AIRSPACE &
FUTURE OPERATIONS
CONSULTATION

HEATHROW'S AIRSPACE DESIGN ENVELOPES FOR EXPANSION

JANUARY 2019

Heathrow

Contents

Heathrow

How to use the design envelopes

This document presents our design envelopes for potential flight paths at an expanded Heathrow.

A design envelope is a geographical area within which it is technically possible to position one or more flight paths. It does not mean that the final flight paths will be spread across the full width of the envelope. In total there are 18 design envelopes for arrival and departure flight paths into each of the three runways (northern, middle and southern) on easterly and westerly operations.

By providing information on the number, height and noise of potential flights over your area, our design envelopes aim to give you an understanding of the potential impact of flights to and from an expanded Heathrow.

- **Find your location of interest on the maps provided overleaf.**

  If you are within one or more design envelopes, it means there is potential for the future flight paths to be positioned overhead.

  We will not spread flight paths across an entire envelope. Your feedback will help us to determine the position of one or more flight paths within an envelope.

- You can also view these maps online at **www.heathrowconsultation.com**, and a postcode checker will help you identify which design envelopes are of interest to you.

- **The envelopes have been divided into sections to show the heights of aircraft that could be flying in each section of the envelope.**

  All height values given are in feet above mean sea level – if for example, the location of interest is on high ground then its height should be factored in.

- **Use the key to determine the height band you are in – this gives a typical height of future flights.**

  The table then indicates how many aircraft you could expect to use that flight path in the future. This is shown as a number of flights per hour, which will vary between zero (when that route is not in use), to a maximum number of hourly flights which would only occur in very busy periods.

  These figures relate to normal operations and represent our initial set of assumptions. The next phase of design will consider stakeholder feedback and these assumptions will be developed; therefore these figures could be subject to change as our design work progresses. We will provide details of any changes as a result of this work in our final airspace consultation planned for 2022.

- **Look at the noise information.**

  We have also provided an indication of the number of flights that may exceed 65 decibels, equivalent to noise levels in a busy office. This measure, known as "N65", is recommended in both the Secretary of State's Air Navigation Guidance and the CAA's Airspace Design Guidance. 65 decibels is a measure for daytime operations*.

If you would like to understand more about how we construct the design envelopes or about the noise generated by aircraft at different heights, you can refer to the noise tables provided in the **Understanding our design envelopes** information paper.

You may be in more than one design envelope. Where this is the case the airspace design will seek to ensure flight paths within different envelopes would not be in use over the same area at the same time. This means that the 'number of flights' figure given alongside each design envelope should be considered individually and not added together, unless stated otherwise.

For information on easterly and westerly operations at Heathrow, please see our **Airspace and Future Operations Consultation** booklet.

* For these envelopes we present an indication of the number of flights likely to exceed 65 decibels because night time runway operations for expansion are still being developed as part of this consultation.

Arrivals-1 for the northern runway (westerly operations)

Height Band	Number of flights	Number of flights above 65 decibels	Info
below 1000ft	0-47 Flights per hour	0-47 Flights per hour	In this area, the flight path has to line up with the northern runway, giving us limited flexibility. Flight paths within this area may be active at the same time as flight paths within some of the departures design envelopes over the same area, but departures would be much higher (over 5000ft).
1000ft to 2000ft	0-47 Flights per hour	0-47 Flights per hour	
2000ft to 3000ft	0-47 Flights per hour	0-47 Flights per hour	
3000ft to 4000ft	0-47 Flights per hour	0-32 Flights per hour	
4000ft to 5000ft	0-47 Flights per hour	0-1 Flights per hour	
5000ft to 6000ft	0-47 Flights per hour	0 Flights per hour	
6000ft to 7000ft	0-47 Flights per hour	0 Flights per hour	

KEY

Design envelope

LHR Heathrow Airport

0 - 1,000ft

1,000 - 2,000ft

2,000 - 3,000ft

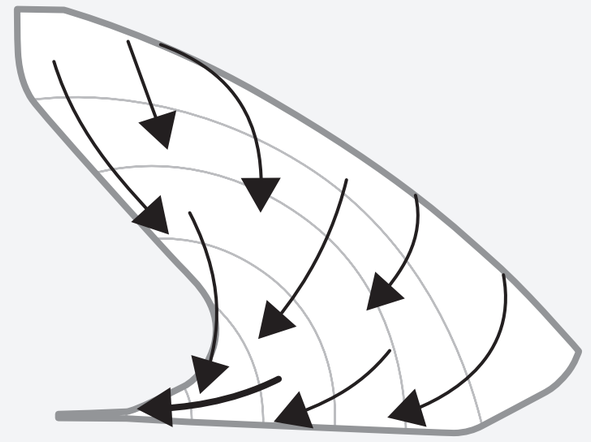
3,000 - 4,000ft

4,000 - 5,000ft

5,000 - 6,000ft

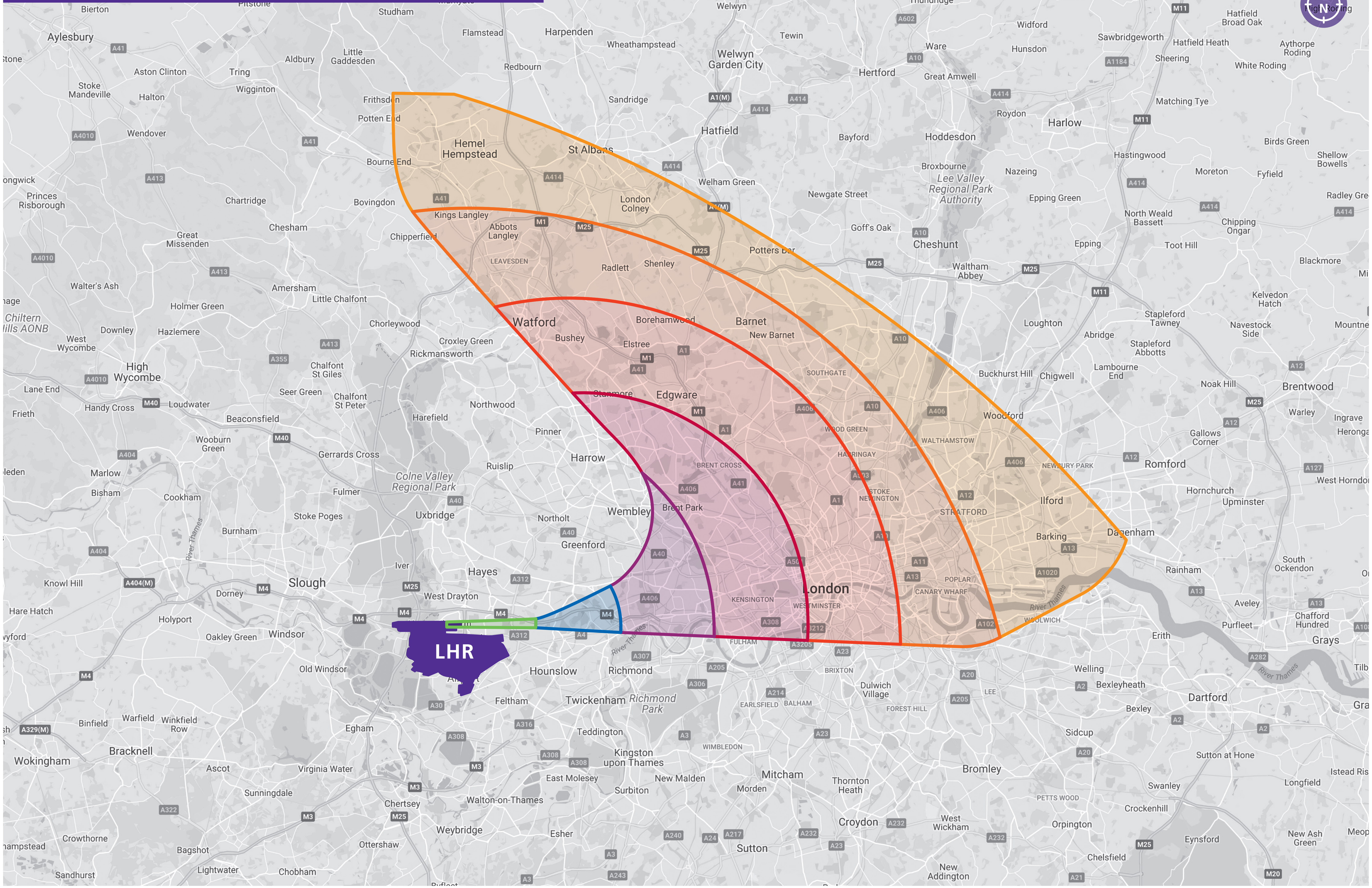
6,000ft +

Direction of descending aircraft within the envelope Arrivals-1



The arrows illustrate the range of potential flight paths we could position within an envelope. They do not indicate that flights would be spread throughout the envelope.

Arrivals-1 for the northern runway



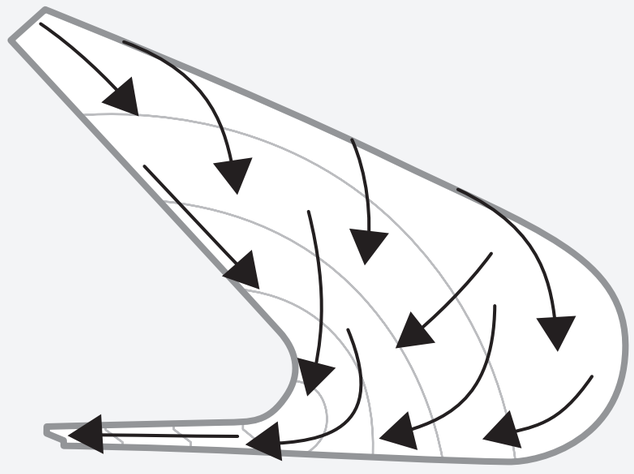
Arrivals-2 for the northern or middle runway (westerly operations)

Height Band	Number of flights	Number of flights above 65 decibels	Info
below 1000ft	0-47 Flights per hour	0-47 Flights per hour	This envelope covers arrival flight paths for either the northern or middle runway. In this area, the flight paths have to line up with the runway, giving us limited flexibility. Flight paths within this area may be active at the same time as flight paths within some of the departures design envelopes over the same area, but departures would be much higher (over 5000ft).
1000ft to 2000ft	0-47 Flights per hour	0-47 Flights per hour	
2000ft to 2300ft	0-47 Flights per hour	0-47 Flights per hour	
2300ft to 3000ft	0-47 Flights per hour	0-47 Flights per hour	
3000ft to 4000ft	0-47 Flights per hour	0-32 Flights per hour	
4000ft to 5000ft	0-47 Flights per hour	0-1 Flights per hour	
5000ft to 6000ft	0-47 Flights per hour	0 Flights per hour	
6000ft to 7000ft	0-47 Flights per hour	0 Flights per hour	

KEY

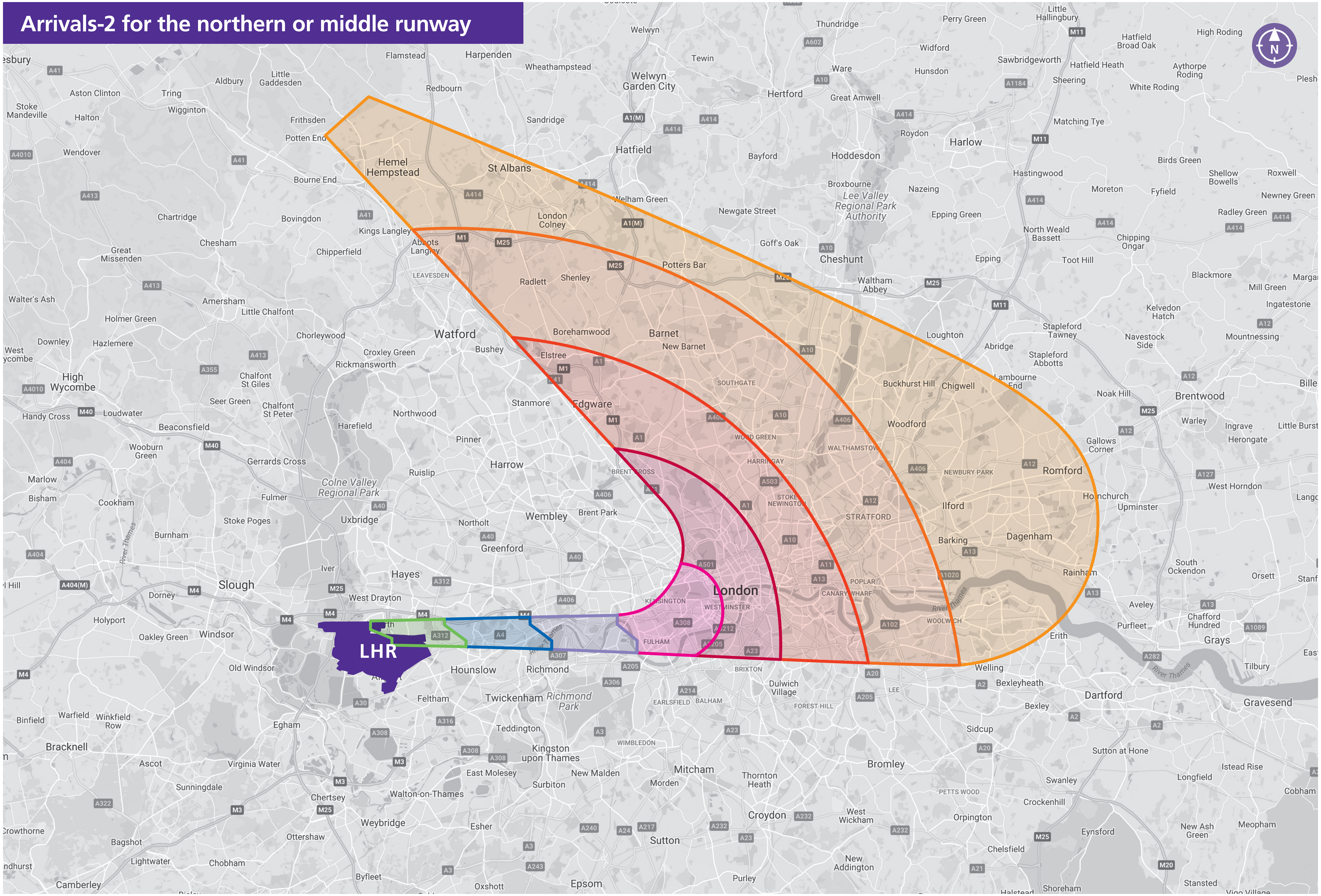
- Design envelope
- LHR — Heathrow Airport
- 0 - 1,000ft
- 1,000 - 2,000ft
- 2,000 - 2,300ft
- 2,300 - 3,000ft
- 3,000 - 4,000ft
- 4,000 - 5,000ft
- 5,000 - 6,000ft
- 6,000ft +

Direction of descending aircraft within the envelope Arrivals-2



The arrows illustrate the range of potential flight paths we could position within an envelope. They do not indicate that flights would be spread throughout the envelope.

Arrivals-2 for the northern or middle runway



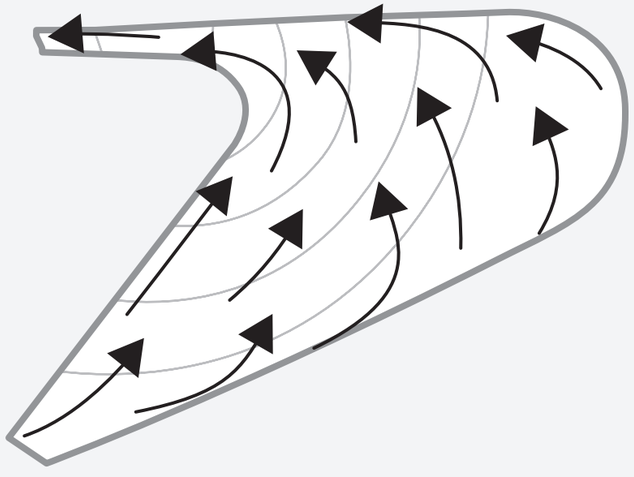
Arrivals-3 for the southern or middle runway (westerly operations)

Height Band	Number of flights	Number of flights above 65 decibels	Info
below 1000ft	0-47 Flights per hour	0-47 Flights per hour	This envelope covers arrival flight paths for either the southern or middle runway. In this area, the flight paths have to line up with either runway, giving us limited flexibility. Flight paths within this area may be active at the same time as flight paths within some of the departures design envelopes over the same area, but departures would be much higher (over 5000ft).
1000ft to 1600ft	0-47 Flights per hour	0-47 Flights per hour	
1600ft to 3000ft	0-47 Flights per hour	0-47 Flights per hour	
3000ft to 4000ft	0-47 Flights per hour	0-32 Flights per hour	
4000ft to 5000ft	0-47 Flights per hour	0-1 Flights per hour	
5000ft to 6000ft	0-47 Flights per hour	0 Flights per hour	
6000ft to 7000ft	0-47 Flights per hour	0 Flights per hour	

KEY

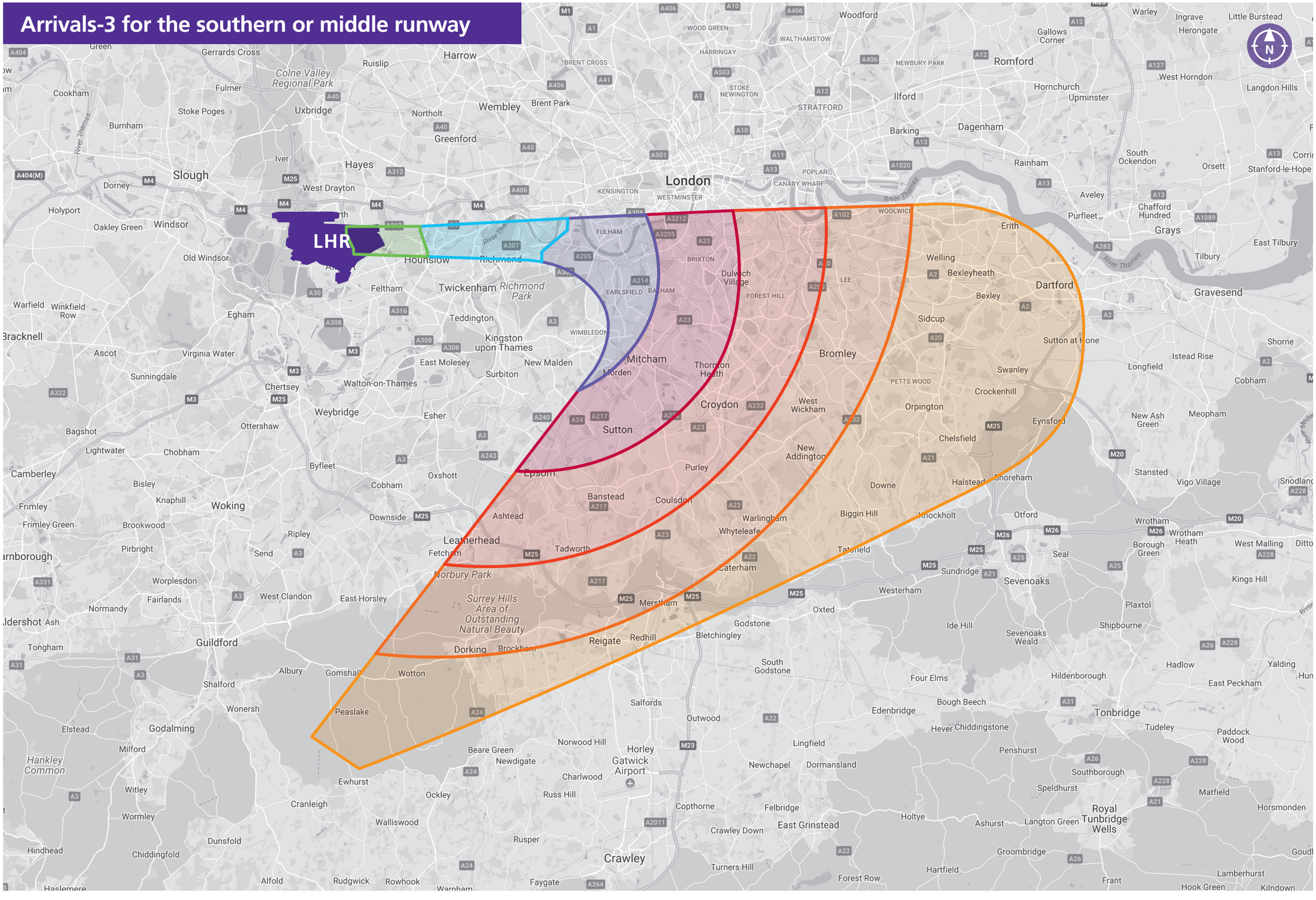
- Design envelope
- LHR — Heathrow Airport
- 0 - 1,000ft
- 1,000 - 1,600ft
- 1,600 - 3,000ft
- 3,000 - 4,000ft
- 4,000 - 5,000ft
- 5,000 - 6,000ft
- 6,000ft +

Direction of descending aircraft within the envelope Arrivals-3



The arrows illustrate the range of potential flight paths we could position within an envelope. They do not indicate that flights would be spread throughout the envelope.

Arrivals-3 for the southern or middle runway



Arrivals-4 for the southern runway (westerly operations)

Height Band	Number of flights	Number of flights above 65 decibels	Info
below 1000ft	0-47 Flights per hour	0-47 Flights per hour	In this area, the flight path has to line up with the southern runway, giving us limited flexibility. Flight paths within this area may be active at the same time as flight paths within some of the departures design envelopes over the same area, but departures would be much higher (over 5000ft).
1000ft to 2000ft	0-47 Flights per hour	0-47 Flights per hour	
2000ft to 3000ft	0-47 Flights per hour	0-47 Flights per hour	
3000ft to 4000ft	0-47 Flights per hour	0-32 Flights per hour	
4000ft to 5000ft	0-47 Flights per hour	0-1 Flights per hour	
5000ft to 6000ft	0-47 Flights per hour	0 Flights per hour	
6000ft to 7000ft	0-47 Flights per hour	0 Flights per hour	

KEY

Design envelope

LHR Heathrow Airport

0 - 1,000ft

1,000 - 2,000ft

2,000 - 3,000ft

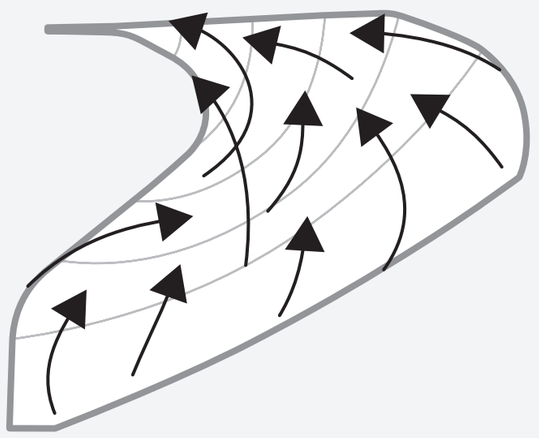
3,000 - 4,000ft

4,000 - 5,000ft

5,000 - 6,000ft

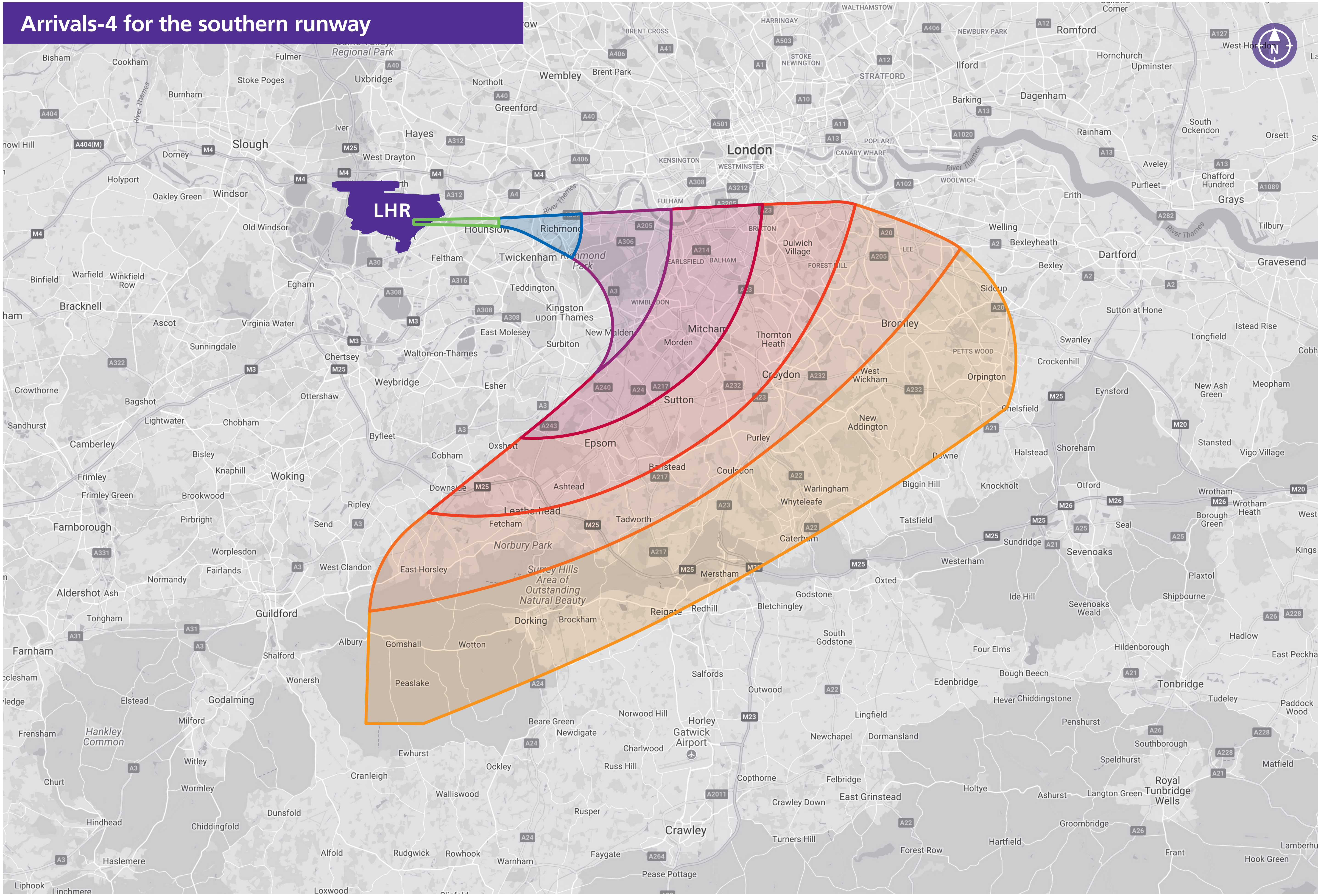
6,000ft +

Direction of descending aircraft within the envelope Arrivals-4



The arrows illustrate the range of potential flight paths we could position within an envelope. They do not indicate that flights would be spread throughout the envelope.

Arrivals-4 for the southern runway



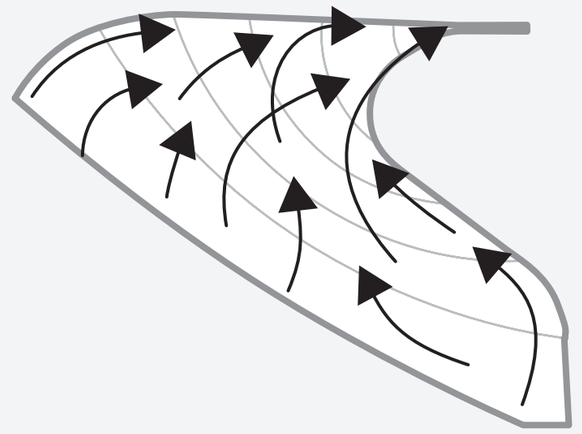
Arrivals-5 for the southern runway (easterly operations)

Height Band	Number of flights	Number of flights above 65 decibels	Info
below 1000ft	0-47 Flights per hour	0-47 Flights per hour	In this area, the flight path has to line up with the southern runway, giving us limited flexibility. Flight paths within this area may be active at the same time as flight paths within some of the departures design envelopes over the same area, but departures would be much higher (over 5000ft).
1000ft to 2000ft	0-47 Flights per hour	0-47 Flights per hour	
2000ft to 3000ft	0-47 Flights per hour	0-47 Flights per hour	
3000ft to 4000ft	0-47 Flights per hour	0-32 Flights per hour	
4000ft to 5000ft	0-47 Flights per hour	0-1 Flights per hour	
5000ft to 6000ft	0-47 Flights per hour	0 Flights per hour	
6000ft to 7000ft	0-47 Flights per hour	0 Flights per hour	

KEY

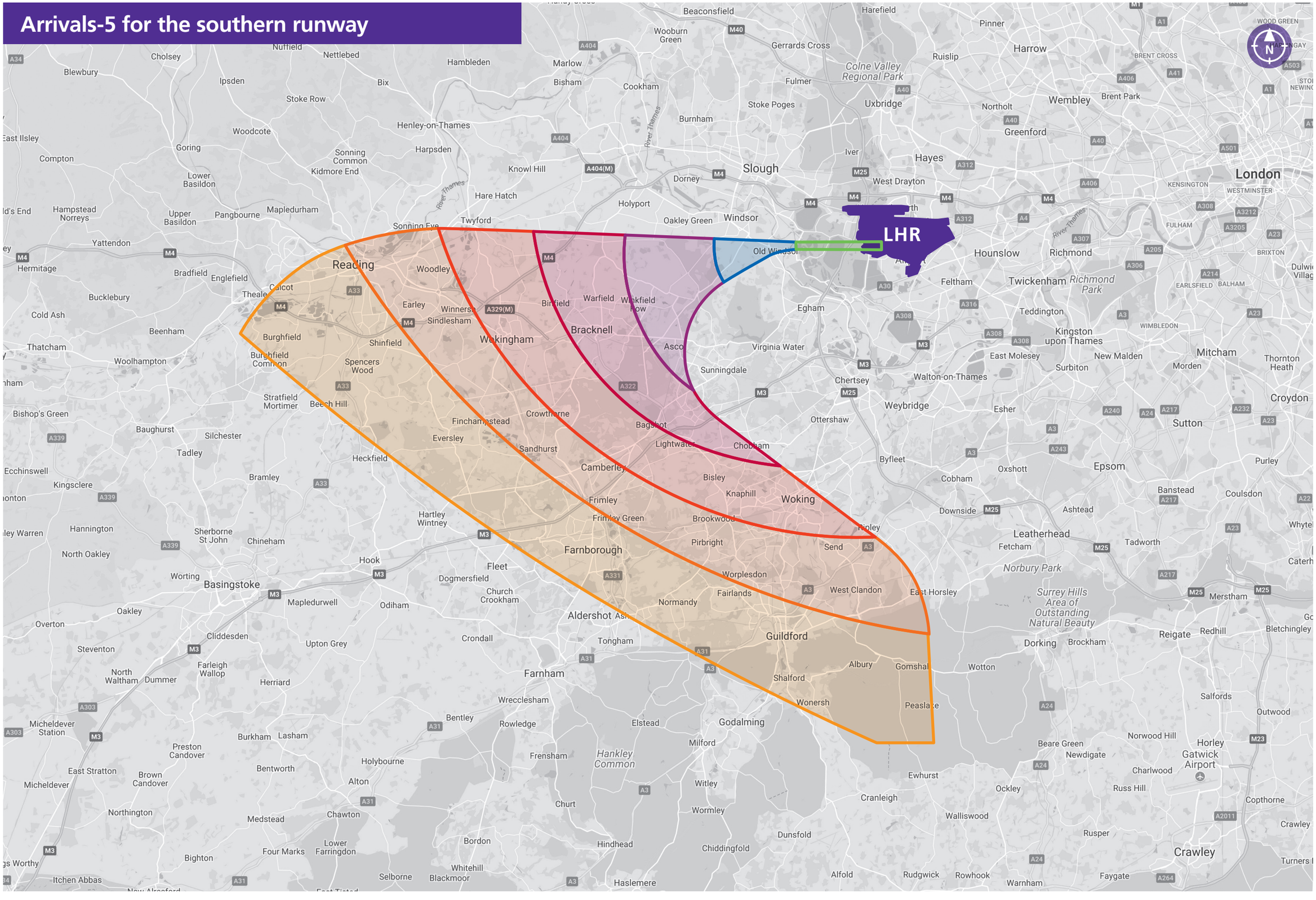
- Design envelope
- LHR — Heathrow Airport
- 0 - 1,000ft
- 1,000 - 2,000ft
- 2,000 - 3,000ft
- 3,000 - 4,000ft
- 4,000 - 5,000ft
- 5,000 - 6,000ft
- 6,000ft +

Direction of descending aircraft within the envelope Arrivals-5



The arrows illustrate the range of potential flight paths we could position within an envelope. They do not indicate that flights would be spread throughout the envelope.

Arrivals-5 for the southern runway



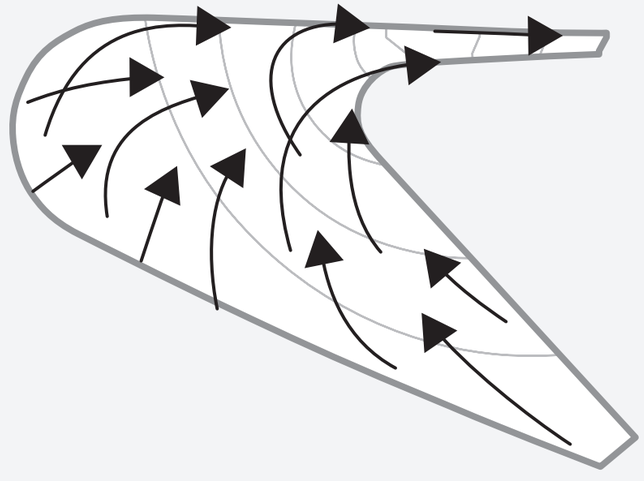
Arrivals-6 for the southern or middle runway (easterly operations)

Height Band	Number of flights	Number of flights above 65 decibels	Info
below 1000ft	0-47 Flights per hour	0-47 Flights per hour	This envelope covers arrival flight paths for either the southern or middle runway. In this area, the flight paths have to line up with either runway, giving us limited flexibility. Flight paths within this area may be active at the same time as flight paths within some of the departures design envelopes over the same area, but departures would be much higher (over 5000ft).
1000ft to 2000ft	0-47 Flights per hour	0-47 Flights per hour	
2000ft to 2200ft	0-47 Flights per hour	0-47 Flights per hour	
2200ft to 3000ft	0-47 Flights per hour	0-47 Flights per hour	
3000ft to 4000ft	0-47 Flights per hour	0-32 Flights per hour	
4000ft to 5000ft	0-47 Flights per hour	0-1 Flights per hour	
5000ft to 6000ft	0-47 Flights per hour	0 Flights per hour	
6000ft to 7000ft	0-47 Flights per hour	0 Flights per hour	

KEY

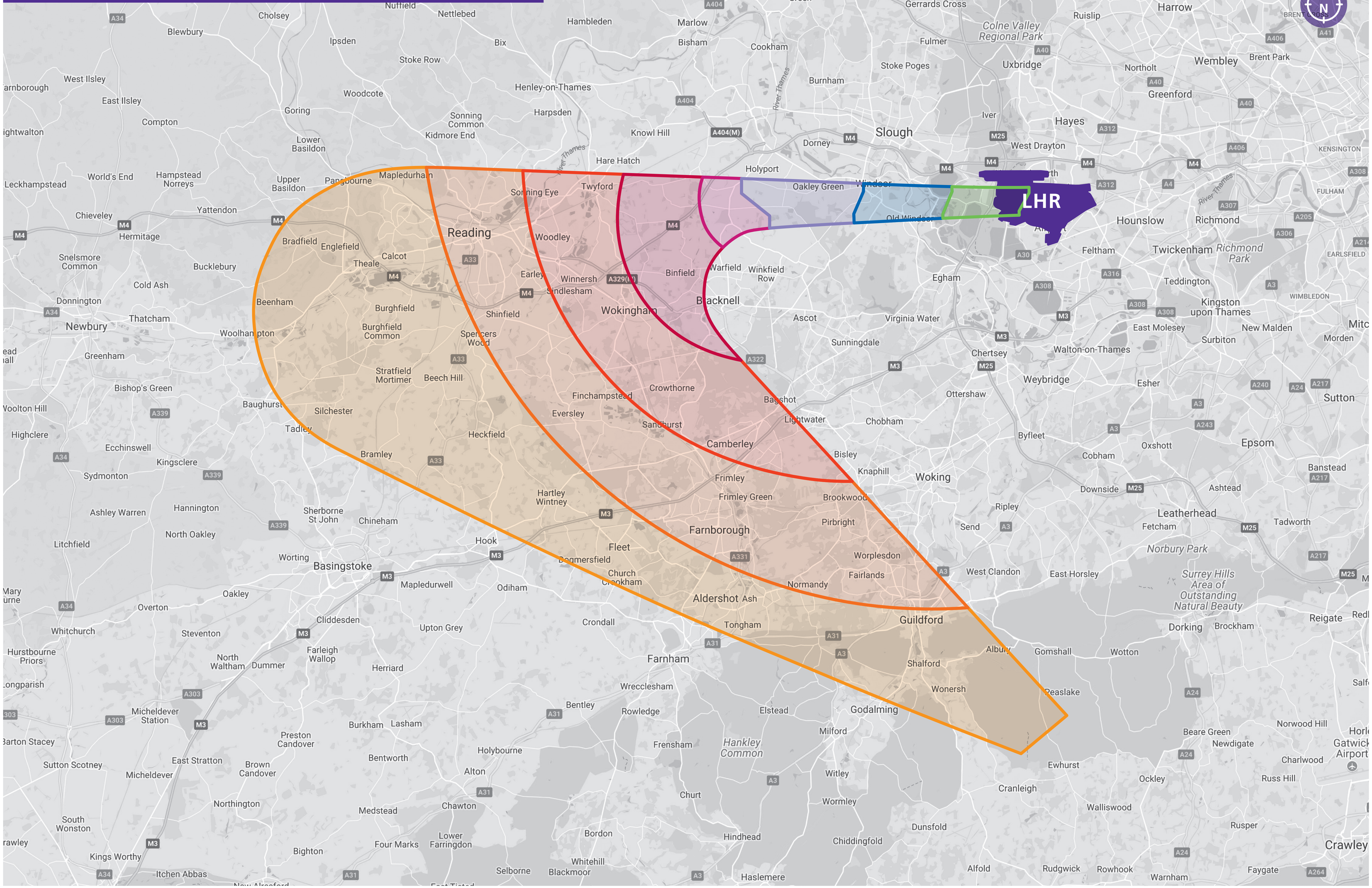
- Design envelope
- LHR — Heathrow Airport
- 0 - 1,000ft
- 1,000 - 2,000ft
- 2,000 - 2,200ft
- 2,200 - 3,000ft
- 3,000 - 4,000ft
- 4,000 - 5,000ft
- 5,000 - 6,000ft
- 6,000ft +

Direction of descending aircraft within the envelope Arrivals-6



The arrows illustrate the range of potential flight paths we could position within an envelope. They do not indicate that flights would be spread throughout the envelope.

Arrivals-6 for the southern or middle runway



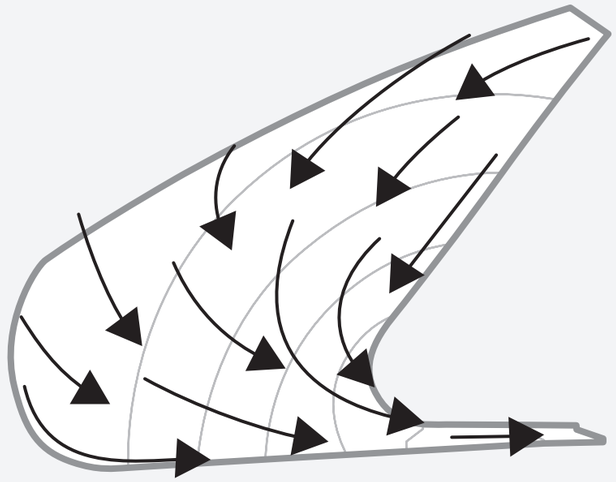
Arrivals-7 for the northern or middle runway (easterly operations)

Height Band	Number of flights	Number of flights above 65 decibels	Info
below 1000ft	0-47 Flights per hour	0-47 Flights per hour	This envelope covers arrival flight paths to either the northern or middle runway. In this area, the flight paths have to line up with either runway, giving us limited flexibility. Flight paths within this area may be active at the same time as flight paths within some of the departures design envelopes over the same area, but departures would be much higher (over 5000ft).
1000ft to 1700ft	0-47 Flights per hour	0-47 Flights per hour	
1700ft to 3000ft	0-47 Flights per hour	0-47 Flights per hour	
3000ft to 4000ft	0-47 Flights per hour	0-32 Flights per hour	
4000ft to 5000ft	0-47 Flights per hour	0-1 Flights per hour	
5000ft to 6000ft	0-47 Flights per hour	0 Flights per hour	
6000ft to 7000ft	0-47 Flights per hour	0 Flights per hour	

KEY

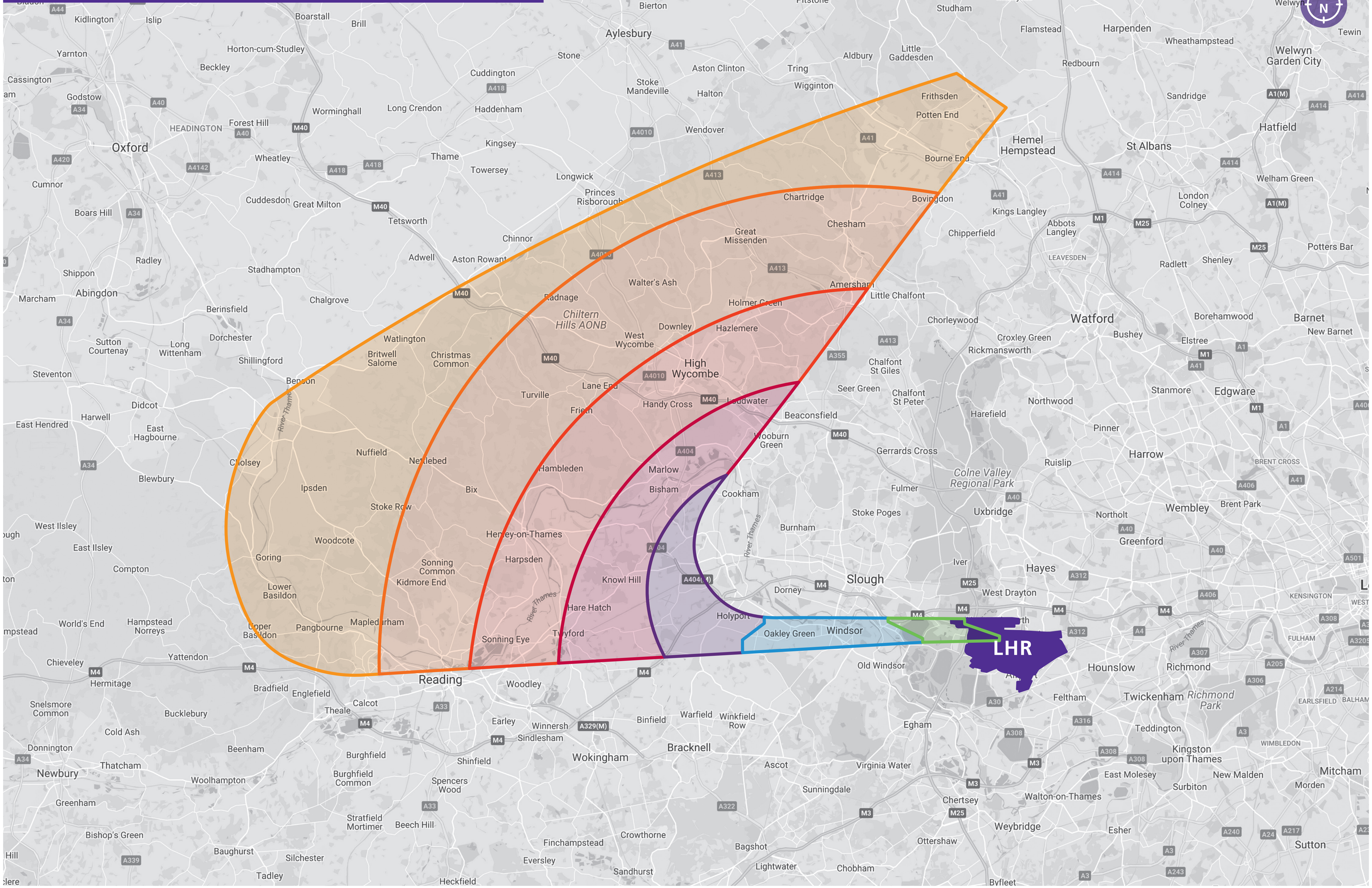
- Design envelope
- LHR — Heathrow Airport
- 0 - 1,000ft
- 1,000 - 1,700ft
- 1,700 - 3,000ft
- 3,000 - 4,000ft
- 4,000 - 5,000ft
- 5,000 - 6,000ft
- 6,000ft +

Direction of descending aircraft within the envelope Arrivals-7



The arrows illustrate the range of potential flight paths we could position within an envelope. They do not indicate that flights would be spread throughout the envelope.

Arrivals-7 for the northern or middle runway



Arrivals-8 for the northern runway (easterly operations)

Height Band	Number of flights	Number of flights above 65 decibels	Info
below 1000ft	0-47 Flights per hour	0-47 Flights per hour	In this area, the flight path has to line up with the northern runway, giving us limited flexibility. Flight paths within this area may be active at the same time as flight paths within some of the departures design envelopes over the same area, but departures would be much higher (over 5000ft).
1000ft to 2000ft	0-47 Flights per hour	0-47 Flights per hour	
2000ft to 3000ft	0-47 Flights per hour	0-47 Flights per hour	
3000ft to 4000ft	0-47 Flights per hour	0-32 Flights per hour	
4000ft to 5000ft	0-47 Flights per hour	0-1 Flights per hour	
5000ft to 6000ft	0-47 Flights per hour	0 Flights per hour	
6000ft to 7000ft	0-47 Flights per hour	0 Flights per hour	

KEY

Design envelope

LHR Heathrow Airport

0 - 1,000ft

1,000 - 2,000ft

2,000 - 3,000ft

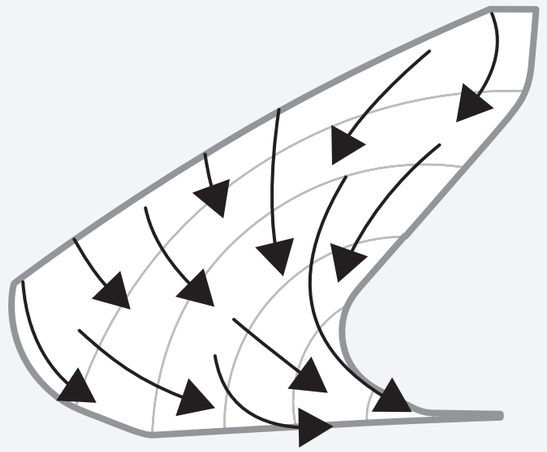
3,000 - 4,000ft

4,000 - 5,000ft

5,000 - 6,000ft

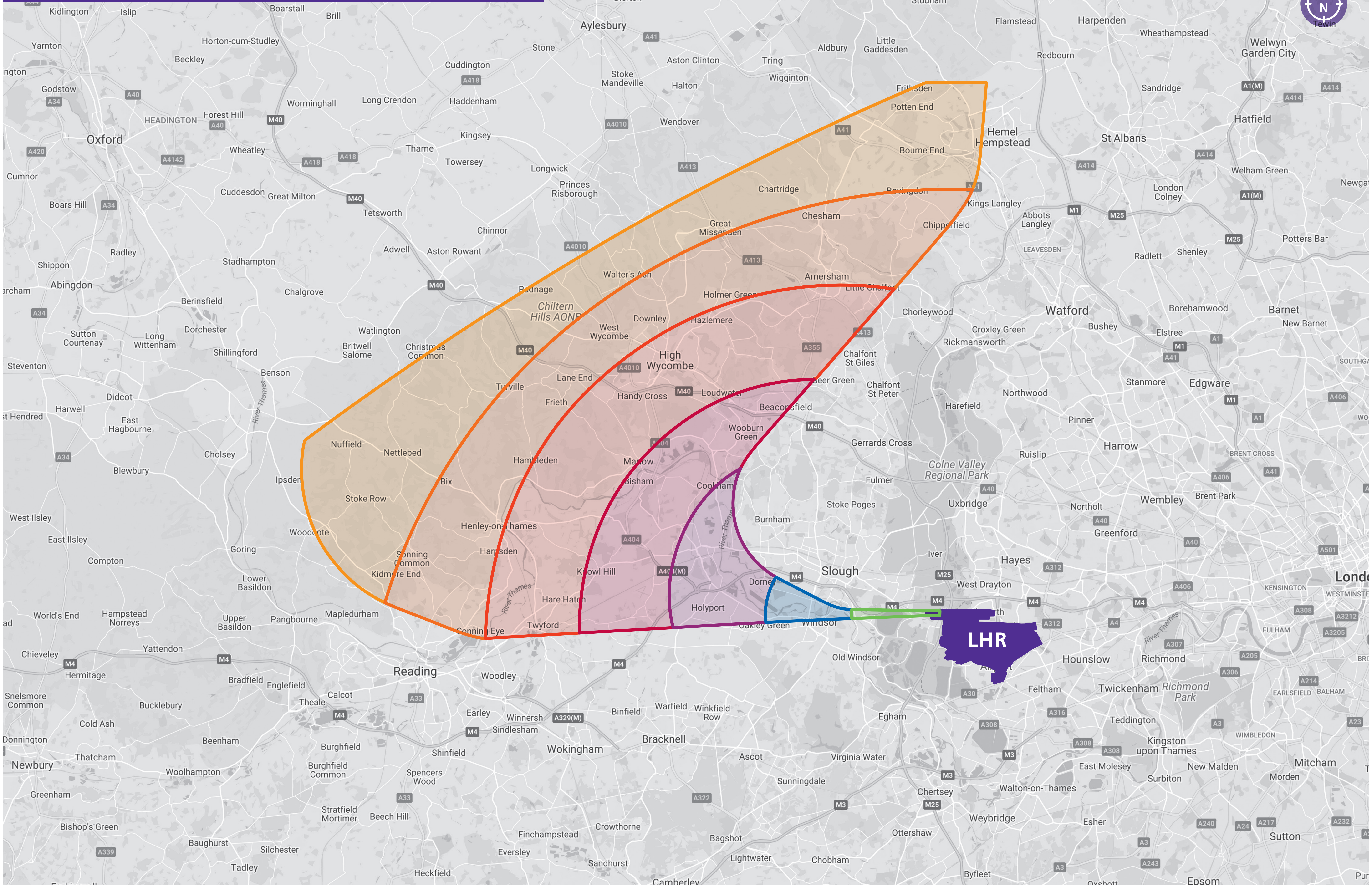
6,000ft +

Direction of descending aircraft within the envelope Arrivals-8



The arrows illustrate the range of potential flight paths we could position within an envelope. They do not indicate that flights would be spread throughout the envelope.

Arrivals-8 for the northern runway



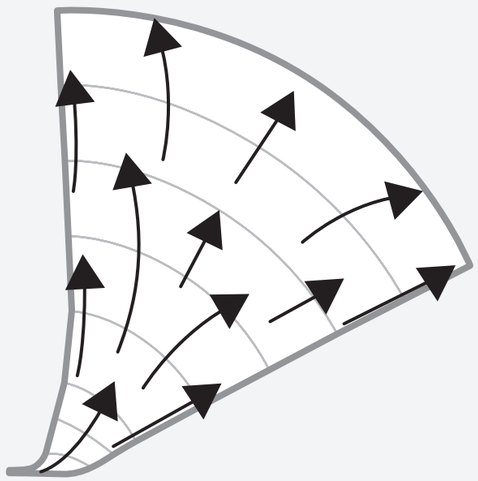
Departures-1 for the northern runway (easterly operations)

Height Band	Number of flights	Number of flights above 65 decibels	Info
below 500ft	0-50 Flights per hour	0-50 Flights per hour	In this area, the flight path has to line up with the northern runway, giving us limited flexibility.
500ft to 3000ft	0-50 Flights per hour	0-50 Flights per hour	In this area, the flight path from the runway would split into three separate diverging flight paths. It may be possible to experience overflight from each of these.
1000ft to 4500ft	0-50 Flights per hour	0-50 Flights per hour	
1500ft to 6000ft	0-17 Flights per hour	0-17 Flights per hour	There would be three separate departure flight paths in this area. They would be spaced far enough apart so that you would only ever experience overflight from one of these flight paths.
2000ft to 9000ft	0-17 Flights per hour	0-17 Flights per hour	
3000ft to 12000ft	0-17 Flights per hour	0-17 Flights per hour	
4000ft to 15000ft	0-17 Flights per hour	0-17 Flights per hour	
5000ft to 18000ft	0-17 Flights per hour	0-3 Flights per hour	
6000ft to 21000ft	0-17 Flights per hour	0-3 Flights per hour	

KEY

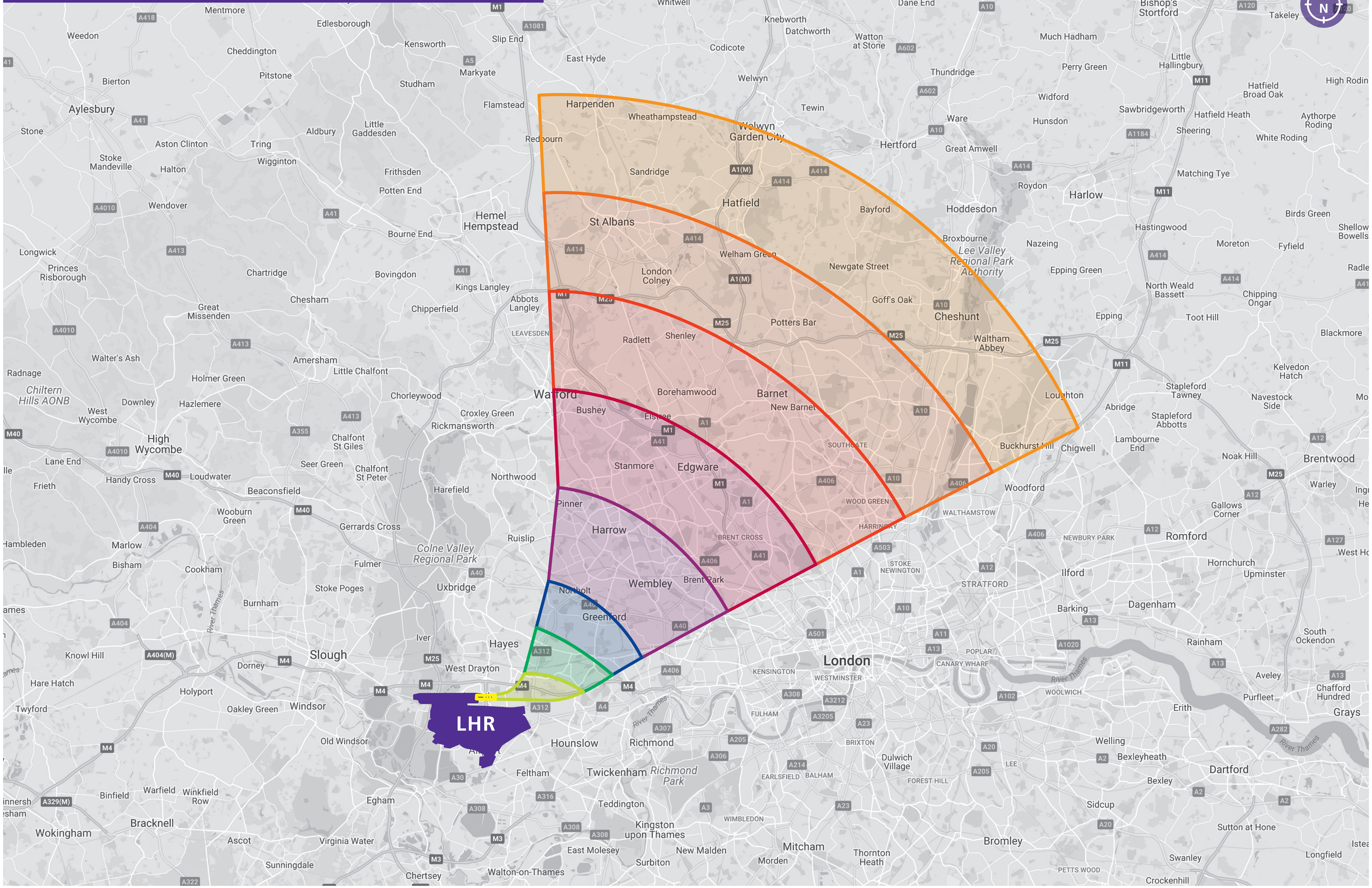
- Design envelope
- LHR Heathrow Airport
- below 500ft
- 500ft to 3000ft
- 1000ft to 4500ft
- 1500ft to 6000ft
- 2000ft to 9000ft
- 3000ft to 12000ft
- 4000ft to 15000ft
- 5000ft to 18000ft
- 6000ft to 21000ft

Direction of ascending aircraft within the envelope
Departures-1



The arrows illustrate the range of potential flight paths we could position within an envelope. They do not indicate that flights would be spread throughout the envelope.

Departures-1 for the northern runway



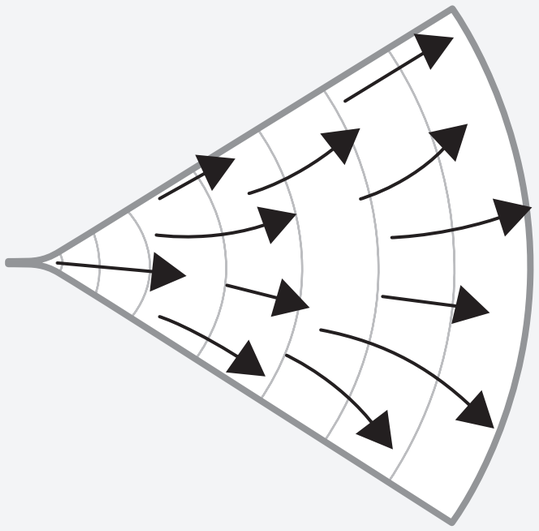
Departures-2 for the middle runway (easterly operations)

Height Band	Number of flights	Number of flights above 65 decibels	Info
below 500ft	0-50 Flights per hour	0-50 Flights per hour	In this area, the flight path has to line up with the middle runway, giving us limited flexibility.
500ft to 3000ft	0-50 Flights per hour	0-50 Flights per hour	In this area, the flight path from the runway would split into three separate diverging flight paths. It may be possible to experience overflight from each of these.
1000ft to 4500ft	0-50 Flights per hour	0-50 Flights per hour	
1500ft to 6000ft	0-17 Flights per hour	0-17 Flights per hour	There would be three separate departure flight paths in this area. They would be spaced far enough apart so that you would only ever experience overflight from one of these flight paths.
2000ft to 9000ft	0-17 Flights per hour	0-17 Flights per hour	
3000ft to 12000ft	0-17 Flights per hour	0-17 Flights per hour	
4000ft to 15000ft	0-17 Flights per hour	0-17 Flights per hour	
5000ft to 18000ft	0-17 Flights per hour	0-3 Flights per hour	
6000ft to 21000ft	0-17 Flights per hour	0-3 Flights per hour	

KEY

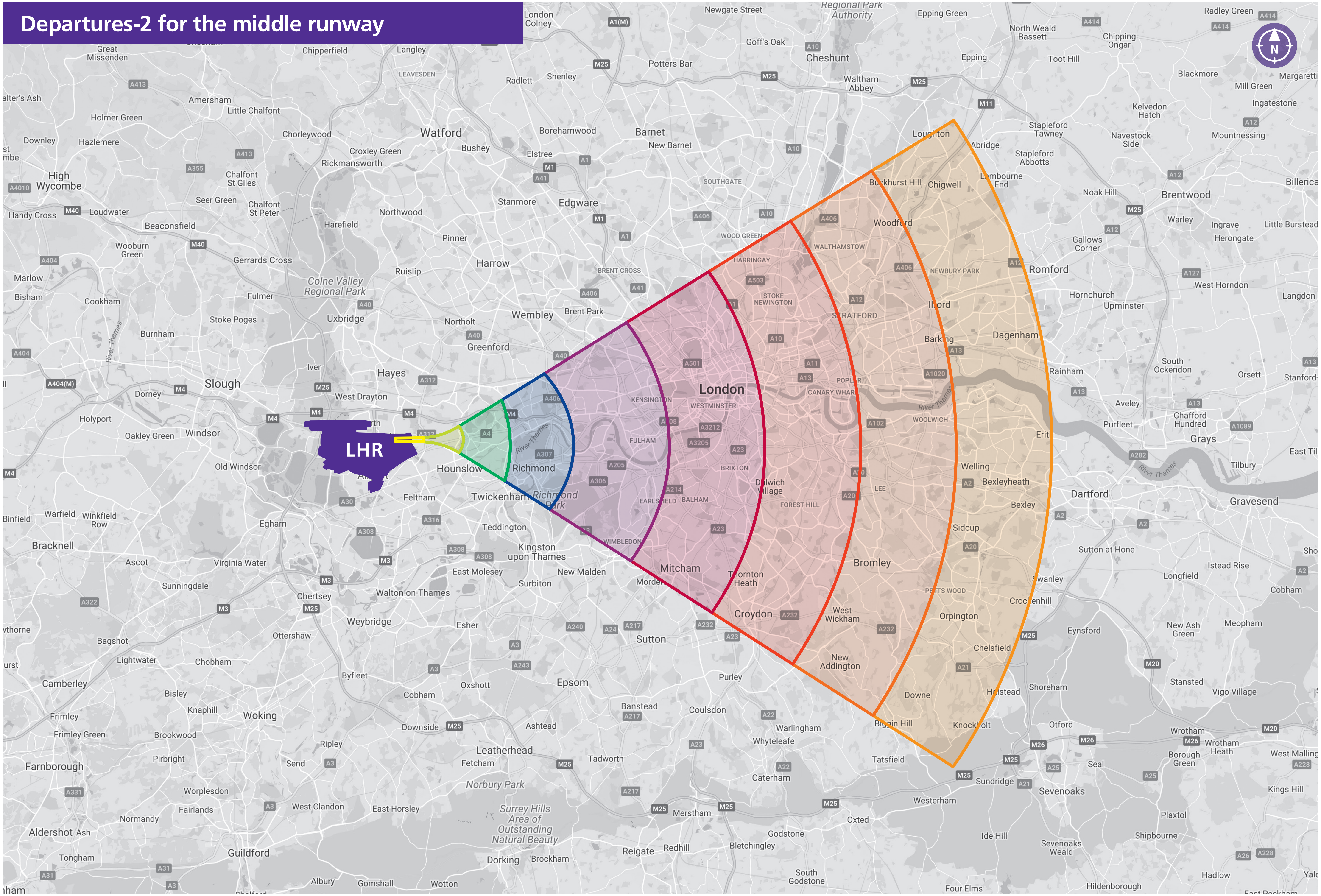
- Design envelope
- LHR Heathrow Airport
- below 500ft
- 500ft to 3000ft
- 1000ft to 4500ft
- 1500ft to 6000ft
- 2000ft to 9000ft
- 3000ft to 12000ft
- 4000ft to 15000ft
- 5000ft to 18000ft
- 6000ft to 21000ft

Direction of ascending aircraft within the envelope
Departures-2



The arrows illustrate the range of potential flight paths we could position within an envelope. They do not indicate that flights would be spread throughout the envelope.

Departures-2 for the middle runway



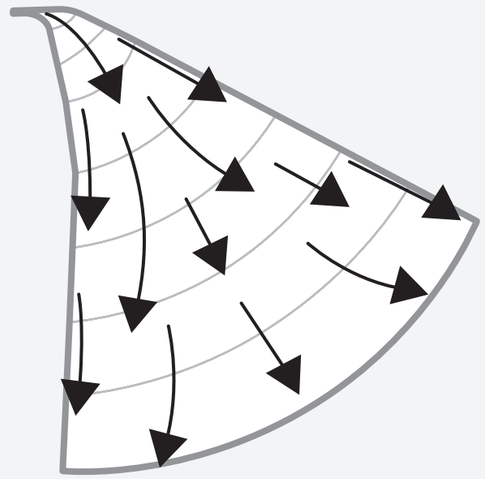
Departures-3 for the southern runway (easterly operations)

Height Band	Number of flights	Number of flights above 65 decibels	Info
below 500ft	0-50 Flights per hour	0-50 Flights per hour	In this area, the flight path has to line up with the southern runway, giving us limited flexibility.
500ft to 3000ft	0-50 Flights per hour	0-50 Flights per hour	In this area, the flight path from the runway would split into three separate diverging flight paths. It may be possible to experience overflight from each of these.
1000ft to 4500ft	0-50 Flights per hour	0-50 Flights per hour	
1500ft to 6000ft	0-17 Flights per hour	0-17 Flights per hour	There would be three separate departure flight paths in this area. They would be spaced far enough apart so that you would only ever experience overflight from one of these flight paths.
2000ft to 9000ft	0-17 Flights per hour	0-17 Flights per hour	
3000ft to 12000ft	0-17 Flights per hour	0-17 Flights per hour	
4000ft to 15000ft	0-17 Flights per hour	0-17 Flights per hour	
5000ft to 18000ft	0-17 Flights per hour	0-3 Flights per hour	
6000ft to 21000ft	0-17 Flights per hour	0-3 Flights per hour	

KEY

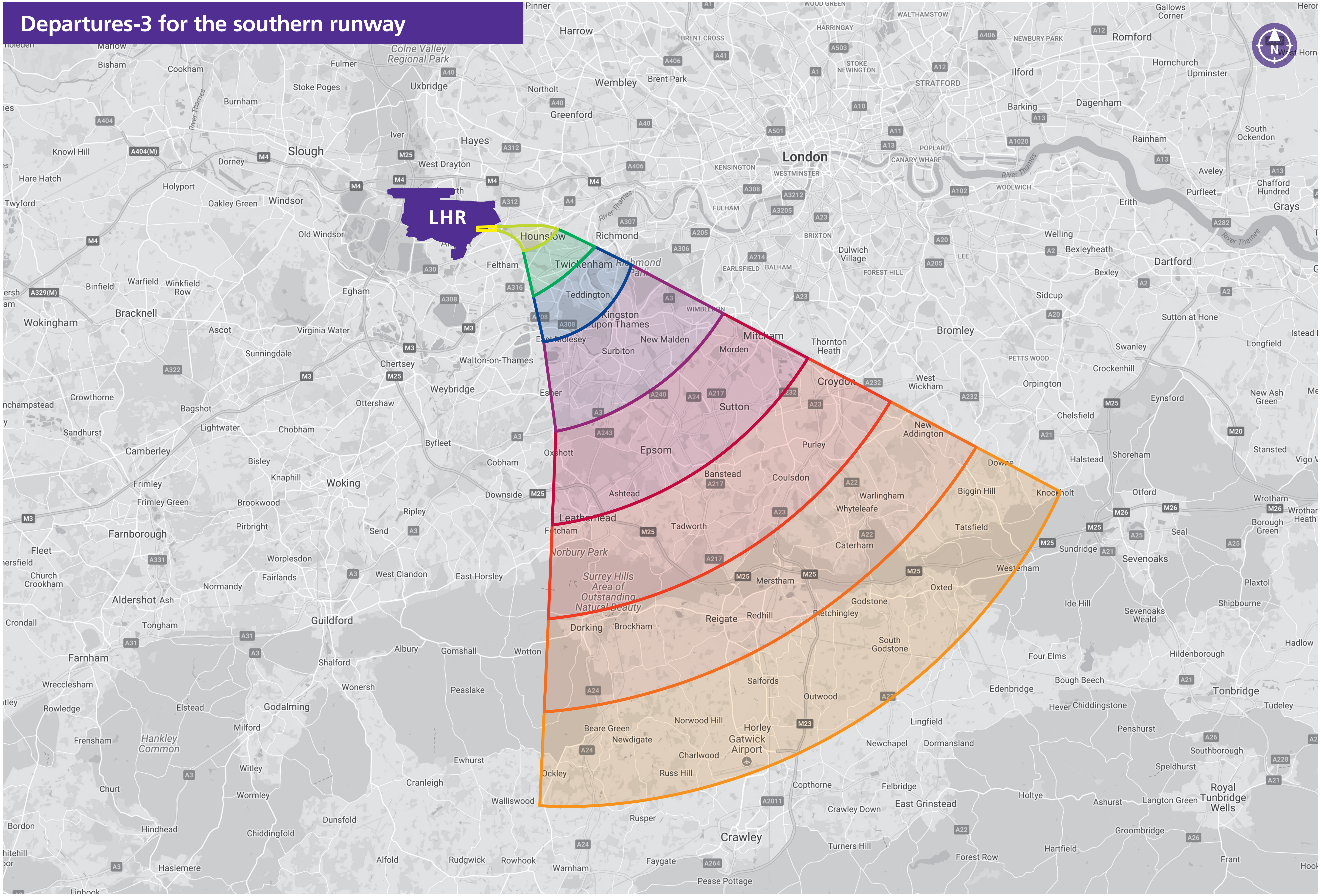
- Design envelope
- LHR Heathrow Airport
- below 500ft
- 500ft to 3000ft
- 1000ft to 4500ft
- 1500ft to 6000ft
- 2000ft to 9000ft
- 3000ft to 12000ft
- 4000ft to 15000ft
- 5000ft to 18000ft
- 6000ft to 21000ft

Direction of ascending aircraft within the envelope
Departures-3



The arrows illustrate the range of potential flight paths we could position within an envelope. They do not indicate that flights would be spread throughout the envelope.

Departures-3 for the southern runway



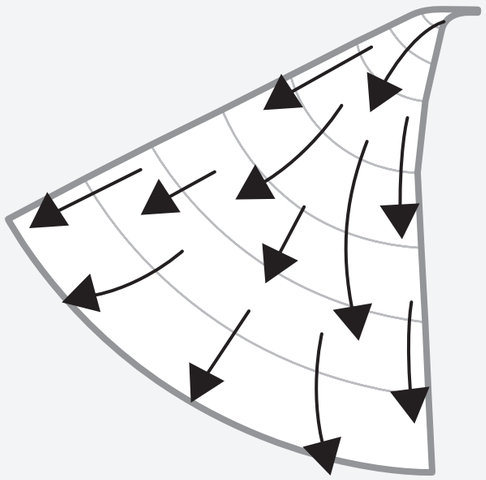
Departures-4 for the southern runway (westerly operations)

Height Band	Number of flights	Number of flights above 65 decibels	Info
below 500ft	0-50 Flights per hour	0-50 Flights per hour	In this area, the flight path has to line up with the southern runway, giving us limited flexibility.
500ft to 3000ft	0-50 Flights per hour	0-50 Flights per hour	In this area, the flight path from the runway would split into three separate diverging flight paths. It may be possible to experience overflight from each of these.
1000ft to 4500ft	0-50 Flights per hour	0-50 Flights per hour	
1500ft to 6000ft	0-17 Flights per hour	0-17 Flights per hour	There would be three separate departure flight paths in this area. They would be spaced far enough apart so that you would only ever experience overflight from one of these flight paths.
2000ft to 9000ft	0-17 Flights per hour	0-17 Flights per hour	
3000ft to 12000ft	0-17 Flights per hour	0-17 Flights per hour	
4000ft to 15000ft	0-17 Flights per hour	0-17 Flights per hour	
5000ft to 18000ft	0-17 Flights per hour	0-3 Flights per hour	
6000ft to 21000ft	0-17 Flights per hour	0-3 Flights per hour	

KEY

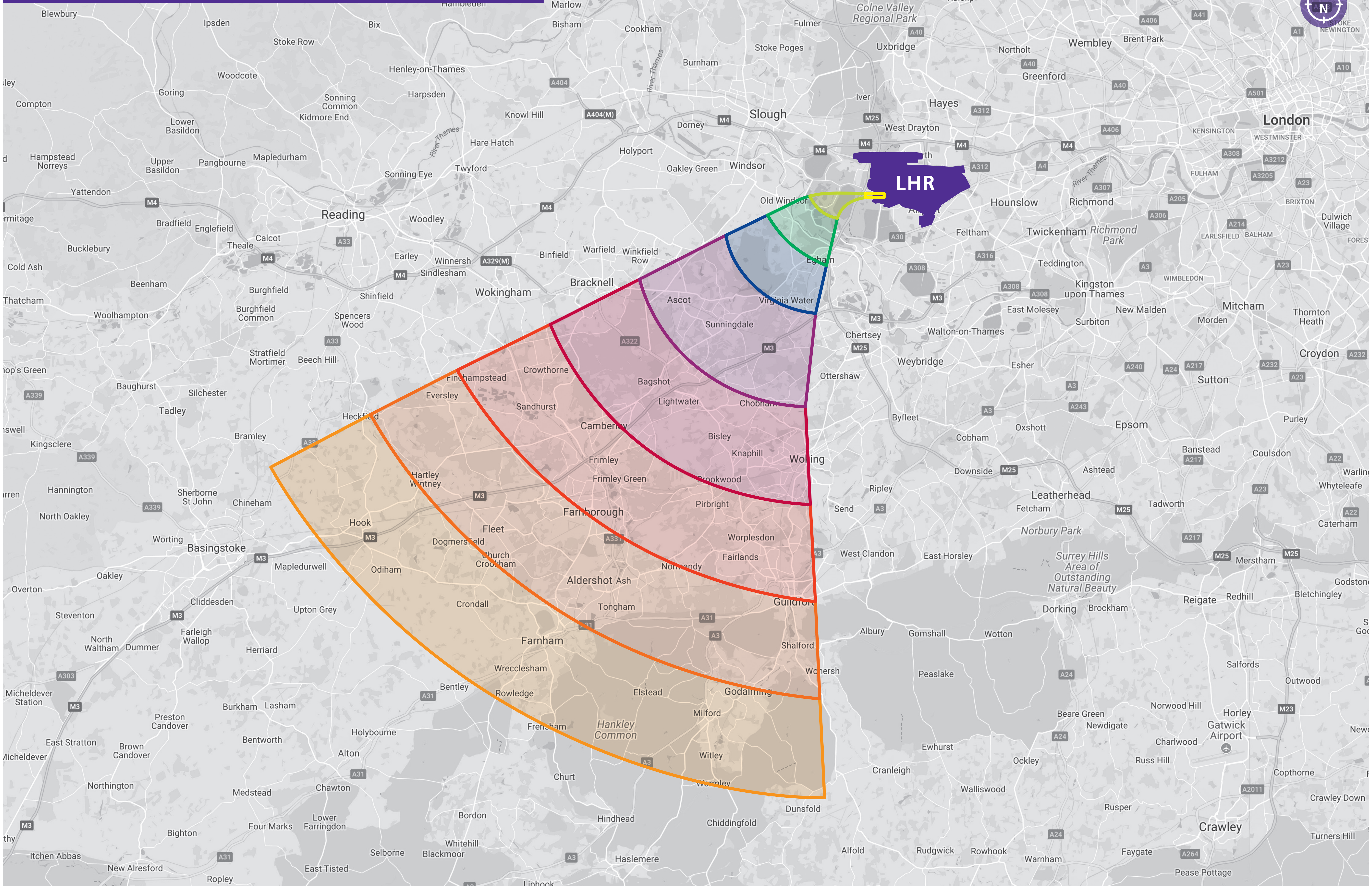
- Design envelope
- LHR Heathrow Airport
- below 500ft
- 500ft to 3000ft
- 1000ft to 4500ft
- 1500ft to 6000ft
- 2000ft to 9000ft
- 3000ft to 12000ft
- 4000ft to 15000ft
- 5000ft to 18000ft
- 6000ft to 21000ft

Direction of ascending aircraft within the envelope
Departures-4



The arrows illustrate the range of potential flight paths we could position within an envelope. They do not indicate that flights would be spread throughout the envelope.

Departures-4 for the southern runway



Departures-5 for the middle runway (westerly operations)

Height Band	Number of flights	Number of flights above 65 decibels	Info
below 500ft	0-50 Flights per hour	0-50 Flights per hour	In this area, the flight path has to line up with the middle runway, giving us limited flexibility.
500ft to 3000ft	0-50 Flights per hour	0-50 Flights per hour	In this area, the flight path from the runway would split into three separate diverging flight paths. It may be possible to experience overflight from each of these.
1000ft to 4500ft	0-50 Flights per hour	0-50 Flights per hour	
1500ft to 6000ft	0-17 Flights per hour	0-17 Flights per hour	There would be three separate departure flight paths in this area. They would be spaced far enough apart so that you would only ever experience overflight from one of these flight paths.
2000ft to 9000ft	0-17 Flights per hour	0-17 Flights per hour	
3000ft to 12000ft	0-17 Flights per hour	0-17 Flights per hour	
4000ft to 15000ft	0-17 Flights per hour	0-17 Flights per hour	
5000ft to 18000ft	0-17 Flights per hour	0-3 Flights per hour	
6000ft to 21000ft	0-17 Flights per hour	0-3 Flights per hour	

KEY

Design envelope

LHR Heathrow Airport

below 500ft

500ft to 3000ft

1000ft to 4500ft

1500ft to 6000ft

2000ft to 9000ft

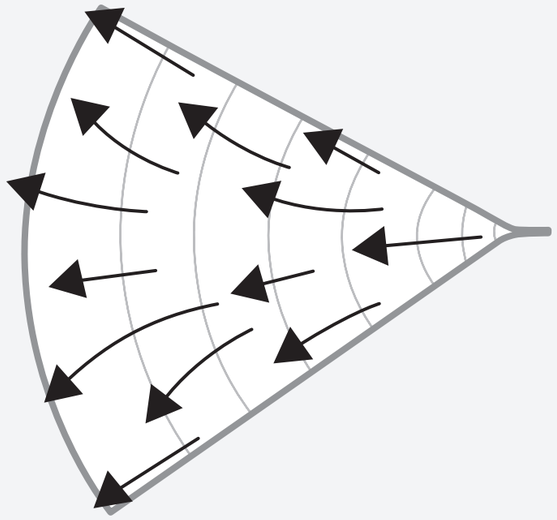
3000ft to 12000ft

4000ft to 15000ft

5000ft to 18000ft

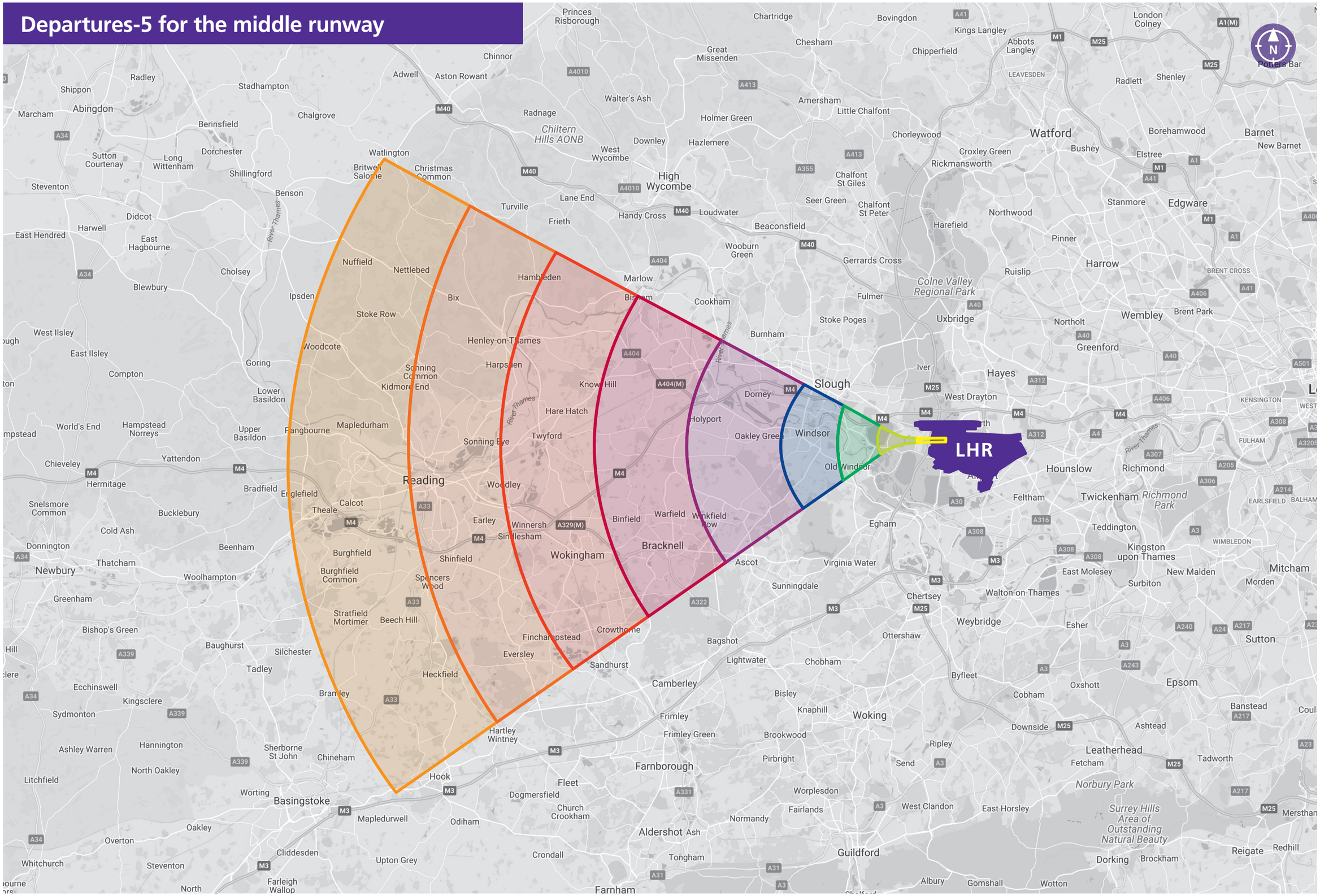
6000ft to 21000ft

Direction of ascending aircraft within the envelope
Departures-5



The arrows illustrate the range of potential flight paths we could position within an envelope. They do not indicate that flights would be spread throughout the envelope.

Departures-5 for the middle runway



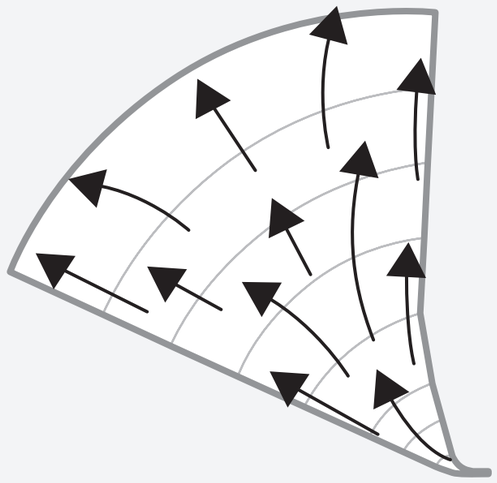
Departures-6 for the northern runway (westerly operations)

Height Band	Number of flights	Number of flights above 65 decibels	Info
below 500ft	0-50 Flights per hour	0-50 Flights per hour	In this area, the flight path has to line up with the northern runway, giving us limited flexibility.
500ft to 3000ft	0-50 Flights per hour	0-50 Flights per hour	In this area, the flight path from the runway would split into three separate diverging flight paths. It may be possible to experience overflight from each of these.
1000ft to 4500ft	0-50 Flights per hour	0-50 Flights per hour	
1500ft to 6000ft	0-17 Flights per hour	0-17 Flights per hour	There would be three separate departure flight paths in this area. They would be spaced far enough apart so that you would only ever experience overflight from one of these flight paths.
2000ft to 9000ft	0-17 Flights per hour	0-17 Flights per hour	
3000ft to 12000ft	0-17 Flights per hour	0-17 Flights per hour	
4000ft to 15000ft	0-17 Flights per hour	0-17 Flights per hour	
5000ft to 18000ft	0-17 Flights per hour	0-3 Flights per hour	
6000ft to 21000ft	0-17 Flights per hour	0-3 Flights per hour	

KEY

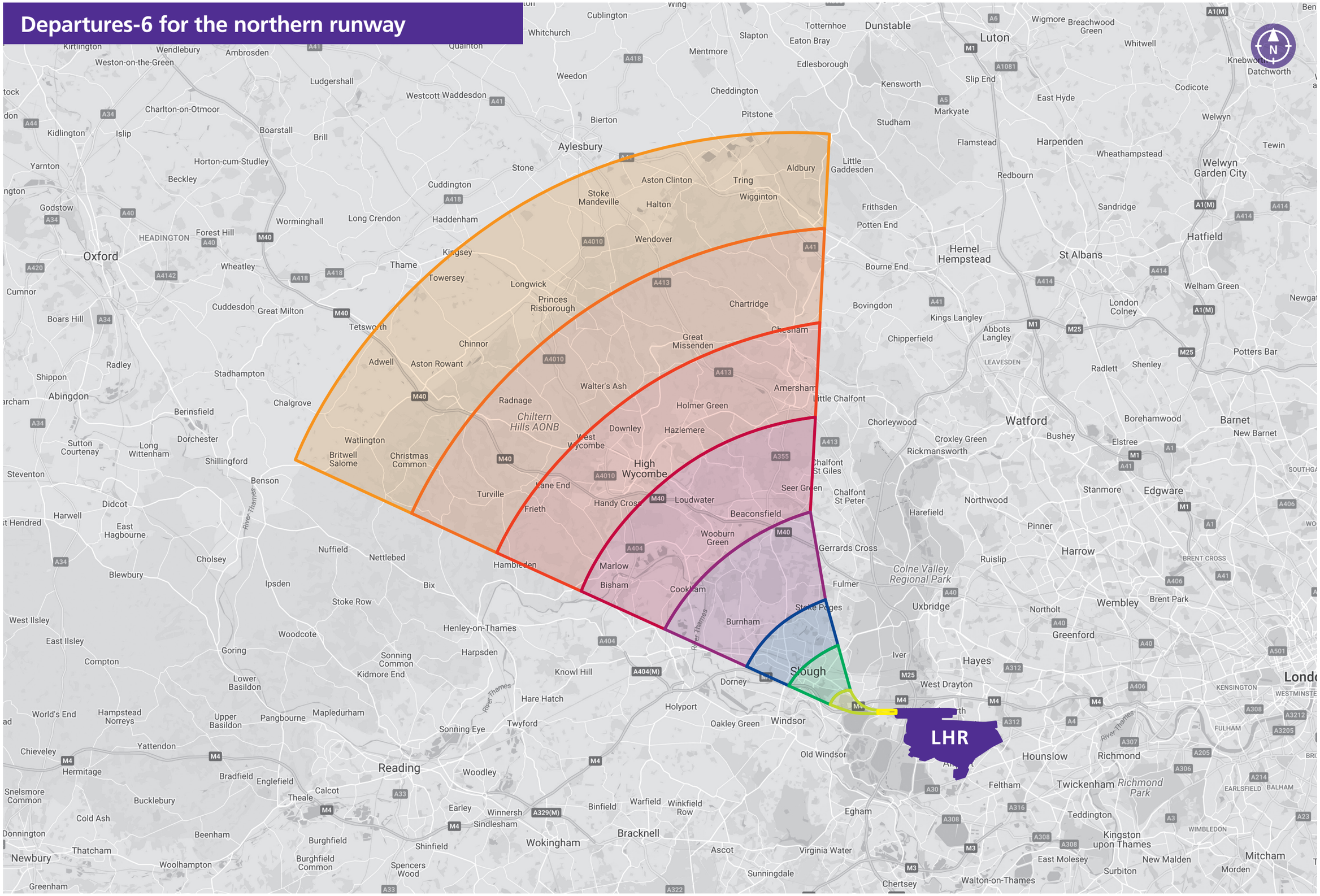
- Design envelope
- LHR Heathrow Airport
- below 500ft
- 500ft to 3000ft
- 1000ft to 4500ft
- 1500ft to 6000ft
- 2000ft to 9000ft
- 3000ft to 12000ft
- 4000ft to 15000ft
- 5000ft to 18000ft
- 6000ft to 21000ft

Direction of ascending aircraft within the envelope
Departures-6



The arrows illustrate the range of potential flight paths we could position within an envelope. They do not indicate that flights would be spread throughout the envelope.

Departures-6 for the northern runway



Departures-7 for the northern runway (easterly operations)

Height Band	Number of flights	Number of flights above 65 decibels	Info
below 500ft	0-17 Flights per hour	0-17 Flights per hour	In this area, the flight path has to line up with the northern runway, giving us limited flexibility.
500ft to 3000ft	0-17 Flights per hour	0-17 Flights per hour	
1000ft to 6000ft	0-17 Flights per hour	0-17 Flights per hour	
2000ft to 9000ft	0-17 Flights per hour	0-17 Flights per hour	
3000ft to 12000ft	0-17 Flights per hour	0-17 Flights per hour	
4000ft to 15000ft	0-17 Flights per hour	0-17 Flights per hour	
5000ft to 18000ft	0-17 Flights per hour	0-3 Flights per hour	Flight paths within this area may be active at the same time as flight paths within the arrivals design envelopes in the same area, but arrivals would be at a much lower height (below 1000ft).
6000ft to 21000ft	0-17 Flights per hour	0-3 Flights per hour	

KEY

Design envelope

LHR Heathrow Airport

below 500ft

500ft to 3000ft

1000ft to 6000ft

2000ft to 9000ft

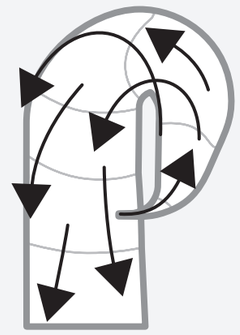
3000ft to 12000ft

4000ft to 15000ft

5000ft to 18000ft

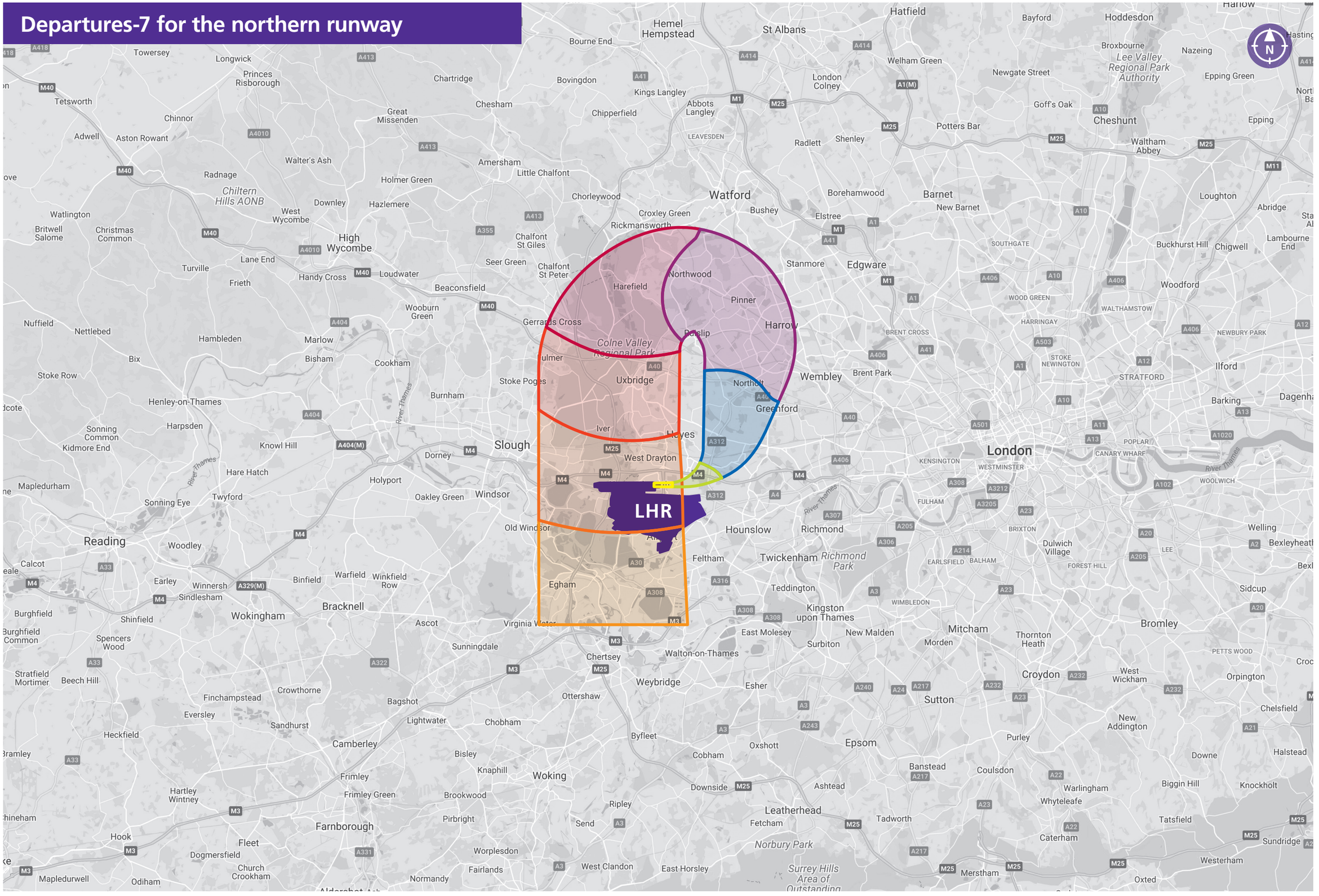
6000ft to 21000ft

Direction of ascending aircraft within the envelope
Departures-7



The arrows illustrate the range of potential flight paths we could position within an envelope. They do not indicate that flights would be spread throughout the envelope.

Departures-7 for the northern runway



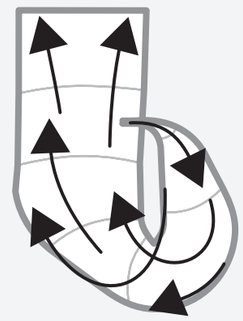
Departures-8 for the southern runway (easterly operations)

Height Band	Number of flights	Number of flights above 65 decibels	Info
below 500ft	0-17 Flights per hour	0-17 Flights per hour	In this area, the flight path has to line up with the southern runway, giving us limited flexibility.
500ft to 3000ft	0-17 Flights per hour	0-17 Flights per hour	
1000ft to 6000ft	0-17 Flights per hour	0-17 Flights per hour	
2000ft to 9000ft	0-17 Flights per hour	0-17 Flights per hour	
3000ft to 12000ft	0-17 Flights per hour	0-17 Flights per hour	
4000ft to 15000ft	0-17 Flights per hour	0-17 Flights per hour	
5000ft to 18000ft	0-17 Flights per hour	0-3 Flights per hour	Flight paths within this area may be active at the same time as flight paths within the arrivals design envelopes in the same area, but arrivals would be at a much lower height (below 1000ft).
6000ft to 21000ft	0-17 Flights per hour	0-3 Flights per hour	

KEY

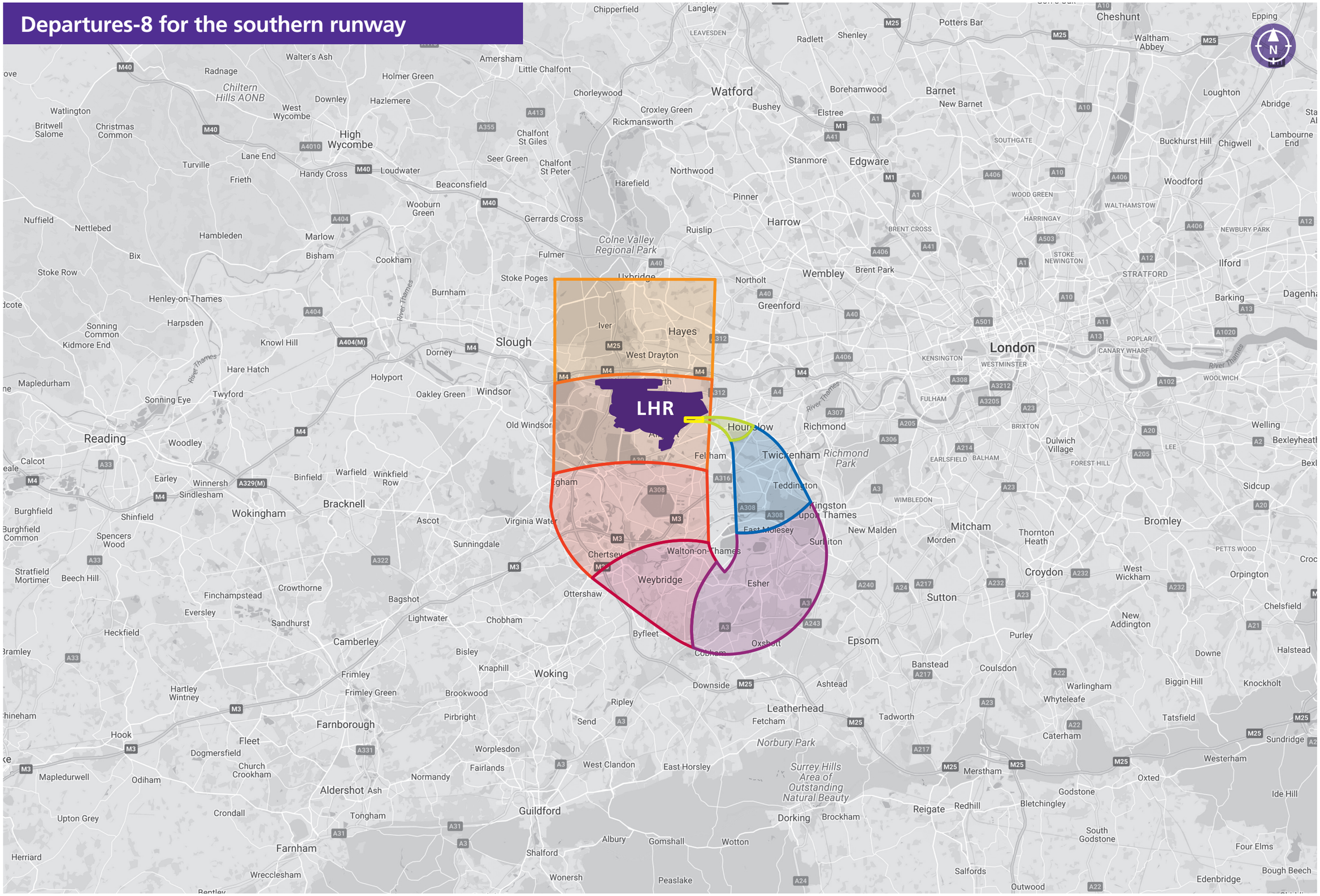
- Design envelope
- LHR — Heathrow Airport
- below 500ft
- 500ft to 3000ft
- 1000ft to 6000ft
- 2000ft to 9000ft
- 3000ft to 12000ft
- 4000ft to 15000ft
- 5000ft to 18000ft
- 6000ft to 21000ft

Direction of ascending aircraft within the envelope
Departures-8



The arrows illustrate the range of potential flight paths we could position within an envelope. They do not indicate that flights would be spread throughout the envelope.

Departures-8 for the southern runway



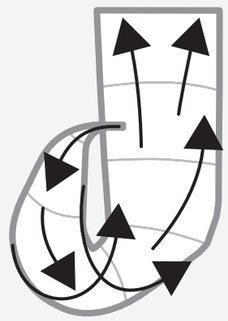
Departures-9 for the southern runway (westerly operations)

Height Band	Number of flights	Number of flights above 65 decibels	Info
below 500ft	0-17 Flights per hour	0-17 Flights per hour	In this area, the flight path has to line up with the southern runway, giving us limited flexibility.
500ft to 3000ft	0-17 Flights per hour	0-17 Flights per hour	
1000ft to 6000ft	0-17 Flights per hour	0-17 Flights per hour	
2000ft to 9000ft	0-17 Flights per hour	0-17 Flights per hour	
3000ft to 12000ft	0-17 Flights per hour	0-17 Flights per hour	
4000ft to 15000ft	0-17 Flights per hour	0-17 Flights per hour	
5000ft to 18000ft	0-17 Flights per hour	0-3 Flights per hour	Flight paths within this area may be active at the same time as flight paths within the arrivals design envelopes in the same area, but arrivals would be at a much lower height (below 1000ft).
6000ft to 21000ft	0-17 Flights per hour	0-3 Flights per hour	

KEY

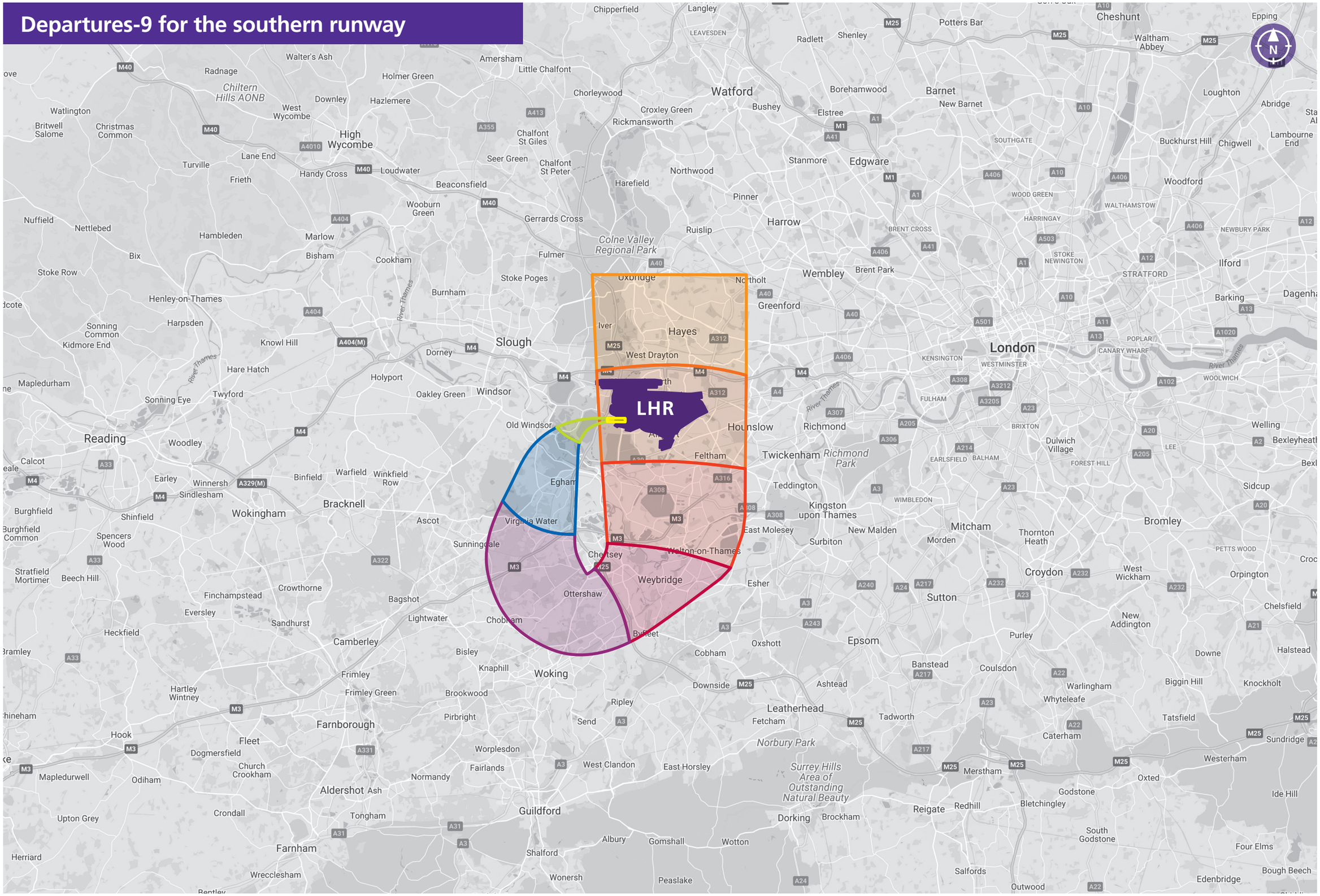
- Design envelope
- LHR — Heathrow Airport
- below 500ft
- 500ft to 3000ft
- 1000ft to 6000ft
- 2000ft to 9000ft
- 3000ft to 12000ft
- 4000ft to 15000ft
- 5000ft to 18000ft
- 6000ft to 21000ft

Direction of ascending aircraft within the envelope
Departures-9



The arrows illustrate the range of potential flight paths we could position within an envelope. They do not indicate that flights would be spread throughout the envelope.

Departures-9 for the southern runway



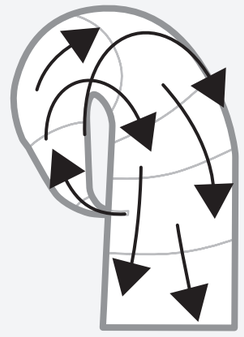
Departures-10 for the northern runway (westerly operations)

Height Band	Number of flights	Number of flights above 65 decibels	Info
below 500ft	0-17 Flights per hour	0-17 Flights per hour	In this area, the flight path has to line up with the northern runway, giving us limited flexibility.
500ft to 3000ft	0-17 Flights per hour	0-17 Flights per hour	
1000ft to 6000ft	0-17 Flights per hour	0-17 Flights per hour	
2000ft to 9000ft	0-17 Flights per hour	0-17 Flights per hour	
3000ft to 12000ft	0-17 Flights per hour	0-17 Flights per hour	
4000ft to 15000ft	0-17 Flights per hour	0-17 Flights per hour	
5000ft to 18000ft	0-17 Flights per hour	0-3 Flights per hour	Flight paths within this area may be active at the same time as flight paths within the arrivals design envelopes in the same area, but arrivals would be at a much lower height (below 1000ft).
6000ft to 21000ft	0-17 Flights per hour	0-3 Flights per hour	

KEY

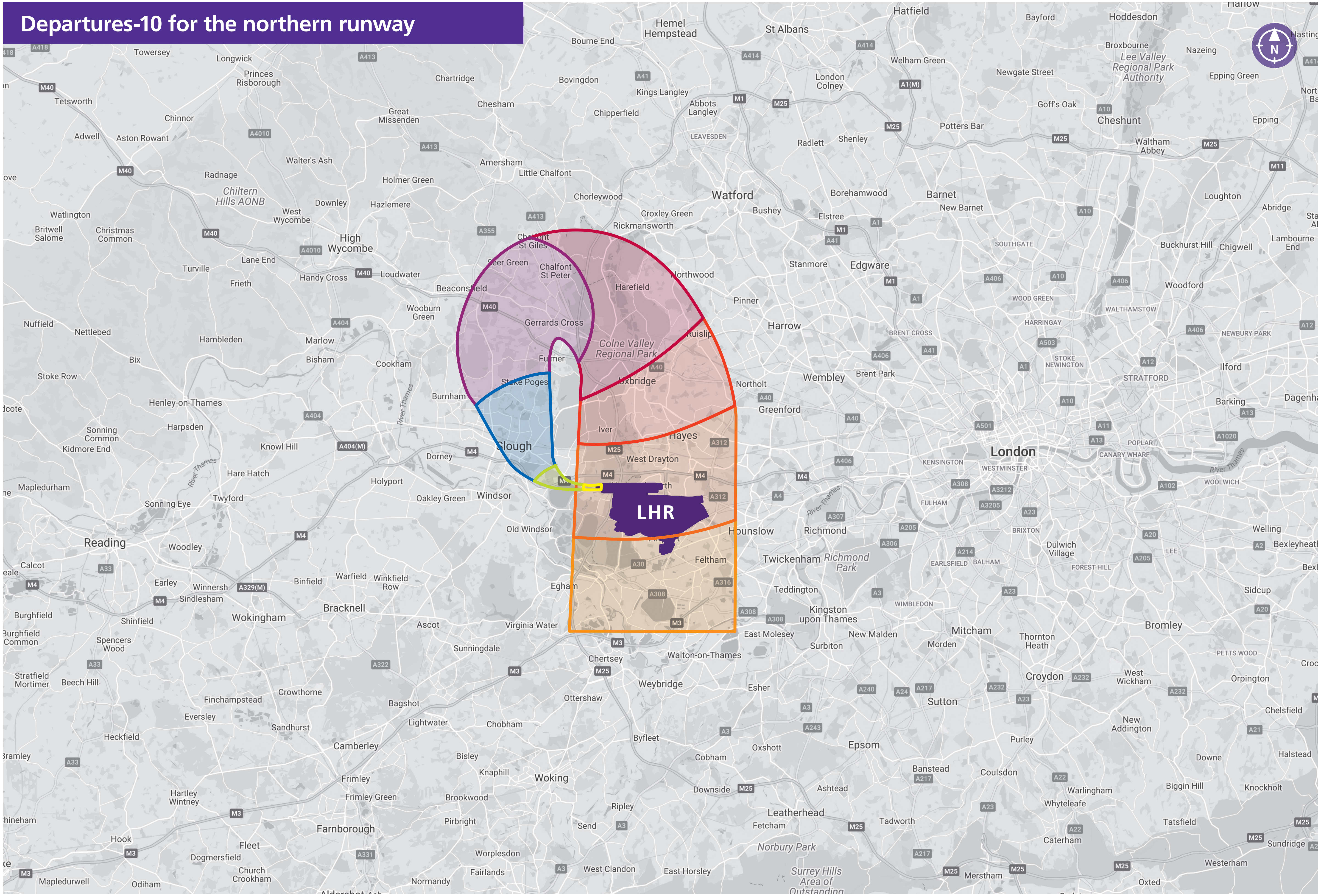
- Design envelope
- LHR — Heathrow Airport
- below 500ft
- 500ft to 3000ft
- 1000ft to 6000ft
- 2000ft to 9000ft
- 3000ft to 12000ft
- 4000ft to 15000ft
- 5000ft to 18000ft
- 6000ft to 21000ft

Direction of ascending aircraft within the envelope
Departures-10



The arrows illustrate the range of potential flight paths we could position within an envelope. They do not indicate that flights would be spread throughout the envelope.

Departures-10 for the northern runway



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