



***EASTERLY ALTERNATION
INFRASTRUCTURE PROJECT***

***Environmental Impact Assessment
Environmental Statement, Volume III
Appendix 8.1: Equality Statement***

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1. Introduction

1.1 Overview of existing Heathrow Airport Operations

- 1.1.1 Heathrow Airport ('the Airport') is located about 15 miles west of Central London, within the London Borough of Hillingdon. The Airport is situated on approximately 1,227 hectares of land and operates two parallel runways (the northern and southern runway, see inset) in segregated mode, whereby arriving aircraft are allocated to one runway and departing aircraft to the other.
- 1.1.2 The airport is either on 'easterly' or 'westerly' operations, depending on the wind conditions. Aircraft normally take off and land into the wind and the prevailing winds at Heathrow Airport are from the west. This means that aircraft movements (departures and arrivals) are in a westerly direction around approximately 73% of the time¹.
- 1.1.3 To provide predictable periods of relief the runways alternate when on westerly operations. The present pattern provides for one runway to be used by landing aircraft from 06:00 until 15:00 and the other runway to be used from 15:00 until after the last departure. This is known as runway alternation.
- 1.1.4 Runway alternation has not occurred routinely at the Airport during easterly operations (when all aircraft movements are in an easterly direction) due to limitations of existing infrastructure on the northern runway. Therefore, during easterly winds, the northern runway is typically not used for scheduled departures (over Cranford) and by consequence the southern runway is typically not used for arrivals.

The Cranford Agreement and restrictions on the northern runway

- 1.1.5 In 1952, a Ministerial undertaking was given to use best endeavours to avoid using the northern runway for departures in an easterly direction over the village of Cranford. This became known as the 'Cranford Agreement'. The case for ending the Agreement was that it would allow runway alternation to be introduced when the Airport is on easterly operations and, therefore, distribute noise more equitably around the Airport, providing affected communities that surround the Airport predictable periods of relief from arriving and departing aircraft.
- 1.1.6 The Department for Transport (DfT) published a Consultation Document, Adding Capacity at Heathrow² in November 2007, which sought to canvass views on how the Airport could be developed over the next 20 years or more. The document included an assessment by the Environmental Research and Consultancy

¹ Based on a 10 year average of operational data from the Applicant – Heathrow Airport Limited (n.d.) *Operational Data*. [online] Available at: <https://www.heathrow.com/company/local-community/noise/data/reports/operational-data> [Accessed: 10 October 2024].

² Department for Transport (2007) *Adding Capacity at Heathrow – Consultation document*. [online] Available at: <https://webarchive.nationalarchives.gov.uk/ukgwa/20080305130916/http://www.dft.gov.uk/consultation/s/closed/heathrowconsultation/consultationdocument/> [Accessed: 10 October 2024].

Department (ERCD) of the UK CAA³ into the noise effects that would result from ending the Cranford Agreement.

1.1.7 The ERCD study concluded that removing the Cranford Agreement (whilst retaining segregated-mode operation⁴) would result in a redistribution of noise exposure to the west of the Airport under the easterly arrival flight paths and also to the east of the Airport under the easterly flight departure paths. The study predicted that in 2015, assuming 480,000 air traffic movements (ATMs), the removal of the Cranford Agreement would decrease the population within the 57dBA L_{Aeq} noise contour (by 10,500)⁵ (described as the onset of community annoyance) due to the transfer of arrival operations away from Windsor and onto the arrivals flight track to Runway 09R. However, it was also predicted that there would be an increase in the number of people living in higher noise exposure areas; with an additional 3,300 people experiencing 63dBA L_{Aeq} or more.

1.1.8 the UK Government's policy decision to end the Cranford Agreement was published in the document Adding Capacity at Heathrow: Decisions following Consultation dated 15 January 2009⁶. Paragraphs 74 and 75 of this document state:

*"Ending the Cranford Agreement would redistribute noise more fairly around the airport... The Secretary of State has therefore decided in the interests of equity to confirm the provisional view set out in the consultation document. Therefore, the operating practice which implements the Cranford Agreement should end as soon as practicably possible. He notes that this would enable runway alternation to be introduced when the airport is operating on easterlies, giving affected communities predictable periods of relief from airport noise."*⁶

1.1.9 As such, the UK Government decided to end the Cranford Agreement in January 2009.

1.2 The Proposed Development

1.2.1 Heathrow Airport Limited (hereafter referred to as the 'Applicant') is seeking planning permission for development of infrastructure that will facilitate full runway alternation when the Airport is operating in an easterly direction (hereafter referred to as the 'Proposed Development').

1.2.2 The main elements of the Proposed Development comprise:

³ Civil Aviation Authority (2007) *ERCD Report 0705: Revised Future Aircraft Noise Exposure Estimates for Heathrow Airport*. [online] Available at: <https://www.caa.co.uk/our-work/publications/documents/content/ercd-report-0705/> [Accessed: 10 October 2024].

⁴ Segregated mode is the use of only one runway at a time for arrivals or departures.

⁵ In the UK, aircraft noise is typically measured using "average" noise contours, which take account of the number of aircraft movements, the amount of noise they make and the duration of those "events" over a set period of time. The measurement period over which the contour is calculated can vary but, in the UK, this traditionally covers the 16 hour summer day (07.00 to 23.00). This type of measure, used by the UK Government, is called " L_{eq} " which stands for equivalent continuous sound level. The areas of equal L_{eq} value are joined together to form a series of contours.

⁶ Department for Transport (2009) *Adding Capacity at Heathrow: Decisions Following Consultation*. [online] Available at: http://news.bbc.co.uk/1/shared/bsp/hi/pdfs/15_01_09decision_doc.pdf [Accessed: 10 October 2024].

- Creation of a 'Hold Area' at the western end of the northern runway;
- The construction of a new taxiway; and
- Two small areas of additional pavement to allow aircraft to access and exit the runway easily.

1.2.3 Implementing full runway alternation during easterly operations (approximately 27% of the time) would result in:

- The introduction of regular departures from the northern runway (Runway 09L) in an easterly direction over Cranford, i.e. an increase in the number of easterly departures over Cranford;
- A decrease in the number of aircraft arriving on the northern runway in an easterly direction;
- An increase in the number of aircraft arriving on the southern runway (Runway 09R) in an easterly direction; and
- A decrease in the number of aircraft departing from the southern runway in an easterly direction.

1.2.4 A full description of the Proposed Development is provided in **Chapter 3: Description of the Proposed Development** of the Environmental Statement, and details of the site and surrounding area are summarised in **Chapter 2: Heathrow Airport and its Surrounds**.

1.3 Purpose of this document

1.3.1 This Equality Statement has been prepared to assist the determining authority (London Borough of Hillingdon (LBH)) in discharging the Public Sector Equality Duty (PSED) as part of its duties in determining the planning application for the Proposed development.

1.3.2 An Environmental Impact Assessment (EIA) has been undertaken to determine the likely significant effects of the Proposed Development on sensitive receptors, which are set out in the Environmental Statement submitted with the planning application for the Proposed Development. The potential effects include those on populations around the airport and there is the potential for some of these to affect people with protected characteristics (as defined in the Equality Act 2010 (hereafter referred to as the Act)⁷), either differentially or disproportionately.

1.3.3 This document provides a signpost to where information can be found within the Environmental Statement and application documents, to support LBH in understanding the equality impacts. The responsibilities of the PSED lie with LBH and cannot be delegated to the applicant.

⁷ HM Government (2010) *Equality Act 2010*. [online] Available at: <https://www.legislation.gov.uk/ukpga/2010/15/contents> [Accessed: 10 October 2024].

2. Legislative and planning context

2.1 Legislation

Equality Act 2010

2.1.1 The Equality Act 2010⁷ protects people against discrimination, harassment or victimisation in employment, and as users of private and public services.

2.1.2 Section 4 of the Act defines that the following characteristics are protected characteristics for the purposes of the Act:

- Age;
- Disability;
- Gender reassignment;
- Marriage and civil partnership;
- Pregnancy and maternity;
- Race;
- Religion or belief;
- Sex; and
- Sexual Orientation.

2.1.3 The Act does not specifically require an equality impact assessment nor define how it should be carried out.

2.1.4 Section 149 sets out the PSED. This duty requires public authorities, in the exercise of their functions (including, for example, decision-making on planning applications), to have due regard to the need to:

- eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by or under the Act;
- advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it; and
- foster good relations between persons who share a relevant protected characteristic and persons who do not share it.

2.1.5 The need to advance equality of opportunity includes the need to (as set out in Section 149 of the Act⁷):

- Remove or minimise disadvantages suffered by persons who share a relevant protected characteristic that are connected to that characteristic;

- Take steps to meet the needs of persons who share a relevant protected characteristic that are different from the needs of persons who do not share it; and
- Encourage persons who share a relevant protected characteristic to participate in public life or in any other activity in which participation by such persons is disproportionately low.

2.1.6 The main objective of the PSED is to ensure public policies and programmes are implemented fairly, in particular with regard to their impact on those with protected characteristics.

2.2 Policy

National Policy

Aviation Policy Framework

2.2.1 The Aviation Policy Framework (APF)⁸ was published in March 2013 by the Department for Transport (DfT). The APF sets out the UK Government's objectives and policies relating to the impacts of aviation. It makes reference to "*making best use of existing capacity to improve performance, resilience and the passenger experience*" (paragraph 1.60).

2.2.2 The AFP states: "*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*".

Airports National Policy Statement

2.2.3 The Airports National Policy Statement (ANPS)⁹ provides planning policy on the provision of additional airport capacity through a Northwest Runway at Heathrow and can also be a relevant consideration in relation to proposals for other airport infrastructure.

2.2.4 The ANPS states in paragraph 1.35 "*The Equality Assessment [for the ANPS] concludes that all of the shortlisted schemes will have effects on these groups, but that such effects can be managed and can ultimately be within appropriate limits. The Airports NPS requires that final impacts on affected groups should be the subject of a detailed review, carefully designed through engagement with the local community, and approved by the Secretary of State. It should be possible to fully or partially*

⁸ Department for Transport, (2013). *Aviation policy framework*. [online] Available at: <https://www.gov.uk/government/publications/aviation-policy-framework> [Accessed: 10 October 2024].

⁹ 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: 10 October 2024].

mitigate negative equalities impacts through good design, operations and mitigation plans”.

- 2.2.5 The ANPS goes on to state in section 4, that applications must examine the potential impact of that project on groups of people with protected characteristics.

National Planning Policy Framework

- 2.2.6 The revised (National Planning Policy Framework (NPPF) (2023)¹⁰ sets out the UK Government’s planning policies and is a material consideration in determining planning applications. The NPPF sets out a presumption in favour of sustainable development through plan making and decision taking with paragraph 11 stating:

“11. Plans and decisions should apply a presumption in favour of sustainable development... For decision-taking this means:

c) approving development proposals that accord with an up-to-date development plan without delay...

83. Planning policies and decisions should recognise and address the specific locational requirements of different sectors. This includes making provision for clusters or networks of knowledge and data-driven, creative, or high technology industries; and for storage and distribution operations at a variety of scales and in suitably accessible locations.

106. Planning policies should:

f) recognise the importance of maintaining a national network of general aviation airfields, and their need to adapt and change over time – taking into account their economic value in serving business, leisure, training and emergency service needs, and the Government’s General Aviation Strategy.”

Local Policy

London Plan 2021

- 2.2.7 Policy GG1 of the London Plan¹¹ states: *“Good growth is inclusive growth. To build on the city’s tradition of openness, diversity and equality, and help deliver strong and inclusive communities, those involved in planning and development must:...*

- *support and promote the creation of a London where all Londoners, including children and young people, older people, disabled people, and people with young children, as well as people with other protected*

¹⁰ 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: 10 October 2024].

¹¹ Greater London Authority, (2021). *The London Plan*. [online] Available at:

https://www.london.gov.uk/sites/default/files/the_london_plan_2021.pdf [Accessed: 10 October 2024].

characteristics, can move around with ease and enjoy the opportunities the city provides, creating a welcoming environment that everyone can use confidently, independently, and with choice and dignity, avoiding separation or segregation

- *support and promote the creation of an inclusive London where all Londoners, regardless of their age, disability, gender, gender identity, marital status, religion, race, sexual orientation, social class, or whether they are pregnant or have children, can share in its prosperity, culture and community, minimising the barriers, challenges and inequalities they face.”*

2.2.8 Policy GG3 of the London Plan states: *“To improve Londoners’ health and reduce health inequalities, those involved in planning and development must:*

- *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 ...*
- *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 ...*
- *seek to improve London’s air quality, reduce public exposure to poor air quality and minimise inequalities in levels of exposure to air pollution ...”.*

Hillingdon Local Plan: A vision for 2026

2.2.9 The Local Plan¹² sets out the vision for Hillingdon: *“Hillingdon residents are benefiting from safer and more inclusive communities with issues such as health inequalities being addressed and regular community engagement being provided on local planning matters. Successful strategies have identified and addressed the particular reasons for inequalities in areas of identified need.”*

2.2.10 Policy SO6 states: *“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.”*

Hillingdon Equality, diversity and inclusion Strategy

2.2.11 Hillingdon has committed to promoting equality of opportunity, celebrating and valuing diversity, eliminating unlawful discrimination, harassment and victimisation, and promoting good relations¹³. The Council aims to:

- *“create a strong and resilient community in Hillingdon;*

¹² London Borough of Hillingdon, (2024). *Local Plan*. [online] Available at: <https://www.hillingdon.gov.uk/local-plan-and-review> [Accessed: 10 October 2024].

¹³ London Borough of Hillingdon, (2023). *Our commitment*. [online] Available at: <https://www.hillingdon.gov.uk/article/11543/Our-commitment> [Accessed: 10 October 2024].

- *counter extremism and hate in all its forms;*
- *bring communities together to promote cohesion and integration; and*
- *build a strong sense of belonging and pride where all people in Hillingdon feel valued and included, whether living, working within, or visiting the borough.”*

2.3 Guidance

Guidance on PSED and Equality Impact Assessment

2.3.1 Guidance¹⁴ for local authorities published by the Government Equalities Office clarifies the PSED is ‘a statutory duty on listed public authorities and other bodies carrying out public functions’.

2.3.2 The guidance goes on to state:

“It is for the decision-maker to decide how much weight should be given to the various factors informing the decision. The duty does not mean that decisions cannot be taken which disadvantage some people (provided this does not constitute unlawful discrimination), but the decision-maker should be aware of the equality impacts of these decisions and consider how they could positively contribute to the advancement of equality and good relations. The decision-maker should consider ways of preventing, or balancing the effects that their decision may have on certain groups. They should decide which mitigations, if any, they might want to put into place in reconsidering the decision. The mitigation should be proportionate to the problem at hand.”

2.3.3 The aim of this Equality Statement is to provide a signposting document to assist the determining authority in gathering the information required to inform decisions to which the PSED applies. The scope of the information presented has been tailored for the Proposed Development.

Planning for Equality and Diversity in London: Supplementary Planning Guidance to the London Plan (2007)

2.3.4 The supplementary planning guidance¹⁵ on how to implement the key London Plan policies relating to addressing the needs of London’s different communities, to ensure that implementation of the London Plan is achieved. The supplementary planning guidance also highlights the spatial impacts of wider socio-economic issues such as poverty and discrimination.

¹⁴ Government Equalities Office and Office for Equality and Opportunity, (2023). *Public Sector Equality Duty: guidance for public authorities*. [online]. Available at: <https://www.gov.uk/government/publications/public-sector-equality-duty-guidance-for-public-authorities/public-sector-equality-duty-guidance-for-public-authorities> [Accessed: 10 October 2024]

¹⁵ 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: 10 October 2024].

3. *Engagement*

3.1.1 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** provided with the planning application. 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: Isleworth Public Hall; Southall – Havelock Family Centre; Longford – Thistle Hotel; Cranford Community College; Stanwell Moor Village Hall; Old Windsor Memorial Hall; and Longford – Thistle Hotel. The following themes recorded from the engagement are particularly relevant to the health assessment and have been taken into account in reaching assessment conclusions:

- Noise: concerns over noise; timing of noise; distribution of noise changes; eligibility for noise insulation; and nature of the mitigation. Awareness of the Cranford Agreement was reported, by the engagement team, as more limited for members of the public attending events held in Cranford.
- Airspace: concerns over whether flights would increase and if there would be changes to flight paths or if mixed mode operations would occur.
- Air quality: concerns in Longford about changes in air quality.
- Next steps: request of information to understand the process, how to raise concerns and the timing of the changes.

3.1.2 The responses provided to the public on these issues are set out in the **Statement of Community Involvement Report** and it is noted that the next steps include for LBH to undertake their own stakeholder consultation exercise following the submission of the planning application.

4. Methodology

4.1 General approach

4.1.1 The construction and operation of a development will have a range of impacts, which can be both positive and negative. Persons affected by a development will have some protected characteristics as defined by the Equality Act 2010⁷. However, they will not all be equally affected. That does not however, necessarily constitute an equality effect.

4.1.2 Effects which are relevant to equality impacts are often defined as those that have either disproportionate or differential equality effects:

- **Disproportionate equality effect:** there may be a disproportionate equality effect where people with a particular protected characteristic make up a significantly greater proportion of those affected than in the wider population.
- **Differential equality effect:** there may be a differential equality effect where people with a protected characteristic are affected differently from the general population as a result of vulnerabilities or restrictions they face because of that protected characteristic.

4.1.3 The scale of equality impacts cannot always be quantified and therefore it is common to address this through descriptive analysis of impacts and identifying the potential direction of effects (considering effects that can reasonably be foreseen as likely and significant).

4.1.4 The Applicant recognises that a decision taken by a public authority will involve a need to consider and balance a range of both positive and negative effects of different types, with consideration of relevant policy (nationally and locally).

4.1.5 There may be reasonable mitigation measures that can eliminate or reduce some disproportionate or differential equality impacts, but such impacts may not always be avoidable.

4.1.6 **Table 4.1** sets out the protected characteristics and for each the relevant indicators that are available at small geographic areas. A baseline based on these indicators is set out in **Section 5**.

Table 4.1: Equality Act 2010 Protected Characteristics Indicators

Equality Act 2010 Protected Characteristics	Indicator	Source	Geographic level data available	Data accessed
Age	TS007B – Age by broad age band	NOMIS Census 2021	Lower layer Super Output Areas (LSOA)	August 2024
Disability	TS038 – Disability	NOMIS Census 2021	LSOA	August 2024
Gender reassignment	TS078 – Gender identity	NOMIS Census 2021	Middle layer Super Output Areas (MSOA)	August 2024
Marriage and civil partnership	TS010 – Living arrangements.	NOMIS Census 2021	MSOA	August 2024
Pregnancy and Maternity	Live births in England and Wales for small geographic areas	ONS Birth Statistics	LSOA	August 2024
Race	TS022 – Ethnic group (detailed) TS028 - National identity	NOMIS Census 2021	LSOA	August 2024
Religion or belief	TS030 – Religion	NOMIS Census 2021	LSOA	August 2024
Sex	TS008 – Sex	NOMIS Census 2021	LSOA	August 2024
Sexual Orientation	TS077 – Sexual orientation	NOMIS Census 2021	MSOA	August 2024

Disproportionate effects

4.1.7 Disproportionate effects relate to differences experienced by a group of people sharing a protected characteristic, and often arise simply due to variation in demographic distribution, without that protected characteristic causing greater individual sensitivity to the Proposed Development's impacts. Baseline data is set out in **Section 5** of this Equality Statement to inform a view on such variation.

Differential effects

4.1.8 Where a protected characteristic is associated with additional sensitivity for a type of change due to the Proposed Development, then a differential effect may arise. Differential effects are identified in a range of the Environmental Statement assessments, including **Chapter 9: Public Health (Volume II)**, which assigns high

sensitivity related to age, pregnancy and existing poor health (including disability). The Environmental Statement assessments have therefore explicitly considered where differential equality effects could arise. Where the conclusion of such assessments is that despite high sensitivity there would not be significant effects, then it is unlikely that there would be a differential equality effect. The assessment of such effects is signposted in **Section 6**.

4.1.9 **Table 4.2** provides a screening exercise to highlight which protected characteristics relate to disproportionate and differential effects in relation to the Proposed Development.

Distinguishing disproportionate and differential effects

Table 4.2: Screening of protected characteristics by disproportionate and differential effects

Protected Characteristic	Experience disproportionate effects	Experience differential effects
Age	✓	✓
Disability	✓	✓
Gender reassignment	✓	
Marriage and civil partnership	✓	
Pregnancy and maternity	✓	✓
Race	✓	✓
Religion or belief	✓	✓
Sex	✓	
Sexual Orientation	✓	

4.2 *Pathways to effects*

4.2.1 The Environmental Statement contains baseline information and assessment information which can be used to inform the understanding of potential equality changes. The relevant chapters, included within **Volume II** of the Environmental Statement:

- **Chapter 6: Air Quality;**
- **Chapter 7: Noise and Vibration;**
- **Chapter 8: People and Communities;**
- **Chapter 9: Public Health;** and
- **Chapter 10: Landscape and Visual Impact Assessment.**
- Additional information is also included in **Chapter 3: Description of the Proposed Development.**

4.2.2 Note that traffic and transport effects were scoped out of the EIA on the basis that the impacts from Heavy Goods Vehicles (HGVs) on the highway network are unlikely to be significant. Where relevant to other aspects such as air quality, these have been considered within the chapter. Further details in relation to HGV movements are provided in **Chapter 3: Description of the Proposed Development.**

4.3 *Affected Groups*

4.3.1 Following identification of potential pathways to effects, consideration is then given to the protected characteristics within the areas likely to be most affected by the Proposed Development. This includes summarising the distribution of the protected characteristics in these areas to determine if and how certain groups within each equality strand could potentially experience disproportionate and/or differential impacts as a result of implementing full runway alternation during easterly operations.

4.4 *Study area*

4.4.1 To support an understanding to the Proposed Development's equality effects two study area levels are discussed: a local authority study area level; 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.

4.4.2 The local authority Study Area reflects the 10 local authority areas lying closest to Heathrow, reflecting the Study Area presented in **Chapter 8: People and Communities** and **Chapter 9: Public Health**. Baseline data has been collected for:

- 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)¹⁶;
- Runnymede Borough Council; and
- Spelthorne Borough Council.

4.4.3 This area represents the greatest geographic area that effects attributable to the proposed changes could be felt.

4.4.4 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**.

4.4.5 The baseline statistics (populations) for these site specific areas, which have been defined as Health Site-Specific Study Areas (HSSSA) (as reported in **Chapter 9: Public Health** and illustrated on **Figure 9.1 (Appendix 9.2: Public Health Figures, Volume III** of the Environmental Statement)) have been derived from where the Lower layer Super Output Areas (LSOAs) applied to the areas with the changes greater than 1dB Laeq,16hr (as identified on **Chapter 7: Noise and Vibration Figure 7.5.4 (Volume IV** of the Environmental Statement)) or changes in annual mean nitrogen dioxide of greater than 0.2 ug/m³. These metrics give the larger extents within which other changes, such as night-time noise or particulate matter changes also occur.

4.4.6 The relevant LSOA, or Medium Layer Super Output Areas (MSOA), where the LSOA data is not available are set out in **Chapter 9: Public Health**.

4.4.7 These HSSSA's are related to the arrival or departure routes they are most relevant to. These easterly operations routes are used around 10% of the time during the summer, and around 14% over the course of a year.

- 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;

¹⁶ 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: 10 October 2024]

- 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; and
- HSSSA 8, Departure on 09R (southern runway) west end, near Stanwell and Stanwell Moor, beneficial effect.

4.4.8 For ease of reference, **Graphic 4.1** summarises the HSSSAs shown in **Figure 9.1 (Appendix 9.2: Public Health Figures)**.

Graphic 4.1 HSSSAs

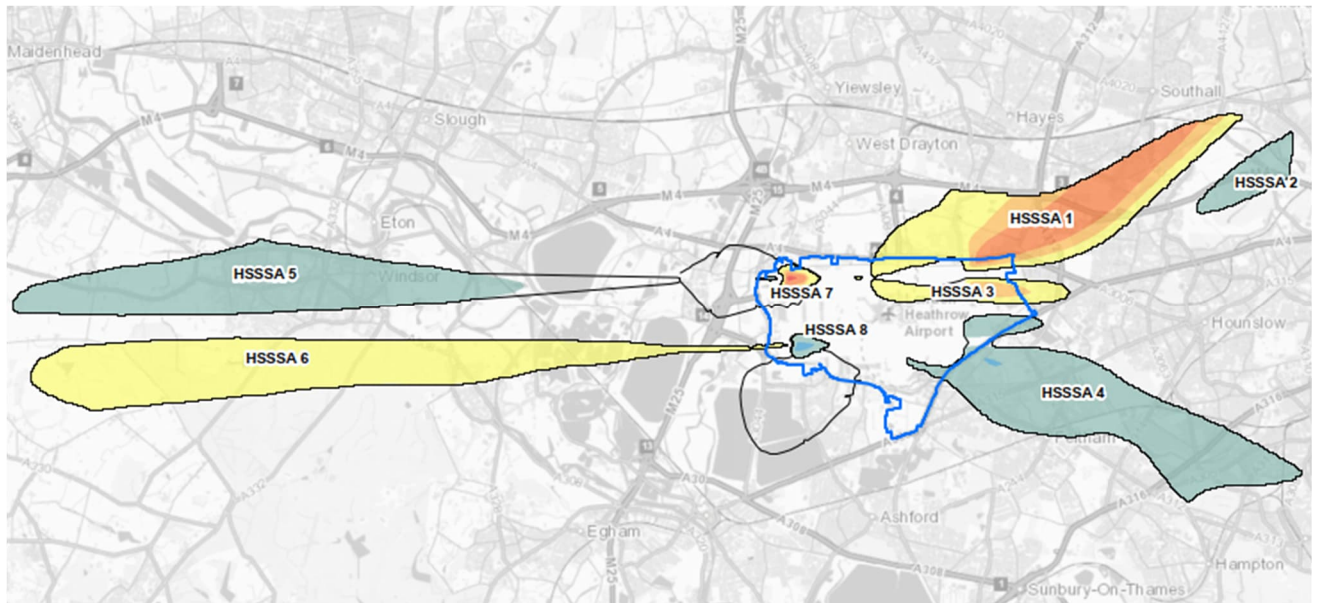


Table 4.3 Census data for the Census 2021 population size in wards (best fit) for each HSSSA

Indicators	HSSSA 1	HSSSA 2	HSSSA 3	HSSSA 4	HSSSA 5	HSSSA 6	HSSSA 7	HSSSA 8
Total: All usual residents	57,721	18,630	56,417	92,886	43,711	23,022	3,629	10,491

4.4.9 **Table 4.3** shows the population size in the HSSSAs (a best fit of relevant LSOAs described in **Chapter 9: Public Health**). The 2021 census population of the HSSSAs that experience beneficial effects (HSSSAs 2, 4, 5 and 8) is 165,718; and the

population of the HSSSAs that experience adverse effects (HSSSAs 1, 3, 6 and 7) is 140,789.

4.4.10

As discussed in **Chapter 9: Public Health**, there are paired effects across these HSSSAs, which are helpful to understand to aid interpretation of effects.

- Departure paired effects (aircraft taking-off into an easterly wind):
 - An adverse effect arises to the northeast of the Airport associated with increased departures from 09L (northern runway) when the Airport is under easterly operations. The effects relate to the population of HSSSA 1 and HSSSA 3 depending on the departure route. A corresponding adverse effect at the western end of 09L also arises from more aircraft commencing their take-off, affecting the population of HSSSA 7.
 - Simultaneously a beneficial effect arises to the southeast of the Airport associated with reduced departures from 09R (southern runway) when the Airport is under easterly operations. The effects relate to the population of HSSSA 4. A corresponding beneficial effect at the western end of 09R also arises from fewer aircraft commencing their take-off, affecting the population of HSSSA 8.
 - A smaller beneficial effect also arises to the northeast of the Airport associated with less use of the north east departure routes (ULTIB and BPK) from 09R (southern runway) under the Proposed Development. The effects relate to the population of HSSSA 2.
- Arrival paired effects (aircraft landing into an easterly wind):
 - A beneficial effect arises to the northwest of the Airport under easterly operations associated with fewer aircraft arrivals on 09L (northern runway), as it is being used for departures. The effects relate to the population of HSSSA 5.
 - Simultaneously an adverse effect arises to the southwest of the Airport under easterly operations associated with more aircraft arrivals on 09R (southern runway). The effects relate to the population of HSSSA 6.

4.5 Assumptions and limitations

- 4.5.1 The effects arising from the Proposed Development may differ between individuals who share a particular protected characteristic. However, these differences are not always predictable and depend greatly on individual circumstances.
- 4.5.2 Indicators in relation to protected characteristics are used that reflect publicly available data for small area geographies (see **Table 4.1**). These indicators do not capture all the sensitive and personal attributes of what membership of that group means to individuals. Reliance may therefore need to be made on population average data, as well as professional judgement.

5. *Disproportionate Effects Baseline Information*

Disproportionate effects

- 5.1.1 Potential for disproportionate effects relate to all protected characteristics (see **Table**).
- 5.1.2 The baseline information presented in this section demonstrates where demographic variation occurs. For example, it shows a greater proportion of the population within area HSSSA 1 (the area where the largest increases in air noise effects arise) are South Asian, which is comparatively higher than the other HSSSAs. As discussed in **Chapter 9: Public Health**, whilst South Asian ethnicity is in general linked to increased cardiovascular risk, the evidence does not indicate that South Asian ethnicity is causally linked to greater noise-related cardiovascular risk. The South Asian ethnicity and noise are considered independent risk factors for cardiovascular health, in the same way as smoking or obesity are also factors in cardiovascular risk. South Asian ethnicity is therefore linked to a disproportionate effect, driven by the relatively higher proportion of South Asian ethnicity represented within the population, rather than a differential effect linked to increased sensitivity to the Proposed Developments noise impacts. Similarly, the data also highlights a greater proportion of the population within area HSSSA 1 has a declared a religion as Muslim or Sikh. A disproportionate effect, driven by the relatively higher proportion of Muslims and Sikhs in the HSSSA 1 population, is therefore likely, but there is not identified to be a differential effect linked to increased sensitivity of Muslims and Sikhs to the Proposed Development's noise effects.

Summary of baseline within HSSSA

- 5.1.3 A summary of the baseline protected characteristics is provided below:
- Age: Age profiles are relatively similar, although HSSSA 4 has a slightly greater proportion of children (22%) and older people (12.6%), compared to other e.g. HSSSA 1 where the proportion of children is 20.6% and older people 11.4% respectively. See **Table** .
 - Disability: the proportion of those who are disabled under the Equality Act is slightly higher in HSSSA 8 (14.5%) and HSSSA 4 (13.5%) than in HSSSA 1 (11.8%). Areas are otherwise below Greater London average. See **Table** 5.2.
 - Gender reassignment: the proportion of those where gender identity is different from sex registered at birth is broadly comparable across HSSSA's, however slightly higher within HSSSA 1 (0.8%) and HSSSA 3 (0.6%) when compared to Greater London average (0.5%). See **Table** 5.3.
 - Marriage and civil partnership: the proportion of those in a married or in a civil partnership is broadly comparable across the HSSSA's; the higher being within HSSSA 2 (47.5%) and lowest in HSSSA 7 (41.2%). See **Table** 5.4.

- Pregnancy and maternity: the number of live births are highest in HSSSA 4 (at 1,018) and HSSSA 1 (892). See **Table 5.5**.
- Race (as ethnic group): 45.2% of the population in HSSSA 1 are South Asian which is comparatively higher than the other areas identified, e.g. HSSSA 7 is 33.8% (as the next highest) whilst HSSSA 5 is 10.8% (as the lowest comparator). See **Table 5.6**.
- Religion or belief: 21.2% and 25.5% of the population within HSSSA 1 have declared a religion as Muslim or Sikh. This is comparatively higher than in other areas e.g. 15.9% and 14% respectively for HSSSA 2 (as the next highest) and 4.9% and 4.3% in HSSSA 5 (as the lowest comparator). See **Table 5.7**.
- Sex: Sex is broadly comparable across all areas. See **Table 5.8**.
- Sexual Orientation: Sexual orientation is broadly comparable across all areas. See **Table 5.9**.

5.2 Data Sources

5.2.1 The data sources used are:

- The UK Census 2021, for the majority of data¹⁷
- Census 2011 (London only), for employment data¹⁸
- IMD 2019, for data on deprivation¹⁹

5.2.1 Baseline data of protected characteristics²⁰ within the Study Area (as outlined in Section 3.4 of this document) was collected. The data sources used to establish the baseline information for the HSSSA's is summarised in **Table 4.1**.

5.2.2 The data provided in **Table 5.1** to **Table 5.9**, provides the baseline data for the HSSSA's for each of the protected characteristics defined by the Equality Act⁷. For comparison, baseline data has also been gathered at a regional (Greater London) and national (England) level for comparison.

5.2.3 The information for the wider Study Area is provided in **Annex A**.

¹⁷ Office for National Statistics, (2021). *Census 2021 Bulk Data Download*. [online] Available at: https://www.nomisweb.co.uk/sources/census_2021_bulk [Accessed: 10 October 2024].

¹⁸ London Datastore, (2011). *2011 Census Labour Market & Qualifications*. [online] Available at: <https://data.london.gov.uk/dataset/2011-census-labour-and-qualifications> [Accessed: 10 October 2024].

¹⁹ Ministry of Housing, Communities and Local Government, (2019). *Indices of Multiple Deprivation (IMD) 2019*. [online] Available at: <https://arcg.is/11Hm0G0> [Accessed: 10 October 2024].

²⁰ As defined by the Equality Act 2010.

Table 5.1 Average age (as a %) across the HSSSA's identified

Indicators	HSSSA 1	HSSSA 2	HSSSA 3	HSSSA 4	HSSSA 5	HSSSA 6	HSSSA 7	HSSSA 8	Greater London (Regional)	England (National)
Aged 4 years and under %	6.2	5.2	6.2	6.2	5.4	4.9	6.15	6.7	6.0	5.4
Aged 5 to 9 years %	6.5	6.5	6.7	6.9	5.9	5.5	5.6	6.1	6.0	5.9
Aged 10 to 15 years %	7.9	7.7	7.6	8.9	7.8	7.6	5.7	6.7	7.2	7.2
Aged 16 to 19 years %	4.8	4.6	4.3	4.6	4.8	4.1	3.35	3.9	4.4	4.6
Aged 20 to 24 years %	6.3	5.3	5.6	5.6	4.6	4.3	5.2	5.3	6.7	6.0
Aged 25 to 34 years %	16.3	14.6	14.5	13.2	13.1	10.9	18.15	15.7	18.1	13.6
Aged 35 to 49 years %	23.0	23.3	25.3	23.6	21.5	20.6	23.8	22.6	22.7	19.4
Aged 50 to 64 years %	17.5	18.0	17.1	18.4	19.8	22.0	19.9	19.3	16.9	19.4
Aged 65 to 74 years %	6.9	8.1	7.0	7.2	8.7	10.7	7.2	7.4	6.5	9.8
Aged 75 to 84 years %	3.2	4.8	3.9	3.8	5.7	6.8	3.75	4.4	3.8	6.1
Aged 85 years and over %	1.2	1.9	1.6	1.6	2.7	2.6	1.1	1.9	1.6	2.4

Table 5.2 Census data for the population with a disability (%) across the HSSSA's identified

Indicators	HSSSA 1	HSSSA 2	HSSSA 3	HSSSA 4	HSSSA 5	HSSSA 6	HSSSA 7	HSSSA 8	Greater London (Regional)	England (National)
Disabled under the Equality Act	11.8	11.8	11.6	13.5	12.4	12.5	11.5	14.5	13.2	17.3
Not disabled under the Equality Act	88.2	88.2	88.4	86.5	87.6	87.5	88.6	85.5	86.8	82.7

Table 5.3 Census data for the gender Identity (as a %) across HSSSA's identified

Indicators	HSSSA 1	HSSSA 2	HSSSA 3	HSSSA 4	HSSSA 5	HSSSA 6	HSSSA 7	HSSSA 8	Greater London (Regional)	England (National)
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Gender identity the same as sex registered at birth	89.5	90.9	89.9	92.5	93.6	93.5	92.2	92.2	91.2	93.5
Gender identity different from sex registered at birth but no specific identity given	0.8	0.3	0.6	0.4	0.2	0.3	0.4	0.4	0.5	0.2
Trans woman	0.3	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1
Trans man	0.4	0.1	0.3	0.1	0.1	0.1	0.2	0.1	0.2	0.1
All other gender identities	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.1
Not answered	9.1	8.6	9.0	6.7	5.9	6.0	7.1	7.0	7.9	6.0

Table 5.4 Census data for the population living in a couple: married or civil partnership (as a %) across the HSSSA's identified

Indicators	HSSSA 1	HSSSA 2	HSSSA 3	HSSSA 4	HSSSA 5	HSSSA 6	HSSSA 7	HSSSA 8	Greater London (Regional)	England (National)
Living in a couple: Married or in a civil partnership	44.5	47.5	44.5	44.8	45.3	46.5	41.2	41.7	37.1	43.7

Table 5.5 Live births across the HSSSA's identified in 2022

Indicators	HSSSA 1	HSSSA 2	HSSSA 3	HSSSA 4	HSSSA 5	HSSSA 6	HSSSA 7	HSSSA 8	Greater London (Regional)	England (National)
Live births (number)	892	214	613	1018	433	211	54	119	106,696	577,046

Table 5.6 Census data of the ethnic groups across the HSSSA's identified (as a %)

Indicators	HSSSA 1	HSSSA 2	HSSSA 3	HSSSA 4	HSSSA 5	HSSSA 6	HSSSA 7	HSSSA 8	Greater London (Regional)	England (National)
Asian, Asian British or Asian Welsh										
All	55.3	35.6	39.4	24.7	13.7	15.4	38.4	25.3	20.7	9.6
Bangladeshi	1.1	0.8	1.1	1.0	0.3	0.3	0.6	0.5	3.7	1.1
Chinese	0.4	1.1	0.7	0.9	0.8	0.8	0.8	0.6	1.7	0.8
Indian	35.3	20.9	24.8	11.7	7.5	10.1	26.4	14.8	7.5	3.3
Pakistani	8.8	6.2	6.0	4.2	3.0	2.5	6.9	4.2	3.3	2.8

Indicators	HSSSA 1	HSSSA 2	HSSSA 3	HSSSA 4	HSSSA 5	HSSSA 6	HSSSA 7	HSSSA 8	Greater London (Regional)	England (National)
Other Asian	9.7	6.7	6.8	7.1	2.0	1.8	3.7	5.2	4.6	1.7
Black, Black British, Black Welsh, Caribbean or African										
All	9.0	7.3	4.8	6.2	2.1	1.8	4.3	4.4	13.5	4.2
African	6.7	4.8	3.5	4.4	1.3	1.3	3.2	3.3	7.9	2.6
Caribbean	1.5	1.9	0.8	1.1	0.6	0.3	0.7	0.7	3.9	1.1
Other Black	0.8	0.7	0.5	0.8	0.3	0.2	0.4	0.4	1.7	0.5
Mixed or Multiple ethnic groups										
All	3.3	4.8	4.2	4.6	4.0	3.4	4.9	3.9	5.7	3.0
White and Asian	1.0	1.5	1.6	1.5	1.6	1.6	2.2	1.3	1.4	0.8
White and Black African	0.5	0.6	0.6	0.7	0.5	0.4	0.7	0.6	0.9	0.4
White and Black Caribbean	0.7	1.1	0.7	1.0	0.8	0.5	0.9	1.0	1.5	0.9
Other	1.0	1.6	1.3	1.5	1.1	0.9	1.1	1.1	1.9	0.8
White										
All	21.8	44.5	45.5	59.4	77.6	76.5	48.2	61.2	53.8	81.0
English, Welsh, Scottish, Northern Irish or British	12.6	28.7	30.8	45.9	65.5	66.3	30.9	49.5	36.8	73.5
Irish	0.9	2.7	1.5	1.4	1.6	1.6	1.4	1.0	1.8	0.9
Gypsy or Irish Traveller	0.2	0.0	0.1	0.1	0.3	0.4	0.4	0.5	0.1	0.1
Roma	0.2	0.3	0.3	0.3	0.2	0.1	0.4	0.3	0.4	0.2

Indicators	HSSSA 1	HSSSA 2	HSSSA 3	HSSSA 4	HSSSA 5	HSSSA 6	HSSSA 7	HSSSA 8	Greater London (Regional)	England (National)
Other White	7.9	12.8	12.8	11.6	10.0	8.0	15.1	9.9	14.7	6.3
Other ethnic group										
All	10.6	7.9	6.1	5.0	2.6	2.8	4.4	5.2	6.3	2.2
Arab	1.4	1.5	1.3	1.4	0.7	0.6	1.2	1.0	1.6	0.6
Any other ethnic group	9.3	6.4	4.8	3.6	1.9	2.2	3.3	4.2	4.7	1.6

Table 5.7 Census data of the population who have declared a religion and belief (as a %)

Indicators	HSSSA 1	HSSSA 2	HSSSA 3	HSSSA 4	HSSSA 5	HSSSA 6	HSSSA 7	HSSSA 8	Greater London (Regional)	England (National)
Total: All usual residents	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No religion	8.5	19.8	18.4	26.0	30.5	27.5	15.5	24.2	27.1	36.7
Christian	29.2	34.1	41.3	42.3	49.9	51.3	45.2	45.6	40.7	46.3
Buddhist	0.7	0.8	1.3	1.6	0.7	0.7	1.0	1.7	0.9	0.5
Hindu	9.6	8.2	9.6	7.3	2.7	3.1	5.8	5.3	5.1	1.8
Jewish	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.1	1.7	0.5
Muslim	21.2	15.9	14.4	12.2	4.9	4.4	12.5	8.6	15.0	6.7
Sikh	25.5	14.0	8.1	3.8	4.3	6.3	14.0	8.8	1.6	0.9
Other religion	0.7	0.9	0.8	0.7	0.6	0.5	0.5	0.7	1.0	0.6

Indicators	HSSSA 1	HSSSA 2	HSSSA 3	HSSSA 4	HSSSA 5	HSSSA 6	HSSSA 7	HSSSA 8	Greater London (Regional)	England (National)
Not answered	4.5	6.2	5.8	5.9	6.1	6.0	5.5	5.1	7.0	6.0

Table 5.8 Census records of Sex(as a %) across the HSSSA's

Indicators	HSSSA 1	HSSSA 2	HSSSA 3	HSSSA 4	HSSSA 5	HSSSA 6	HSSSA 7	HSSSA 8	Greater London (Regional)	England (National)
All persons	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Female	49.60	50.86	49.60	51.13	50.00	50.03	47.15	48.68	51.50	51.00
Male	50.40	49.14	50.40	48.87	50.00	49.97	52.85	51.32	48.50	49.00

Table 5.9 Census records of Sexual Orientation (as a %) across the HSSSA's

Indicators	HSSSA 1	HSSSA 2	HSSSA 3	HSSSA 4	HSSSA 5	HSSSA 6	HSSSA 7	HSSSA 8	Greater London (Regional)	England (National)
Total: All usual residents aged 16 years and over (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Straight or Heterosexual (%)	87.0	87.6	86.9	88.9	90.1	90.2	89.6	89.6	86.2	89.4
Gay or Lesbian (%)	0.5	1.7	0.9	1.4	1.4	1.5	1.4	1.4	2.2	1.5
Bisexual (%)	1.4	1.1	1.4	1.1	0.9	0.9	1.0	1.0	1.5	1.3

Indicators	HSSSA 1	HSSSA 2	HSSSA 3	HSSSA 4	HSSSA 5	HSSSA 6	HSSSA 7	HSSSA 8	Greater London (Regional)	England (National)
All other sexual orientations (%)	0.6	0.3	0.4	0.4	0.2	0.3	0.3	0.3	0.5	0.3
Not answered (%)	10.6	9.5	10.4	8.2	7.3	7.2	7.8	7.8	9.5	7.5

6. Differential Effects Assessment Signposting

6.1 Overview

6.1.1 As noted in **Table 4.2**, potential for differential effects relate to age, disability, pregnancy and maternity, race and religion or belief.

6.1.2 Differential effects relate to a subset of protected characteristics where sensitivity is increased to the Proposed Development changes. The relevant chapters where such effects are considered are included within **Volume II** of the Environmental Statement:

- **Chapter 6: Air Quality;**
- **Chapter 7: Noise and Vibration;**
- **Chapter 8: People and Communities;**
- **Chapter 9: Public Health;** and
- **Chapter 10: Landscape and Visual Impact Assessment.**

6.1.3 Only the noise and vibration assessment, presented in **Chapter 7: Noise and Vibration** identified likely significant effects. This section therefore focuses on the potential equality impacts on protected characteristics as a result of changes in noise levels experienced within the HSSSA's (where there is a change of 1dB or greater).

6.1.4 **Chapter 7: Noise and Vibration** discusses significant effects on community infrastructures associated with protected characteristics, such as age in relation to nurseries, schools and colleges, and religion or belief for places of meeting for religious worship.

6.1.5 **Chapter 9: Public Health** discusses the noise, vibration, air quality and visual changes associated with the Proposed Development for populations around the Airport. The following points are made in relation to protected characteristics and potential for effects:

- Age and disability are related to increased sensitivity to noise, vibration, air quality and visual changes. Population health effects, including for vulnerable groups and health inequalities, are concluded to be not significant.
- Pregnancy and maternity are related to increased sensitivity to air quality changes. Population health effects, including for vulnerable groups and health inequalities, are concluded to be not significant.
- Race and religion or belief are related to increased sensitivity to noise and vibration, including linked to places of meeting for religious worship. **Chapter 7: Noise and Vibration** identifies significant effects for Holy Angels Anglican Church and St Christopher Roman Catholic Church. As noted in **paragraph 5.1.2** of this Equality Statement, South Asian ethnicity was also taken into account in terms of its role within health sensitivity to

cardiovascular health. Population health effects, including for vulnerable groups and health inequalities, are concluded to be not significant.

6.1.6 The population groups relevant to this assessment relate primarily to the areas of effect set out in **Chapter 7: Noise and Vibration Figure 7.5.4 (Volume IV** of the Environmental Statement), which indicatively correspond with the HSSSAs discussed in **Chapter 9: Public Health**:

- 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 change.
- HSSSA 8: Departure on 09R (southern runway) west end, near Stanwell and Stanwell Moor, beneficial change.

Summary of baseline within HSSSA

6.1.7 **Chapter 9: Public Health** has taken into account the following, focusing on contrasting the main paired areas where beneficial and adverse effects arise:

- The proportion of the young age population in HSSSA 1 and HSSSA 4 is around 20%, with HSSSA 4 slightly higher than HSSSA 1. These are higher than the regional Greater London and the national England averages. Considering the working-age group, HSSSA 1 has a higher proportion of 68% which aligns closely with the regional average of 68.8% and is higher than the national average of 63.0%. In contrast, HSSSA 4 has a slightly lower proportion of 65.4% which is lower than the regional average but slightly higher than the national average. For the elderly population, the proportion is similar in both study areas, with 11.4% in HSSSA 1 and 12.6% in HSSSA 4. These are lower than the regional Greater London average and the national England average.
- The age distribution in HSSSA 5 and HSSSA 6 is variable. The proportion of the young age population is similar in both study areas with 19% and 18% in HSSSA 5 and HSSSA 6 respectively. These are similar to the regional and

national averages. When considering the working age population, the proportion in HSSSA 5 is slightly higher than that in HSSSA 6. However, both are notably lower than the regional average and similar to the national average. For the elderly population, the proportion is slightly variable in both study areas, with 17.1% in HSSSA 5 and 20.1% in HSSSA 6. These are higher than the regional Greater London average and similar to the national England average.

- Disability under the Equality Act is slightly higher in HSSSA 4 than in HSSSA 1. These are similar to the regional Greater London average and lower than the national England average.
- Disability under the Equality Act in HSSSA 5 and HSSSA 6 is similar. Around 12% of the population are disabled under the Equality Act. These are similar to the regional Greater London average and lower than the national England average. Around 87% of the population are not disabled, which are similar to the regional average and higher than the national average.

6.2 *Embedded Environmental Measures*

- 6.2.1 The Airport is seeking consent for the Proposed Development to allow the full alternation of the north and south runways during easterly operations.). 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 15:00local time; and the other from 15:00local time until after the last departure for the day's schedule).
- 6.2.2 The Proposed Development seeks to provide predictable 'respite' to communities dominantly affected during current easterly operations under existing operations such as Stanwell and Hatton, North Feltham, Hanworth, Twickenham in HSSSA 4. Notably the Proposed Development proposes no changes to night-time runway alternation (this being from the time after the last departure until 06:00.
- 6.2.3 The Airport already implements a number of existing measures which are relevant to the Proposed Development:
- Implementation of existing Quieter Neighbourhood Support (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 (HCTOF) 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.

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

6.2.5 Key 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**).
- Measures set out in **Chapter 7: Noise and Vibration Table 7.31** and **Table 7.32**, including:
 - Easterly Alternation Noise Mitigation Package – Residential Dwelling Insulation;
 - Easterly Alternation Noise Mitigation Package – Schools Insulation;
 - Easterly Alternation Noise Mitigation Package – Noise Induced Vibration; and

- Easterly Alternation Noise Mitigation Package – Parks and Gardens.

6.2.6

Chapter 9: Public Health highlights the importance of clear communication with residents and users of affected facilities as to the timings of construction impacts and the timings of the predictable respite periods. This will be primarily achieved online through Heathrow's website. The health assessment also notes that the QNS administration includes provisions to take account of hardship and exceptional circumstances. Furthermore, through the course of the health assessment the opportunities to enhance the Proposed Development have been considered and have informed the submitted scheme. This includes provisions relevant to vulnerable groups access to the noise mitigation measures. For example, recognising that communication of the noise impacts and insulation schemes should have regard to the presence of households who do not speak English (noting the above average rates in HSSSA 1, see **Table 9.15** in **Chapter 9: Public Health**); and that the surveying and installation of insulation and related works in homes and schools will need to have appropriate protocols for safeguarding and having clear communication with vulnerable persons. Furthermore, measures are proposed for local community open spaces that are significantly adversely affected by the Proposed Development which can be tailored to promotes access and use of these sites by vulnerable groups, including those with additional sensory or mobility needs or measures related to inclusivity in terms of age.

7. Summary

- 7.1.1 This Equality Statement has summarised and signposted the impacts and mitigations associated with the implementing full runway alternation during easterly operations, and the potential effects experienced by person(s) who share a particular protected characteristic.
- 7.1.2 Disproportionate effects arise simply as a function of variation in demographics in the areas around the airport. In considering such variation it is relevant to compare these on the basis of the paired effects of the Proposed Development, i.e. that adverse departure effects to the northeast of the airport are linked to beneficial departure effects to the southeast of the airport. Correspondingly, beneficial arrivals effects to the northwest of the airport are linked to adverse arrivals effects to the southwest of the airport. Demographically such paired beneficial and adverse effects occur to similar representations of protected characteristics. Whilst there is some variation around this, the variation is not considered to pose equality challenges.
- 7.1.3 Differential effects arise for a subset of the protected characteristics where there is heightened sensitivity to the Proposed Development's changes due to those characteristics. Such effects have been considered and reported within the Environmental Statement. Effects relate to age, pregnancy and disability are discussed in **Chapter 9: Public Health**. **Chapter 7: Noise and Vibration** also discusses effects to these populations and on community infrastructures associated with particular characteristics, such as age in relation to nurseries, schools and colleges, and religion or belief for places of meeting for religious worship (effects arise to one Anglican Church and one Roman Catholic Church). **Chapter 9: Public Health** assigns high sensitivity in relation to such effects but does not identify significant effects in EIA terms. Such a conclusion suggests that the effects would not pose equality challenges.
- 7.1.4 The significant effects discussed in **Chapter 7: Noise and Vibration** are noted and will relate to people with one or more protected characteristics (all people have an age, ethnicity and gender and some will also have other protected characteristics as well). Those people will also benefit disproportionately from the Proposed Development's mitigation measures.
- 7.1.5 Of particular relevance, the Applicant is proposing a bespoke Easterly Alternation Noise Mitigation Package for residential dwellings forecast to experience significant increases in air noise of 3 dB $L_{Aeq,16hr}$ or more and leaves a household exposed to at least 54 dB $L_{Aeq,16hr}$ due to the Easterly Alternation. 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 existing QNS, further details are provided in **Chapter 7: Noise and Vibration**, including on measures that also relate to community infrastructures, as well as embedded measures that are summarised in **Section 6**.
- 7.1.6 Where people may be disproportionately or differentially affected by an impact relating to their protected characteristics, then general mitigation measures relating to that impact will correspondingly disproportionately or differentially benefit them.

- 7.1.7 The Proposed Development and the subsequent changes in the distribution of aircraft are in response to the ending of the Cranford Agreement allowing more equal distribution of effects around the Airport, as well as predictable respite periods.

Annex A Local Authority Study Area protected characteristics data

Table A.1 Baseline data on protected characteristics

Measure	LB Hillingdon	LB Ealing	LB Hounslow	LB Richmond upon Thames	LB Wandsworth	Slough Borough Council	Windsor and Maidenhead	Buckinghamshire Council	Runnymede	Spelthorne	Greater London	England
Age												
19 and under	26%	24%	25%	24%	20%	30%	24%	24%	24%	23%	24%	23%
20-64	61%	64%	63%	59%	71%	61%	58%	57%	59%	59%	64%	58%
65 and over	6%	5%	5%	8%	4%	4%	9%	9%	9%	9%	5%	9%
Being married or in a civil partnership												
Married/civil	49%	45%	47%	50%	33%	51%	51%	45%	44%	48%	40%	45%
Being pregnant or on maternity leave												
Live births (2022)	4,037	4,427	3,529	1,827	3,812	2,293	1,356	5,533	916	1,110	106,696	577,046
Disability												
Disabled according to the Equality Act	13%	12%	12%	13%	11%	11%	12%	13%	15%	14%	13%	17%
Race, (ethnicity)												
Asian, Asian British or Asian Welsh	33%	30%	37%	9%	12%	47%	13%	12%	9%	13%	7%	10%
Black, Black British, Black Welsh, Caribbean or African	8%	11%	7%	2%	10%	7%	2%	3%	2%	2%	2%	4%
Mixed or Multiple ethnic groups	4%	5%	5%	5%	6%	4%	3%	4%	4%	4%	3%	3%

Measure	LB Hillingdon	LB Ealing	LB Hounslow	LB Richmond upon Thames	LB Wandsworth	Slough Borough Council	Windsor and Maidenhead	Buckinghamshire Council	Runnymede	Spelthorne	Greater London	England
White	48%	43%	44%	80%	68%	36%	80%	80%	84%	79%	86%	81%
Other ethnic group	6%	11%	7%	3%	4%	6%	2%	2%	2%	2%	1%	2%
Religion												
No religion	19%	19%	19%	38%	36%	13%	31%	34%	35%	31%	27%	37%
Christian	39%	38%	38%	45%	43%	32%	50%	47%	50%	51%	41%	46%
Buddhist	1%	1%	1%	1%	1%	0%	1%	1%	1%	1%	1%	0%
Hindu	11%	8%	9%	2%	2%	8%	3%	3%	2%	4%	5%	2%
Jewish	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	2%	0%
Muslim	14%	19%	17%	4%	10%	29%	6%	7%	3%	4%	15%	7%
Sikh	9%	8%	9%	1%	0%	11%	3%	2%	1%	3%	2%	1%
Other religion	1%	1%	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%
Not answered	6%	7%	6%	7%	7%	5%	6%	6%	7%	6%	7%	6%
Sex												
Male	51%	51%	50%	51%	53%	50%	51%	51%	52%	51%	51%	51%
Female	49%	49%	50%	49%	47%	50%	49%	49%	48%	49%	49%	49%
Sexual orientation												
Sexual orientation: Straight or Heterosexual	89%	86%	87%	89%	86%	88%	91%	91%	88%	91%	86%	89%

Measure	LB Hillingdon	LB Ealing	LB Hounslow	LB Richmond upon Thames	LB Wandsworth	Slough Borough Council	Windsor and Maidenhead	Buckinghamshire Council	Runnymede	Spelthorne	Greater London	England
Sexual orientation: Gay or Lesbian	1%	2%	1%	2%	3%	1%	1%	1%	1%	1%	2%	2%
Sexual orientation: Bisexual	1%	1%	1%	1%	2%	1%	1%	1%	2%	1%	2%	1%
Sexual orientation: All other sexual orientations	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Sexual orientation: Not answered	9%	10%	10%	8%	8%	10%	7%	7%	8%	7%	10%	7%
Gender Identity												
Gender identity: Gender identity the same as sex registered at birth	92%	90%	91%	94%	93%	90%	94%	94%	93%	94%	91%	93%
Gender identity: Gender identity different from sex registered at birth but no specific identity given	0%	1%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
Gender identity: Trans woman	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Gender identity: Trans man	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Gender identity: All other gender identities	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Measure	LB Hillingdon	LB Ealing	LB Hounslow	LB Richmond upon Thames	LB Wandsworth	Slough Borough Council	Windsor and Maidenhead	Buckinghamshire Council	Runnymede	Spelthorne	Greater London	England
Gender identity: Not answered	7%	9%	8%	6%	7%	9%	6%	6%	6%	6%	8%	6%

Table note: London Borough (LB)