

***EASTERLY ALTERNATION
INFRASTRUCTURE PROJECT***

***Environmental Impact Assessment
Environmental Statement, Volume II
Chapter 8: People and Communities***

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8. People and Communities

8.1 Introduction

- 8.1.1 This Chapter reports the outcome of the assessment of likely significant effects arising from the Proposed Development upon people and communities. It describes the potential effects of the Proposed Development, which will enable full alternation of Heathrow Airport (the Airport) runways during easterly operations, on people, communities and other socio-economic factors. The effects of the Proposed Development on human health as a result of changes to environmental, social and economy are considered separately within **Chapter 9: Public Health, Volume II** of the Environmental Statement.
- 8.1.2 Generally, the topic of people and communities is broad; it considers a range of effects, including employment, population and housing, disruption to businesses and residents, as well as impacts on community infrastructure. This assessment therefore considers the impacts on the lives of people in the community through changes in environment and socio-economics, as identified in other technical chapters. As such, this chapter (and its associated figures and appendices) is intended to be read as part of the wider Environmental Statement, with particular reference to **Chapter 6: Air Quality, Chapter 7: Noise and Vibration** and **Chapter 10: Landscape and Visual Impact Assessment, Volume II** of the Environmental Statement.
- 8.1.3 This Chapter is supported by the following appendix, included in **Volume III** of the Environmental Statement:
- **Appendix 8.1: Equality Statement.** The Equality Statement provides the London Borough of Hillingdon information in relation to the potential impact of the Proposed Development on Protected Characteristics, as defined by the Equality Act 2010¹.
- 8.1.4 This Chapter is also supported by the following figures included in **Appendix 8.2: People and Communities Figures**:
- **Figure 8.1a: Wider Study Area;**
 - **Figure 8.1b: Site-Specific Study Area;**
 - **Figure 8.2: Number of people in the main working age group (25-64);**
 - **Figure 8.3: Index of Multiple Deprivation by Decile;** and
 - **Figure 8.4: PRoW in the vicinity of Heathrow Airport.**
- 8.1.5 The approach adopted for the assessment is based on determining the relevant existing and future circumstances (i.e. the baseline) followed by the assessment of relevant topics and effects on individual receptors. The approach uses desk-based analysis, drawing on

¹ HM Government (2010) *Equality Act 2010*. [online] Available at: <https://www.legislation.gov.uk/ukpga/2010/15/contents> [Accessed: 11 October 2024].

statistical information and professional judgment/opinion as well as relevant government and other guidance, and similar projects.

8.2 Relevant legislation, policy and technical guidance

8.2.1 This section identifies the legislation, policy and technical guidance that has informed the scope of the people and communities assessment presented in this chapter.

Legislation

8.2.2 There are no specific legislative requirements relating to the topic of people and communities in the preparation of Environmental Impact Assessments (EIA). However, it is conventional to include, as part of the assessment, a description of the direct socio-economic consequences of the effects on the environment as experienced by people and communities locally (areas within the borough) and, where appropriate, more widely (regionally or nationally).

Policy

8.2.3 A summary of relevant policy is provided in **Table 8.1** relevant to the people and communities assessment. Policy specific to air quality, noise and vibration and landscape and visual are summarised within the respective technical aspect chapters (**Chapter 6: Air Quality**, **Chapter 7: Noise and Vibration** and **Chapter 10: Landscape and Visual Impact Assessment**).

Table 8.1 Relevant policy

Document / Reference	Summary
National Planning Policies	
National Planning Policy Framework (NPPF)² 2023	<p>The NPPF sets out the UK Government’s planning policies for England and how these should be applied. It provides a framework within which locally-prepared plans can provide for development in a sustainable manner.</p> <p>Paragraph 96(c) of the NPPF states that: <i>“Planning policies and decisions should aim to achieve healthy, inclusive and safe places which: [...] (c) enable and support healthy lifestyles...”</i></p> <p>Paragraph 97(a) of the NPPF states that: <i>“To provide the social, recreational and cultural facilities and services the community needs, planning policies and decisions should:(a) plan positively for the provision and use of shared spaces, community facilities (such as local shops, meeting places, sports venues, open space, cultural buildings, public houses and places of worship) and other local services to enhance the sustainability of communities and residential environments.”</i></p>

² Department for Levelling Up, Housing and Communities (2023) *National Planning Policy Framework*.

[online] Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf [Accessed: 11 October 2024].

Document / Reference	Summary
	<p>Paragraph 191 also states that: “Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development”.</p>
<p>Aviation Policy Framework 2013³</p>	<p>The Aviation Policy Framework states: <i>“To further improve operations and resilience at Heathrow we confirmed the ending of the Cranford Agreement. ...Following implementation, noise will be distributed more fairly around the airport, extending the benefits of runway alternation to communities under the flight paths during periods of easterly winds”.</i></p>
<p>Airports National Policy Statement: New runway capacity and infrastructure at airports in the southeast of England (June 2018)⁴</p>	<p>The Airports National Policy Statement (NPS) provides planning policy specifically for a new North West runway at Heathrow, although it can also be a relevant consideration in relation to proposals for other airport infrastructure. The NPS states that the environmental, safety, social and economic benefits and adverse impacts should be considered at national, regional and local levels.</p> <p>Paragraph 2.1 identifies the importance of air transport to the UK economy: <i>“International connectivity, underpinned by strong airports and airlines, is important to the success of the UK economy. It is essential to allow domestic and foreign companies to access existing and new markets, and to help deliver trade and investment, linking us to valuable international markets and ensuring that the UK is open for business. It facilitates trade in goods and services, enables the movement of workers and tourists, and drives business innovation and investment, being particularly important for many of the fastest growing sectors of the economy.”</i></p> <p>The economic and employment value is emphasised in subsequent paragraphs (2.2 to 2.9) which identify a national contribution of £20 billion to national economic output and £3 billion to government revenues together with employment of 230,000 workers (values here and below are as quoted using sources from 2014). At Heathrow, approximately 75,000 people are employed onsite.</p> <p>Aviation is noted as providing wider benefits including travel for leisure and for visiting family and friends and a hub for developing new trading relationships with the rest of the world.</p>

³ Department for Transport (2013) *Aviation policy framework*. [online] Available at: <https://www.gov.uk/government/publications/aviation-policy-framework> [Accessed: 11 October 2024].

⁴ Department for Transport (2018) *Airports National Policy Statement: new runway capacity and infrastructure at airports in the South East of England*. [online] Available at: <https://assets.publishing.service.gov.uk/media/5e2054fc40f0b65dbed71467/airports-nps-new-runway-capacity-and-infrastructure-at-airports-in-the-south-east-of-england-web-version.pdf> [Accessed: 11 October 2024].

Document / Reference	Summary
	Paragraph 5.47 identifies that the UK Government’s objective is to strike a fair balance between the negative impacts of noise (on health, amenity, quality of life and productivity) and the positive impacts of flights.
Flightpath to the Future: a strategic framework for the aviation sector (2022) ⁵	Flightpath to the Future’ is a further Department for Transport policy document that sets out a strategic framework for the aviation industry over the next 10 years, building on responses to the Aviation 2050 consultation. Number 4 of the 10 point plan in Flightpath to the Future states that: <i>“[...] We will also continue to work with the sector to reduce the localised impacts of aviation from noise and air pollution.”</i>
Local Development Policies	
The London Plan (2021) ⁶	Policy GG3 Creating a healthy city states that: <i>“Those involved in planning and development must: (A) ensure that the wider determinants of health are addressed in an integrated and co-ordinated way, taking a systematic approach to improving the mental and physical health of all Londoners and reducing health inequalities and [...] (D) assess the potential impacts of development proposals and Development Plans on the mental and physical health and wellbeing of communities, in order to mitigate any potential negative impacts, maximise potential positive impacts, and help reduce health inequalities, for example through the use of Health Impact Assessments.”</i> Policy T8 (Aviation) states that: <i>“(B) The environmental and health impacts of aviation must be fully acknowledged and aviation-related development proposals should include mitigation measures that fully meet their external and environmental costs, particularly in respect of noise, air quality and climate change” and; (E) Development proposals that would lead to changes in airport operations or air traffic movements must take full account of their environmental impacts and the views of affected communities. Any changes to London’s airspace must treat London’s major airports equitably when airspace is allocated.”</i> Paragraph 10.8.2 states that: <i>“London’s major airports provide essential connectivity for passengers and freight, support vital trade, inward investment and tourism, generate prosperity, and provide and support significant numbers of jobs. The aviation industry must fully address its environmental and health impacts. Government and industry must also recognise local communities’ concerns about aviation noise and pollution, consult fully with those affected, and use new technologies to deliver tangible reductions in noise exposure and pollution.”</i>

⁵ Department for Transport (2022) *Flightpath to the Future*. [online] Available at: <https://assets.publishing.service.gov.uk/media/628f7d26e90e07039f799ebc/flightpath-to-the-future.pdf> [Accessed: 11 October 2024].

⁶ Greater London Authority (2021) *The London Plan*. [online] Available at: https://www.london.gov.uk/sites/default/files/the_london_plan_2021.pdf [Accessed: 11 October 2024].

Document / Reference	Summary
Hillingdon Local Plan: Part 1⁷	<p>The Hillingdon Local Plan: Part 1- Strategic Policies Para 3.6 states that the plan:</p> <p><i>“Seeks to maximise the economic benefits of Heathrow, reduce any negative environmental impacts of the airport and secure improvements for local communities.”</i></p> <p>In addition, policy SO6 aims to: <i>“Promote social inclusion through equality of opportunity and equality of access to social, educational, health, employment, recreational, green space and cultural facilities for all in the borough, particularly for residents living in areas of identified need”</i> and policy SO10 aims to: <i>“Improve and protect air and water quality, reduce adverse impacts from noise including the safeguarding of quiet areas [..]”</i></p> <p>Policies under the heading of Recreation, Leisure and Community Facilities (Category 9 covering UDP saved policies) provide general requirements which may be affected by the Proposed Development. More specifically:</p> <ul style="list-style-type: none"> - Policy EM1 and EM8 refer to the need to control, reduce and mitigate noise and air quality impacts especially around Heathrow and the major road network. - Policy EM4 states that: <i>“The Council will work with DEFRA to identify and protect open spaces that provide quiet areas and will also consider whether other areas merit protection of relative tranquillity.”</i>
Hillingdon Local Plan: Part 2⁸	<p>Policy DMAV 2: Heathrow Airport, which states that:</p> <p><i>“Development proposals within the Heathrow Airport boundary will only be supported where: [...] i) they relate directly to airport related use or development, ii) there is no detrimental impact to the safe and efficient operation of local and strategic transport networks, iii) they comply with Policy DMEI 14: Air Quality, iv) there are no other significant adverse environmental impacts; and v) they comply with all other relevant policies of the Local Plan “</i></p>

⁷ London Borough of Hillingdon (2012) *Hillingdon Local Plan: Part 1 – Strategic Policies*. [online] Available at: [https://www.hillingdon.gov.uk/media/3080/Local-Plan-Part-1---Strategic-Policies/pdf/npLocal Plan Part 1 Strategic Policies 15 feb 2013 a 1 1.pdf?m=1598370401647](https://www.hillingdon.gov.uk/media/3080/Local-Plan-Part-1---Strategic-Policies/pdf/npLocal%20Plan%20Part%201%20Strategic%20Policies%2015%20feb%202013%20a%201%201.pdf?m=1598370401647) [Accessed: 11 October 2024].

⁸ London Borough of Hillingdon (2020) *Hillingdon Local Plan Part 2: Development Management Policies*. [online] Available at: [https://www.hillingdon.gov.uk/media/3084/Hillingdon-Local-Plan-Part-2-Development-Management-Policies/pdf/pdLPP2 Development Management Policies - ADOPTED VERSION JAN 2020 1.pdf?m=1598370641570](https://www.hillingdon.gov.uk/media/3084/Hillingdon-Local-Plan-Part-2-Development-Management-Policies/pdf/pdLPP2%20Development%20Management%20Policies%20-ADOPTED%20VERSION%20JAN%202020%201.pdf?m=1598370641570) [Accessed: 11 October 2024].

Technical guidance

8.2.4 A summary of relevant technical guidance is provided in **Table 8.2**.

Table 8.2 Relevant guidance

Document / Reference	Summary
United Nations Environment Programme: EIA Training Resource Manual⁹	A well-established and extensive resource with a range of guidance on many elements of EIA implementation.
International Association for Impact Assessment: Social Impact Assessment: Guidance for Assessing and Managing the Social Impacts of Projects¹⁰	The guidance provides a thorough source of detailed methodologies for conducting activities supporting social assessment particularly those for identifying and representing community issues and assessing methods of resolution.
The Green Book (and supplementary guidance) published by UK Government¹¹	Published by UK Government's HM Treasury, the set of advice in The Green Book advice provides a broad framework for how policies, programmes and projects in the UK should be appraised and evaluated to inform decision making. Chapter 7: Noise and Vibration provides an 'in year' monetisation of the Proposed Development in 2028 using Technical Assessment Guidance (TAG) (formally WebTAG).
The Additionality Guide, published by UK government¹²	Provides more specific guidance on how to assess the impacts of a policy intervention (or a private sector investment) on the local, regional and national economy. While withdrawn in 2022, with some elements incorporated into The Green Book ¹¹ , it remains relevant due to the guidance provided by clear illustrations of issues related to additionality.
The DLUHC appraisal guide, published by UK government¹³	This is a guidance document provided by the Department for Housing, Communities and Local Government (previously the Department for Levelling Up, Housing and Communities (DLUHC)) directed at

⁹ United Nations Environment Programme (2002) *Environmental Impact Assessment Training Resource Manual, 2nd Edition*. [Online] Available at: https://wedocs.unep.org/bitstream/handle/20.500.11822/26503/EIA_Training_Resource_Manual.pdf?sequence=1&isAllowed=y [Accessed: 11 October 2024].

¹⁰ International Association for Impact Assessment (2015) *Social Impact Assessment: Guidance for Assessing and Managing the Social Impacts of Projects*. [Online] Available at: https://www.iaia.org/uploads/pdf/SIA_Guidance_Document_IAIA.pdf [Accessed: 11 October 2024].

¹¹ HM Treasury (2024) *The Green Book (2022)*. [online] Available at: <https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government/the-green-book-2020> [Accessed: 11 October 2024].

¹² Homes and Communities Agency (2014) *Additionality Guide Fourth Edition*. [Online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/378177/additionality_guide_2014_full.pdf [Accessed: 11 October 2024].

¹³ Department for Levelling Up, Housing and Communities (2023) *DLUHC appraisal guide*. [Online] Available at: <https://www.gov.uk/government/publications/dluhc-appraisal-guide> [Accessed: 11 October 2024].

Document / Reference	Summary
	Government economists in their assessment of economic appraisal of development proposals, including housing and other commercial development. Whilst not aimed at socio-economic assessment in EIA which does not involve cost benefit analysis calculations or assessing value for money, it contains relevant technical guidance for socio-economic impact assessment and links to data sources. It replaces The DCLG Appraisal Guide which was withdrawn on 31 March 2023.
Planning for Equality and Diversity in London - Supplementary Planning Guidance to the London Plan¹⁴	This provides an overarching perspective for local authority planning considerations in relation to equality and diversity. The stated purpose of the document is to give more detailed guidance on London Plan Policies 3A.14 Addressing the needs of London's diverse population, 3A.15 Protection and enhancement of social infrastructure and community facilities and 4B.7 Respect local context and communities as well as other policies with equalities implications.
Glasson, J. Socio-economic impacts 1: economic impacts (2009)¹⁵	This source of socio-economic guidance is from the practitioners' established general reference for Environmental Impact Assessment.

8.3 Technical and public engagement

- 8.3.1 This Section describes the relevant engagement undertaken in relation to the people and communities assessment. This is in addition to the submission of a Scoping Report, requesting a Scoping Opinion from LBH which was submitted on 01 November 2023 (see **Appendix 1.5: Scoping Report**). A Scoping Opinion was provided on 01 February 2024 (see **Appendix 1.6: Scoping Opinion**).
- 8.3.2 Information received in the Scoping Opinion (**Appendix 1.6: Scoping Opinion**) has informed the scope of the people and communities assessment. This is summarised in **Table 8.8** of this Chapter. In addition to the Scoping Opinion from LBH, comments were also made by the London Borough of Hounslow and Spelthorne Borough Council in relation to the scope of the people and communities assessment.
- 8.3.3 In regard to public engagement, meetings with the Longford Residents Association, Heathrow's Local Community Forum, the Noise and Airspace Community Forum and the Council for the Independent Scrutiny of Heathrow Airport are set out in the **Statement of Community Involvement Report**. Engagement with the community has included information events, letters, postcards, emails, social media, door knocking and information boards. Events during September 2024 took place in:

¹⁴ Mayor of London (2007) *Planning for Equality and Diversity in London Supplementary Planning Guidance to the London Plan*. [online] Available at: https://www.london.gov.uk/sites/default/files/gla_migrate_files_destination/archives/mayor-strategies-sds-docs-spg-planning-for-equality.pdf?token=1Svk6LBu [Accessed: 11 October 2024].

¹⁵ Glasson, J. (2009) *Socio-economic impacts 1: Overview and economic impacts*.

- Isleworth Public Hall;
- Southall – Havelock Family Centre;
- Longford – Thistle Hotel (two separate events);
- Cranford Community College;
- Stanwell Moor Village Hall; and
- Old Windsor Memorial Hall.

8.3.4 The responses provided to the public following the engagement sessions are set out in the **Statement of Community Involvement Report** and it is noted that the next steps include for London Borough of Hillingdon to undertake their own stakeholder consultation exercise following the submission of the planning application.

8.4 Baseline Conditions

Method of baseline data collection

8.4.1 A desktop review of statistical information has been undertaken to inform the socio-economic assessment of the existing and future baseline characteristics of people and communities. This data includes recent historical records and published projections of the future.

8.4.2 The current baseline has been developed using publicly available data sources which are predominantly from local and central government. Data sources are referenced where used. The data sources used comprise:

- The UK Census 2021¹⁶, for the majority of data;
- Census 2011 (London only)¹⁷, for employment data; and
- Index of Multiple Deprivation (IMD) 2019¹⁸, for data on deprivation.

8.4.3 References quoted within each subsection of the baseline also provide the source for the following data presented in the same subsection unless otherwise referenced.

8.4.4 The baseline data is presented at local authority level and is shown at more disaggregated levels when used to assess more localised effects. Data for aggregated indicators of the health of the general population is provided in this baseline with effects on human health addressed in **Chapter 9: Public Health**.

¹⁶ Office for National Statistics (2021) *Census 2021 Bulk Data Download*. [online] Available at: https://www.nomisweb.co.uk/sources/census_2021_bulk [Accessed: 11 October 2024].

¹⁷ London Datastore (2011) *2011 Census Labour Market & Qualifications*. [online] Available at: <https://data.london.gov.uk/dataset/2011-census-labour-and-qualifications> [Accessed: 11 October 2024].

¹⁸ Ministry of Housing, Communities and Local Government (2019) *Indices of Multiple Deprivation (IMD) 2019*. [online] Available at: <https://arcg.is/11Hm0G0> [Accessed: 11 October 2024].

Surveys

- 8.4.5 The surveys which provide noise and air quality data are relevant to the assessment of effects as they indicate the baseline environmental conditions for people and communities. The results of surveys, and subsequent analysis for air quality and noise, have been used to define areas where effects on people and communities may occur (See **Chapter 6: Air Quality**, **Chapter 7: Noise and Vibration** and **Chapter 10: Landscape and Visual Impact Assessment** respectively).
- 8.4.6 A site visit was not undertaken as potential effects are distributed over a wide area and are better represented by the comprehensive and systematic area-based approach provided by the noise and air quality monitoring.

Study area

- 8.4.7 To support an understanding of the effects arising from the Proposed Development, two study area levels have been considered:
- A local authority study area level (Wider Study Area); and
 - A site-specific study area level, comprised of areas that relate to the areas of greatest change (beneficial and adverse) due to the Proposed Development. To align with **Chapter 9: Public Health**, these have been termed Health Site Specific Study Areas (HSSSAs).

Wider Study Area

- 8.4.8 Following implementation of the Proposed Development, the Airport will have the ability to operate with full alternation during easterly operations leading to a geographical redistribution of aircraft movements. Consideration is therefore given to the potential changes in effects experienced by populations, based on the study areas considered in other technical assessments. The geographical areas used for describing the baseline cover the broad areas where noise, landscape and visual, and air quality effects are expected.
- 8.4.9 The largest study area is for estimated air noise and comprises a rectangle of 40 nautical miles (nm) west-east and approximately 20nm north-south centred on Heathrow Airport (see **Chapter 7: Noise and Vibration**). It covers 10 local authority areas with details provided below. The more specific distribution of air noise effects will occur within a smaller footprint for which the Noise Preferred Routes (NPR) provide a general indication of the location of effects. The local authority areas, the footprint of air noise and NPR arising with easterly operations are shown in **Figure 8.1 (Appendix 8.2)**.
- 8.4.10 The study area for the assessment of air quality impacts is influenced by a review of monitoring data including continuous monitoring (see **Chapter 6: Air Quality**). There are 14 continuously monitored locations within 2km of the Proposed Development, which lies within the Heathrow air quality Focus Area and is also relevant to Air Quality Management Areas (AQMAs) in surrounding local authority areas because of possible exposure to elevated nitrogen dioxide levels. The spatial area assessed for air quality is defined in **Chapter 6: Air Quality**.

- 8.4.11 The study area for landscape and visual is illustrated in **Figure 10.1** (see **Appendix 10.3: LVIA Figures**) and extends to a radius of 2km surrounding the noise barrier component of the Proposed Development. Further details are provided in **Chapter 10: Landscape and Visual Impact Assessment**.
- 8.4.12 These study areas were used as the basis for the selection of local authority areas used in describing the baseline. The 10 local authority areas lying closest to Heathrow and forming the area for baseline data collection are those of:
- London Borough of Hillingdon;
 - London Borough of Hounslow;
 - London Borough of Ealing;
 - London Borough of Richmond upon Thames;
 - London Borough of Wandsworth;
 - Slough Borough Council;
 - The Royal Borough of Windsor and Maidenhead;
 - South Bucks District Council (Buckinghamshire Council for data from April 2020)¹⁹;
 - Runnymede Borough Council; and
 - Spelthorne Borough Council.

HSSSA

- 8.4.13 The site-specific study areas reflect that some temporary and permanent components of the Proposed Development may result in impacts that occur at a localised scale. These have been considered on a site-specific basis, with the locations driven by the assessment of likely effects arising from the Proposed Development, specifically air noise effects, as summarised in **Chapter 7: Noise and Vibration** and air quality effects, as summarised in **Chapter 6: Air Quality**.
- 8.4.14 The baseline statistics (populations) for these site specific areas, which have been defined as HSSSA (as reported in **Chapter 9: Public Health**) have been derived from where the Lower layer Super Output Areas (LSOAs) applied to the areas with the changes greater than 1dB $L_{aeq,16hr}$ (as identified in **Chapter 7: Noise and Vibration** and **Figure 7.2.6** in **Volume IV** of the Environmental Statement) or changes in annual mean nitrogen dioxide of greater than 0.2 $\mu\text{g}/\text{m}^3$. These metrics give the larger extents within which other changes, such as night-time noise or particulate matter changes also occur.

¹⁹ Buckinghamshire Council (2022) *Overview of authority area*. [online] Available at: <https://www.buckinghamshire.gov.uk/planning-and-building-control/planning-policy/planning-reporting/view-the-authority-monitoring-report-amr/authority-monitoring-report-2020-to-2021/overview-of-authority-area/> [Accessed: 11 October 2024].

Current baseline

8.4.15 The Airport lies approximately 23km west of Central London and falls entirely within the administrative boundary of the London Borough of Hillingdon. It is surrounded by the villages of Longford, Sipson, Harlington and Harmondsworth to the north and the neighbourhoods of Cranford and Hatton to the east. To the south lie Feltham, Bedfont and Stanwell while to the west Heathrow is separated from Slough, Horton and Windsor by the M25 motorway.

Population and Population density

8.4.16 The populations of the 10 local authorities make up 27% of the population of South East England, which is 4.4% of the total population of England²⁰. They vary in size from approximately 90,000 in Runnymede to 553,000 in Buckinghamshire. Hillingdon with 314,000 and the London boroughs of Hounslow (275,000), Ealing (339,000) and Wandsworth (337,000) are of similar size. The others range between Spelthorne (100,000) and Richmond (201,000).

8.4.17 Within the HSSSA, identified based on the likely effects on populations in relation to noise and air quality, the population varies from 53,418 within HSSSA3 to 3,630 in HSSSA7.

8.4.18 **Table 8.3** summarises the total population and population density in the site-specific study areas, and immediate local authority areas. The population density is higher to the east of the Airport whilst it is lower to the west of the Airport, reflecting the spread across the local authority areas. Population density is illustrated on **Figure 7.11 (Volume IV)** and discussed in **Chapter 7: Noise and Vibration**.

Table 8.3 Population and population density

Area	Population Estimates (2021 Census Data)	Area Size ²¹	Population Density
Site Specific Study Areas			
HSSSA1	57,721	3096	18.6
HSSSA2	18,630	813	22.9
HSSSA3	56,417	752	75.0
HSSSA4	92,886	2070	44.9
HSSSA5	43,711	5804	7.5
HSSSA6	23,022	8320	2.8
HSSSA7	3,629	1940	1.9
HSSSA8	10,491	2356	4.5

²⁰ Office for National Statistics (2020) *Subnational population projections for England: 2018-based*. [online] Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/subnationalpopulationprojectionsforengland/2018based> [Accessed: 14 October 2024].

²¹ Based on the size of LSOAs within the HSSSAs.

Area	Population Estimates (2021 Census Data)	Area Size ²¹	Population Density
Local Authority			
London Borough of Hillingdon	305888	11570	26.4
London Borough of Hounslow	288191	5598	51.5
London Borough of Ealing	367124	5554	66.1
London Borough of Richmond upon Thames	245056	5741	42.7
London Borough of Wandsworth	327498	3426	95.6
Slough Borough Council	158500	5400	29.4
The Royal Borough of Windsor and Maidenhead	153506	19843	7.7
Buckinghamshire Council	553077	187400	3.0
Runnymede Borough Council	88076	7800	11.3
Spelthorne Borough Council	102958	5116	20.1
Regional/Country			
Greater London	8799725	157000	56.0
England	56490048	13046000	4.3

Age and gender profile

8.4.19 The distributions of population by age in the 10 local authorities differ appreciably from those for England and the South East²². The higher number of people of working age and lower than average number in older age groups is noticeable for the London boroughs and with the largest percentage of working age population in Wandsworth. Within the HSSSA, the distribution of population by age is broadly comparable with working age between (57.8 and

²² Office for National Statistics (2021) *Estimates of the population for the UK, England, Wales, Scotland, and Northern Ireland*. [online] Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland> [Accessed: 11 October 2024].

63.1%), except for within HSSSA7 which has the largest percentage of working age population in Wandsworth (67%).

Table 8.4 Age profile

Area	% Young People (0-19)	% Working Age (20-64)	% Older People (65+)	Gender (F:M)
Site Specific Study Areas				
HSSSA1	25.4	63.1	11.3	50:50
HSSSA2	24	61.2	14.8	51:49
HSSSA3	24.8	62.5	12.5	50:50
HSSSA4	26.6	60.8	12.6	51:49
HSSSA5	23.9	59	17.1	50:50
HSSSA6	22.1	57.8	20.1	50:50
HSSSA7	20.8	67.05	12.05	47:53
HSSSA8	23.4	62.9	13.7	49:51
Local Authority				
London Borough of Hillingdon;	26	61	13	51:49
London Borough of Hounslow;	25	63	12	50:50
London Borough of Ealing;	24	64	12	51:49
London Borough of Richmond upon Thames;	24	59	18	51:49
London Borough of Wandsworth;	20	71	10	53:47
Slough Borough Council;	30	61	10	50:50
The Royal Borough of Windsor and Maidenhead;	24	58	18	51:49

Area	% Young People (0-19)	% Working Age (20-64)	% Older People (65+)	Gender (F:M)
Buckinghamshire Council;	24	57	19	51:49
Runnymede Borough Council; and	24	59	17	52:48
Spelthorne Borough Council.	23	59	18	51:49
Regional/Country				
Greater London	24	64	12	51:49
England	23	58	18	51:49

Population growth rate

- 8.4.20 The populations all show small forecast changes between 2023 and 2043, the latest date for Government 2018-based projections, and the overall growth rate for the aggregate of the 10 councils is 3.4%. The projections for 2028 (the 'operational' year for the Proposed Development) have minimal changes from 2023.
- 8.4.21 The current age structure summarised in **Table 8.4** influences the population structure in the future. In the 20 year period from 2023 to 2043, there is a notable increase in the size of the older population, and notable decrease in the size of the population of working age and younger across the local authority areas (See **Graphic 8.1**). In age groups over 65, the population grows faster in seven of the ten councils.

Graphic 8.1 Population growth rates as % change from 2023 to 2043

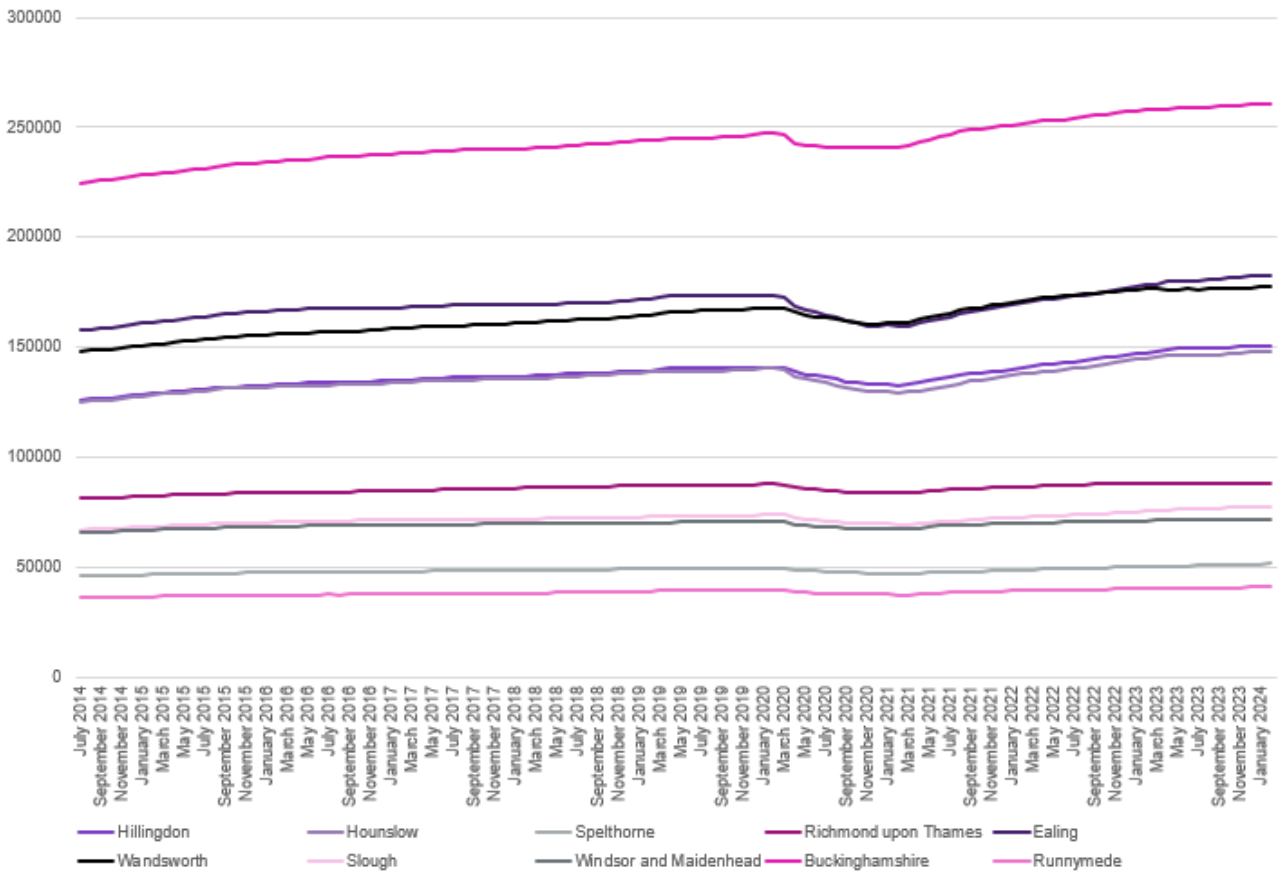


Employment within the Wider Study Area

8.4.22 Employment levels have broadly followed a common trend within the 10 local authorities²³ (see **Graphic 8.2**). Employment levels reflect the different sizes of population and so have a highest value for Buckinghamshire.

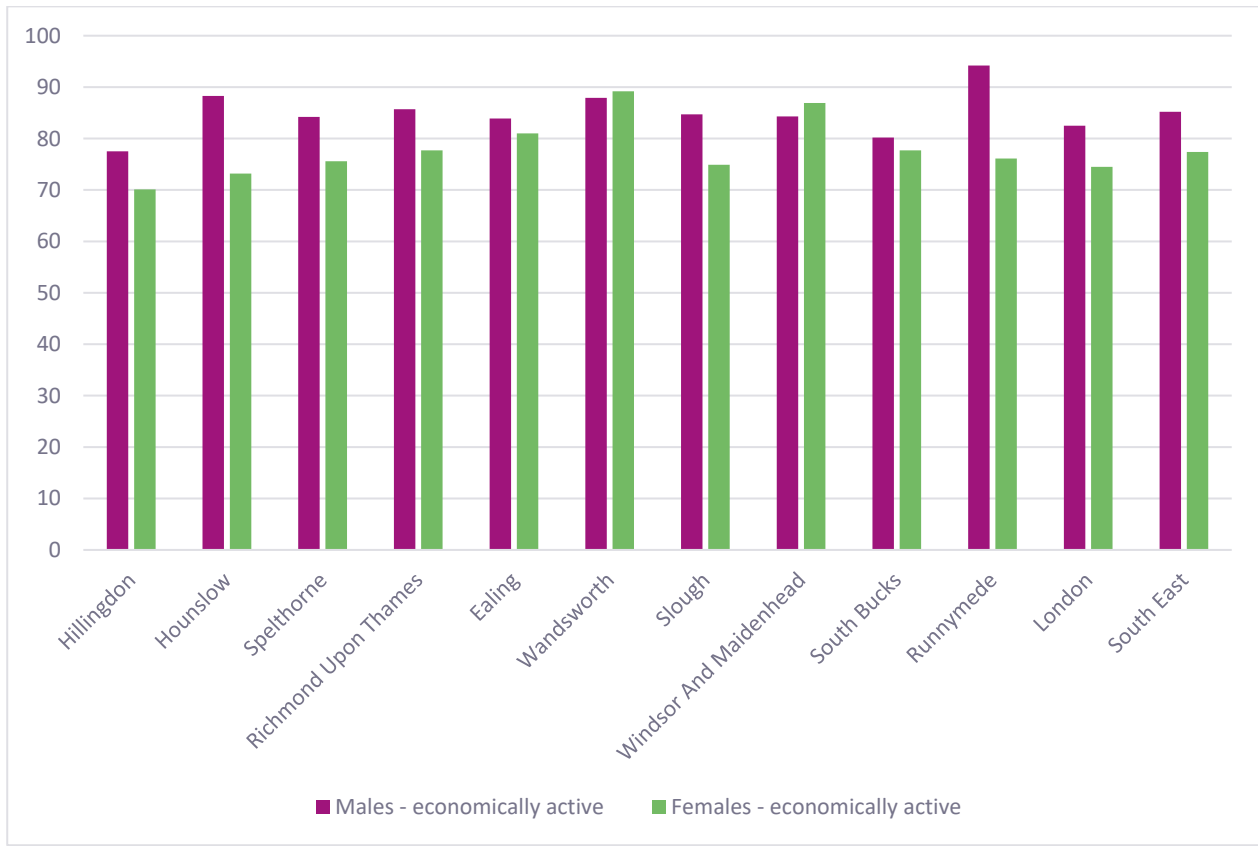
²³ Office for National Statistics (2024). *Earnings and employment from Pay As You Earn Real Time Information, UK: March 2024*. [online] Available at: <https://www.beta.ons.gov.uk/releases/earningsandemploymentfrompayasyouearnrealtimeinformationukmarc h2024> [Accessed: 14 October 2024].

Graphic 8.2 Employment: Payrolled employees - All industries, seasonally adjusted



The number of people who are economically active within the 10 local authority areas is generally higher than the average for London, which is consistent with a younger population. Only in Hillingdon is the economic activity rate lower than in London for both males and females, while in Buckinghamshire it is lower only for males and in Hounslow lower only for females. Using the South-East (which has higher economic activity rates than London) as an alternative comparator for areas outside London, Spelthorne and Slough fall below for both males and females, Windsor and Maidenhead falls below for males, and Runnymede falls below for females (see **Graphic 8.3**)

Graphic 8.3 – Employment: Male and female economic activity rates (2021)



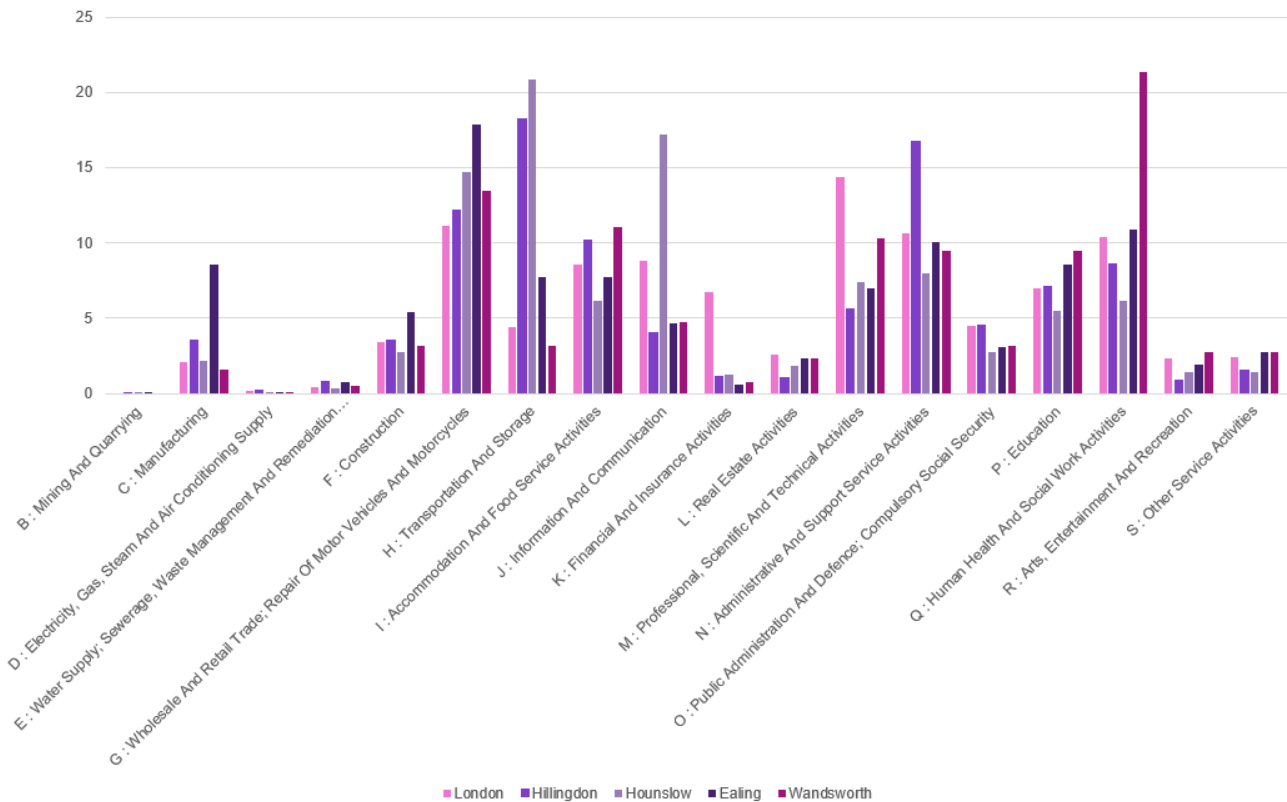
8.4.23

The greater number of the population in the main working age group (16-59) that live in Hillingdon and Hounslow and to the east of the Airport compared to populations to the west is shown in **Figure 8.2 (Appendix 8.2)**.

8.4.24

In a comparison of the five London council areas, the importance of sector H: Transport and Storage to London/Hillingdon and Hounslow is apparent while it is very much less important in Ealing and Wandsworth (see **Graphic 8.4**)²⁴. There are marked differences in Sector C, where Ealing has a level more than three times that of London; in Sector J Information and Communication, where Hounslow has a level more than three times greater than the other councils and double that of London; in Sector N Administrative And Support Service Activities, where Hillingdon significantly exceeds the level for London and the other councils; and in Sector Q Human Health And Social Work Activities where Wandsworth is more than double the level for London. In some other sectors there is more similarity and/or much less significant levels of employment noting in particular Construction (F) and Trade and Repair of vehicles (G), and the service sectors for Accommodation and Food Services (I), Public Administration (O) and Education (P).

Graphic 8.4- Proportions of each economic sector in the four London council areas compared to London

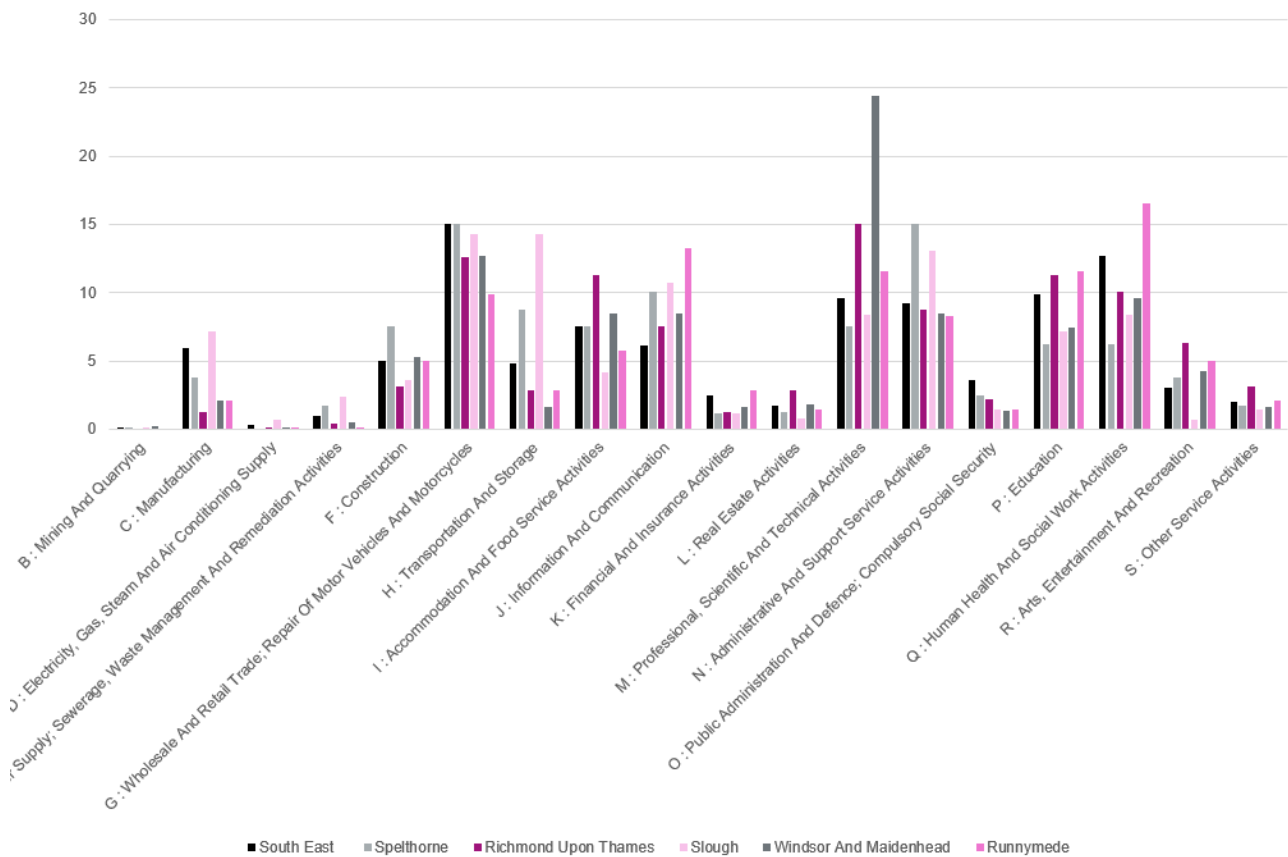


²⁴ Office for National Statistics (2022) *Business Register and Employment Survey*. [online] Available at: <https://www.ons.gov.uk/surveys/informationforbusinesses/businesssurveys/businessregisterandemploymentsurvey> [Accessed: 14 October 2024].

8.4.25

In a comparison of the five council areas outside London with the average for the South East: Slough is distinctive in having higher proportions for Manufacturing (Sector C) and Transport and Storage (H) and its low proportions for Accommodation and food Services (I) and Arts, Entertainment and Recreation (R); Richmond and Windsor and Maidenhead for the high proportion of Professional Scientific and Technical (M); and Runnymede for the high proportion of Human Health and Social Work (Q) (**Graphic 8.5**). Otherwise, compared to averages for the South-East, Manufacturing (C) and Transport and Storage (H) are very low except in Spelthorne and Slough while in other sectors there is broad similarity and/or much less significant levels of employment.

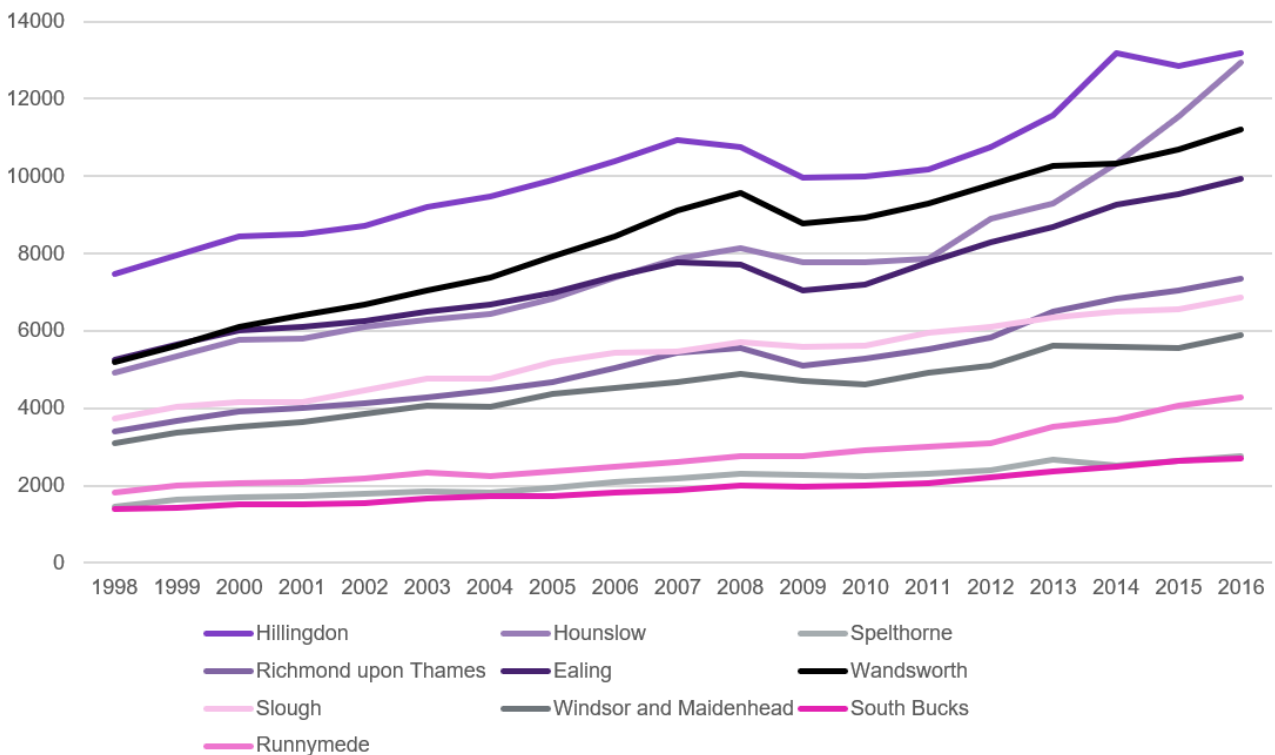
Graphic 8.5 Proportions of each economic sector in the five council areas outside London compared to the South East



8.4.26

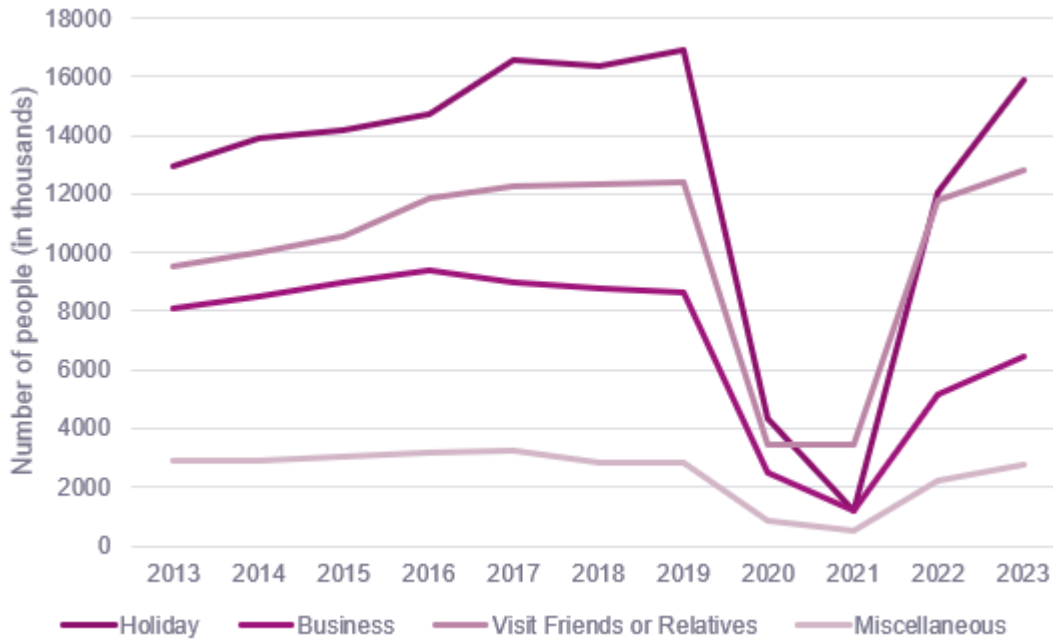
The value of economic output as expressed in terms of Gross Value Added (GVA) at the level of local authority is available for an indication of general trends up until 2016 (see **Graphic 8.6**). From that date, and lacking further information, GVA may be expected to broadly follow the employment trends illustrated earlier, noting that the assignment of GVA to locations depends on company structure and sites in use. Hillingdon has the greatest GVA of the local authority areas, which may in part be due to Heathrow Airport being situated within Hillingdon’s administrative area. The levels for other local authority areas reflect to a degree the relative sizes of populations, with South Bucks represented independently from Buckinghamshire at this time, and the five London areas making up the top four for GVA. The smaller areas of Spelthorne, Runnymede and South Bucks have correspondingly small levels of GVA.

Graphic 8.6 - Trends in aggregate GVA for 10 council areas (£m nominal)



8.4.27 Private and business travel are the main services provided at Heathrow. The level of both was significantly affected by the Covid-19 pandemic but levels of demand have recovered and the underlying requirement for travel and transport services is expected to continue. There was significant and continued growth in holiday travel and in visiting friends and relatives recorded between 2013 and 2023 (see **Graphic 8.7**)²⁵. After the pandemic, the rate of recovery has been dramatic and the airline industry may be expected to aim to realign with the earlier trend and with planned capacity.

Graphic 8.7 Overseas and UK residents' visits to and from the UK



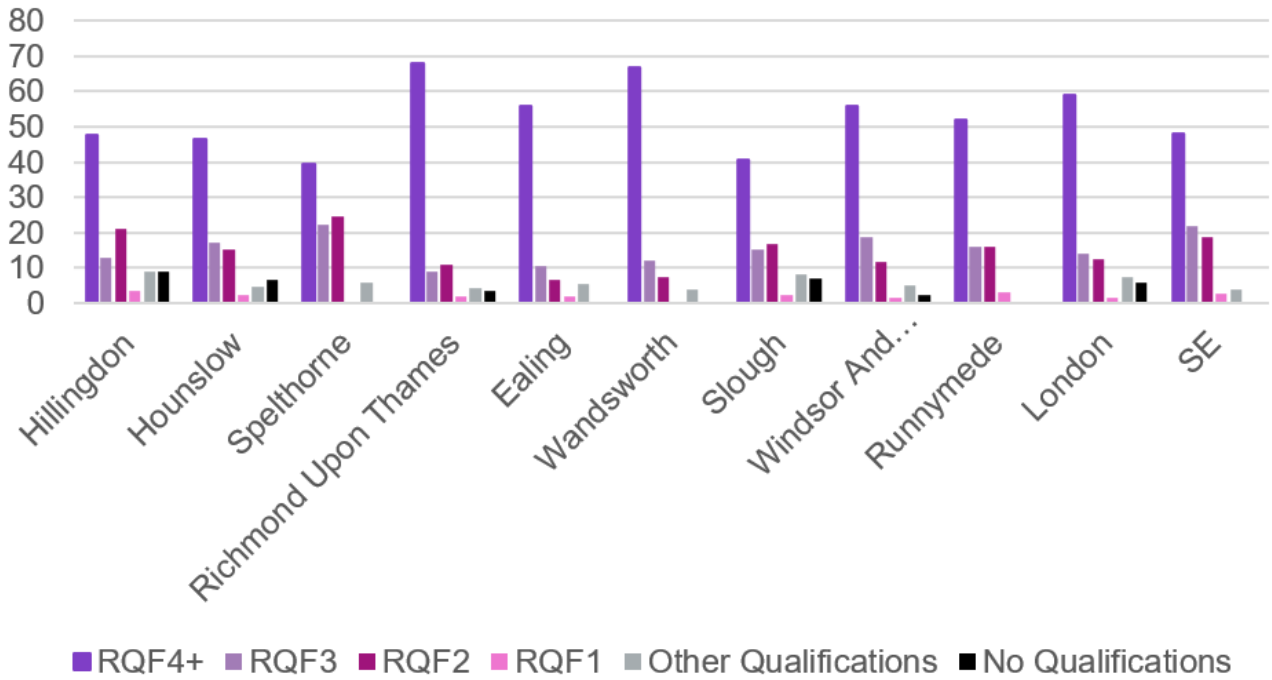
Skills and qualifications in the Wider Study Area

8.4.28 The local authority areas where more of the population have the highest levels of skills are Richmond and Wandsworth²⁶. In these areas, the proportion of the population with intermediate skills is lower. This pattern is observed in Ealing to a lesser degree. Elsewhere, areas typically have a lower proportion of higher-level skills and a greater proportion of intermediate skills, with Spelthorne most showing this pattern. Slough is similar but has a greater proportion of both 'Other qualifications' and 'no qualifications'. As a reference, the South-East is similar to Hounslow while London is different from all but most close to Slough, though with a greater proportion of higher-level skills and a lower proportion of intermediate skills.

²⁵ Office for National Statistics (2024) *Travel trends: 2023*. [online] Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/leisureandtourism/articles/traveltrends/2023#:~:text=As%20with%20overseas%20residents%E2%80%99%20visits%20to> [Accessed: 11 October 2024].

²⁶ ONS, (2021). *Annual Population Survey: Qualifications* (reported by NOMIS).

Graphic 8.8 Skill Levels

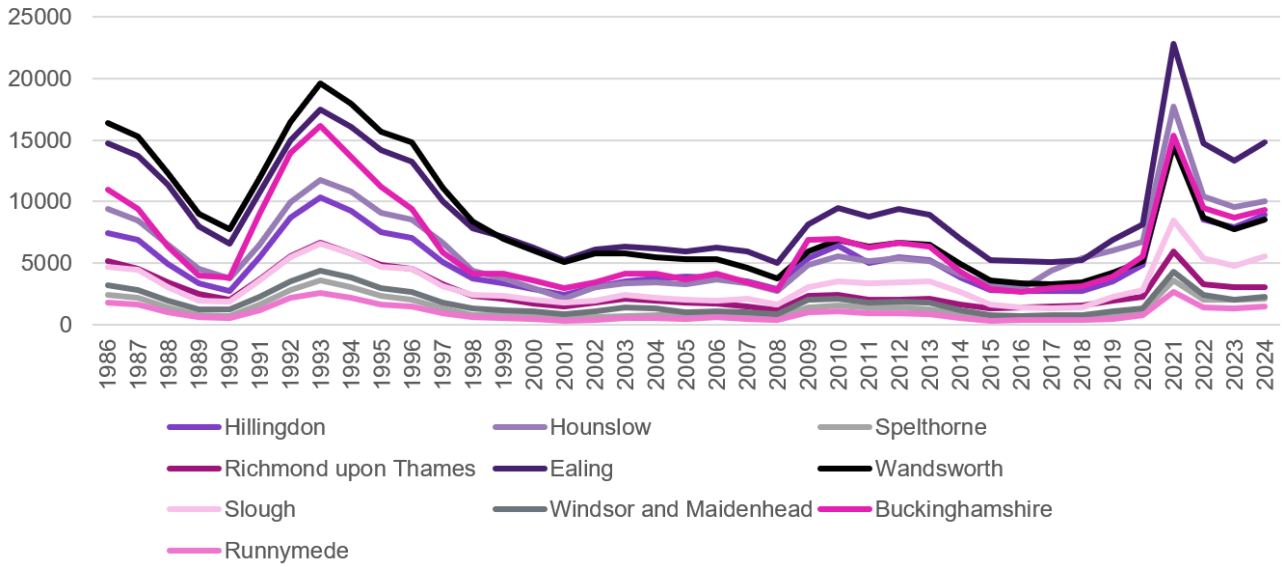


Economic activity, unemployment and worklessness in the Wider Study Area

8.4.29 The level of unemployment as represented by Claimant unemployment for all ages shows broad similarity as regards the main movements over a long period for the local authority areas considered (see **Graphic 8.9**)²⁷. The most recent peak represents unemployment due to the Covid-19 pandemic. While seeing a subsequent reduction, unemployment did not fall back to levels prevailing before the pandemic and over the last year has been increasing in all areas.

²⁷ Office for National Statistics (2024) *Claimant count*. [online]. Available at: https://www.nomisweb.co.uk/home/release_group.asp?g=1 [Accessed: 11 October 2024].

Graphic 8.9 Claimant count, All categories: Age 16+

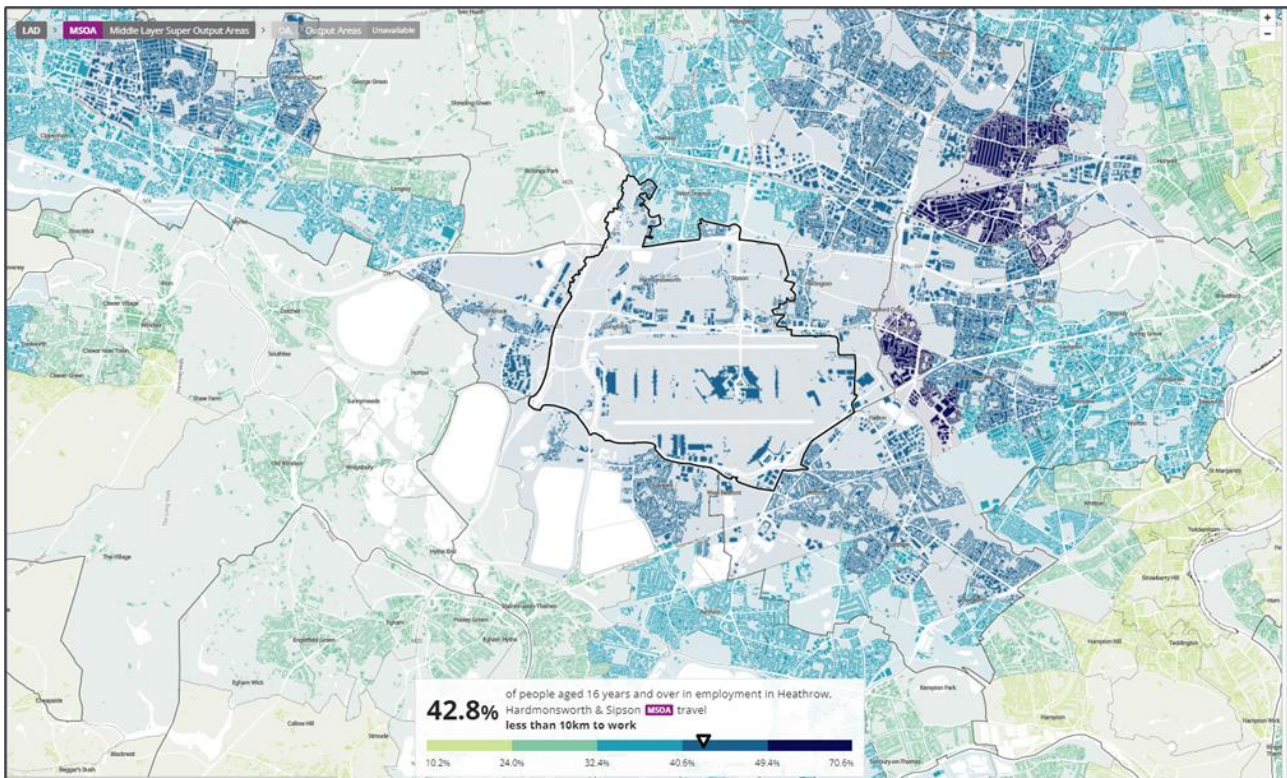


8.4.30 The socio-economic conditions which may affect the vulnerability of residents to localised effects are identified in metrics which record levels and causes of deprivation²⁸. The overall levels of deprivation, recorded as the IMD, are greatest in areas to the north-east and east of Heathrow, while the greater deprivation shown to the west is concentrated near Slough (see **Figure 8.3 (Appendix 8.2)**).

8.4.31 The population, particularly in the centres to the east of the Airport, lives and works in nearby areas with a significant majority travelling less than 10km to work as shown in **Graphic 8.10**.

²⁸ Department for Levelling Up, Housing and Communities (n.d.) *Indices of Deprivation: 2019 and 2015*. [online] Available at: http://dclgapps.communities.gov.uk/imd/iod_index.html# [Accessed 11: October 2024].

Graphic 8.10 - Proportion of people travelling less than 10km to work



8.4.32 Further baseline information in relation to protected characteristics is included in **Appendix 8.1: Equality Statement**.

8.4.33 Further baseline information relating to health is provided in the **Chapter 9: Public Health**.

Businesses and Community Facilities

8.4.34 There are a number of businesses and community facilities within the HSSSA's. Those which are identified in the noise assessment (presented in **Chapter 7: Noise and Vibration**) as having the potential to experience likely noise effects²⁹ comprise the following:

- 56 hotels (including the Thistle Hotel in Longford which is the closest to the Proposed Development);
- 122 offices;
- 55 places of worship;
- 1 court³⁰;

²⁹ Screening in of receptors was based on the expected experience of a change in noise levels of LAeq16hr greater than 50 dB but less than 63 dB and the change is greater than 1dB, and greater than 63 dB and no change in levels.

³⁰ It should be noted that whilst the Address Base Plus dataset classifies the Old Court as a 'Court', further investigation indicates that this receptor may be used as a centre for community arts and cinema.

- 20 community halls;
- 24 hospitals, nursing homes and hospices;
- 76 schools (which includes nurseries, primary and secondary schools);
- 2 colleges; and
- 3 libraries.

8.4.35 Of the community facilities there are a number which support vulnerable persons³¹, including The Cedars Primary School (a special needs school for children who have an EHCP (Education, Health and Care Plan) located in Cranford), and Heathrow Special Needs Centre located in Longford which provides a variety of activities, including interaction with various farm animals and horticultural therapy.

8.4.36 There are also regular events that occur within the community in the HSSAs including weekly and monthly markets and car boot sales and annual festivals.

Local Highways and Public Rights of Way in the local area

8.4.37 The Airport is bounded by a perimeter road and, outside it, to the north by the A4, to the west by the A3044, and to the south and east by the A30 and smaller connecting roads.

8.4.38 The M25 is approximately 550m west of the A3044 and Junction 14a provides a direct link to Terminal 5 and the Western Perimeter Road. Wright Way lies east of the A3044, begins parallel to the Western Perimeter Road and merges into it south of the Thistle Hotel. It provides access to the Heathrow Terminal 5 Pod Parking. The M4 provides an additional direct link from Junction 4 via a 'spur' to the Airport's central terminal area and the northern section of the perimeter road.

8.4.39 There are a number of public rights of way around Heathrow's ownership boundary and their widespread distribution indicates a similarly widespread set of potential users both geographically and by type (see **Figure 8.4** in **Appendix 8.2**). The closest public rights of way to the Airport are:

- The Y23 Byway that runs through the Colne Valley Heathrow Biodiversity Site to the west of Longford, approximately 300m west of the location of the new Longford Noise Barrier on Wright Way.
- The Y21 Footpath to the west of the Premier Inn London Heathrow, approximately 200m northeast of the most westerly part of the new Longford Noise Barrier at the Terminal 5 Pod Parking.

³¹ Vulnerabilities due to young age, older age, income, health status, social disadvantage and access or geographic reasons.

Open Space

- 8.4.40 Over 200 parks and open spaces were identified within the Wider Study Area (further details presented in **Chapter 7: Noise and Vibration**) which range in size from less than 1km² in area to 9.5km² (Richmond Park).
- 8.4.41 Locally, the closest public open spaces to the Airport boundary are:
- Longford Pocket Park also known as Peggy Bedford Heathrow Biodiversity Site, approximately 10m north of the Terminal 5 Pod Parking;
 - Colne Valley Heathrow Biodiversity Site, approximately 80m west of Wright Way and Duke of Northumberland River beyond Stanwell Moor Road;
 - Heathrow Close Children's Playground, approximately 150m north of Wright Way and Duke of Northumberland River;
 - Huckerby's Meadows and Cranebank, adjacent to the Eastern Perimeter Road; and
 - Cranford Park, Berkeley Meadows and Avenue Park, approximately 750m northeast of the Airport boundary.

Future baseline

- 8.4.42 The future baseline reflects anticipated demographic change as reported in UK national projections. It includes growth in the proportion of older people within a steadily but relatively slow-growing total population and indicates future change in the protected characteristic of age and in related levels of vulnerability.
- 8.4.43 The government projections presented in the current baseline described above are considered the most appropriate representation of the future baseline for population and employment. As such, the future baseline will reflect anticipated demographic changes reported in UK national projections, particularly the declining share of the population of working age and increasing share of older people. The future levels of noise are projected within the specific assessment (see **Chapter 7: Noise and Vibration**). The future baseline for other changes, such as in technology or regulation, is assumed to reflect a continuation of current conditions.

8.5 Assessment Methodology

- 8.5.1 The generic project-wide approach to the assessment methodology is set out in **Chapter 5: Approach to the EIA**, which has informed the approach used in this assessment. This section sets out how this methodology has been used for assessing effects on people and communities and continues the approach used for identifying relevant data presented in the baseline.

Overall Approach

- 8.5.2 There is currently no UK legislation or guidance that specifies the detailed content required to prepare assessments on people and communities, or that provides defined standards or thresholds for assessing the significance of socio-economic effects.

8.5.3 The assessment of people and communities is nevertheless recognised as the systematic analysis of the effects of the Proposed Development on society, resulting from changes to the circumstances in the environment of affected populations. Both beneficial and adverse effects are assessed together with measures providing associated embedded or additional enhancement or mitigation.

8.5.4 The basis of the people and communities assessment, as aligned with good practice, has focused on responding to questions that arise from an overarching and general concern with people and communities in society. These questions are wide-ranging and include those that individuals from any background might themselves raise due to direct effects on themselves or on people of concern to them:

- Will the Proposed Development result in material changes to the local, regional, or national demography, economy, economic sectors, employment opportunities or community characteristics, environment, amenities and facilities?
- Will a small number of people be affected in a significant way (changes to transport, employment prospects, amenity) or will significant numbers of people be affected?
- Will people be affected over a long timescale?
- Will there be involuntary displacement of people and businesses?
- Will the Proposed Development result in a change similar to or larger than that experienced in the area over a similar time period in the past?
- Does the nature of effects caused by the Proposed Development or characteristics of people affected mean they would be particularly vulnerable or particularly advantaged?

8.5.5 The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended)³² states that “*the EIA must identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of the proposed development on the following factors – (a) population and human health...*”

8.5.6 Consideration is therefore given to effects arising from direct impacts (i.e. physical impacts such as loss (partial or full) of an asset or severance/access to an asset) and indirect impacts (such as effects identified through other assessment such as of noise) on people and community receptors. The assessment has been based on the findings of the other topic assessments included in the Environmental Statement and considers:

- The level of significance of the effects identified;
- The spatial extent of the effects; and
- Temporal extent of the effects.

³² HM Government (2017) *The Town and Country Planning (Environmental Impact Assessment) Regulations 2017*. [Online] Available at: <https://www.legislation.gov.uk/ukxi/2017/571/contents> [Accessed: 11 October 2024].

Assessment Criteria

8.5.7 The assessment methodology and assessment criteria presented below has been based on accepted industry practice, a review of socio-economic and community assessments for other relevant projects including other airports and significant infrastructure schemes.

Receptor sensitivity

8.5.8 As set out in **Chapter 5: Approach to the EIA**, the assessment of the effects of the Proposed Development are defined in terms of their consequences on 'receptors' that are likely to be impacted during its construction and operation.

8.5.9 The sensitivity of a receptor or resource is broadly attributed to its ability to absorb or respond to change. The criteria for receptor sensitivity are outlined in **Table 8.5**.

Table 8.5 Criteria for Receptor Sensitivity

Sensitivity	Guidelines used for assessment of sensitivity of receptors
Very High	Receptors/resources at risk have a very limited ability to respond to the change with no local access to alternatives
High	Receptors/resources have limited ability to respond to the change with limited local access to alternatives
Medium	Receptors/resources have some ability to respond to the change with slightly restricted local access to alternatives
Low	Receptors/resources are particularly responsive to change with ready access to alternatives
Very Low	Receptors/resources generally have adequate capacity to experience impacts without incurring a significant effect with many comparable and accessible alternatives

Identification of impacts

8.5.10 The identification of possible impacts on receptors as a result of activities related to the Proposed Development are described according to knowledge of how activities related to it will occur. The criteria for defining magnitude of impacts are outlined in **Table 8.6**.

Table 8.6 Criteria for Magnitude of Impact

Magnitude of Impact	Guidelines used for assessment of magnitude of impact
Very High	The impact results in complete loss or is substantially disruptive (positively or negatively) to a receptor or the way a resource is currently used. Impacts on baseline are likely to be long-term or permanent.
High	The impact results in partial loss or is considerably disruptive (positively or negatively) to a receptor or the way a resource is currently used. Impacts on baseline are likely to be long to medium-term or permanent.
Medium	The impact results in a noticeable change (positively or negatively) for a receptor or the way a resource is currently used, but the overall purpose and function of the resource is unaffected. Impacts on baseline are likely to be medium-term but may be reversible.
Low	The impact is anticipated to have little discernible change for a receptor or the way a resource is currently used. Impacts on baseline are likely to be short-term and reversible.
Very Low	No discernible change to one or more characteristics, features or elements.

Significance criteria

- 8.5.11 The resultant effect on receptors is identified based on the sensitivity of a receptor (and ability to accommodate change) and the magnitude of the impact (as set out in **Table 8.7**). In addition, socio-economic effects on people and communities may also arise from specific changes to the environment, such as changes in air quality and noise.
- 8.5.12 The determination of significance is derived with reference to information about the nature of the Proposed Development, the receptors that could be significantly affected and their sensitivity or value, together with the magnitudes of change that are likely to occur. **Section 5.8** of **Chapter 5: Approach to the EIA** provides detail on the standardised approach that this Environmental Statement has taken to determining significance and this is applied in this people and communities chapter.

Table 8.7 Assessment Matrix

Sensitivity	Magnitude of Impact				
	Very High	High	Medium	Low	Very Low
Very High	Major (Significant)	Major (Significant)	Major (Significant)	Major (Significant)	Moderate (Potentially Significant)
High	Major (Significant)	Major (Significant)	Major (Significant)	Moderate (Potentially Significant)	Minor (Not significant)
Medium	Major (Significant)	Major (Significant)	Moderate (Potentially Significant)	Minor (Not significant)	Negligible (Not significant)
Low	Major (Significant)	Moderate (Potentially Significant)	Minor (Not significant)	Negligible (Not significant)	Negligible (Not significant)
Very Low	Moderate (Potentially Significant)	Minor (Not significant)	Negligible (Not significant)	Negligible (Not significant)	Negligible (Not significant)

Limitations and assumptions

8.5.13 This Section summarises the assumptions and limitations relevant to the people and communities assessment.

- The Longford Noise Barrier would be constructed early in the construction programme and so would reduce subsequent noise effects including those of further construction and operation of the Airport during easterlies.
- To complete the construction activities required to implement the noise barrier, it has been assumed for a worst-case assessment, that a section of Wright Way would be temporarily closed for a period of up to seven weeks, with works occurring either during the day or overnight. Vehicles would be directed to use the Western Perimeter Road as an alternative route, which runs parallel to Wright Way and allows for an alternative route for access to Heathrow Terminal 5 Pod Parking and the Thistle Hotel. The hotel would retain its primary access off Bath Road.
- The assessment is based on the residual significant effects identified in other EIA topic assessments, and so assumes mitigation measures such as acoustic screening, and noise insulation, are taken into account.
- Effects have been assessed based on available information using the criteria as defined in this chapter.

8.6 Scope of the assessment

Introduction

- 8.6.1 The scope of this assessment has been established through obtaining a formal Scoping Opinion which was received from LBH on 31 January 2024. Further information can be found in **Chapter 5: Approach to the EIA**.
- 8.6.2 This section provides an update to the scope of the assessment based on the most up to date information and the Scoping Opinion. It re-iterates the evidence base for scoping out elements following further iterative assessment and is summarised in **Table 8.9**.

Scoping Opinion

- 8.6.3 **Table 8.8** sets out the comments received from LBH and how they have been addressed in this Environmental Statement.

Table 8.8 Scoping Opinion comments and responses

Scoping Opinion comment	How is this addressed?
<i>“The areas to be scoped in as set out within the People and Communities Chapter is agreed alongside further collaboration on the baseline position.”</i>	This is noted. For reference, the areas scoped in and out of the people and communities assessment are noted in Table 8.9 . The links between the peoples and communities assessment in relation to noise and air quality considerations (with respect to the technical assessments reported in Chapter 6: Air Quality and Chapter 7: Noise and Vibration have been further developed including specific information provided in response to queries raised in the Scoping Opinion.
<i>“Clarification on the evidence base, assigning sensitivity to receptors, how the noise metrics will be used and how significant effects will be defined would be welcomed.”</i>	The sensitivity of receptors to noise is reflected in the implementation of government methodologies used to quantify effects in the chapter on noise (see Chapter 7: Noise and vibration). Appendix 8.1: Equality Statement further considers the qualitative effects on populations with different socio-economic characteristics.
<i>“Clarification on the development of an Equalities Impact Assessment is welcomed.”</i>	Appendix 8.1: Equality Statement considered the impact of the Proposed Development on characteristics protected under the Equality Act ¹³³ relevant to the assessment of equality. Reference is made to the supplementary planning guidance to the London Plan <i>Planning for Equality and Diversity in London</i> .

³³ UK Government (n.d.) *Discrimination: your rights*. [online] Available at: <https://www.gov.uk/discrimination-your-rights> [Accessed: 14 October 2024].

Elements Scoped in and out of the Assessment

8.6.4 The elements shown in **Table 8.9** which are not considered to give rise to likely significant effects as a result of the Proposed Development are scoped out and have not been considered further within this assessment.

Table 8.9 Elements scoped in and out of the assessment

Category	Phase	Receptor	Effect	Scope in for further assessment	Justification
Economy	Construction	Businesses and activity in the construction sector and wider supply chain.	Temporary change in direct employment	No	<p>As set out in the EIA Scoping Report, the financial effects arise from the costs of implementing the Proposed Development - a medium sized construction project on a constrained site within a large regional construction market, would not be significant.</p> <p>There is a high degree of mobility of employment within the London construction market. It is a large pool of workers, and it is considered the demand from the Proposed Development will not have a significant effect. This is due to:</p> <ul style="list-style-type: none"> • Heathrow having an established supply chain and logistics mechanisms due to the near constant improvement and asset replacement works at the Airport. • The Proposed Development does not require a specialised supply chain, such that it would affect patterns of supply or have significant indirect effects.
			Supply chain activity change	No	
	Operation	Employment. Supply Chain.	Permanent change in direct employment	No	

Category	Phase	Receptor	Effect	Scope in for further assessment	Justification
					phase of the Proposed Development would not change the number of Air Transport Movements (ATM), which would remain within the limit of 480,000 movements per annum and there would be no effects on employment levels.
			Procurement of goods and services	No	There would be no change to the numbers of ATMs, which would remain within yearly limits, during operation of the Airport following construction of the Proposed Development, or changes in the goods/services required for the operation of the Airport.
Business Disruption	Construction	Businesses and commercial activity	Access, severance and environmental change	Yes	Businesses/employees working locally may experience effects arising from changes to noise environments, emissions to air and other construction effects which may indirectly affect capability in performing some types of work or tasks.
			Change of access to premises, car parking and land	Yes	It is assumed that construction of the Longford Noise Barrier will require the temporary closure of Wright Way for up to eight weeks and areas of land from the Heathrow Terminal 5 Pod Car Park. As set out in Chapter 3 Description of the Proposed Development , in

Category	Phase	Receptor	Effect	Scope in for further assessment	Justification
					<p>order to manage construction activities whilst maintaining safe airport operations and avoiding disruption, much of the required construction activities would be undertaken at night. This will ensure minimal impacts on the operation of the Airport.</p> <p>Traffic movements associated with the construction phase would lead to approximately 60 Heavy Goods Vehicle (HGV) movements per day on average, equating to less than 6% change in HGVs on the local road network. At peak, which would occur during the airfield infrastructure works, HGV movements would be approximately 120 per day, split roughly equally between day and night shifts. Daily HGV movements related to the construction phase would be limited to the strategic highway network (M4 and M25), an existing busy road. The number of staff movements are minimal and therefore unlikely to result in severance impacts to local highway network.</p>
	Operation	Businesses and commercial activity	Change in environmental conditions.	Yes	Businesses/employees working locally may experience effects arising from changes to noise

Category	Phase	Receptor	Effect	Scope in for further assessment	Justification
					environment, emissions to air and other operational effects which may indirectly affect capability in performing some types of work or tasks.
			Change of access to premises, car parking and land	No	Operation of the Airport following construction of the Proposed Development will not result in a change of access to premises, car parking and land. As there would be no change to the number of ATMs, which would remain within yearly limits, during operation of the Airport following construction of the Proposed Development, there are anticipated to be no changes to overall traffic movements during operation and therefore unlikely to result in severance impacts.
Resident Disruption	Construction	Residents/ Population	Loss of access and severance from locations of employment	No	Construction of the Proposed Development would not result in the loss of access or severance to any residential property. Traffic movements associated with the construction phase would lead to approximately 60 HGV movements per day on average, equating to less than 6% change in HGVs on the local road network. At peak, which would occur during the airfield infrastructure works, HGV

Category	Phase	Receptor	Effect	Scope in for further assessment	Justification
					movements would be approximately 120 per day, split roughly equally between day and night shifts. Daily HGV movements related to the construction phase would be limited to the strategic highway network (M25 and M4), an existing busy road. The number of staff movements is considered to be minimal and therefore unlikely to result in severance impacts to the local highway network.
			Change in environmental conditions	Yes	Residents may experience effects arising from changes to noise environments, emissions to air and other construction effects.
	Operation		Change in journey times and access to locations of employment	No	As there would be no change to the number of ATMs, which would remain within yearly limits, during operation of the Airport following construction of the Proposed Development, there are anticipated to be no changes to overall traffic movements during operation and therefore unlikely to result in severance or driver delay impacts.
			Change in environmental conditions	Yes	Residents may experience effects arising from changes to noise environment, emissions to air and other operational effects, based on the findings of other assessments.

Category	Phase	Receptor	Effect	Scope in for further assessment	Justification
Population	Construction	Population	Change in the local population related to the introduction of a temporary workforce	No	As set out in Chapter 3: Description of the Proposed Development , whilst construction workforce numbers would vary depending on the stage of construction and certain activities, it is anticipated that the total daily workforce to construct the Proposed Development would not exceed 57 people. On this basis, the Proposed Development is not anticipated to introduce significant numbers of construction workers to the area, such that it would change the local population nor the availability of housing in the area, and the impact is therefore scoped out of further assessment
		Housing	Change in the availability of housing	No	
	Operation	Population	Change in the size of the local population	No	There would be no change to number of ATMs nor employment levels as a result of the Proposed Development and so no change is expected in the size of the local population or effects on supply or availability of housing.
		Housing	Change in the availability of housing	No	
Community	Construction	Supply of community facilities	Change in the demand for community facilities relating to the introduction of a temporary workforce	No	As set out in Chapter 3: Description of the Proposed Development , whilst construction workforce numbers would vary depending on the stage of

Category	Phase	Receptor	Effect	Scope in for further assessment	Justification
					<p>construction and types of activities, it is anticipated that the total daily workforce to construct the Proposed Development would not exceed 57 people.</p> <p>The limited number of temporary workers is therefore not expected to result in an increased demand for community facilities.</p>
		Existing community assets	Introduction of a temporary construction workforce and change in environment	No	<p>Due to the location of construction works, changes to patterns of air emissions, noise and other construction effects are not expected to affect users of community facilities or planned and seasonal schedules of events.</p>
	Operation	Facilities and services	Change in the demand for community facilities	No	<p>There would be no change to the number of ATMs or employment levels as a result of the Proposed Development and so no change is expected in the size of the local population or levels of demand for community facilities.</p>
		Existing community assets	Change in environment which may impact community assets, community events and community activities	Yes	<p>Patterns of air noise and other operational effects may impact on community assets including religious or educational facilities.</p> <p>Patterns of air noise and other operational effects may coincide</p>

Category	Phase	Receptor	Effect	Scope in for further assessment	Justification
					<p>with planned or seasonal schedules of community events. Schedules for cultural, religious, sporting, and entertainment events have been identified for this assessment.</p> <p>Patterns of air noise and other operational effects may coincide with temporal patterns of behaviour for people in communities arising from regular activities under similar headings to community events (cultural, religious, sporting, and entertainment) as well as from regular markets and specific events on religious, ecological or astronomical calendars for activities such as food preparation, sports practice, nature-watching and travelling /commuting patterns.</p>
<p>Sports and Open Space</p>	<p>Construction</p>	<p>Users of parks and open space</p>	<p>Access and use of sports facilities and open space and change in environment</p>	<p>No</p>	<p>There would be no direct impacts on any open space and parks during construction of the Proposed Development.</p> <p>Construction of the Longford Noise Barrier will generate construction noise which may impact on users of adjacent Longford Pocket Park (also known as the Peggy Bedford Biodiversity Site). However, as the duration of works which may impact on users would be relatively short-</p>

Category	Phase	Receptor	Effect	Scope in for further assessment	Justification
					term and users would be transient and not expected to stay for long periods of time, effects are considered to be not significant.
	Operation		Use of sports facilities and open space and change in environment.	Yes – however, this is considered in Chapter 7: Noise and Vibration to avoid duplication (detail included in Appendix 7.5: Air Noise, Volume III of the Environmental Statement)	Whilst there may be changes to the patterns of air emissions, noise and other operational effects which may have indirect effects on the use of open space or parks, the assessment presented in Chapter 7: Noise and Vibration considers the potential changes to the experience people have when using these resources for recreational and amenity purposes. Consideration on the effects on health associated with the use of open space is considered in Chapter 9: Public Health .

8.6.5 On the basis of **Table 8.9**, the following elements are scoped into the assessment:

- Business Disruption;
- Residential Disruption; and
- Community Assets.

Sensitive receptors

8.6.6 The following are included within the categories of sensitive receptors considered in the assessment:

- General public;
- Residents; and
- Workers in the vicinity of the Airport.

8.6.7 Receptor categories also take account of other EIA topic assessments in particular **Chapter 7: Noise and Vibration**. Consideration of the effects those with protected characteristics is presented in **Appendix 8.1: Equality Statement**.

8.6.8 The effects are influenced by activities and behaviours undertaken in the context of change in the environmental effects from noise. The following are the activities and behaviours considered relevant to the assessment of effects:

- Community events;
- Community activities with regular temporal patterns;
- Working locally;
- Outdoor recreation; and
- Health conditions (which are considered in **Chapter 9: Public Health**).

Embedded environmental measures

8.6.9 The Airport is seeking consent for the Proposed Development to allow the full alternation of the north and south runways during easterly operations. This is in accordance with Airports National Policy Statement⁴ (paragraph 5.61) which states that Heathrow “*should put forward plans for a runway alternation scheme that provides communities affected with predictable periods of respite*”. To this end it is proposed that upon completion of the Proposed Development that easterly alternation is adopted in the same manner as westerly alternation is currently provided (i.e. easterly runways (either runway 09L (northern runway) or runway 09R (southern runway))) are designated as the arrival runway and used for the majority of landings from 06:00 to 15:00 local time; and the other from 15:00 local time until after the last departure for the day’s schedule).

8.6.10 The Proposed Development seeks to provide predictable ‘respite’ to communities affected during current easterly operations under existing operations such as Stanwell and Hatton. Notably the Proposed Development proposes no changes to night-time runway alternation (this being from the time after the last departure until 06:00).

8.6.11 The Airport already implements a number of existing measures which are relevant to the Proposed Development:

- Implementation of existing QNS sound insulation schemes (launched in 2024) which builds on previous legacy insulation schemes as described in **Chapter 7: Noise and Vibration**;
- Heathrow's Home Relocation Assistance Scheme (HRAS) is available for properties that fall within Heathrow's 2019 69 dB $L_{Aeq, 16hr}$ noise contour, and residents who have been living in the property before 31 December 2022. The HRAS provides eligible homeowners with financial assistance with the costs of moving away from areas of high levels of airport noise. The scheme is currently capped at £20,000 per home. Further detail is provided in **Chapter 7: Noise and Vibration**;
- Support to Heathrow Community Trust, an independent grant-making charity which receives funding from the Applicant, noise fines levied on airlines when they break the noise regulations, and other airport companies, as well as funding from Heathrow staff via their fundraising activities;
- The Heathrow Community Take Off Fund supports part of our 'Giving Back Programme' which sets out the Airport's goal to improve areas around the Airport; and
- Community Engagement Forums: Heathrow has a number of community forums which allows the Airport to engage and work collaboratively with local communities and local stakeholders.

8.6.12 The Proposed Development will incorporate a number of environmental measures to avoid or reduce likely significant effects. This approach is described in **Chapter 5: Approach to the EIA**.

8.6.13 Key environmental measures include:

- As set out in **Chapter 3: Description of the Proposed Development**, in order to manage construction activities whilst maintaining safe airport operations and avoiding disruption, much of the required construction activities for both the noise barrier and new airfield infrastructure would be undertaken at night. This would ensure minimal impacts to the Airport's customers.
- Provision of a noise barrier (referred to as the 'Longford Noise Barrier') as part of the Proposed Development, to mitigate aircraft 'ground' noise for noise sensitive receptors in Longford. Moreover, the noise barrier would be constructed before the airfield works to provide mitigation for the airfield construction activities and reducing the temporary effects for the residents of Longford.
- Temporary diversion of vehicles so that the Western Perimeter Road can be used as an alternative to Wright Way and continue to allow for access to Heathrow Terminal 5 Pod Parking and the secondary entrance to the Thistle Hotel.
- Measures to reduce impacts on air quality and noise and vibration effects during construction of the Proposed Development, as set out in the **Construction**

Environmental Management Plan (CEMP) (as described in as **Chapter 6: Air Quality** and **Chapter 7: Noise and Vibration**).

- Revision to the QNS Eligibility Boundary: The existing eligibility boundary for Heathrow's QNS is based on a 2026 noise forecast without easterly alternation in place. In line with the QNS, where the Proposed Development results in locations becoming exposed to levels of 63 dB $L_{Aeq,16hr}$ and 55 dB $L_{Aeq,8hr}$ in 2028 that are not already captured by the existing QNS eligibility boundary, the boundary of the QNS will be updated to reflect the impact of the Proposed Development. Where this occurs, residential dwellings will be eligible for the same benefits as those in the existing QNS boundary, i.e. 100% funding of noise insulation costs subject to a maximum expenditure of up to £34,000 per dwelling. Further details are provided in **Chapter 7: Noise and Vibration**.

8.6.14 Through the EIA process, adverse effects were also identified for specific receptors having regard to the absolute levels of noise exposure, and the magnitude of change in noise exposure, due to the Proposed Development. The Applicant has therefore prepared a package of additional noise mitigation measures (Easterly Alternation Noise Mitigation Package) which covers specific residential receptors, schools and colleges, and parks and gardens. This mitigation package is designed to provide financial assistance towards the costs of noise insulation for households that do not qualify for insulation measures under the Quieter Neighbourhood Support (QNS). Further details are provided in **Chapter 7: Noise and Vibration**.

8.7 Assessment of potential effects

Construction phase

Business Disruption

8.7.1 Construction of the Proposed Development could impact on businesses such as offices and hotels close to where construction works would occur for the noise barrier.

8.7.2 As set out in **Table 8.9**, it is assumed the Proposed Development will require the temporary closure of a western section of Wright Way for up to eight weeks to facilitate the construction of the Longford noise barrier. Wright Way provides access to Heathrow Terminal 5 Pod Car Park and a secondary access to Thistle Hotel. The temporary closure requires all vehicles to use a route on the eastern section of Wright Way to reach the Heathrow Terminal 5 Pod Parking and secondary access to the hotel. Vehicles with routes to the east will not be affected while vehicles with routes to the west will need a short detour of less than 2km around the roundabout to the east before proceeding west on the Western Perimeter Road. There will also be a small reduction on the number of parking spaces available within Heathrow Terminal 5 Pod Car Park, to ensure sufficient working arrangements during the construction phase. While the sensitivity to changes in access for the Heathrow Terminal 5 Pod Parking and Hotel is high, the magnitude of the impact is very low with the temporary diversion in place and access maintained, and the overall effect is considered to be minor (not significant).

8.7.3 Businesses outside of the Airport's ownership boundary have the potential to experience adverse indirect effects through changes in emissions to air, construction noise, landscape and visual as a result of the construction works and have been assessed within the respective topic chapters or scoped out of further assessment:

- Construction dust effects were scoped out of further assessment and emissions to air from construction traffic are negligible (see **Chapter 6: Air Quality**);
- **Chapter 7: Noise and Vibration** considers the noise effects on representative receptors closest to the Proposed Development. The assessment identifies significant noise effects at three non-residential receptor groups (representative of offices and hotels closest to the works identified in **Figure 7.10** in **Volume IV**). At receptor groups 14 and 15 (hotels), there will be temporary significant effects during night time airfield infrastructure works, with effects on other receptor groups and during construction of the noise barrier which are not significant. Whilst effects on the hotels will breach significance thresholds, it is reasonable to assume that intrinsic noise mitigation measures (sound insulation, ventilation, and cooling) will have been developed to protect occupants from noise. Guests are not normally expected to reside at the hotel for periods exceeding the temporal criteria; and
- **Chapter 10: Landscape and Visual Impact Assessment** identifies Moderate/Minor to None visual amenity effects on receptors in Longford which are not significant.

8.7.4 The effects on receptors arising from visual amenity and construction noise have the potential to overlap. The business receptors impacted would have limited visibility of the works through intervening vegetation and existing physical assets (such as fencing, roads and buildings). Offices would not be occupied at night-time when the majority of on-airfield construction works would be undertaken, and hotels would have intrinsic noise mitigation measures, which are part of the building envelope designed to protect occupants from noise due to proximity to the Airport. In addition, noise emissions are to be managed and mitigated through a CEMP and Section 61 process which will identify and secure the 'best practicable means' approach and any further controls to be implemented during the night-time 09L airfield infrastructure construction works.

8.7.5 On this basis, the sensitivity of businesses to the changes is **low** overall.

8.7.6 The magnitude of impact is **low** overall, on the basis that the duration of construction works where impacts would overlap on receptors will be generally limited and short-term in nature.

8.7.7 The overall effect would be **Negligible (Not significant)**.

Resident Disruption

8.7.8 There are a number of residential properties in the vicinity of the Proposed Development, including some which are close to the proposed noise barrier and impacted by the airfield infrastructure works to the northern runway.

8.7.9 As set out in **Table 8.9**, due to the extent of the Proposed Development, direct effects on residents are not expected, because there will be no change in housing availability or quality and no impact on access and, therefore, direct effects are not considered further.

- 8.7.10 Residents have the potential to experience adverse indirect effects through changes in emissions to air, construction noise, landscape and visual as a result of construction works, and these effects have been assessed or scoped out within the respective aspect chapters:
- Construction dust effects were scoped out of further assessment and emissions to air from construction traffic are negligible (see **Chapter 6: Air Quality**);
 - **Chapter 7: Noise and Vibration** considers the noise effects on representative receptors closest to the Proposed Development. The assessment identifies that six receptor groups (identified in **Figure 7.10** in **Volume IV**) in Longford would experience levels of construction noise that exceed thresholds for significance. However, receptors are likely to qualify under legacy noise insulation schemes or are otherwise prioritised under the noise QNS Residential Insulation Scheme 'RIS' insulation scheme, hence significant effects on health and quality of life can be avoided. Noise emissions are to be managed and mitigated through a CEMP and Section 61 process, and will be limited further following construction of the noise barrier; and
 - **Chapter 10: Landscape and Visual Impact Assessment** identifies Moderate/Minor to None visual amenity effects on receptors in Longford which are not significant.
- 8.7.11 The effects on receptors arising from visual amenity and construction noise have the potential to overlap. The residences are located with intervening vegetation and hardstanding between them and the Airport and are eligible for Heathrow's legacy noise insulation schemes (daytime, night and QNS) under the new QNS RIS, as described in **Appendix 7.2: Noise Management and Mitigation at Heathrow Airport (Volume III** of the Environmental Statement). As such, the sensitivity of residential receptors is **medium** overall.
- 8.7.12 The magnitude of impact is **low** overall, on the basis that the duration of construction works where impacts would overlap on receptors was generally limited and short-term in nature.
- 8.7.13 The overall effect would be **Minor Adverse (Not significant)**.
- 8.7.14 Further consideration in relation to health outcomes on residential population is also given in **Chapter 9: Public Health**.

Community Assets – Disruption

- 8.7.15 There is one nursery 'Littlebrook Nursery' which is in the vicinity of the proposed noise barrier to the north-west side of the Site (identified in **Figure 7.10** in **Volume IV** of the Environmental Statement) and was identified as part of the representative groups most exposed to construction noise, as well as users of Longford Pocket Park. Other community facilities are located within the vicinity of the noise barrier, including, Heathrow Special Needs Centre which is also located along Bath Road in Longford; however, these would be located further from the Proposed Development and therefore considered to be less exposed to noise and not considered further.

- 8.7.16 Due to the extent of the Proposed Development, there would be no direct effects on community facilities as there will be no change in availability or quality of facilities and no impact on access. Direct effects are therefore not considered further.
- 8.7.17 There is the potential for indirect effects on community receptors within the vicinity of the Proposed Development through changes in emissions to air, construction noise, landscape and visual as a result of the construction works, which have been assessed or scoped out within the respective topic chapters:
- Construction dust effects were scoped out of further assessment and emissions to air from construction traffic are negligible (see **Chapter 6: Air Quality**);
 - **Chapter 7: Noise and Vibration** concludes the effects on the nursery are not significant; and
 - **Chapter 10: Landscape and Visual Impact Assessment** identifies Moderate/Minor to None visual amenity effects on receptors in Longford which are not significant.
- 8.7.18 Whilst no significant effects have been identified, the effects on receptors arising from visual amenity and construction noise have the potential to overlap. Views of the works were generally limited, with limited visibility of the works through intervening vegetation and hardstanding. On this basis, the sensitivity of the nursery is **medium** overall, and users of the Longford Pocket Park are **low**.
- 8.7.19 The nursery would be eligible under Heathrow's legacy noise insulation schemes (daytime, night and QNS) and also eligible under the QNS 'Residential Insulation Scheme' (RIS), as described in **Appendix 7.2: Noise Management and Mitigation at Heathrow Airport**.
- 8.7.20 Overall, no significant noise and vibration, air quality or visual amenity effects are anticipated during construction on the basis that the works are generally limited and short-term in nature (occurring during construction of the noise barrier), with limited visibility of the works through intervening vegetation and hardstanding, and the context of their use (e.g. the nursery would not be in use during night-time works), reducing impacts. The magnitude of impact is therefore **low** overall, on the basis of the short-term duration of construction when overlap on receptors would be generally limited and short-term in nature.
- 8.7.21 The overall effect would be **Minor Adverse to Negligible (Not significant)**.
- 8.7.22 Further consideration in relation to health outcomes on community infrastructure and educational attainment is also given in **Chapter 9: Public Health**.

Operational phase

Business Disruption

- 8.7.23 The operation of the Airport with full runway alternation during easterly operations has the potential to result in disruption to business due to changes in aircraft air movements.
- 8.7.24 As set out in **Table 8.9**, due to the extent of the Proposed Development, direct effects (such as changes to access or severance) on businesses are not expected and therefore not considered further.

8.7.25 Businesses outside of the Airport's ownership boundary have the potential to experience adverse indirect effects. The following effects are identified in the environmental aspect chapters in the Environmental Statement:

- The air quality assessment within **Chapter 6: Air Quality** does not specifically assess different types of property. However, the assessment identifies concentrations of NO₂, PM₁₀ and PM_{2.5} will would be Slight Adverse or Negligible (Not Significant);
- Within **Chapter 7: Noise and Vibration**, the assessment considered the potential effects from air noise on 56 hotels and 122 offices. However, it was considered that no significant (adverse or beneficial) noise effects on businesses are expected (see **Chapter 7: Noise and Vibration** and associated **Appendix 7.5: Air Noise** for further detail). Businesses within Longford would also benefit from the presence of the Longford noise barrier. No significant effects were reported for ground noise or aircraft induced vibration); and
- **Chapter 10: Landscape and Visual Impact Assessment** identifies moderate to negligible effects (all not significant) for visual receptors north-west of the Airport due to visibility of the Longford noise barrier.

8.7.26 Effects across the environmental aspect chapters have been identified as **not significant** and, taking into account the spatial extent for which they have been identified, it is considered that there is limited potential for a combination of effects to occur and result in an effect on business receptors.

Resident Disruption

8.7.27 The operation of the Airport with full runway alternation during easterly operations could result in disruption to residents due to a change in the distribution of in aircraft air movements.

8.7.28 As set out in **Table 8.9**, due to the extent of the Proposed Development, direct effects (such as changes to access or severance) on residents are not expected and therefore not considered further.

8.7.29 Residents however have the potential to experience indirect effects. The following effects are identified in the environmental aspect chapters in the Environmental Statement.

8.7.30 **Chapter 6: Air Quality** identifies changes in concentrations of NO₂, PM₁₀ and PM_{2.5} will would be Slight Adverse at four receptor locations and Negligible at all others assessed (Not Significant).

8.7.31 **Chapter 7: Noise and Vibration** identifies the change in the distribution of aircraft movements results in a reduction in the population affected by number of aircrafts above 65 dB L_{ASmax} (known as N65 events) show a reduction, from 75,100 to 41,000, in the population experiencing an N65 rate of more than 400 per day. In EIA terms, this equates to significant and not significant air noise effects, both beneficial and adverse, occur over a wide area:

- Reduce the overall number of people exposed above Lowest Observed Adverse Effect Level (LOAEL)³⁴ by around 2,800;
- Reduce the number of people exposed to levels above 54 dB $L_{Aeq,16hr}$ (“the approximate onset of significant community annoyance”) by 15,300;
- Reduce the overall number of people exposed between LOAEL and Significant Observed Adverse Effect Level (SOAEL)³⁵ by 3,900;
- Increase the overall number of people above SOAEL by around 1,100; and
- Increase the overall number of people exposed to levels above 69 dB $L_{Aeq,16hr}$ by around 500.

8.7.32 To help understand the air noise effects and the populations affected, the spatial distribution of the noise levels with changes greater than 1dB is summarised below for the HSSSAs:

- HSSSA 1: Departure Routes ULTIB and BPK, northeast towards Hounslow and Ealing, adverse change.
- HSSSA 2: Departure Routes ULTIB and BPK, northeast towards Hounslow and Ealing, beneficial change.
- HSSSA 3: Departure Route DET, east towards Hounslow and Richmond upon Thames, adverse change.
- HSSSA 4: Departure Route GASGU and MODMI, southeast towards Hounslow and Elmbridge, beneficial change.
- HSSSA 5: Arrival to 09L (northern runway), west from Windsor and Maidenhead and Slough, beneficial change.
- HSSSA 6: Arrival to 09R (southern runway), west from Windsor and Maidenhead and Spelthorne, adverse change.
- HSSSA 7: Departure on 09L (northern runway) west end, near Longford, adverse effect. However, residents within Longford would also benefit from the presence of the Longford Noise barrier.
- HSSSA 8: Departure on 09R (southern runway) west end, near Stanwell and Stanwell Moor, beneficial effect.

8.7.33 As set out in **Section 8.6**, the Applicant has implemented a number of measures to help mitigate noise impacts and is proposing a new package of additional noise mitigation

³⁴ Lowest Observed Adverse Effect Level: This is the level above which adverse effects on health and quality of life can be detected.

³⁵ Significant Observed Adverse Effect Level. This is the level above which significant adverse effects on health and quality of life occur.

measures (Easterly Alternation Noise Mitigation Package) which covers specific residential receptors. Further detail is provided in **Chapter 7: Noise and Vibration**.

8.7.34 Within **Chapter 10: Landscape and Visual Impact Assessment** moderate to negligible effects (all not significant) are identified for visual receptors north-west of the Airport due to visibility of the Longford Noise Barrier.

8.7.35 Whilst significant effects have been identified in relation to noise, effects across the other topics are identified as not significant. Taking into account the spatial extent where landscape and visual and air quality effects have been identified, it is considered that there is limited potential for a combination of effects to occur and result in an effect on residential receptors (disturbance) beyond the significant adverse effects reported within the noise assessment.

8.7.36 Further detail on the noise assessment and the noise management and mitigation schemes is provided in **Chapter 7: Noise and Vibration**, and associated appendices (specifically **Appendix 7.2: Noise Management and Mitigation at Heathrow Airport**). Further consideration in relation to public health outcomes on residential population is also given in **Chapter 9: Public Health**.

Community Assets – disruption

8.7.37 The operation of the Airport with full runway alternation during easterly operations could result in disruption to community facilities due to changes in aircraft air movements.

8.7.38 As set out in **Table 8.9** due to the extent of the Proposed Development, direct effects (such as changes to access or severance) on community facilities are not expected and therefore not considered further.

8.7.39 However, the operation of the Airport with full runway alternation during easterly operations could result in disruption to community facilities. The following effects are identified in the environmental aspect chapters in the Environmental Statement:

8.7.40 The air quality assessment within **Chapter 6: Air Quality** does not specifically assess different types of property. However, the assessment identified concentrations of NO₂, PM₁₀ and PM_{2.5} will be Slight Adverse at four receptor locations and Negligible at all others assessed (Not Significant).

8.7.41 Within **Chapter 7: Noise and Vibration**, the following non-residential receptors would likely experience significant adverse noise effects:

- Holy Angels Anglican Church High Street, Cranford, TW5 9RG;
- St Christopher Roman Catholic Church High, Street, Cranford, TW5 9RG;
- Khosla House, Park Lane, TW5 9WA;
- The Cedars Primary School, High Street, Cranford, TW5 9RU;
- De Lacey Day Nursery, North Hyde Lane, UB2 5TE;
- Wolf Fields Primary School, Norwood Road, UB2 4JS;

- Sybil Elgar School, Havelock Road, UB2 4NY;
- Clifton Primary School, Clifton Road, UB2 5QP;
- Havelock Primary School, Havelock Road, UB2 4PA; and
- Cranford Community College, High Street, Cranford, TW5 9PD.

8.7.42 Community activities within the Study Area include an annual festival within Hounslow and regular markets in Hounslow and Southall, the most frequent of which occurs three days a week. As full runway alternation during easterly operations would occur for a small proportion (approximately 15% of the time) of the year and attendance by visitors would be transitory during the day, the effects identified in the noise assessment are considered unlikely to affect the basis for the activities.

8.7.43 Within **Chapter 10: Landscape and Visual Impact Assessment**, moderate to negligible effects (all not significant) are identified for visual receptors north-west of the Airport due to visibility of the Longford Noise Barrier.

8.7.44 Whilst significant effects have been identified in relation to noise, effects across the other topics are identified as not significant. Taking into account the spatial extent for landscape and visual and air quality effects, it is considered that there is limited potential effects to combine with noise effects and result in an effect on community assets beyond the effects reported within the noise assessment. Further detail on the noise assessment and the noise management and mitigation schemes is provided in **Chapter 7: Noise and Vibration**, and associated appendices (specifically **Appendix 7.2: Noise Management and Mitigation at Heathrow Airport**). Further consideration in relation to public health outcomes on access to community infrastructure and educational attainment is also given in **Chapter 9: Public Health**.

Monitoring

8.7.45 **Chapter 7: Noise and Vibration** summarises current monitoring practices that implemented by the Airport, as well as within **Appendix 7.2: Noise Management and Mitigation at Heathrow Airport**.

8.7.46 As those effects identified are primarily related to noise, no additional monitoring is proposed in relation to people and communities.

Cumulative effects

8.7.47 The assessment presented in this chapter includes indirect effects and so inherently considers the potential for technical topics to combine and create a greater effect on people and communities.

8.7.48 Cumulative effects arising from the Proposed Development interacting with other development are considered in **Chapter 13: Cumulative Effects**.

Opportunities for Environmental Enhancement

8.7.49 No opportunities are proposed additional to those proposed in other chapters.

8.8 Assessment Summary

8.8.1 This Section provides a summary of the assessment for the effects in the construction and operational phases

Construction effects

Table 8.10 Summary of residual effects during construction.

Receptor	Summary of residual effect	Significance	Summary rationale
Direct Effects			
Heathrow Pod Terminal 5 Car Parking and Thistle Hotel	Minor adverse	Not Significant	There would be no change to the primary access for Thistle Hotel. Access to Heathrow Terminal 5 Pod Car Parking will be maintained via a diversion along Western Perimeter Road, which runs parallel to Wright Way. The diversion would not substantially increase the probable journey length for expected users, and there would be no discernible change to how the car park is used.
Indirect Effects			
Business disruption	Negligible	Not Significant	Due to the extent of potential effects identified and duration of works where impacts may overlap, works are not likely to significantly affect businesses.
Residential disruption	Minor adverse	Not Significant	Due to the extent of potential effects identified and duration of works where impacts may overlap, works are not likely to significantly affect residents.
Community facility (Littlebrook Nursery)	Minor adverse	Not Significant	Due to the extent of potential effects identified and duration of works where impacts may overlap, works are not likely to significantly affect the nursery.
Community facility (Longford Pocket Park)	Negligible	Not Significant	Due to the extent of potential effects identified, duration of works where impacts may overlap and transitory nature of users, works are not likely to significantly affect the users of the park.

Operational effects

8.8.2 The operation of the Airport with full runway alternation during easterly operations would have no direct (physical impacts) on businesses, residents, and community resources.

8.8.3 The assessment has explored whether there are any in-combination effects during operation however as no businesses, residents and community resources experience two or more residual significant effects, there are no significant effects during operation beyond the significant adverse effects reported within the noise assessment. Further detail on the noise assessment and mitigation is provided in **Chapter 7: Noise and Vibration**, and associated appendices (specifically **Appendix 7.2: Noise Management and Mitigation at Heathrow Airport**).