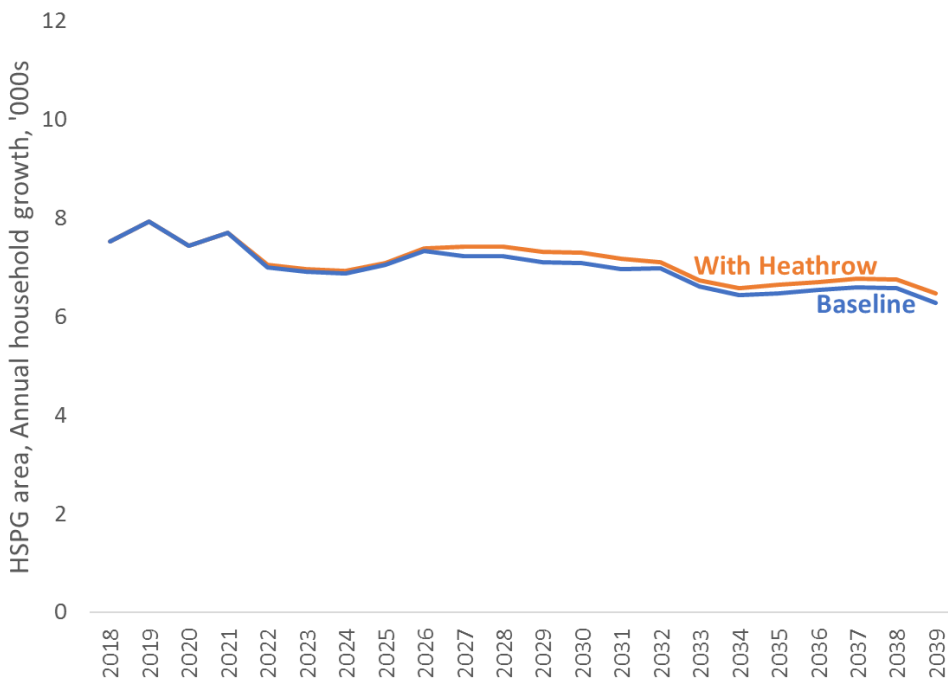
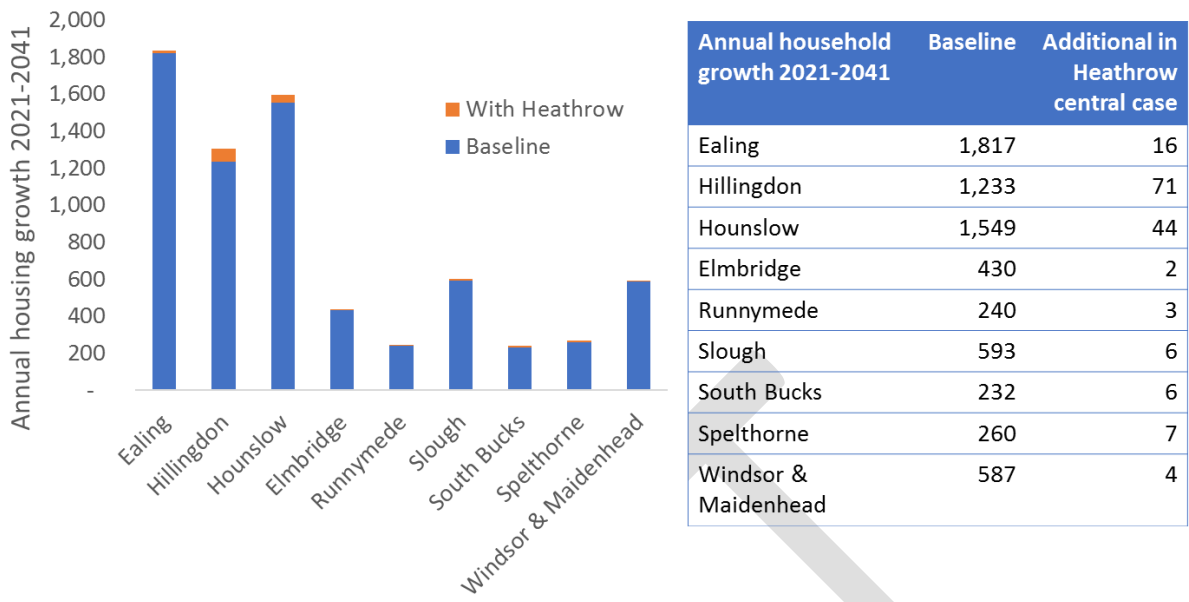


Figure 6: Oxford Economics modelled annual household growth



2.6 The breakdown of this annual growth by district shows that the effect of Heathrow expansion will be strongest in the London authorities, particularly Hillingdon and Hounslow. However, even within these districts this additional Heathrow-related growth represents a very small fraction of projected baseline annual average household growth, representing an additional 71 households per year in Hillingdon over the baseline annual increase of 1,233:

Figure 7: Oxford Economics modelled average annual household growth by district, 2011-41

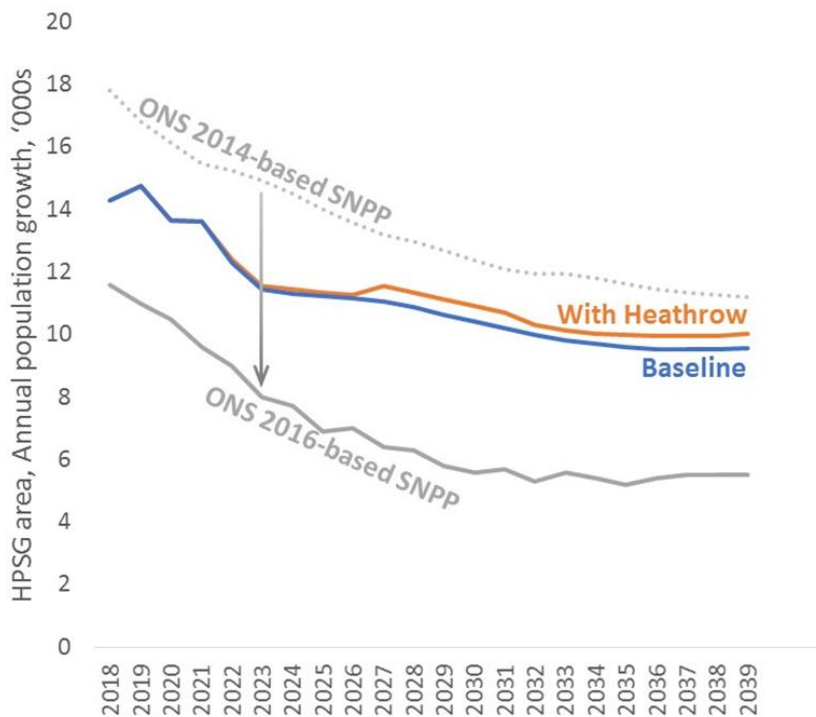


2.7 Local planning authorities already plan for future housing growth to accommodate housing growth; how the Oxford Economics model Central Scenario projections compare to these is examined below.

**Comparing Forecasts – Other Forecasts and Planned Housing**

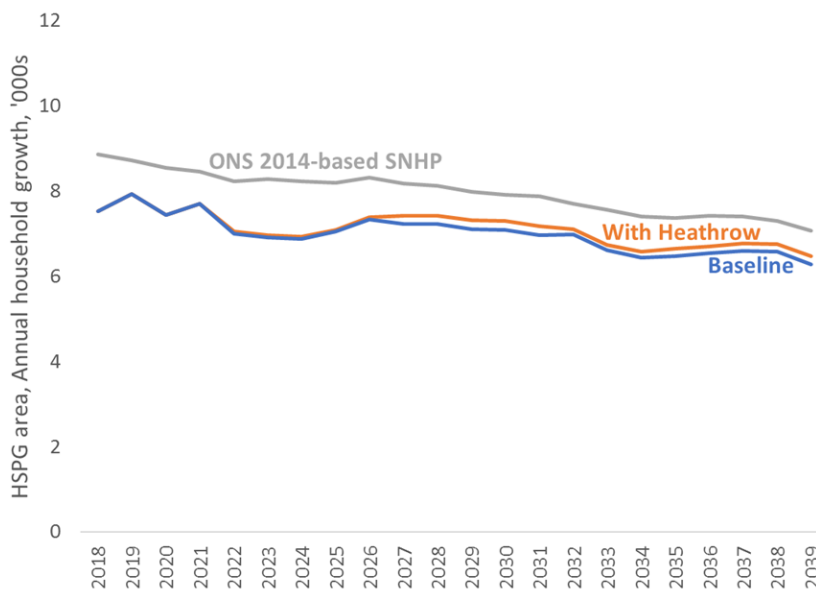
2.8 Population growth projections produced by the ONS for the JEBIS districts can be compared to the Oxford Economic population forecasts. The two most recent ONS projections are 2016-based and 2014-based Subnational Population Projections (SNPPs). As shown below, the 2014-based SNPP show a higher forecast level of annual population growth than the Oxford Economics model, whereas the 2016-based SNPP (released in 2018) show a lower level:

Figure 8: Annual population growth forecasts compared



- 2.9 The ONS SNPPs are trend-based projections. The main reason for the drop in projected population between the 2014-based and 2016-based projections is that the 2016-based projections incorporate changed assumptions about lower fertility rates, lower immigration and lower life expectancy growth in most of London and the South East.
- 2.10 The Oxford Economics model has also taken account of these shifts in demographics and assumptions. However, it differs from the ONS projections in that it is partly an economically-driven model which unlike ONS projections also considers how economic changes affect migration patterns. For example, areas with high concentrations of jobs such as London will still attract relatively high numbers of migrants, even if overall national immigration levels fall.
- 2.11 The ONS has not yet published 2016-based Subnational Household Projections (SNHP), which are due to be published later in 2018. While the 2014-based SNHP forecast a higher annual rate of household growth than the Oxford Economics model forecasts, it is likely that the 2016-SNHP will also show a drop in forecast household growth for similar reasons to the SNPP. However, as mentioned above the Oxford Economics model already takes into the underlying demographic shifts which alter ONS projections and will not change as a result.

Figure 9: Annual household growth forecasts compared



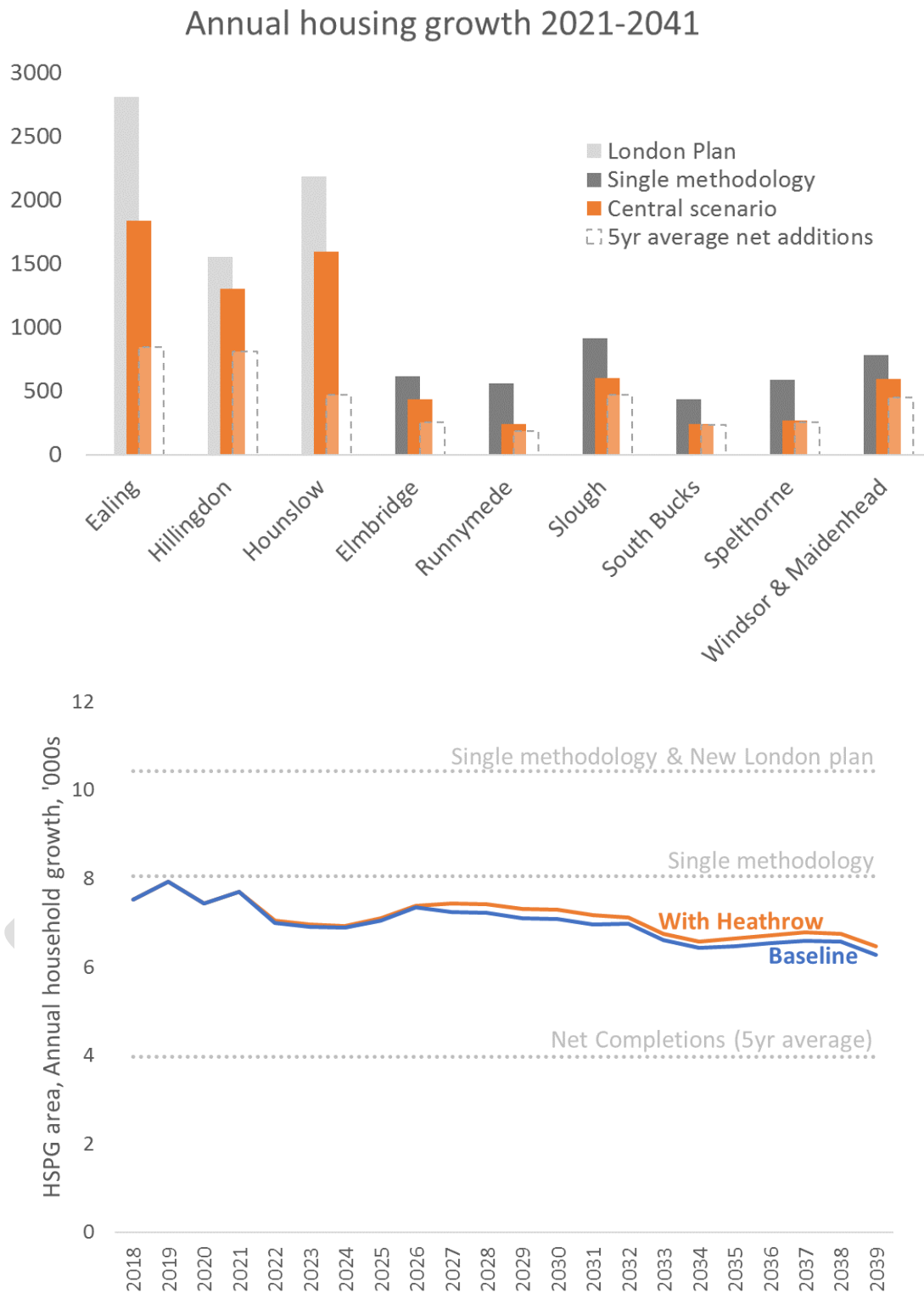
- 2.12 The Oxford Economics forecasts can also be compared to the main methodologies which will form the basis of local authorities' planned housing development. The Government has produced a new national methodology (referred to here as the 'Single Methodology') for assessing annual housing need for each local planning authority in England. The Single Methodology is principally based on the most recently published ONS SNHP, with adjustments to account for market signals and affordability. The Government's intention is for this to form the basis of future local planning authority assessments of planned future housing, but the Single Methodology is to be updated before it is implemented, to ensure that it still leads to an increase in housebuilding even though ONS household growth projections are expected to be lowered.
- 2.13 Additionally, in London housing targets for boroughs are assessed by the Greater London Authority (GLA) based on overall London housing need and borough capacity, most recently in the draft New London Plan (2017). The GLA's assessment of housing need is based on bespoke and trend-based population and

household forecasts as well as assessments of London's housing market, development capacity and housing supply backlog.

- 2.14 The Oxford Economics central scenario forecasts of annual household growth by district (with Heathrow expansion) still fall below what the Single Methodology and New London Plan state as the housing need for these boroughs, although these are all higher than the five-year average net growth in housing stock in the districts:

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Figures 10 & 11: Oxford Economics central scenario and housing need assessments compared



2.15 The reason for this difference lie in the different methodologies used. It should be noted that the Oxford Economics model and housing need methodologies are measuring slightly different things, as the Single Methodology and London Plan not only measure household growth but also make additional adjustments to account for housing market activity. For example, the London Plan figures account for housing need

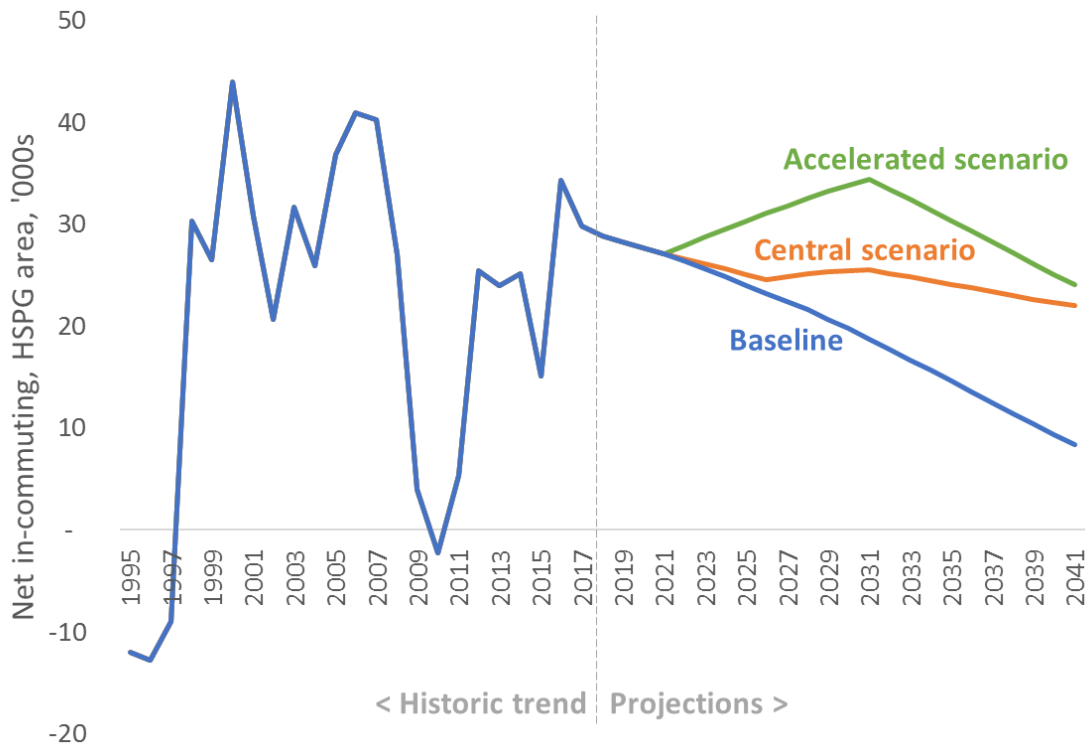
backlog (housing need in recent years which has not been met) and treats London as a whole housing market, apportioning housing targets based primarily on housing capacity.

- 2.16 What this comparison demonstrates is that while Heathrow expansion will lead to some increased housing need with the Core Area, this is a small proportion on top of the baseline housing need that will arise regardless. Furthermore, JEBIS authorities will already need to plan for high housing need under the Single Methodology or the London Plan regardless of Heathrow expansion, and the Oxford Economics modelling suggests that the airport does not give rise to a need to increase housebuilding targets beyond levels already likely to be required.

### Commuting

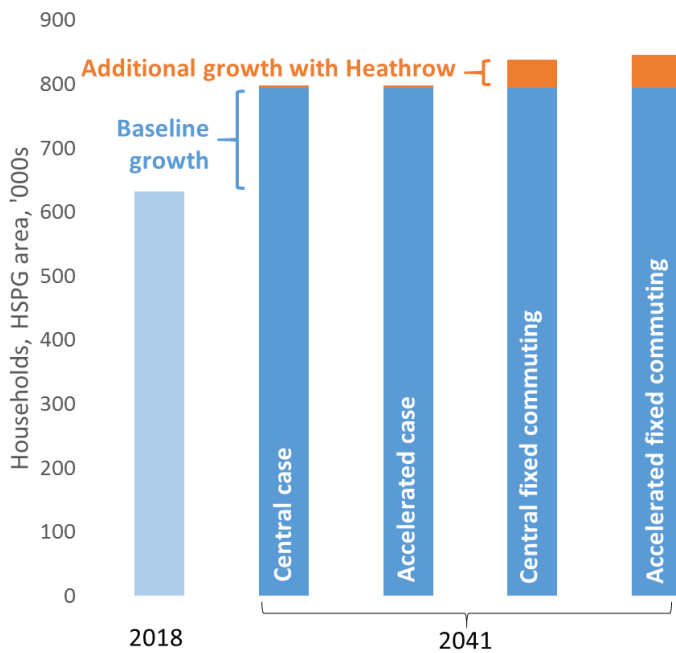
- 2.17 Changing commuting patterns represents one way in which local labour markets would respond to employment growth at Heathrow. They also have important housing market impacts, as jobs filled by workers commuting from elsewhere would not lead to increased housing demand within the JEBIS Core Area.
- 2.18 Currently, the JEBIS Core Area has net in-commuting, with more commuting to jobs within the area than commuting from the area to jobs elsewhere. The Oxford Economics model forecasts that under future baseline conditions, net in-commuting levels will steadily fall, as net out-commuting from Ealing and Spelthorne in particular grows. However, Heathrow expansion would stabilise or reverse this trend to some degree, as net in-commuting to Hillingdon and Hounslow would grow.
- 2.19 Figure 12 shows commuting patterns from the Oxford Economics modelling under three scenarios – baseline (without Heathrow expansion) and then two different employment profiles for growth of Heathrow. The first “central scenario” is based on Heathrow’s own projections, and the other “accelerated scenario” is based on Department for Transport and Airport Commission projections. The latter assumes earlier growth in jobs and a slightly higher number of jobs at the end.

Figure 12: Commuting trends (Oxford Economics)



2.20 The effect of commuting patterns on housing need can be tested with a ‘commuting-fixed’ scenario, under which levels of net in-commuting are assumed to fall as in the baseline. This allows an assessment of what impact Heathrow expansion would have if commuting patterns did not change in response to increased employment.

Figure 13: ‘Commuting-fixed’ scenarios (Oxford Economics)



- 2.21 Under this scenario Heathrow expansion would increase housing need above the baseline substantially, to between on average 9,000 and 9,500 new households/homes a year over the study period instead of about 7,000. This demonstrates the importance of in-commuting in filling new jobs at Heathrow, as the future airport draws on a wider regional labour market

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### 3 Conclusions and Next Steps

- 3.1 To conclude, this report has summarised how Heathrow expansion would lead to increased housing need within the JEBIS Core Area up to 2041. However, there would be a large baseline growth in housing need that is forecast to occur regardless, and additional growth as a result of Heathrow expansion would be a small proportion on top of this. Furthermore, it would also be a small proportion of the housing need that current standard housing need methodologies show that local planning authorities in the JEBIS area would have to plan for regardless, which currently show higher need than the Oxford Economics central scenario forecasts. As a result, the planning implications of new housing need as a result of Heathrow employment expansion are relatively small, compared to housing need that will exist regardless.
- 3.2 This Stage 4 work and the work of the preceding stages will feed into Stage 5. This will be produced by Arup and will involve examining the infrastructure provision needed due to growth as a result of Heathrow expansion. The employment forecasts produced for Stage 2 and the findings of Stages 3 and 4 will provide the basis of this assessment, which will aim to identify infrastructure 'gaps' and produce infrastructure options and recommendations for consideration by the HSPG.

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