London Luton Airport Operations Ltd
FASI-S Airspace Change Proposal
Stage 2

Appendix D - Evolution of Options Presentations

V2.0

London Luton Airport

Presentation distributed to Community Stakeholders

MARCH 2020

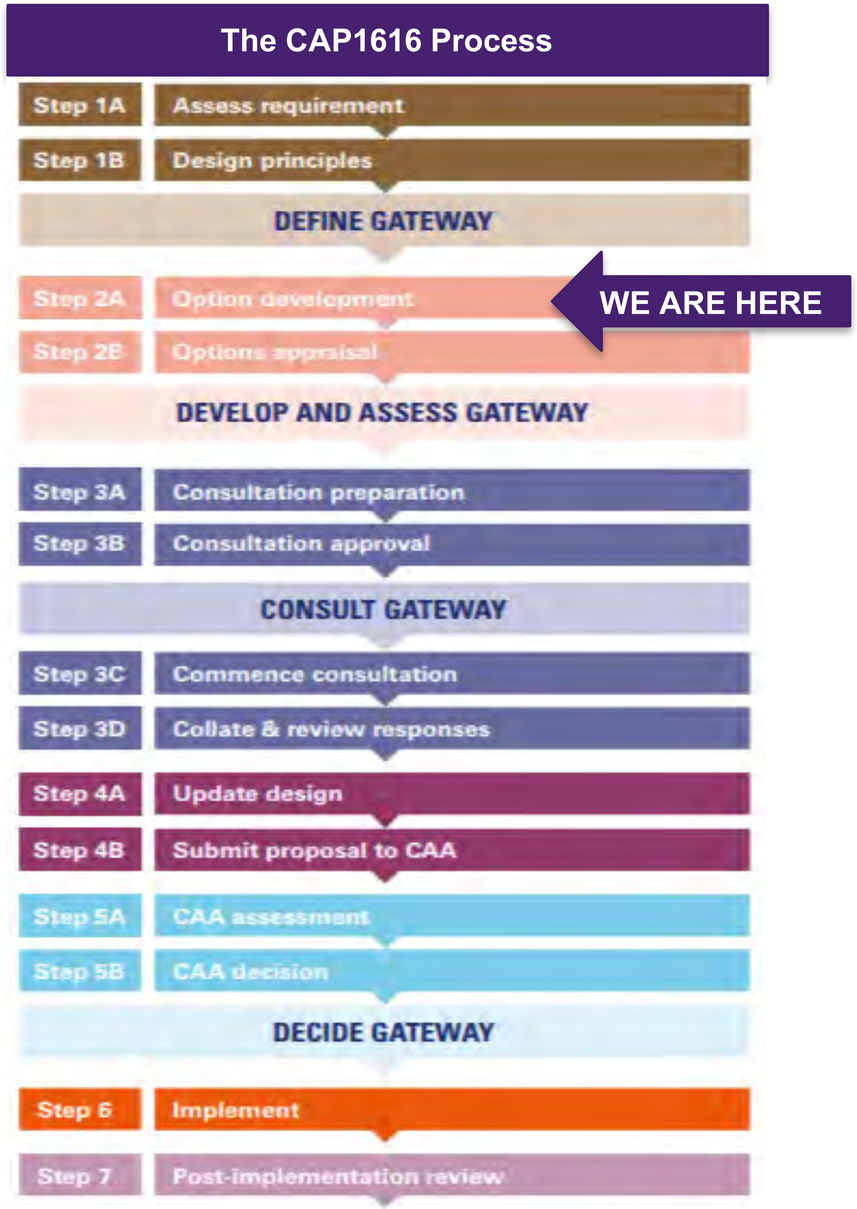
Luton FASI-S

Comprehensive list of options

V2.0 2 March 2020

London
Luton
Airport

Purpose of this session



- We are following the Civil Aviation Authority's (CAA) Airspace Change Process, CAP1616
- We are at Stage 2 of our developing Airspace Change Proposal for FASI-S
- This is the stage where we develop an initial comprehensive list of flight path options and then share these options with our stakeholders
- CAP1616 requires us to engage with stakeholders at this stage to "preliminarily tests these (options) with the same stakeholders it engaged with in Stage 1 (when we developed the design principles)"

Purpose of this session

The purpose of this session is **not** to seek feedback on individual route options by examining the detailed specific geographical position of the options.

We do not yet have any detail on the potential impacts of each option, that comes later.

The purpose of this session is to explore and test our approach to developing the options and answer questions relating to our approach.

We will use today's feedback to understand and try and address any concerns raised. We are able to refine options based on your feedback.

As well as yourselves, we will also be engaging industry stakeholders including airlines, general aviation bodies, other airports and NATS.

Development of the FASI-S initial comprehensive list of options

	Design Principle
1	Must be safe
2	Must meet the 3 aims of the NPSe, Air Navigation Guidance 2017 and all appropriate Government aviation policies, and updates thereof.
3	Should not constrain the airport's capacity, providing the environmental objectives/requirements have been met
4	Should enable continuous climb/descent to/from at least 7000ft & facilitate continuous climb/descent above that
5	Should provide an equitable distribution of traffic where possible, through eg; Use of multiple routes New route structures Options (mechanisms) for respite
6	Should avoid overflying the same communities with multiple routes, & take into account routes of other airports, below 7000ft
7	Should minimise tactical intervention by ATC below 7000ft
8	Should minimise the impact on other airspace users through; Keeping CAS requirements to a minimum Simple airspace boundaries Allowing flexible use of airspace, where possible

Excerpt from letter from CAA to Luton Airport

We acknowledge that you have already completed your Design Principles development and passed through the CAA Define Gateway.

However, because of the CAA's AMS and the co-sponsored Masterplan work, we now understand it is important that:

1. The impact of the AMS and the Masterplan work on your proposed change is included in your Design Principles; and
2. Your stakeholders are made aware of the way in which the AMS is reflected in your Design Principles, and that this is of particular importance to your airspace change proposal.

For these reasons we have concluded that it is necessary to see the following concepts reflected and adopted in your Design Principles

Subject to the overriding design principle of maintaining a high standard of safety, the highest priority principle of this airspace change that cannot be discounted is that it accords with the CAA's published Airspace Modernisation Strategy (CAP 1711) and any current or future plans associated with it.

Process Requirements

As you have already completed the stakeholder engagement necessary for Design Principles and because you have already passed Gateway 1

- Please develop an additional design principle that meets the guidance above;
- Please bring this to the attention of your stakeholders that worked with you on your design principles; and
- Please engage with your stakeholders as needed in order that they understand the impact of this additional design principle on your proposal

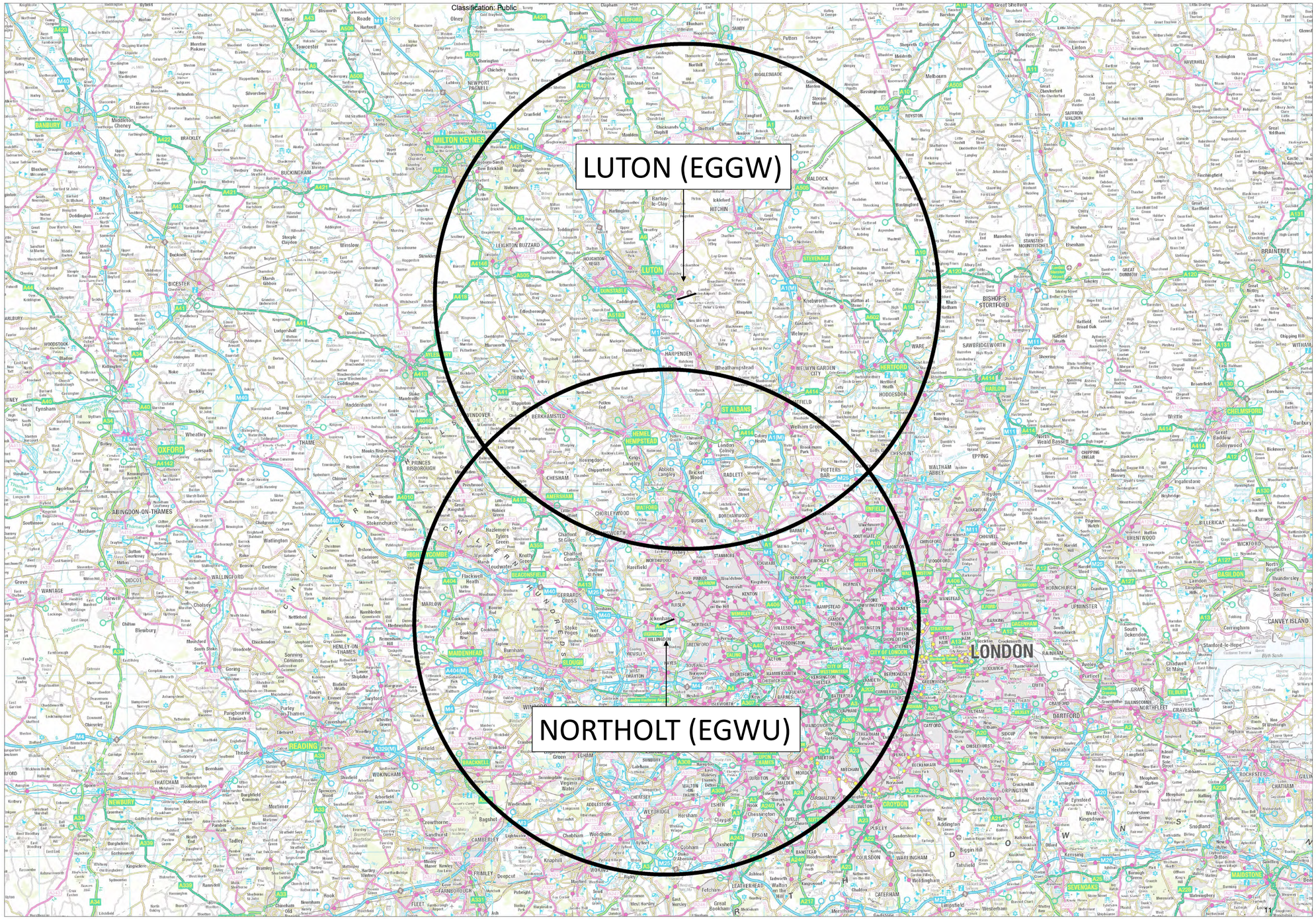
Further explanation of the Co-ordinated Modernisation Design Principle and why it is important to your proposal

The CAA's AMS (CAP 1711) describes what airspace modernisation must deliver, drawn from relevant national and international policy and law. Paragraphs 3.5-3.7 set out factors that airspace modernisation must deliver, drawn from section 70 of the Transport Act 2000 and relevant policy, such as:

- the need to increase aviation capacity in the South East;
- for this growth to be sustainable; and
- for the need to make the best use of existing runways.

In addition, as set out in paragraph 1.25 and 3.1 of the CAA's AMS, the government's Airports National Policy Statement makes clear that capacity (accommodating additional runway capacity at Heathrow and making best possible use of existing infrastructure) is the context of airspace modernisation.

7000ft ring around Luton and Northolt based on an 8% climb gradient.

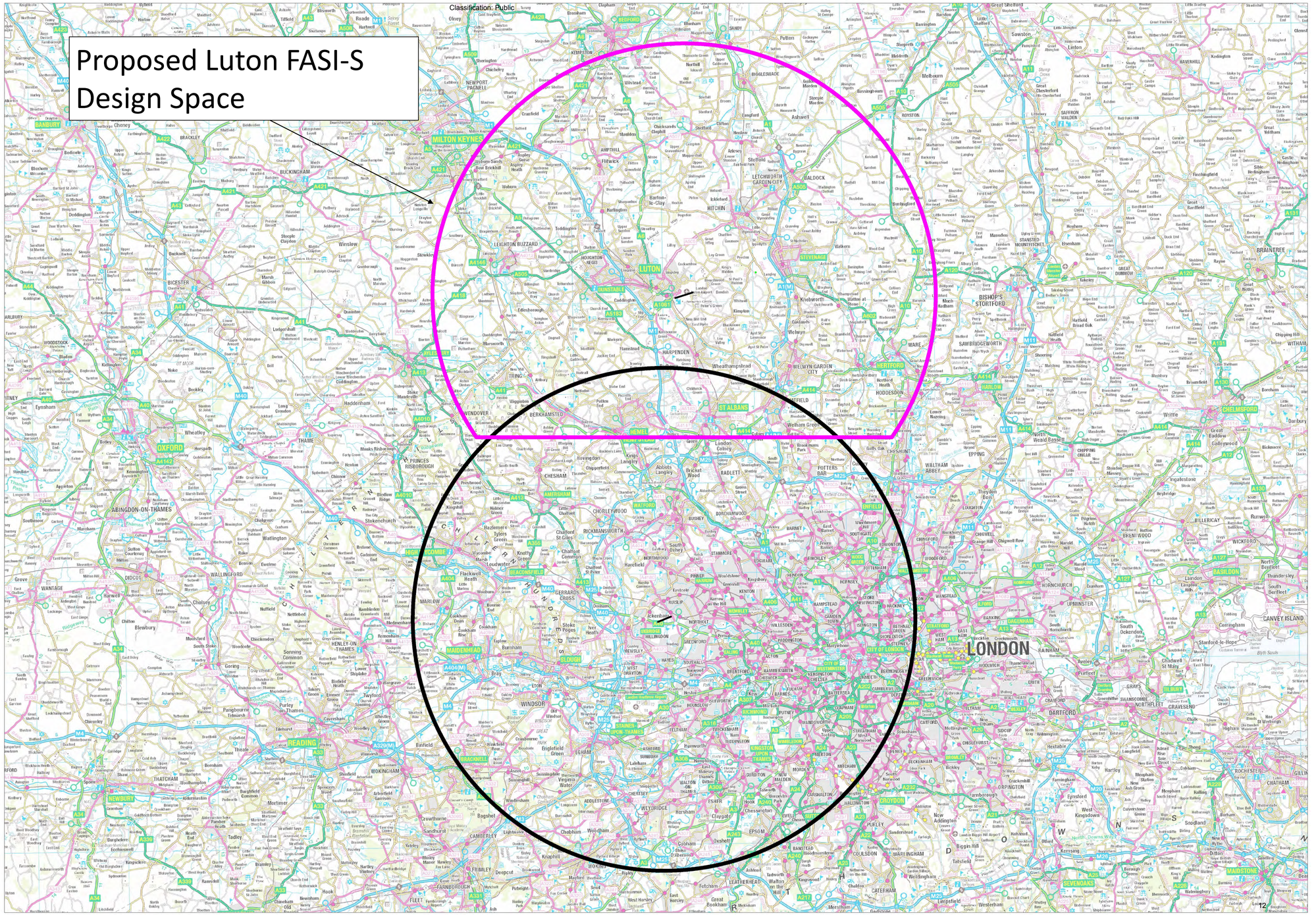


Due to the overlap between Northolt and Luton's design space and also being cognisant of Heathrow's ambitions for expansion, we reduced the size of the Luton design space to the south. This was to help facilitate adherence with:

Luton Design Principle 4:
Should enable continuous climb/descent to/from at least 7000ft & facilitate continuous climb/descent above that

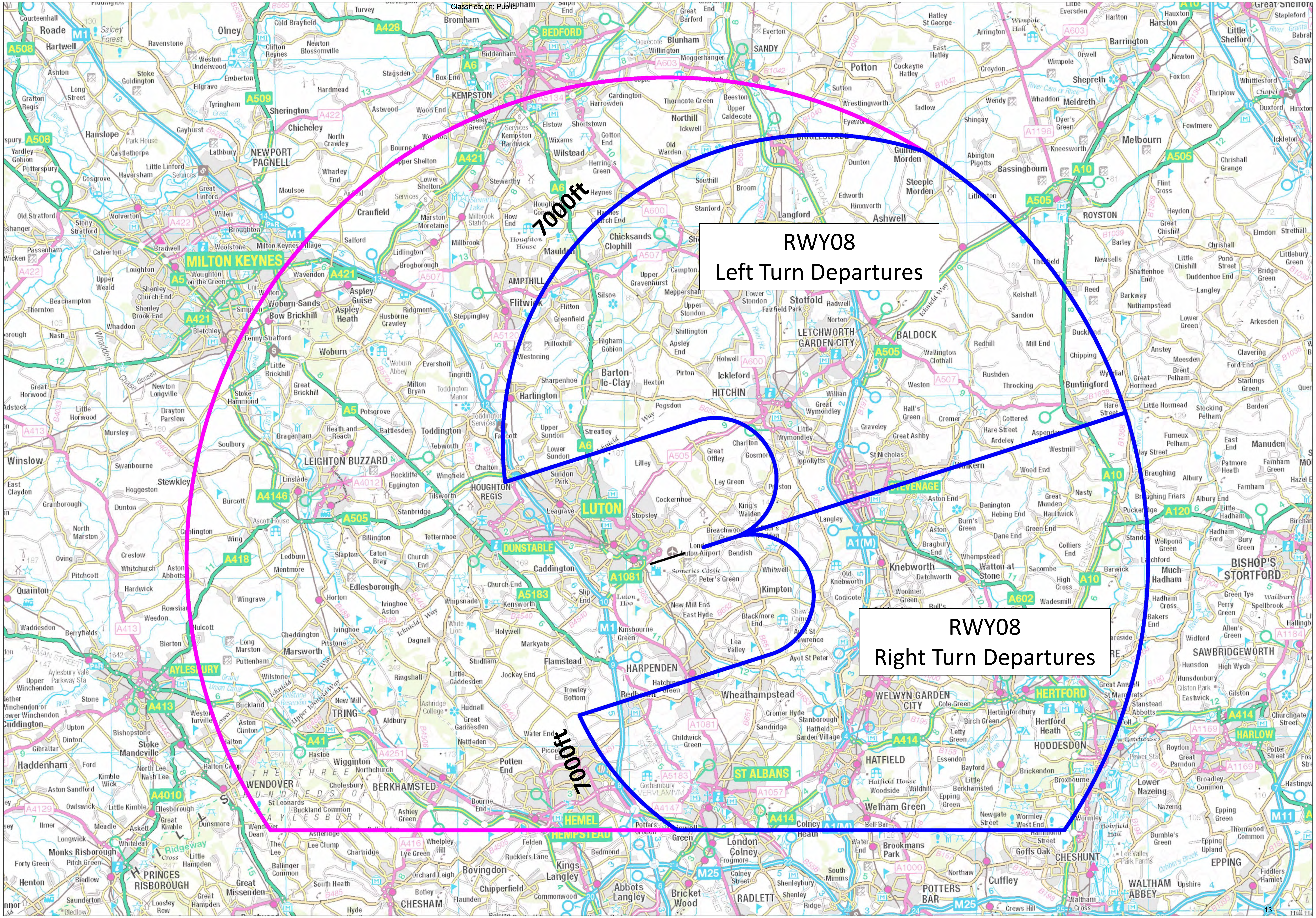
Luton Design Principle 6:
Should avoid overflying the same communities with multiple routes, & take into account routes of other airports, below 7000ft

Luton Design Principle 7:
Should minimise tactical intervention by ATC below 7000ft



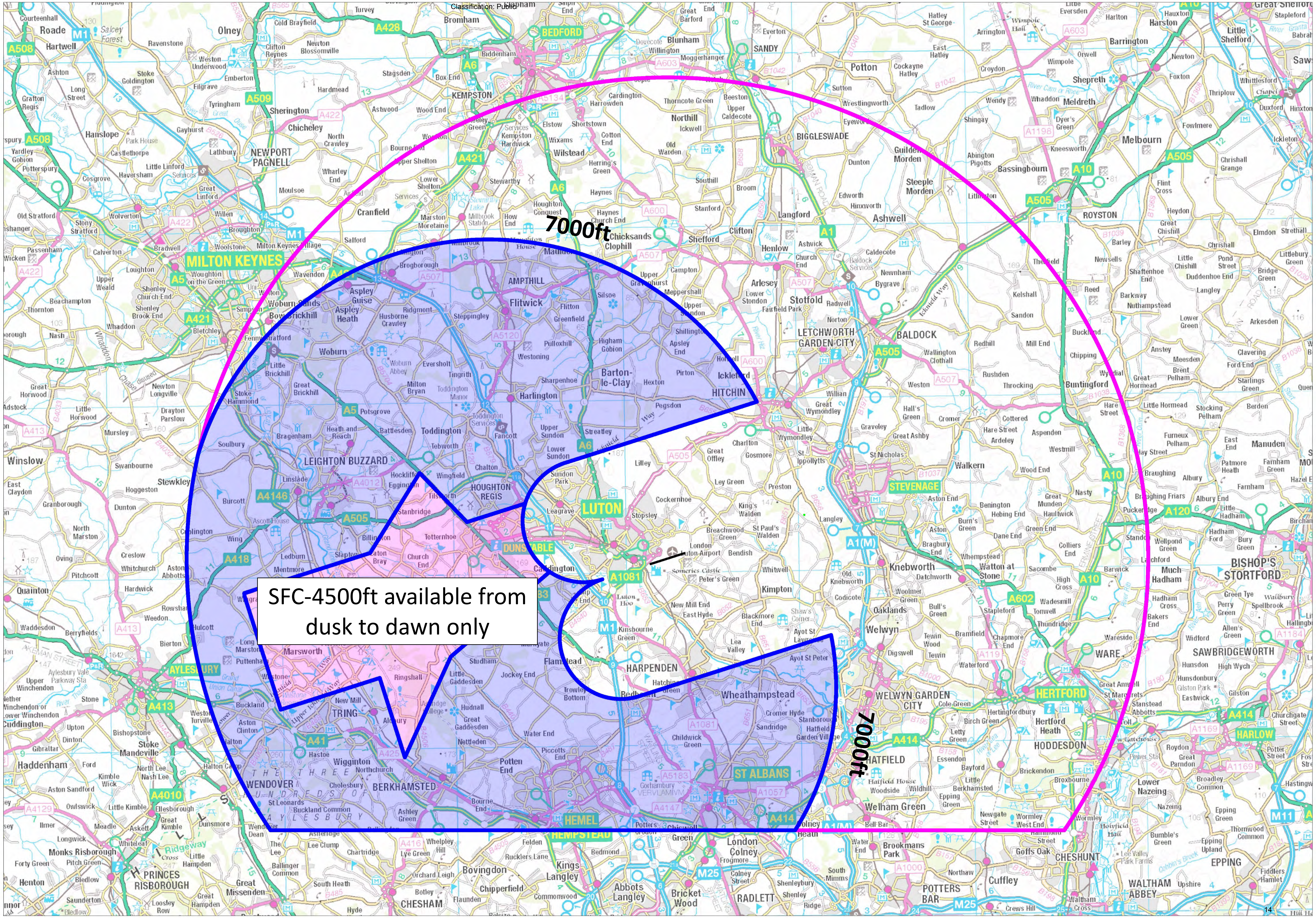
DEPARTURES
RWY08

This area is mirrored for right turns.

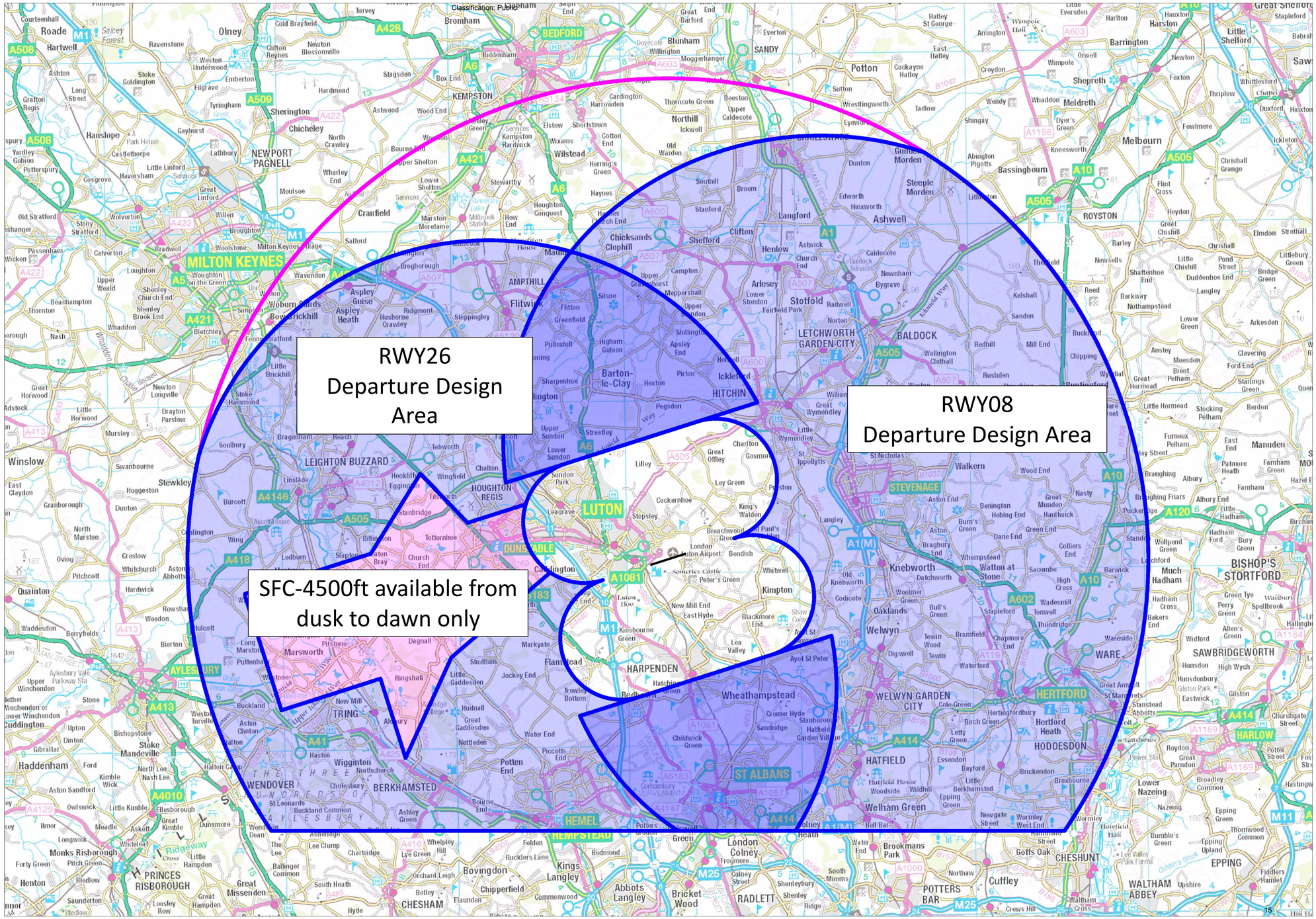


DEPARTURES
RWY26

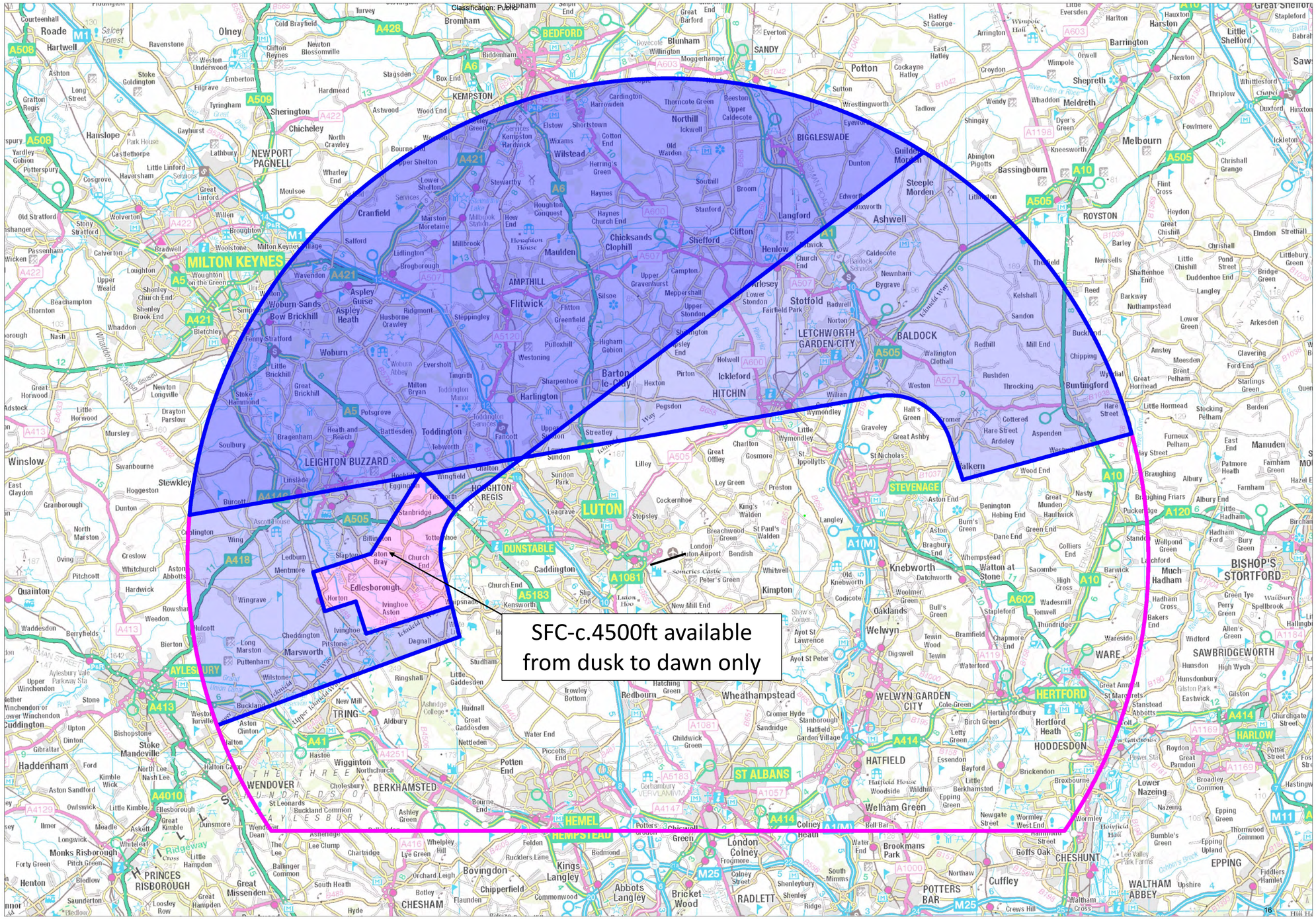
Due to gliding activity in the vicinity of Luton Airport, a portion of airspace is only available between dusk and dawn.



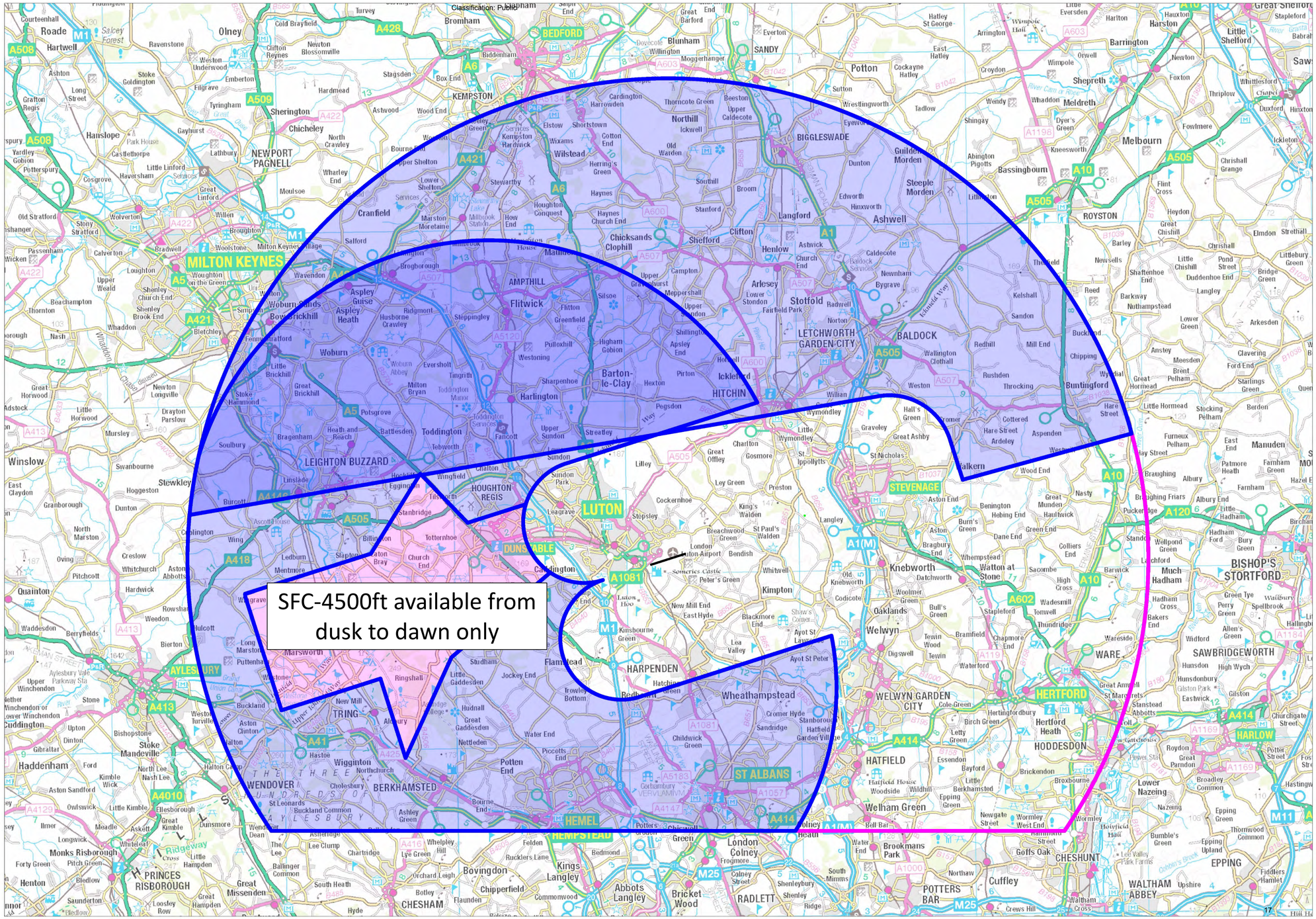
DEPARTURES DESIGN AREAS



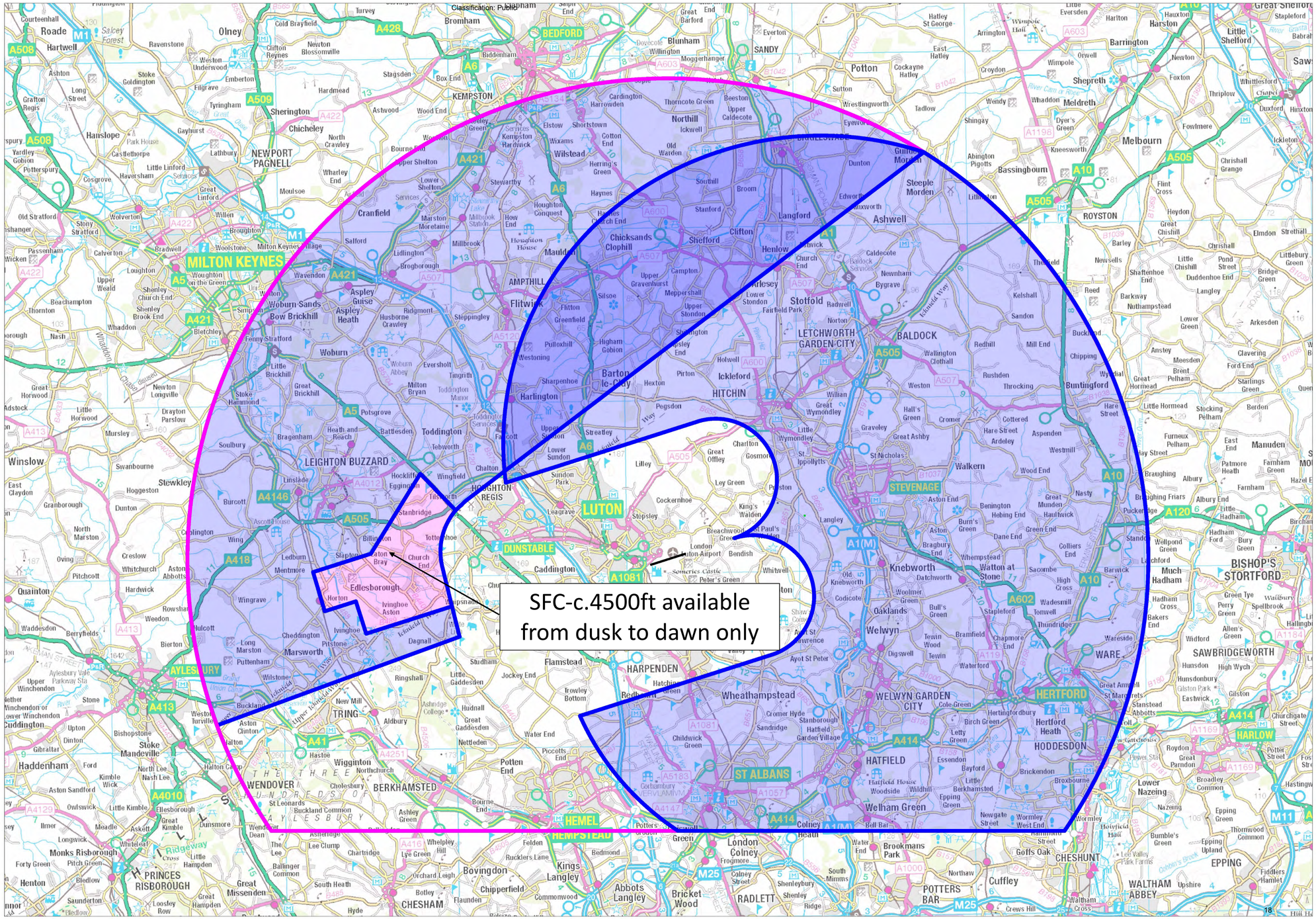
ARRIVALS DESIGN AREAS



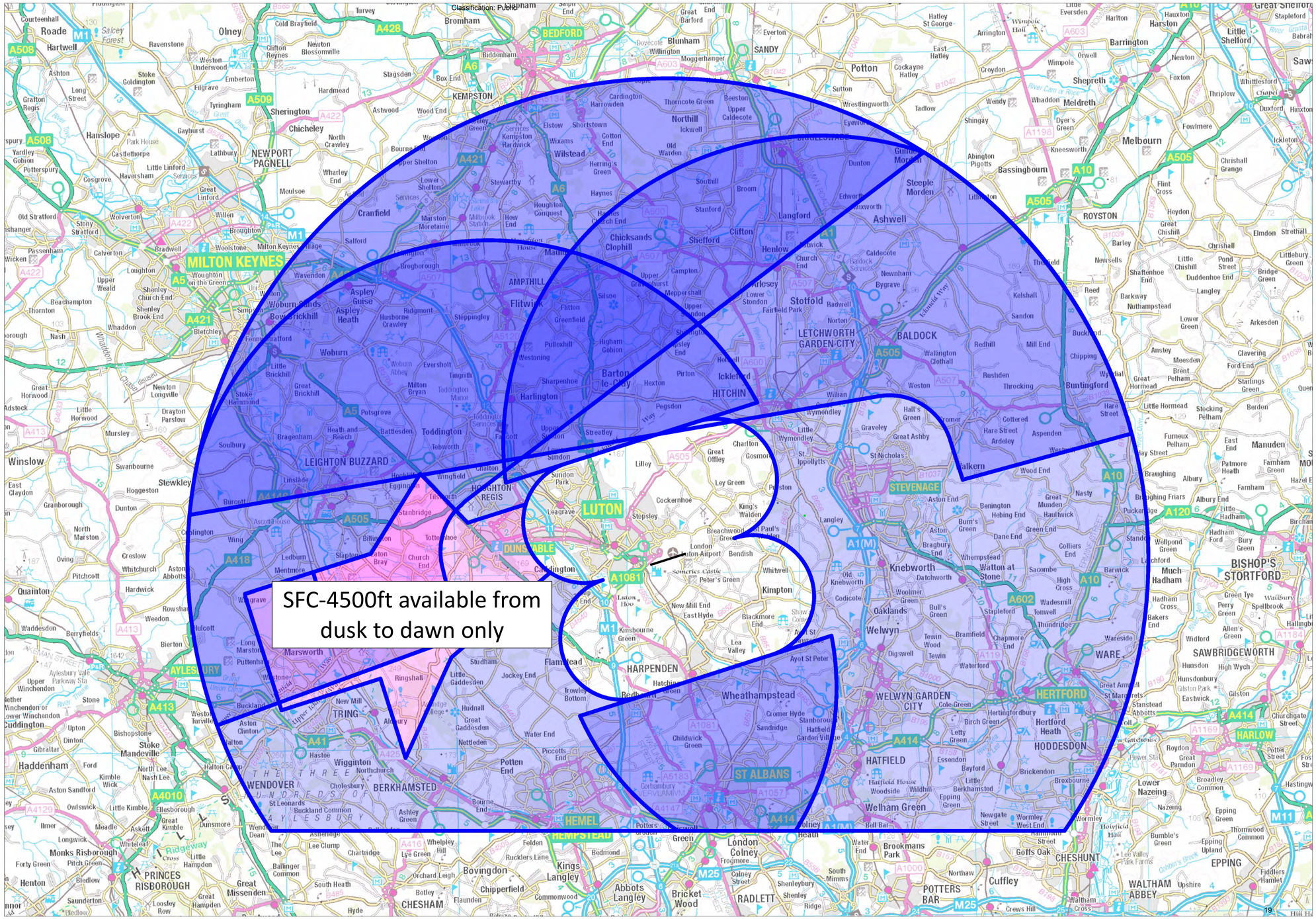
LUTON FASI-S DESIGN AREAS - WESTERLIES



LUTON FASI-S DESIGN AREAS - EASTERLIES

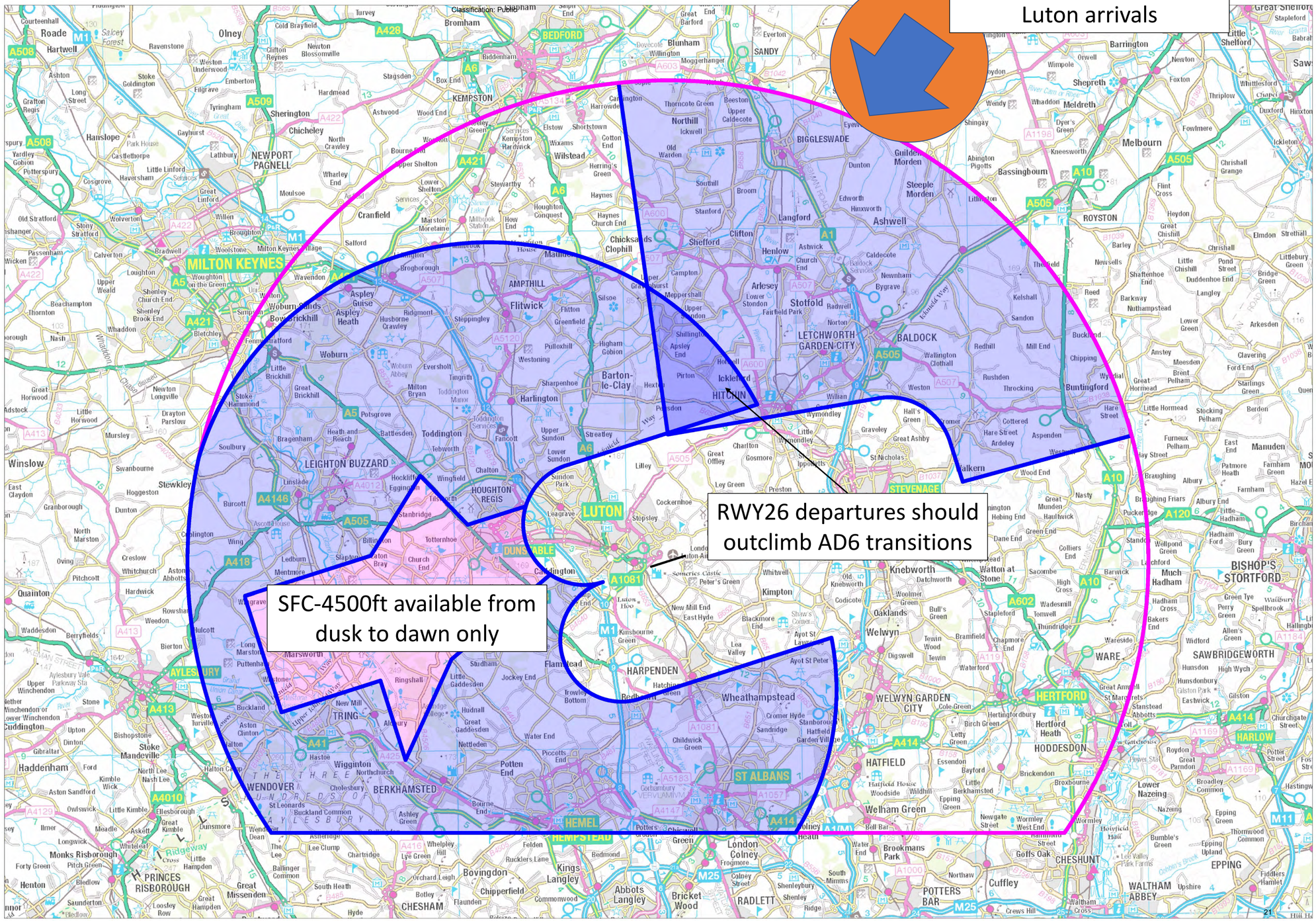


LUTON FASI-S DESIGN AREAS

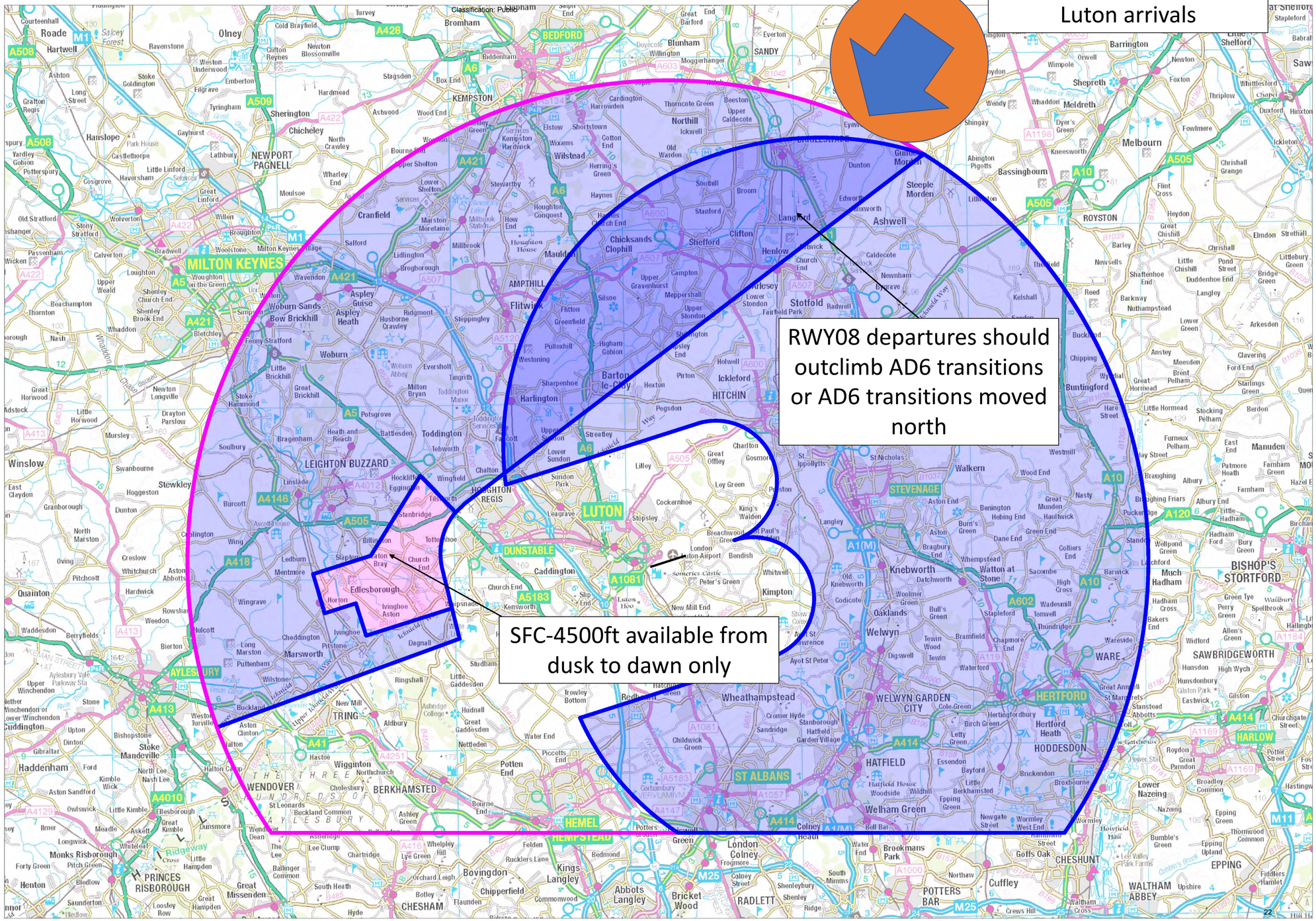


Relationship with AD6

LUTON FASI-S DESIGN AREAS – WESTERLIES

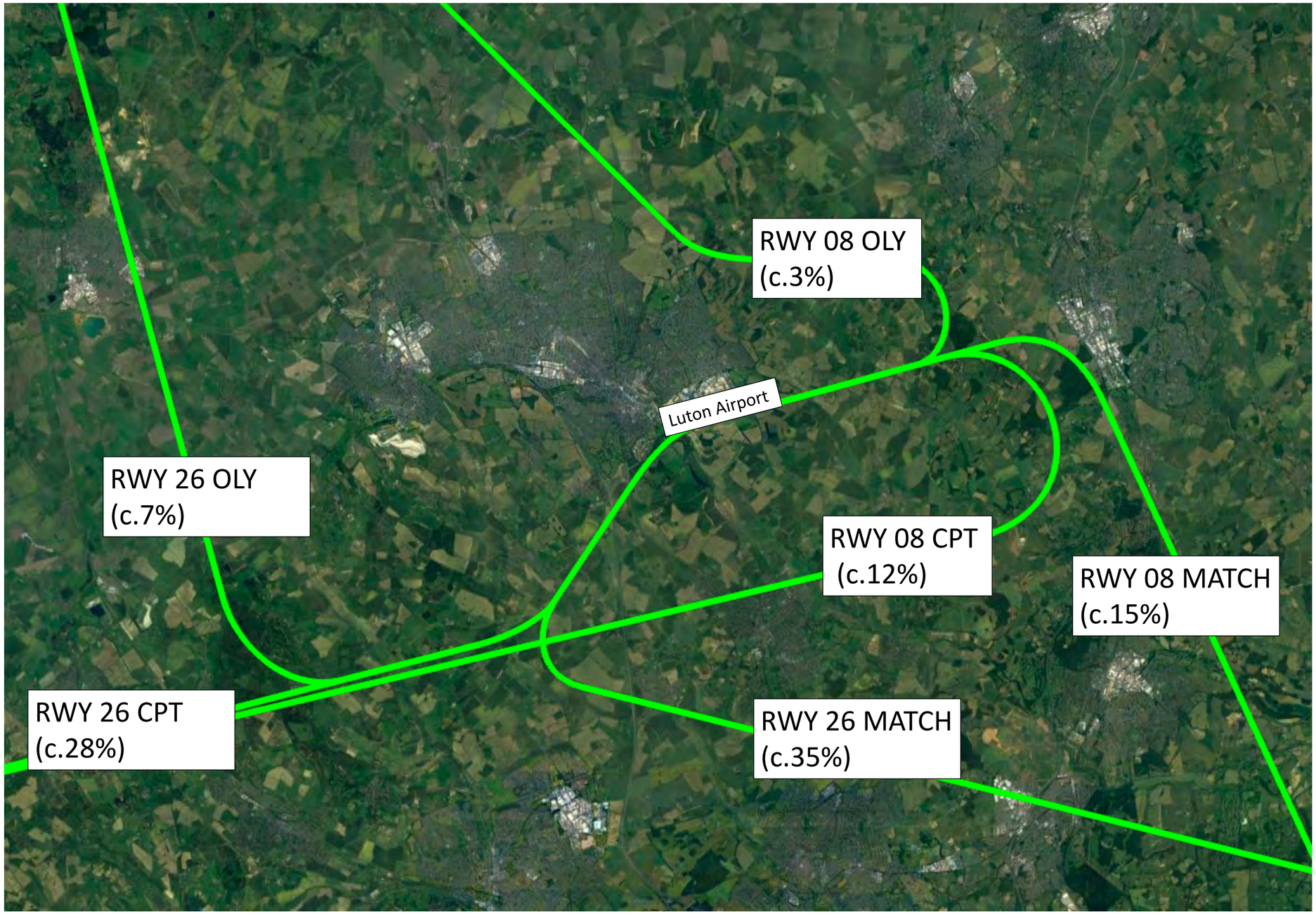


LUTON FASI-S DESIGN AREAS – EASTERLIES

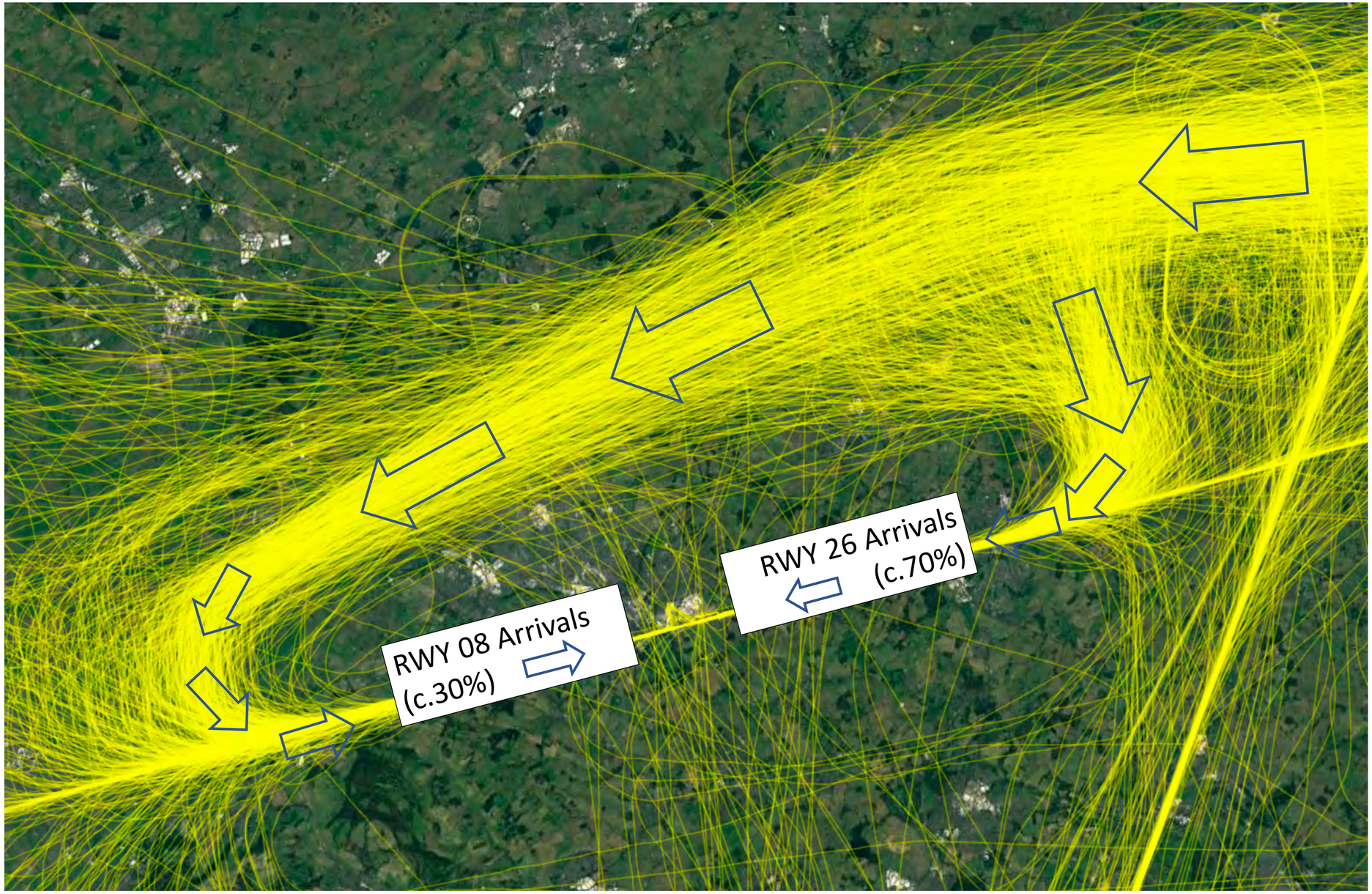


TODAY’S ROUTE STRUCTURE

Current published departure route structure and approximate usage



Current typical arrival tracks (no published route structure)



INITIAL OPTION DEVELOPMENT

ALL FLIGHT PATHS ILLUSTRATIVE ONLY

Route demand assumptions:

OLY 10%

CPT 40%

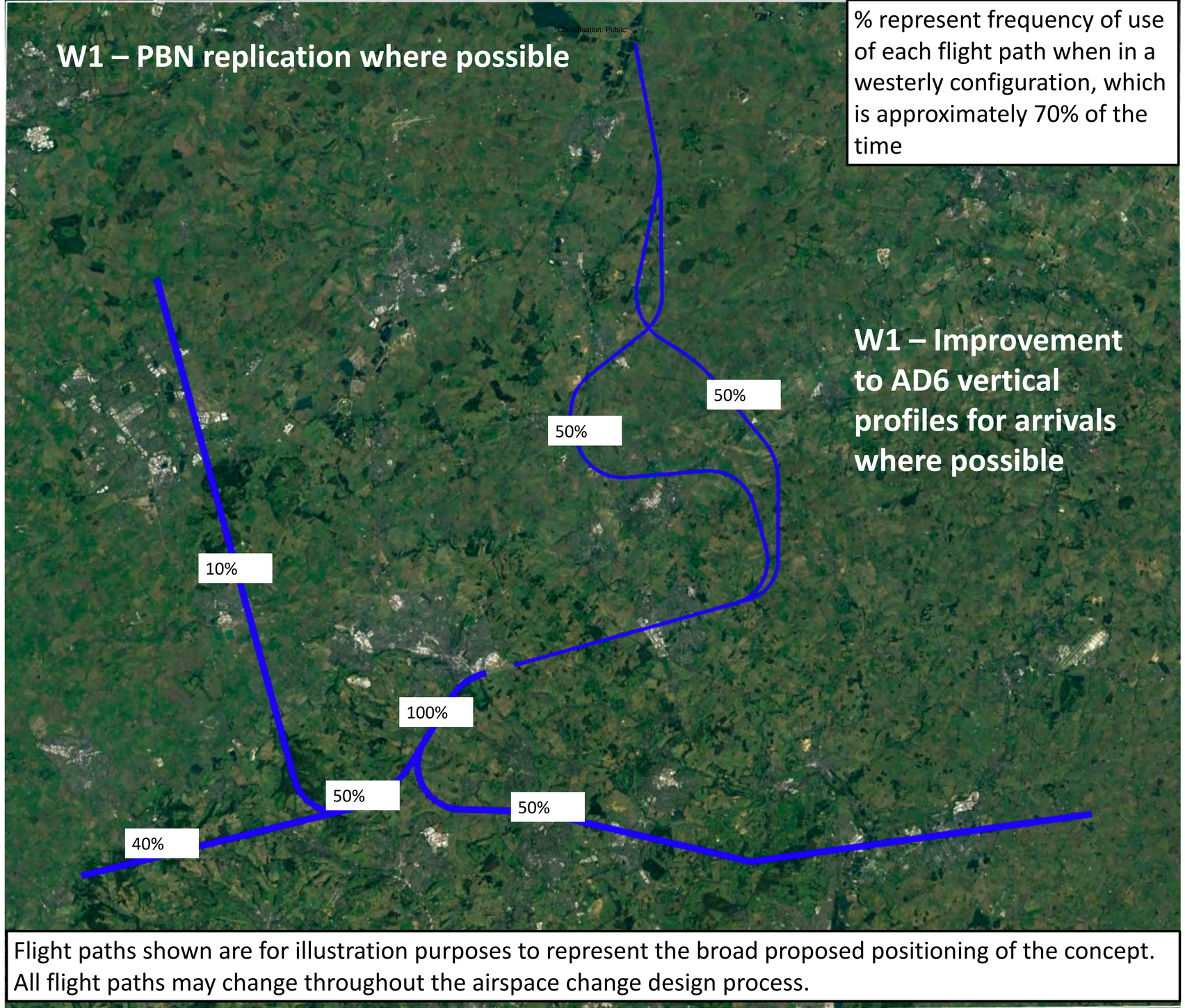
MATCH 50%

ALL FLIGHT PATHS SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY TO DEMONSTRATE THE CONCEPT.
FLIGHT PATHS ARE ALL SUBJECT TO REFINEMENT THROUGHOUT THE AIRSPACE CHANGE PROCESS

Westerly operations

ALL FLIGHT PATHS ILLUSTRATIVE ONLY

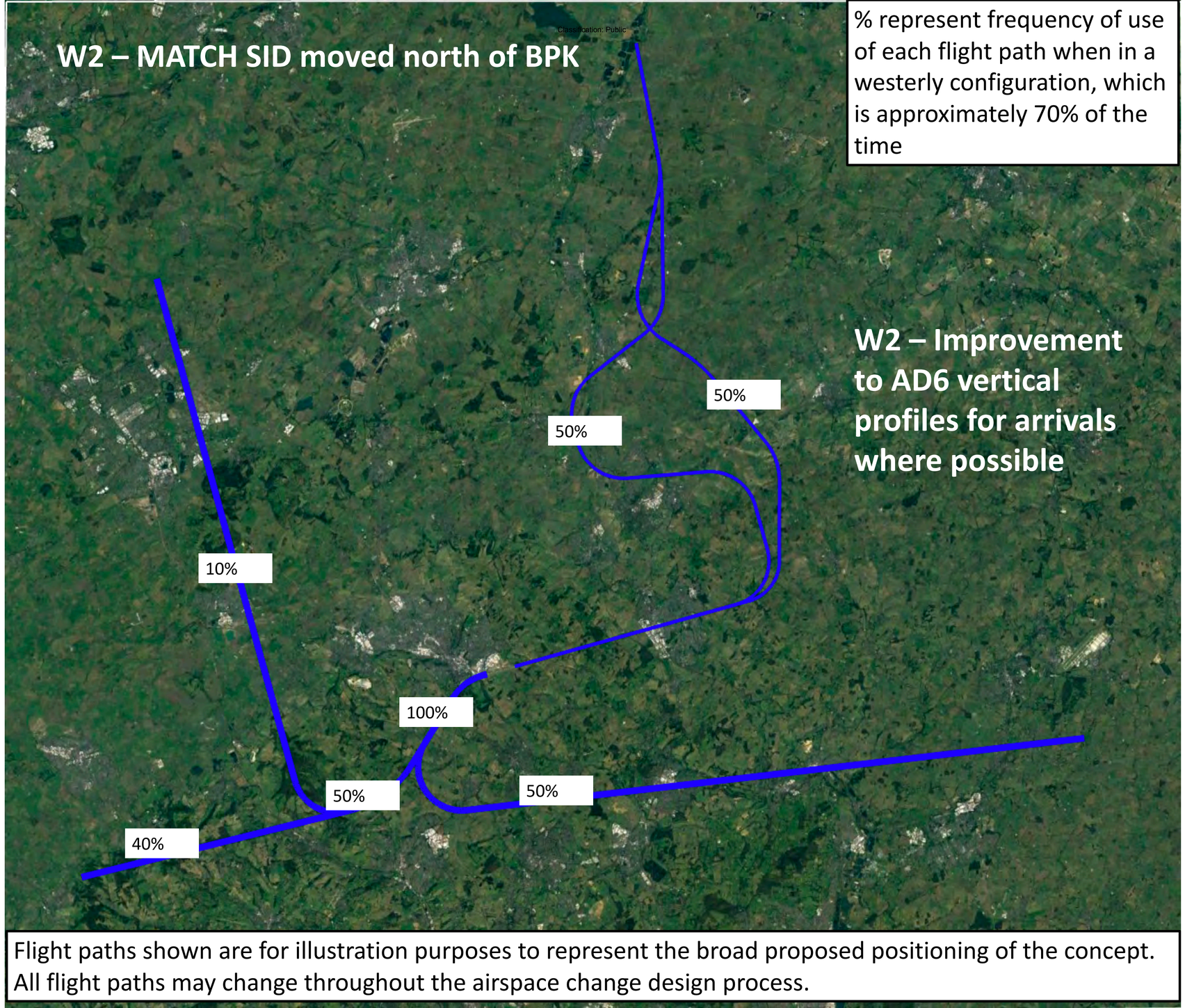
% represents the approximate percentage of overflight in that area from Westerly operations only



Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

W2 – MATCH SID moved north of BPK

% represent frequency of use of each flight path when in a westerly configuration, which is approximately 70% of the time

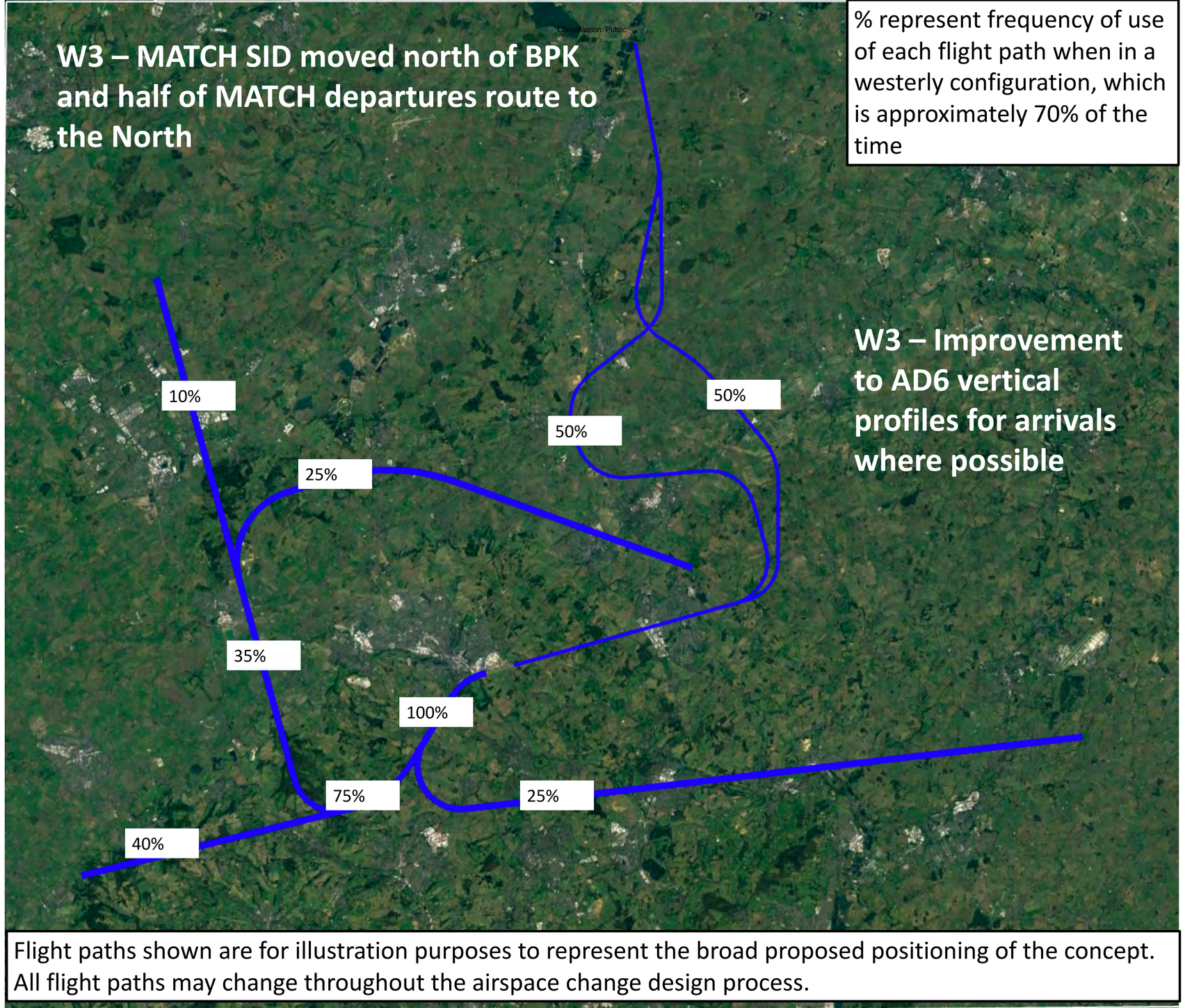


W2 – Improvement to AD6 vertical profiles for arrivals where possible

Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

W3 – MATCH SID moved north of BPK and half of MATCH departures route to the North

% represent frequency of use of each flight path when in a westerly configuration, which is approximately 70% of the time



W3 – Improvement to AD6 vertical profiles for arrivals where possible

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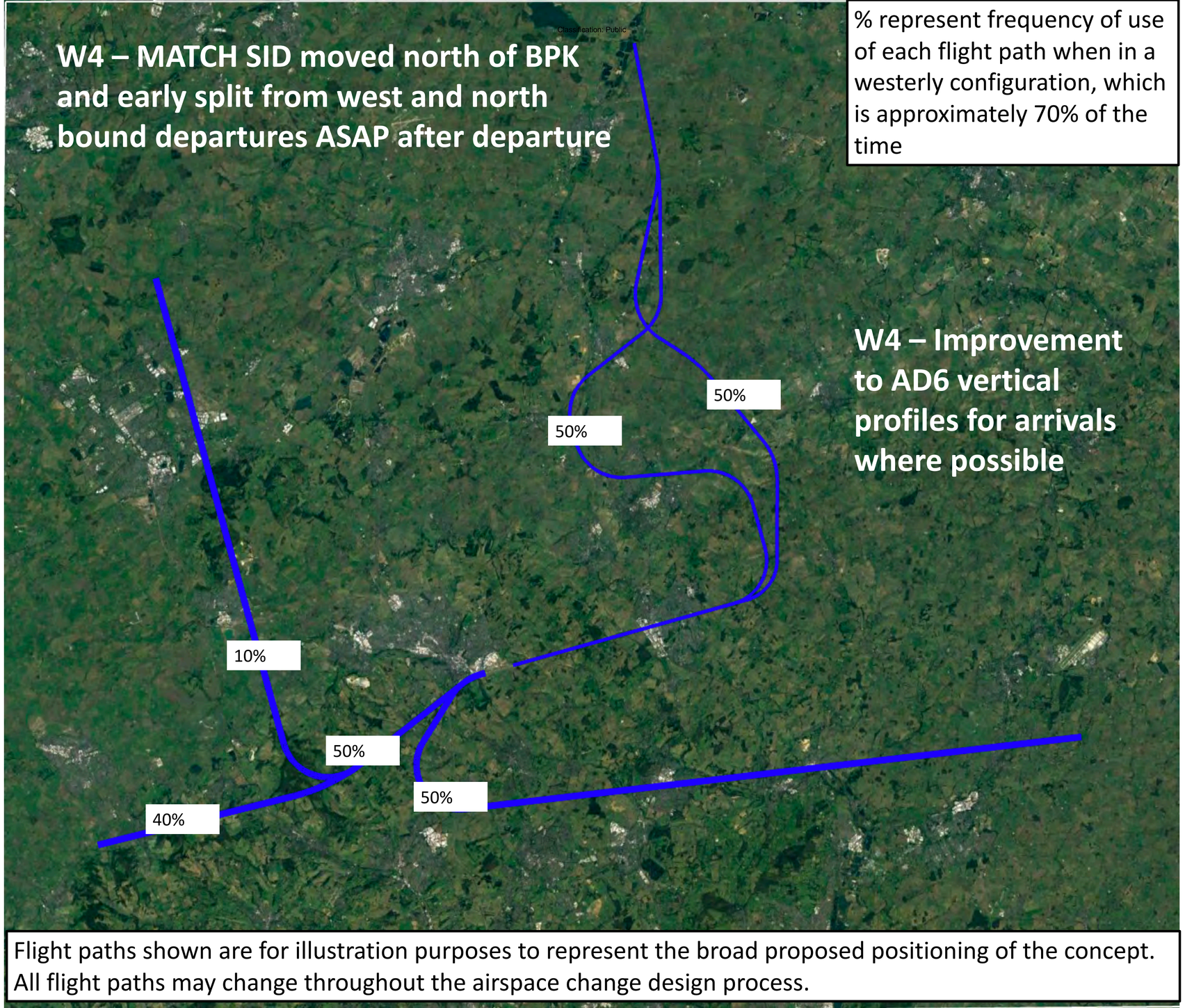
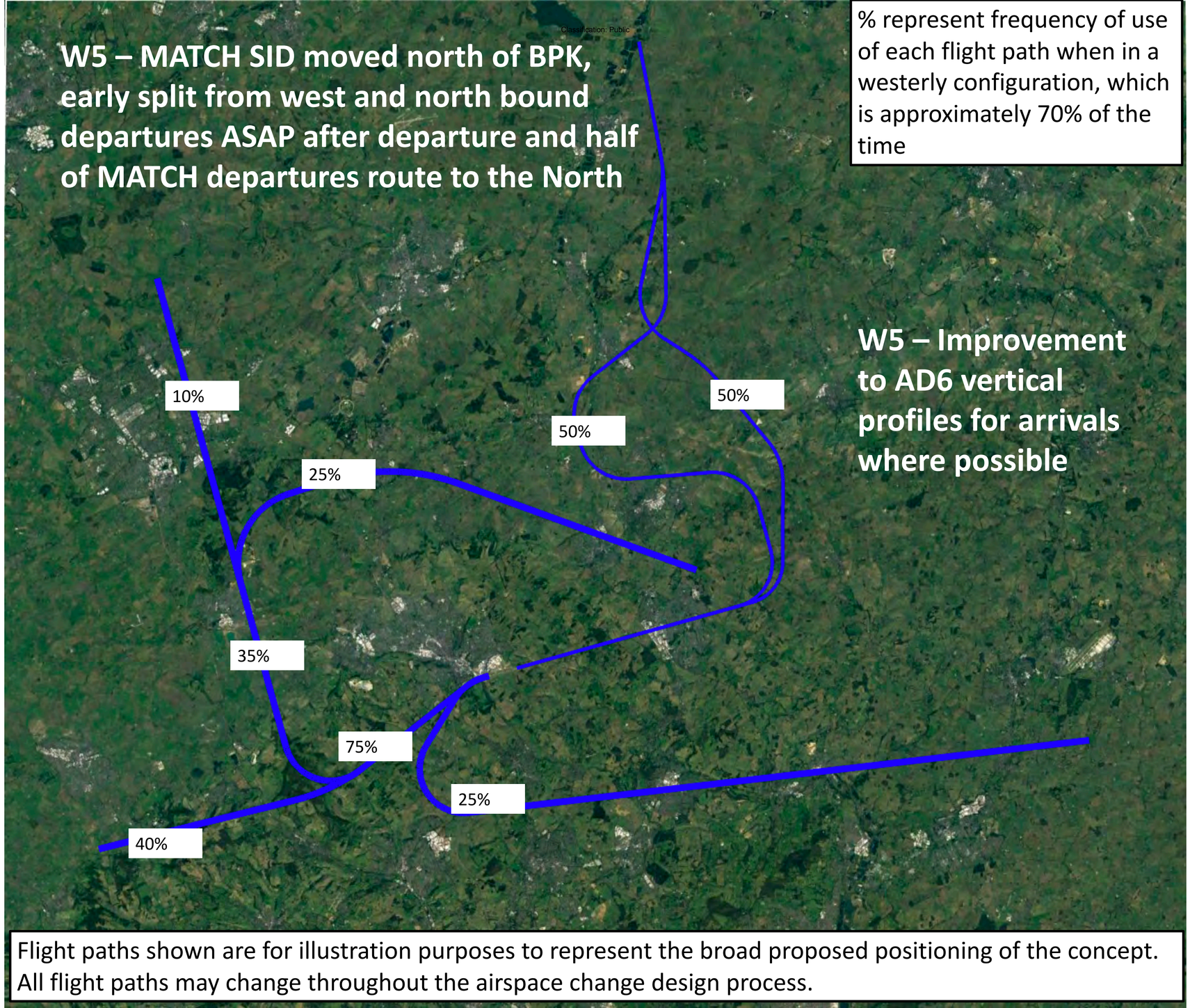


Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

W5 – MATCH SID moved north of BPK, early split from west and north bound departures ASAP after departure and half of MATCH departures route to the North

% represent frequency of use of each flight path when in a westerly configuration, which is approximately 70% of the time



W5 – Improvement to AD6 vertical profiles for arrivals where possible

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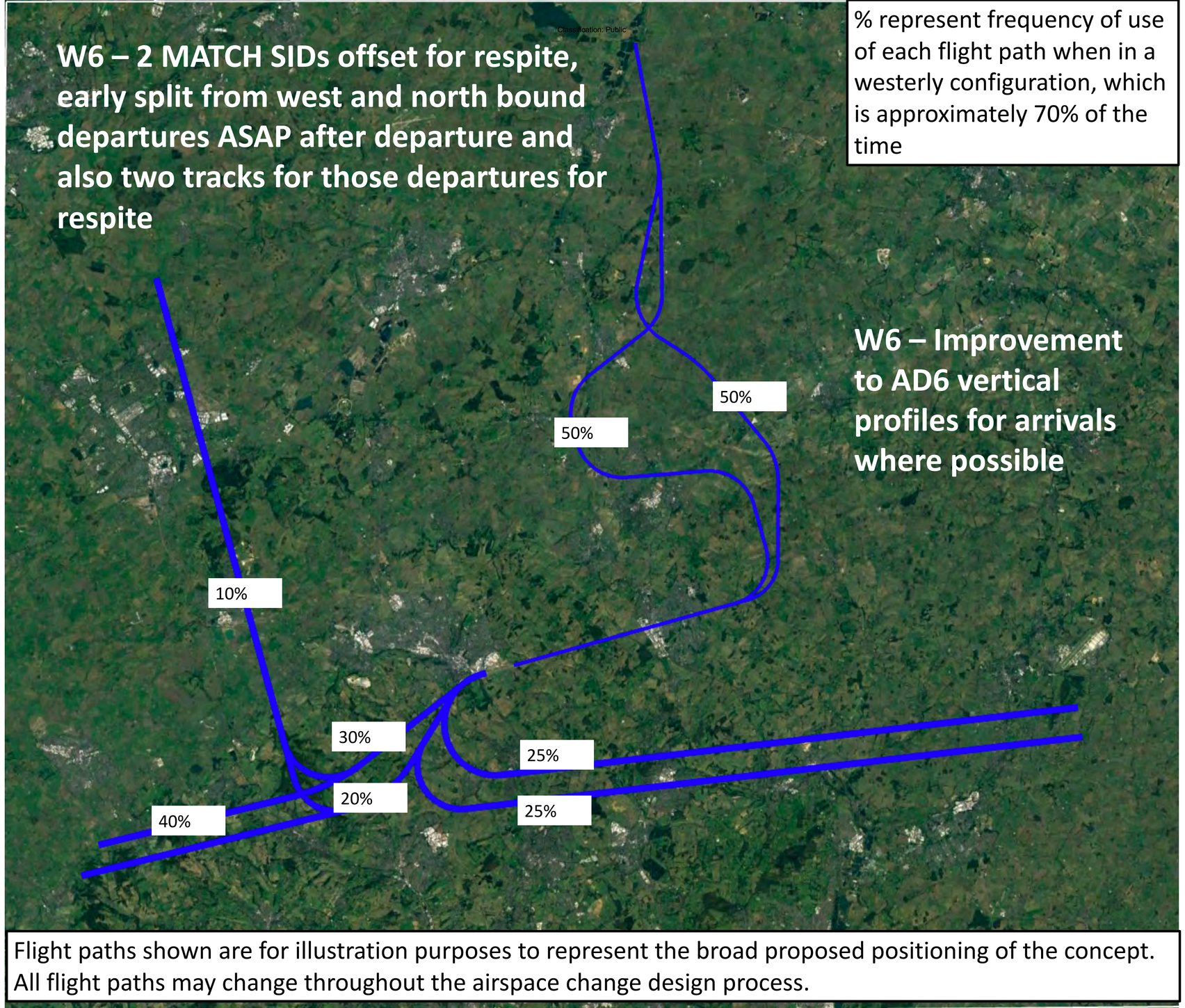
W6 – 2 MATCH SIDs offset for respite, early split from west and north bound departures ASAP after departure and also two tracks for those departures for respite

% represent frequency of use of each flight path when in a westerly configuration, which is approximately 70% of the time

W6 – Improvement to AD6 vertical profiles for arrivals where possible



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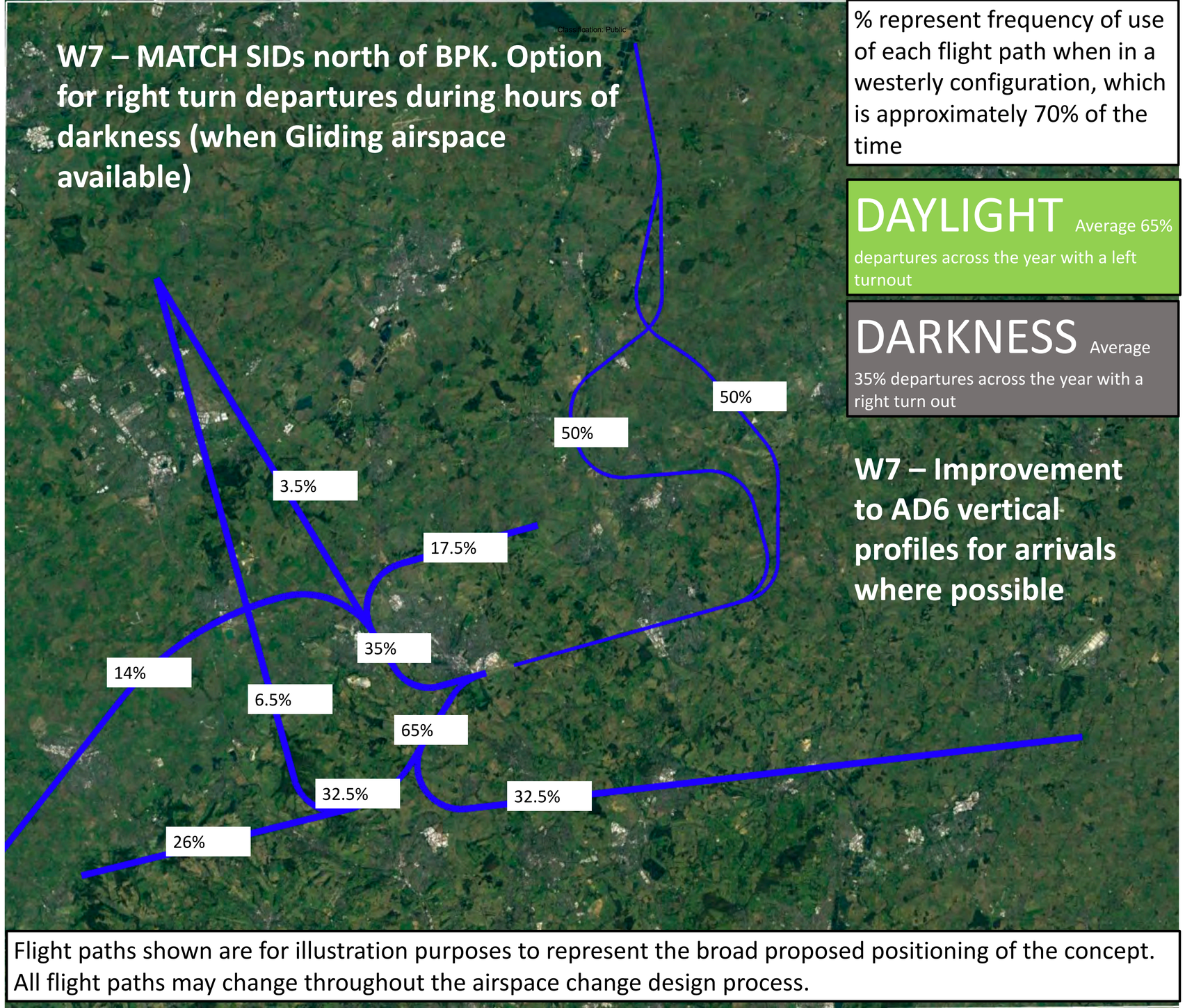
W7 – MATCH SIDs north of BPK. Option for right turn departures during hours of darkness (when Gliding airspace available)



% represent frequency of use of each flight path when in a westerly configuration, which is approximately 70% of the time

DAYLIGHT Average 65% departures across the year with a left turnout

DARKNESS Average 35% departures across the year with a right turn out

W7 – Improvement to AD6 vertical profiles for arrivals where possible

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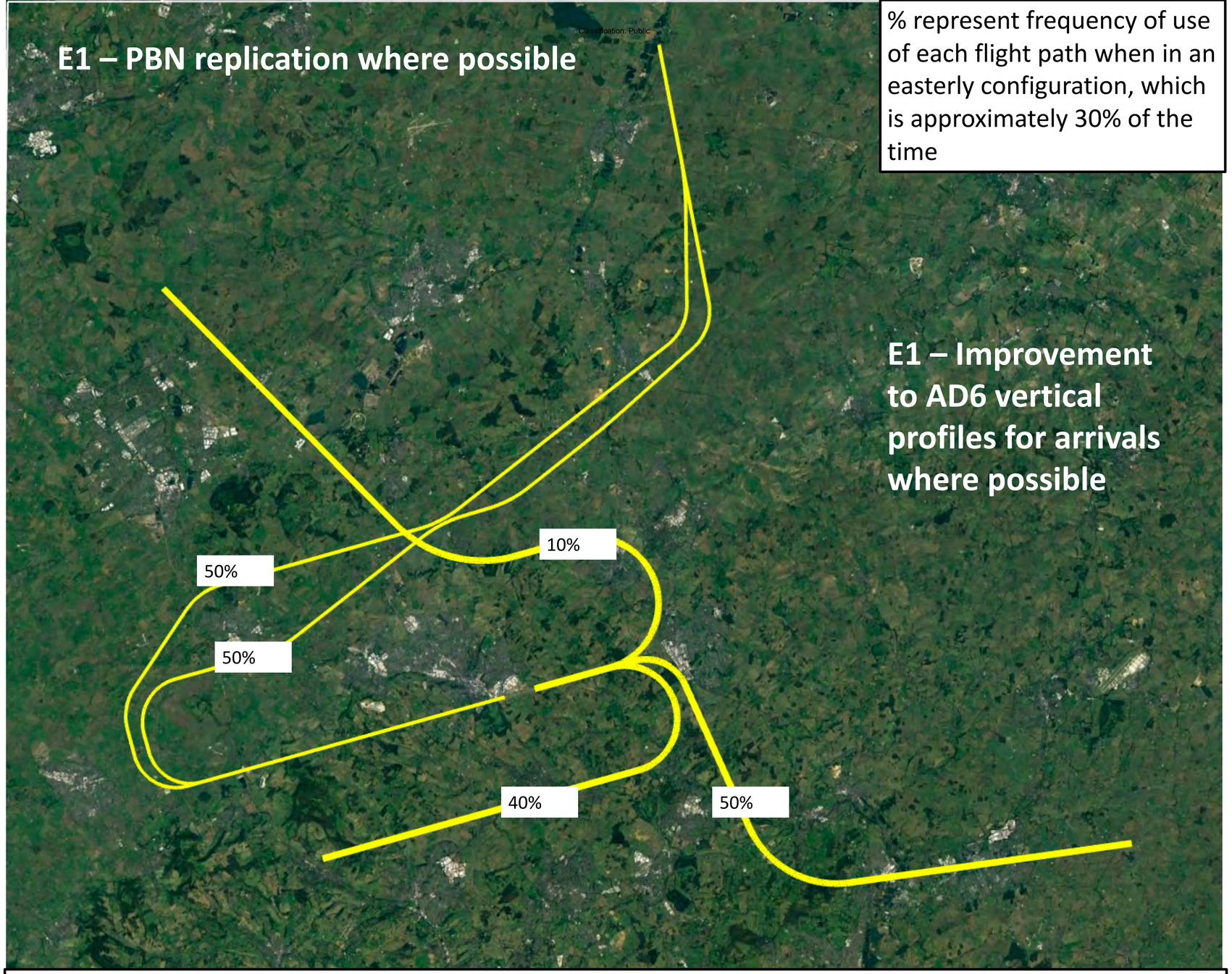
Easterly operations

ALL FLIGHT PATHS ILLUSTRATIVE ONLY

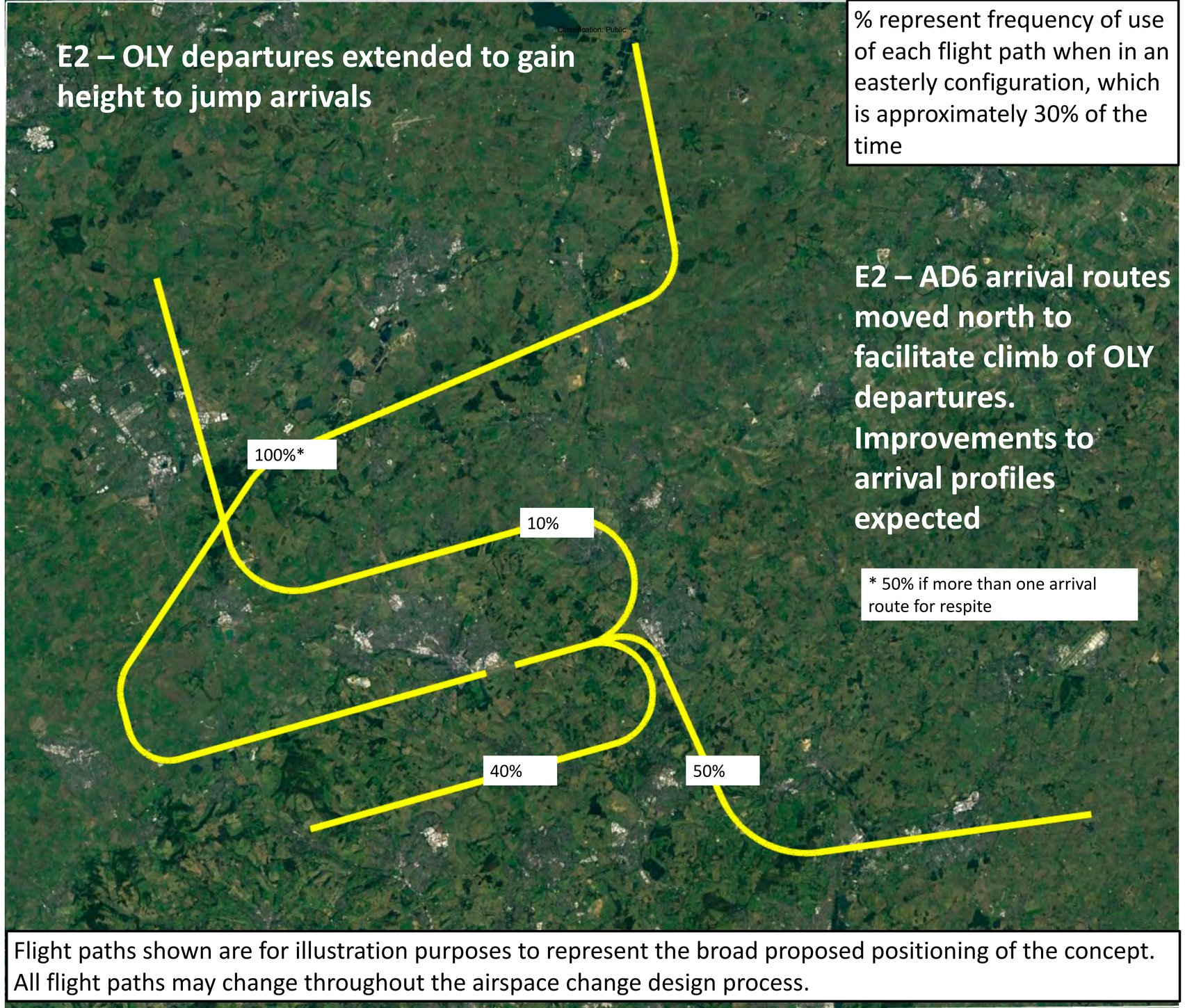
% represents the approximate percentage of overflight in that area from Easterly operations only



Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

E2 – OLY departures extended to gain height to jump arrivals

% represent frequency of use of each flight path when in an easterly configuration, which is approximately 30% of the time



E2 – AD6 arrival routes moved north to facilitate climb of OLY departures. Improvements to arrival profiles expected

* 50% if more than one arrival route for respite

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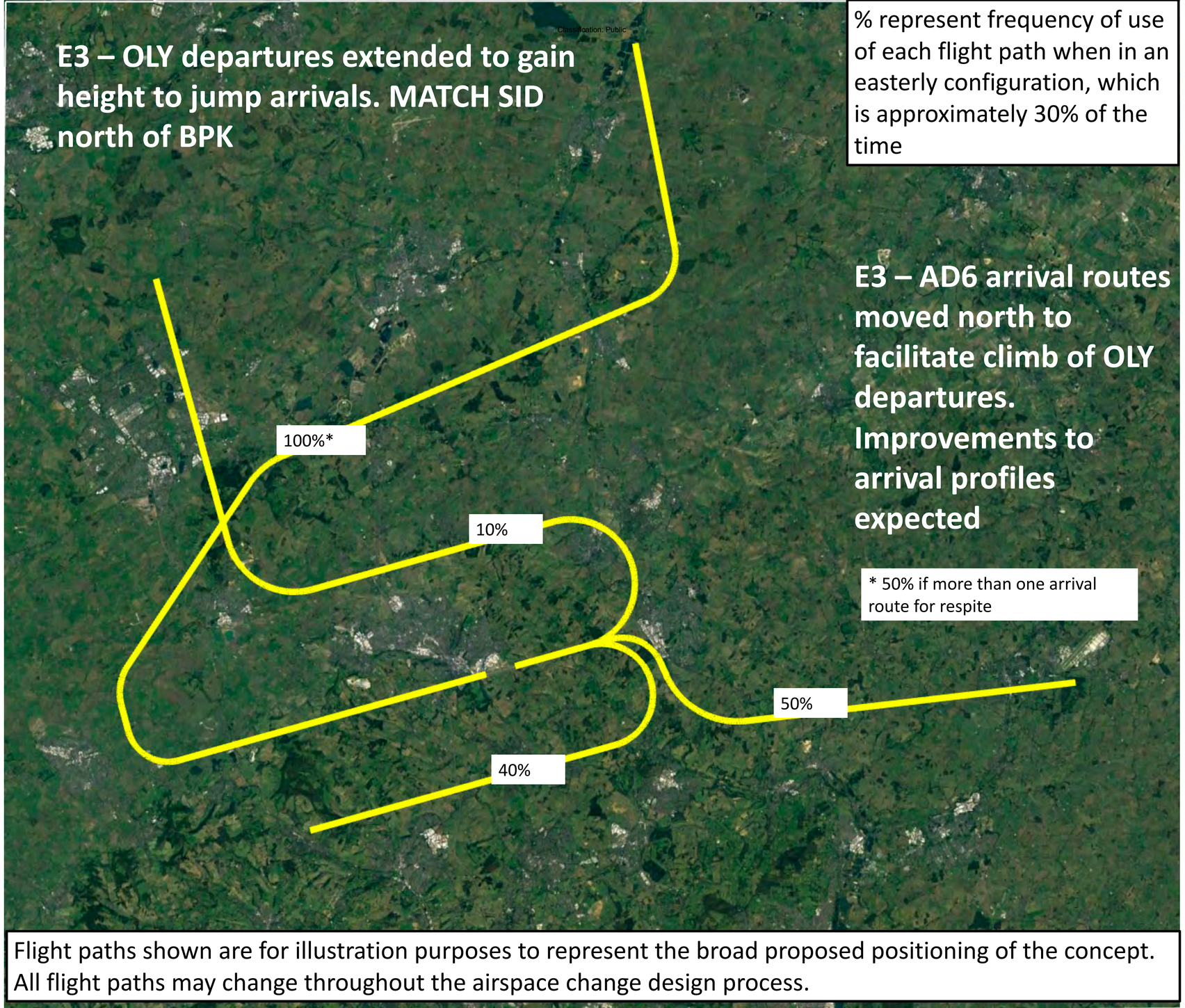

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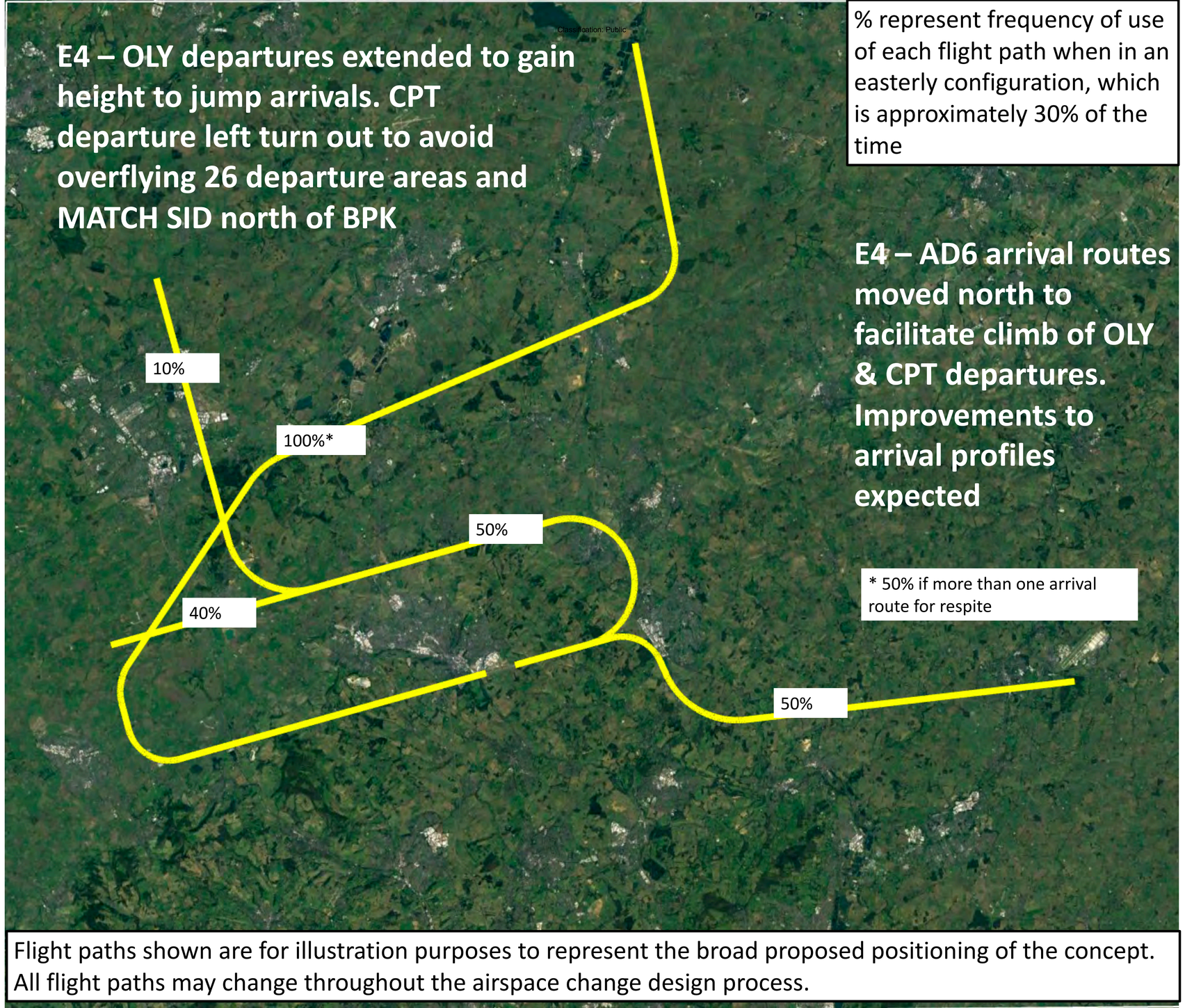
% represent frequency of use of each flight path when in an easterly configuration, which is approximately 30% of the time

E4 – OLY departures extended to gain height to jump arrivals. CPT departure left turn out to avoid overflying 26 departure areas and MATCH SID north of BPK

E4 – AD6 arrival routes moved north to facilitate climb of OLY & CPT departures. Improvements to arrival profiles expected



* 50% if more than one arrival route for respite

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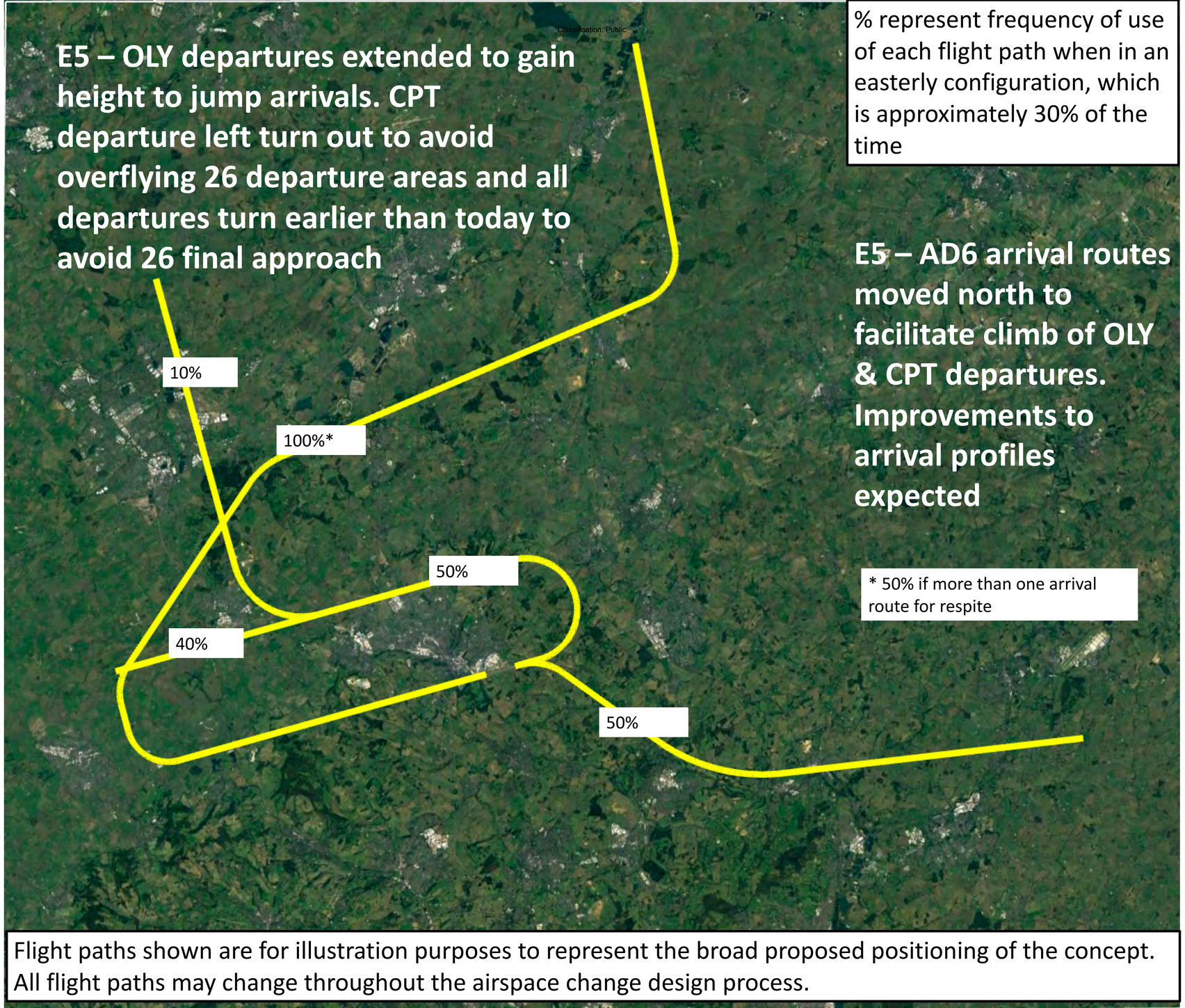

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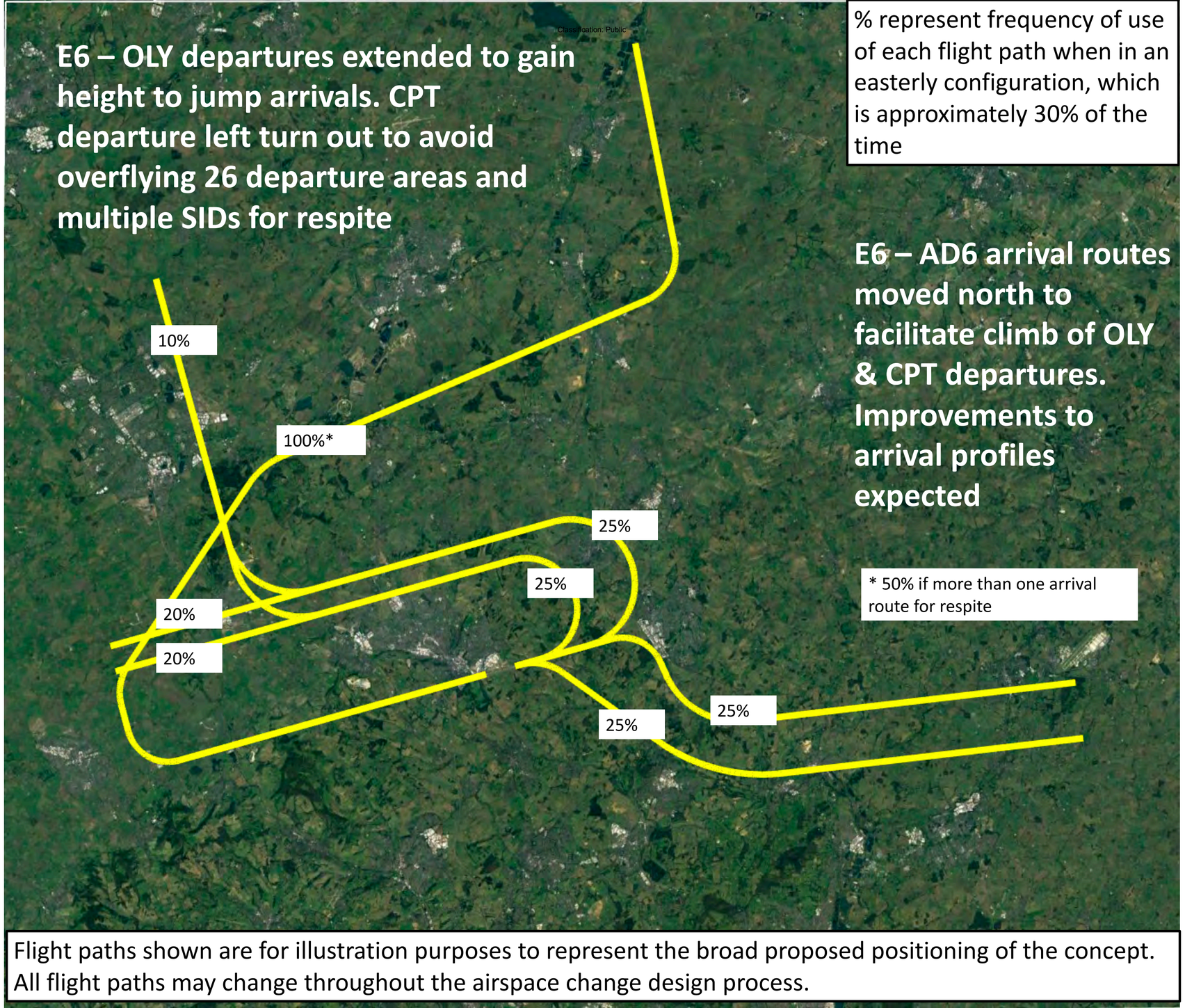
% represent frequency of use of each flight path when in an easterly configuration, which is approximately 30% of the time

E6 – OLY departures extended to gain height to jump arrivals. CPT departure left turn out to avoid overflying 26 departure areas and multiple SIDs for respite

E6 – AD6 arrival routes moved north to facilitate climb of OLY & CPT departures. Improvements to arrival profiles expected



* 50% if more than one arrival route for respite

Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

Easterly & Westerly system options

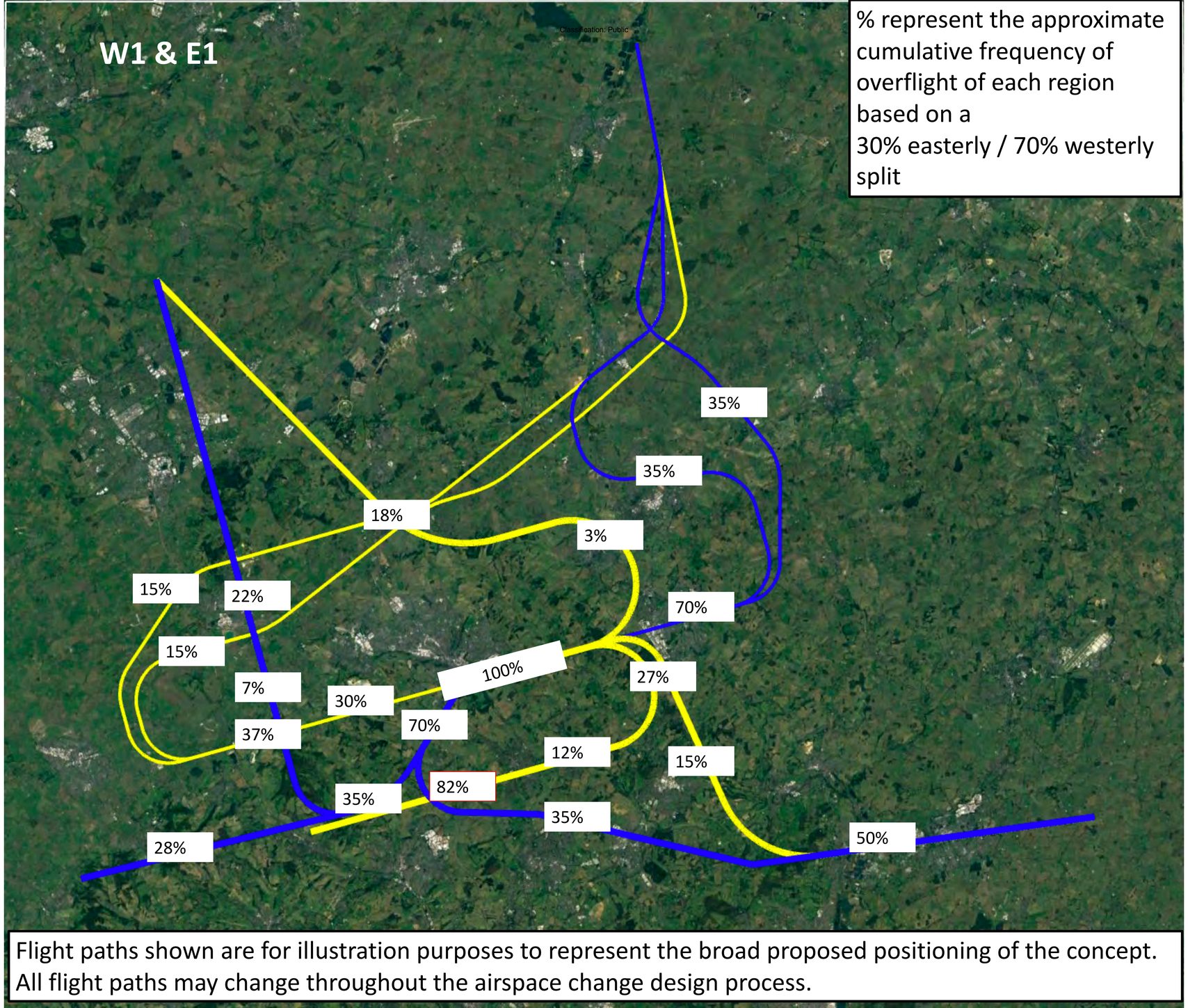
ALL FLIGHT PATHS ILLUSTRATIVE ONLY

The following slides show approximate % of overflight per year in that area, based on 30/70 E/W split

	Westerly (RWY26)	Easterly (RWY08)
MATCH	50 (35%)	50 (15%)
CPT	40 (28%)	40 (12%)
OLY	10 (7%)	10 (3%)

W1 & E1

% represent the approximate cumulative frequency of overflight of each region based on a
30% easterly / 70% westerly split



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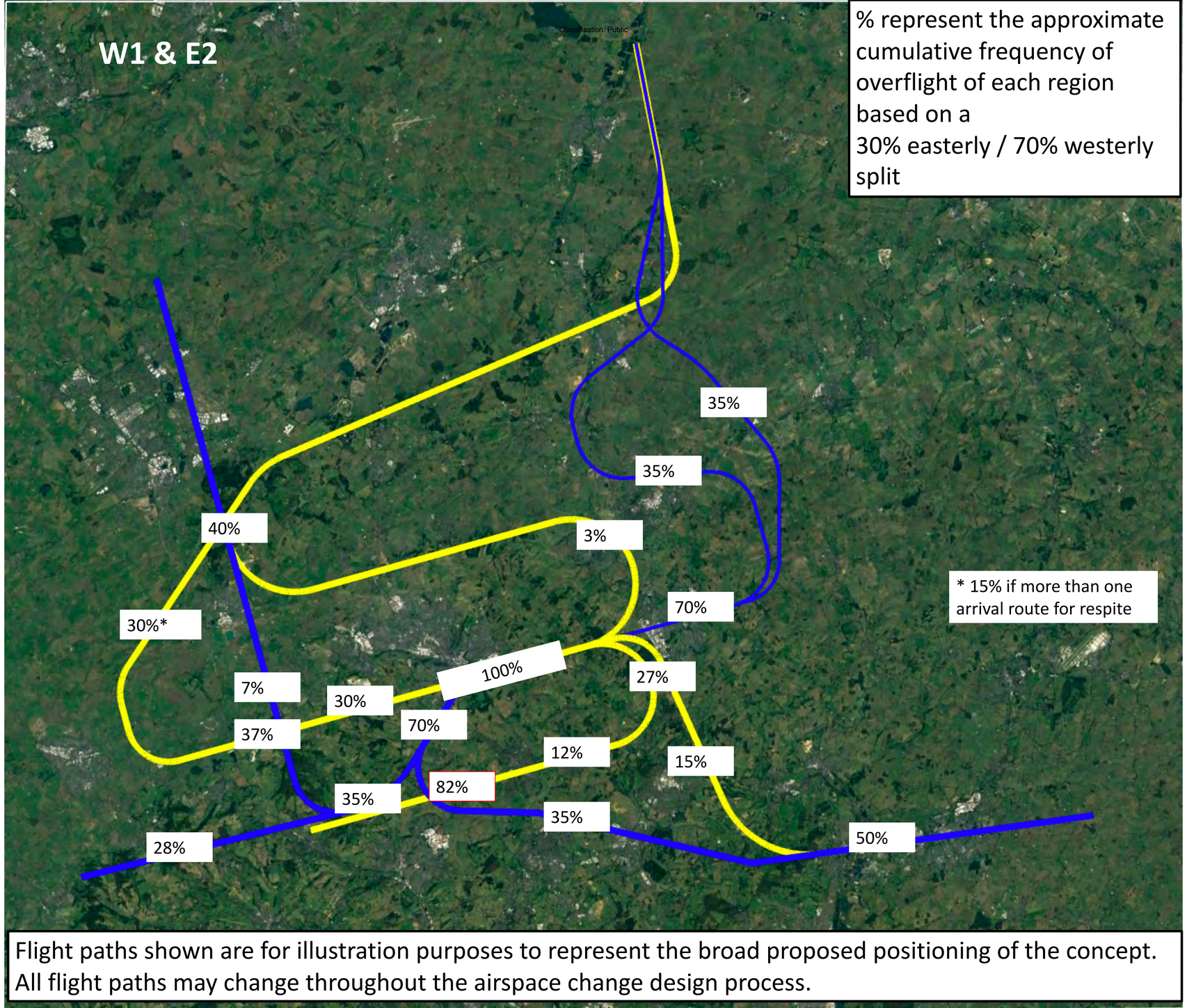
W1 & E2



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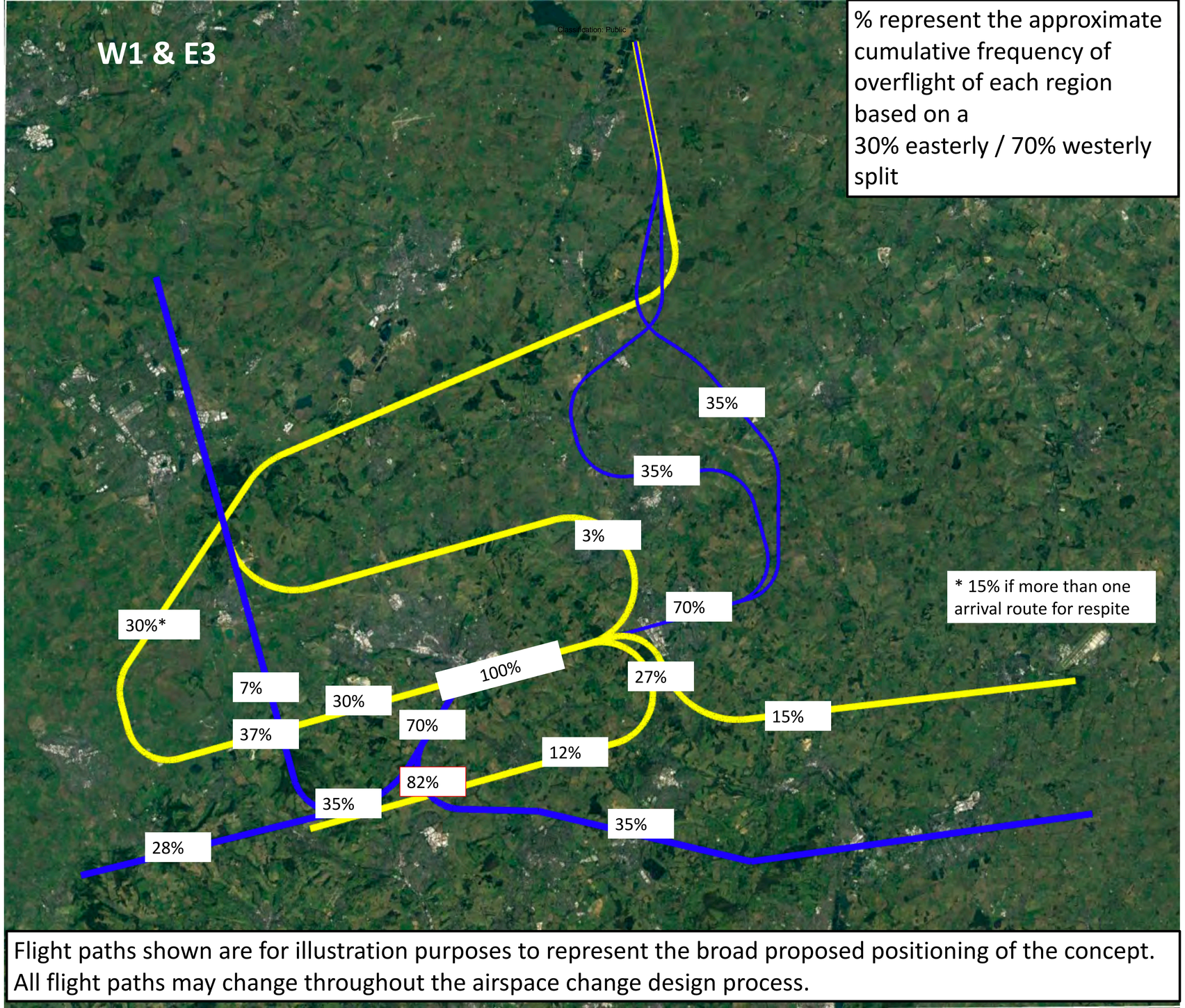
W1 & E3



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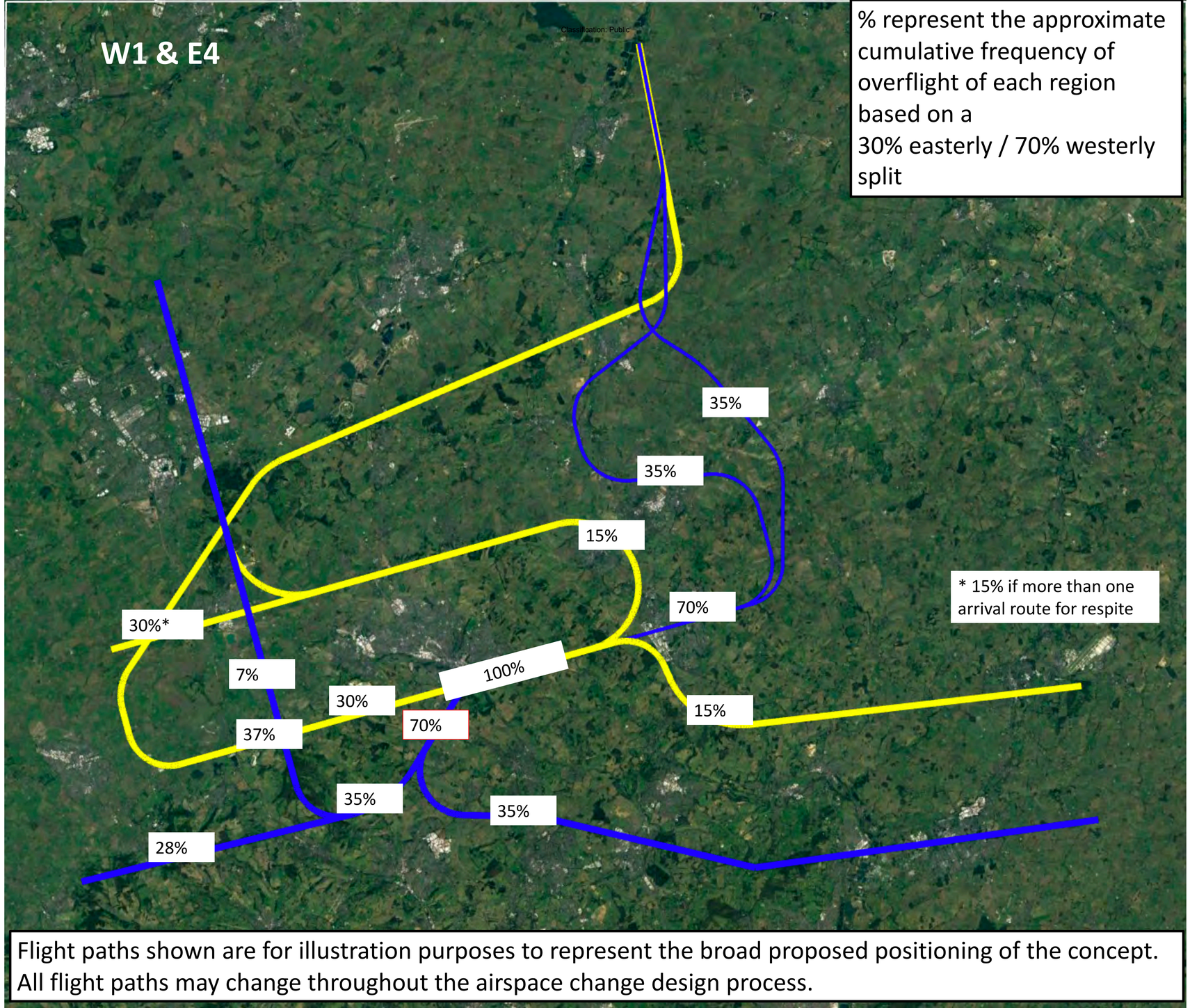
W1 & E4



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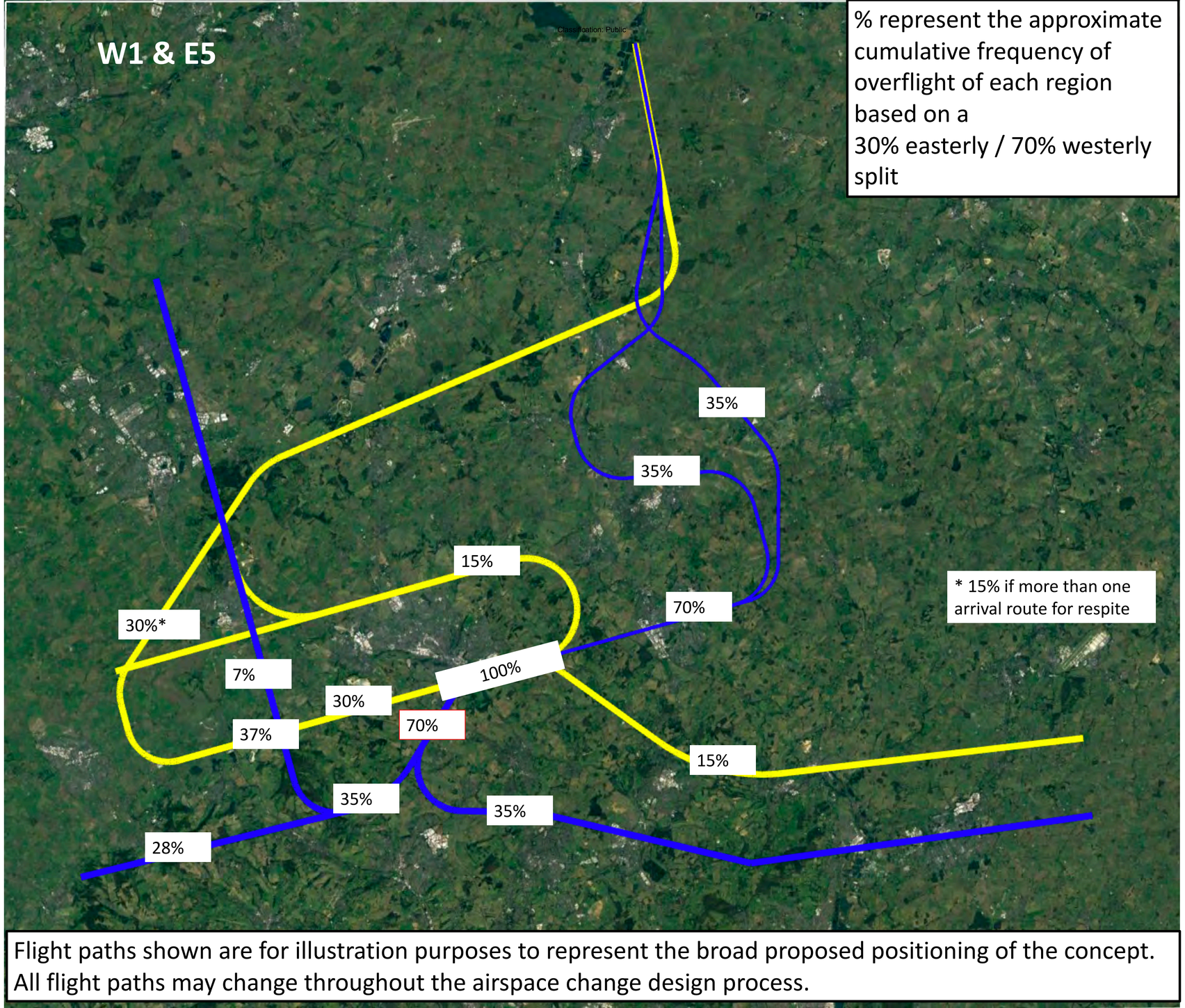
W1 & E5

% represent the approximate cumulative frequency of overflight of each region based on a
30% easterly / 70% westerly split



* 15% if more than one arrival route for respite

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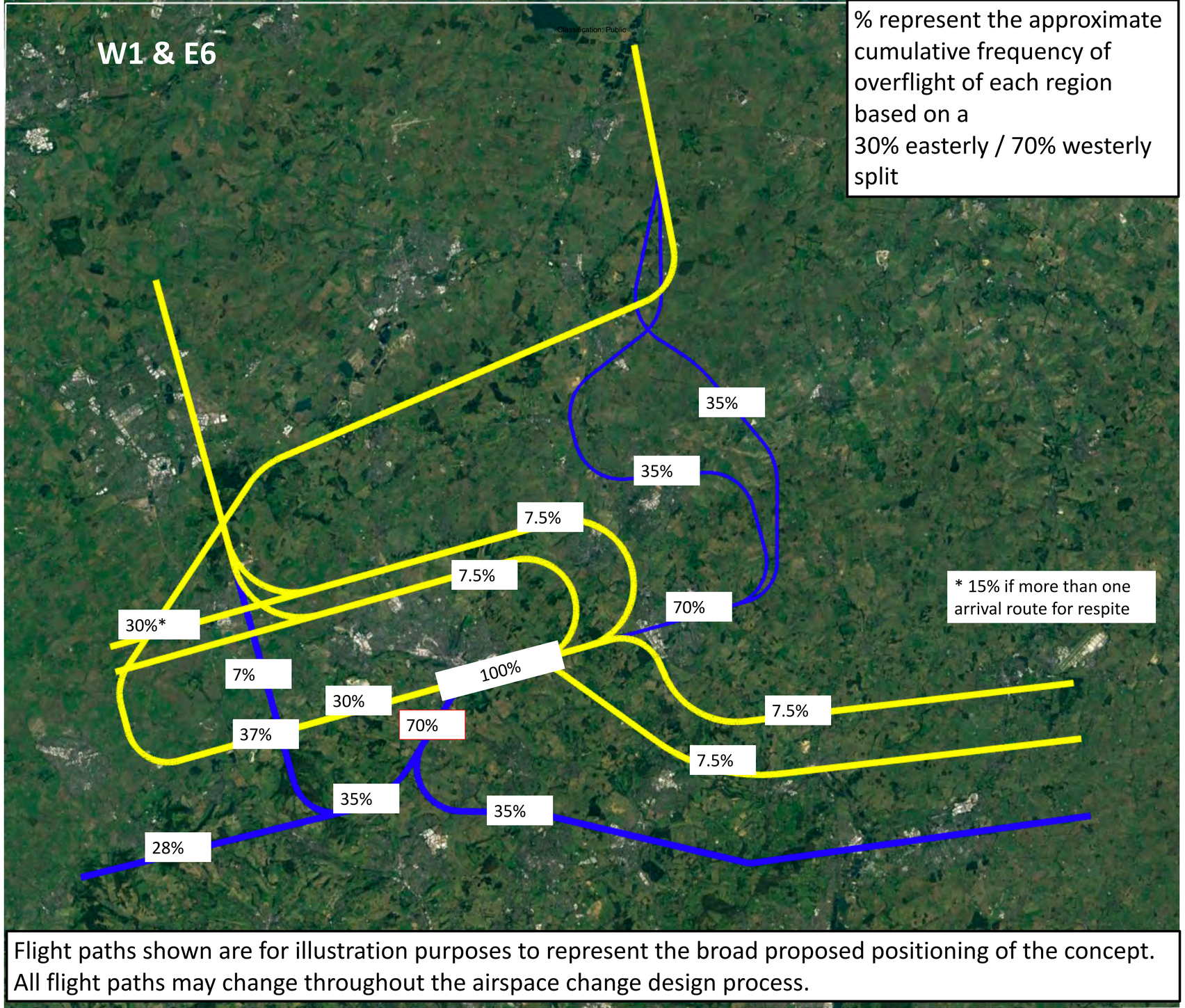
W1 & E6



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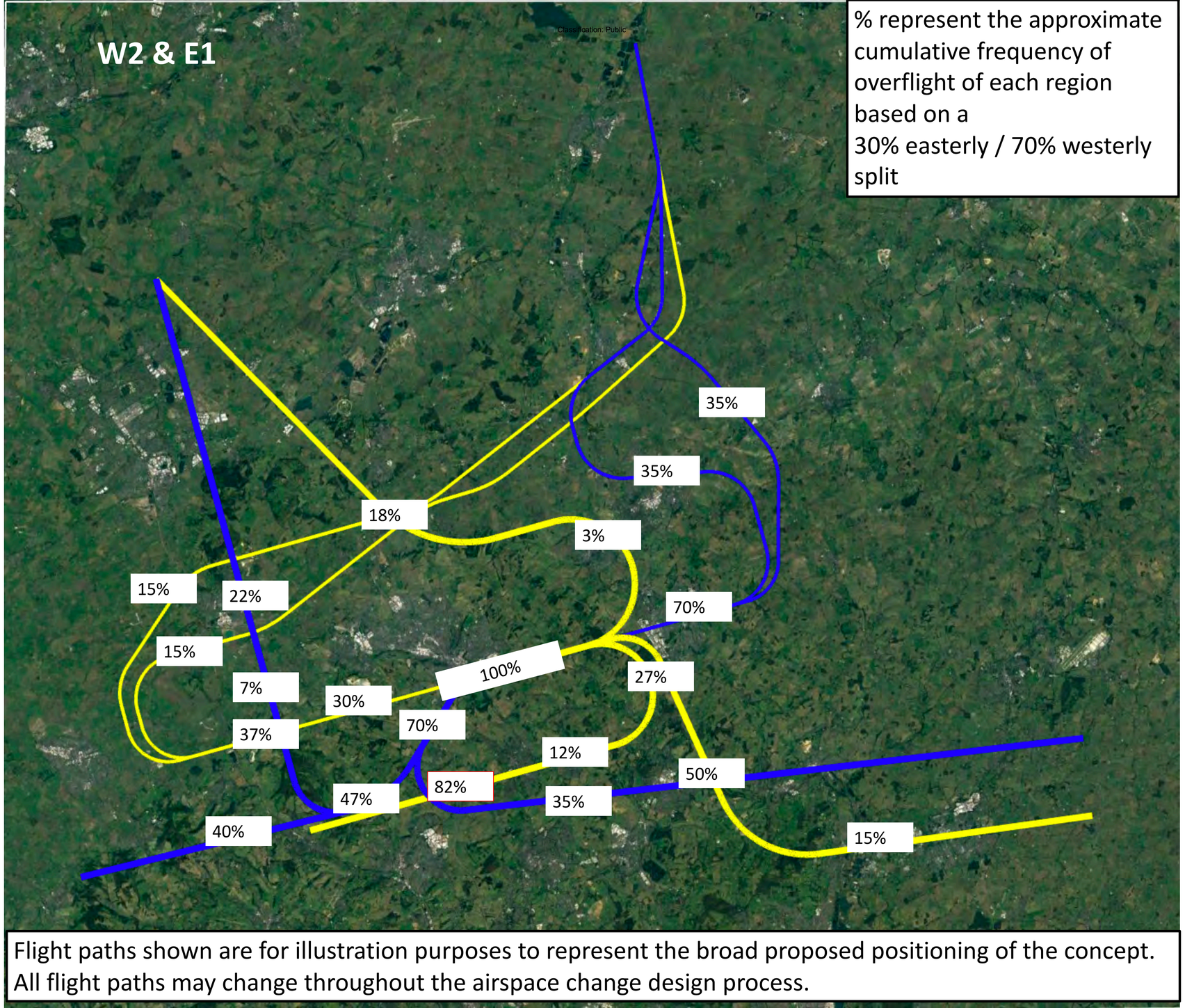
W2 & E1

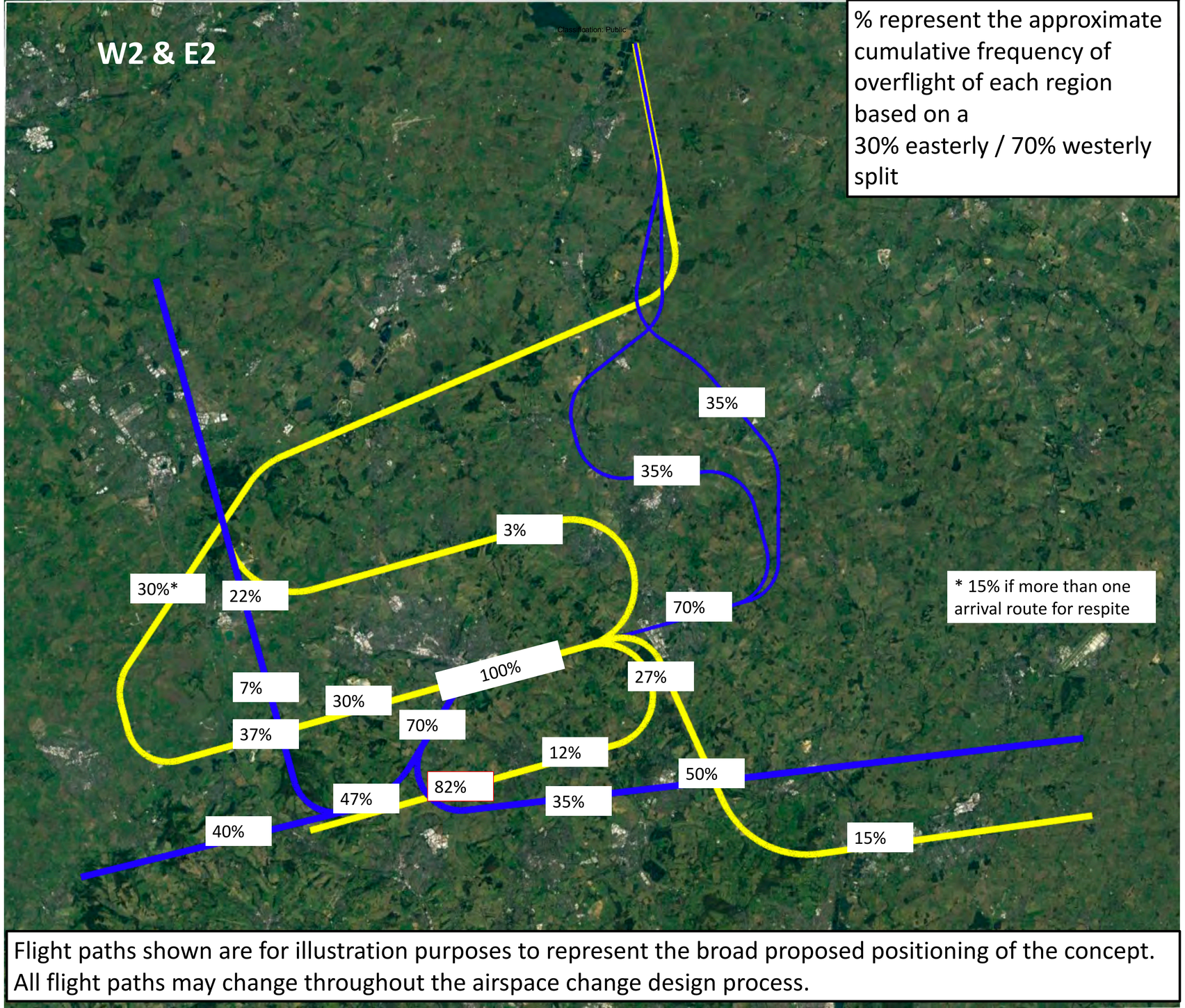
% represent the approximate cumulative frequency of overflight of each region based on a
30% easterly / 70% westerly split



Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

W2 & E2

% represent the approximate cumulative frequency of overflight of each region based on a
30% easterly / 70% westerly split



* 15% if more than one arrival route for respite

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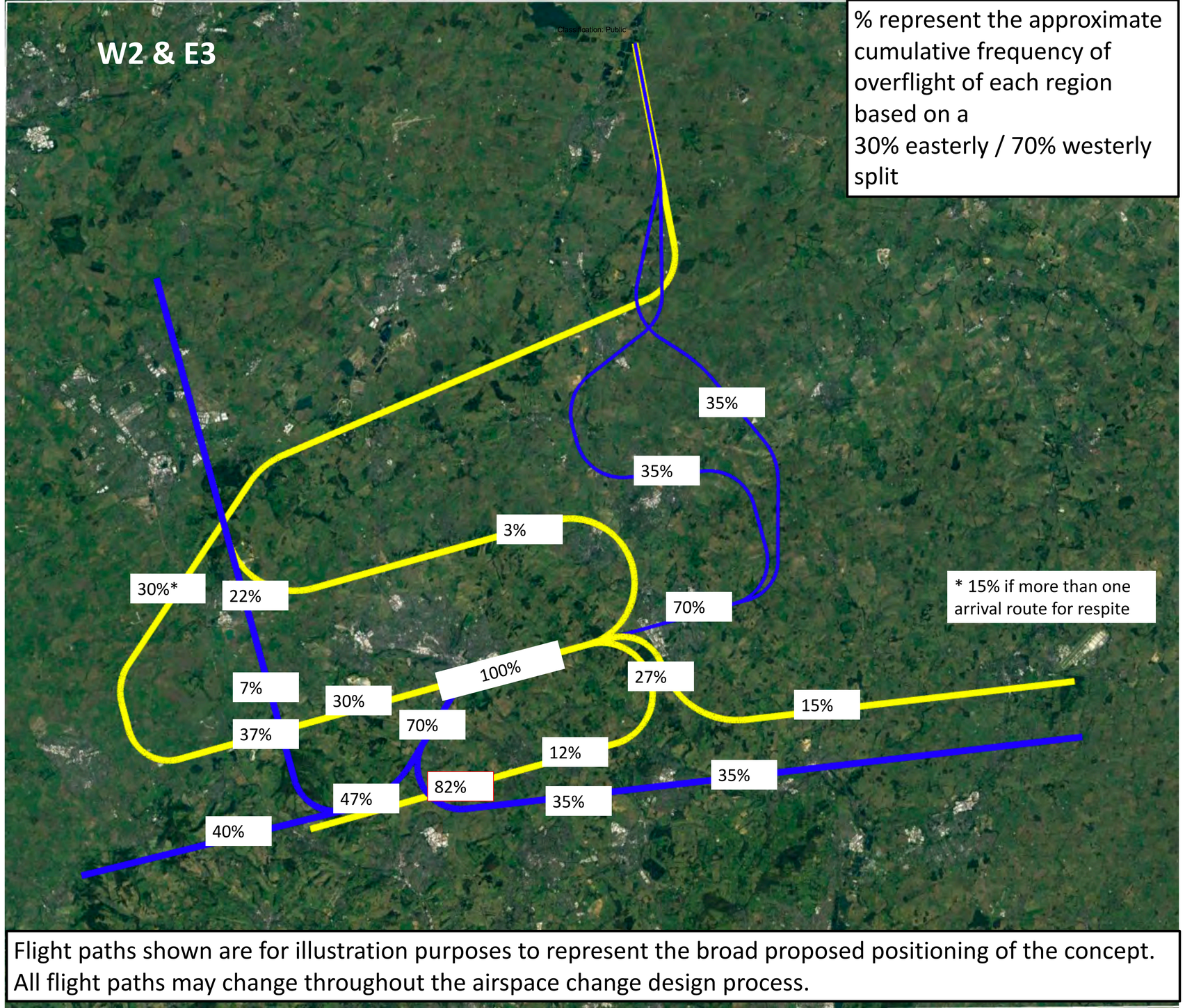
W2 & E3

% represent the approximate cumulative frequency of overflight of each region based on a
30% easterly / 70% westerly split



* 15% if more than one arrival route for respite

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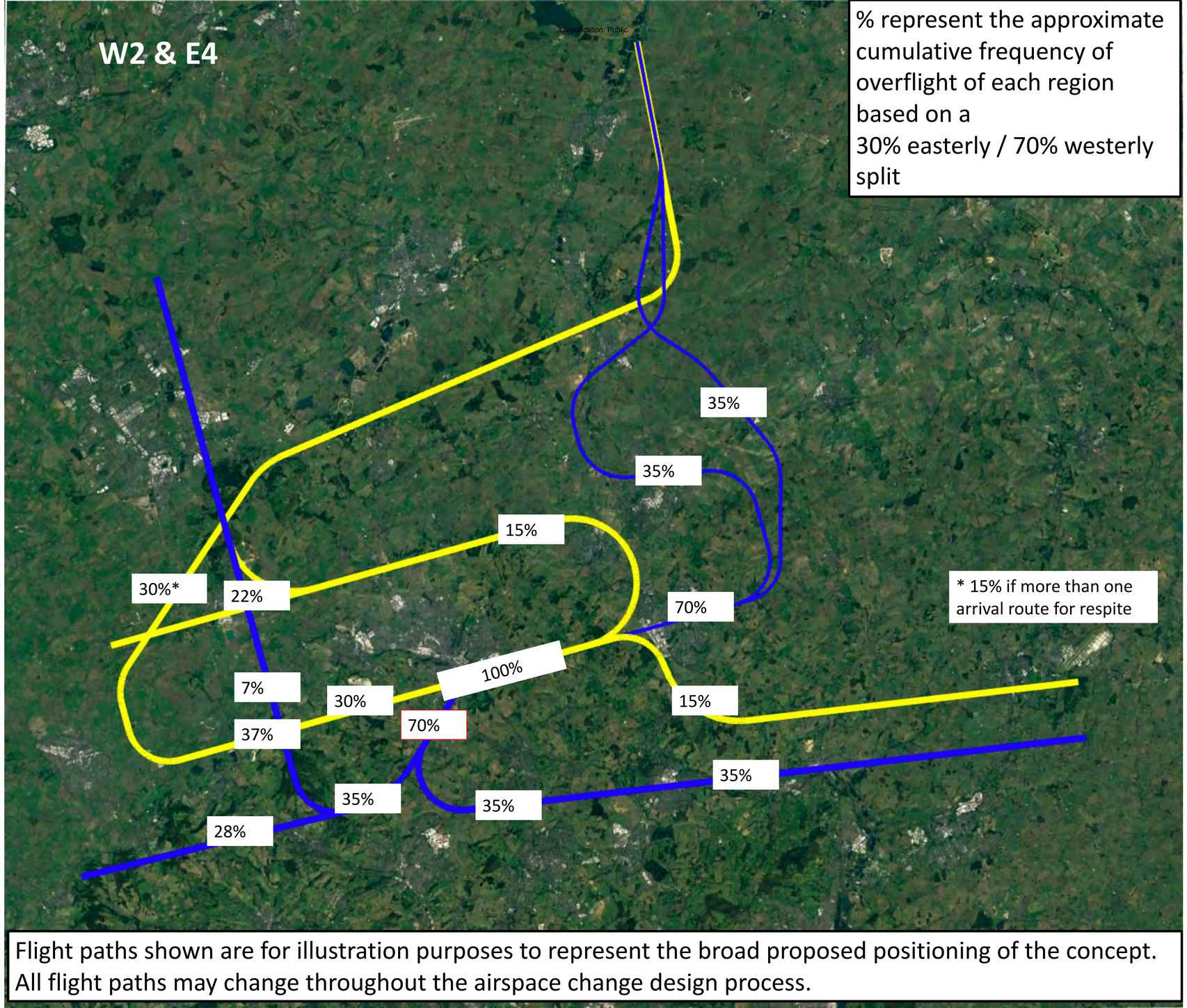
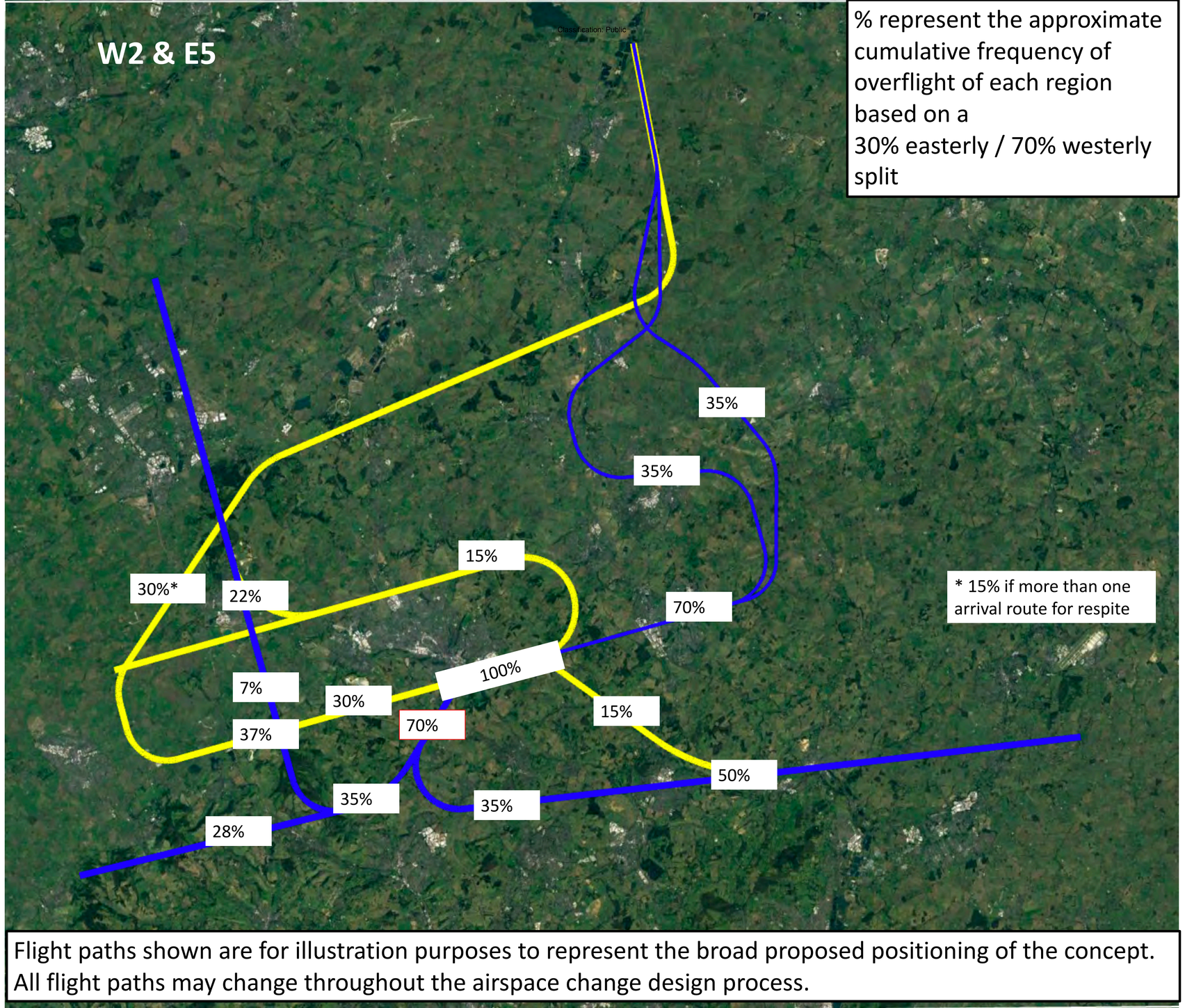
W2 & E4



Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

W2 & E5

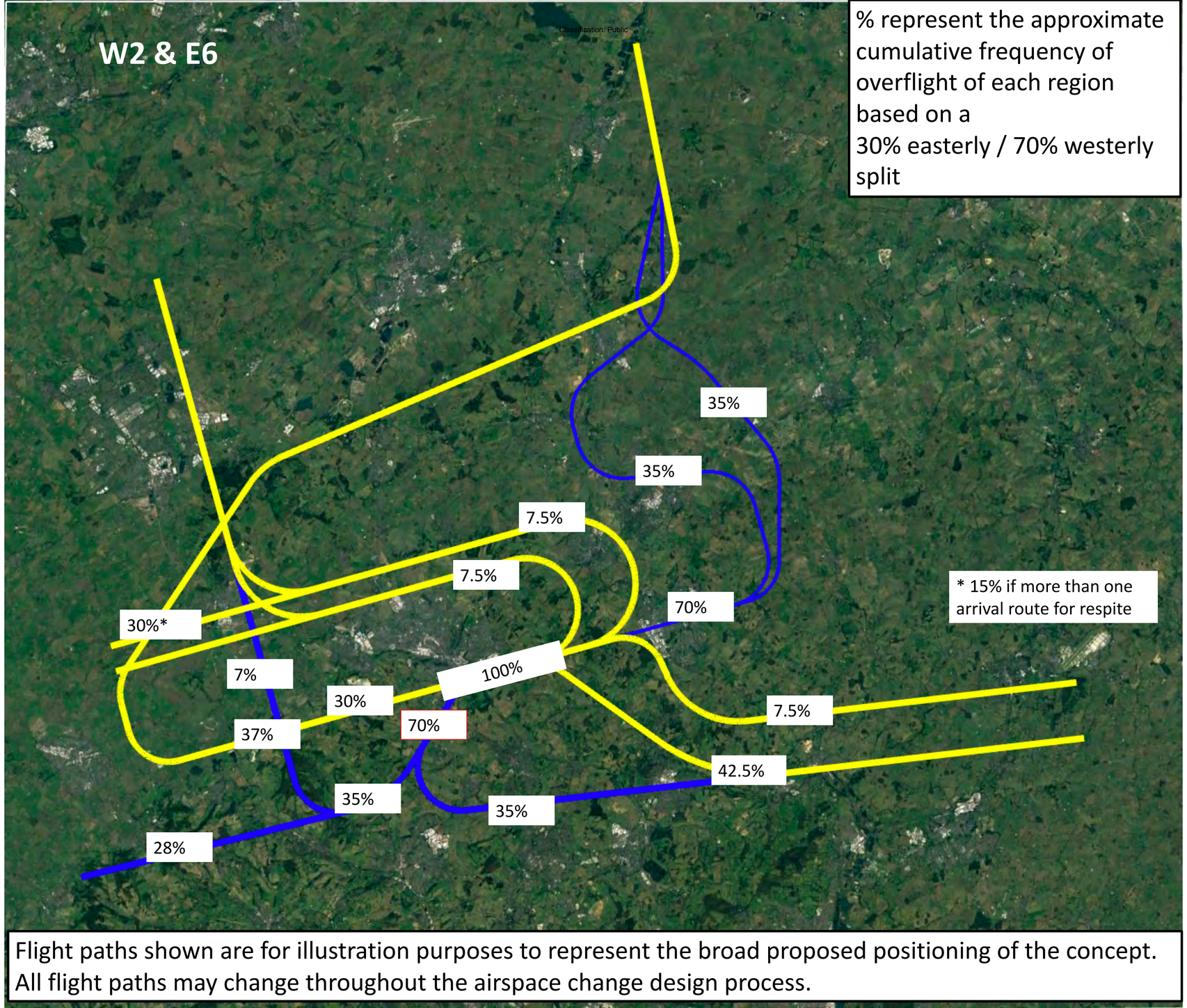
% represent the approximate cumulative frequency of overflight of each region based on a
30% easterly / 70% westerly split



* 15% if more than one arrival route for respite

Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

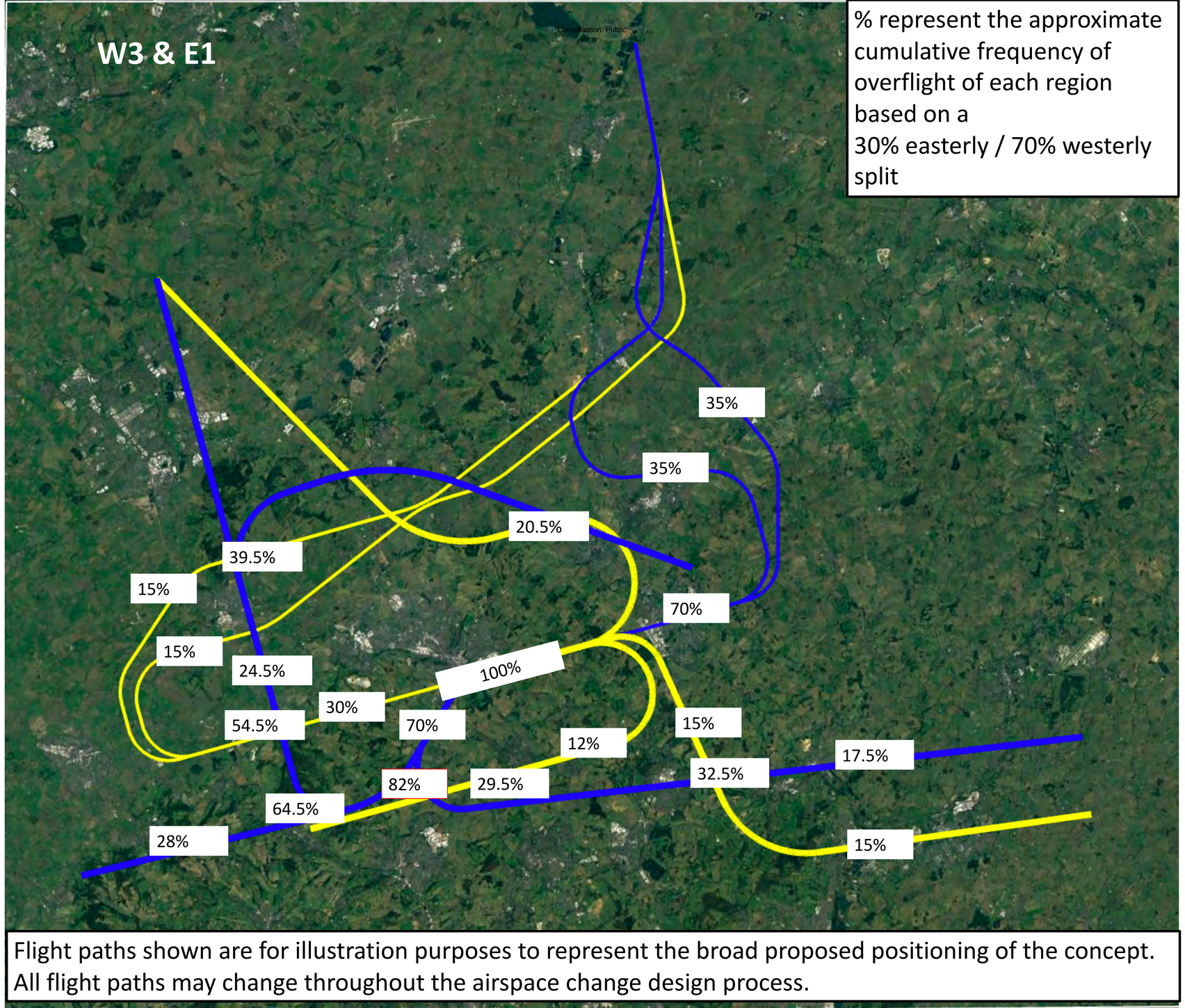
W2 & E6



Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

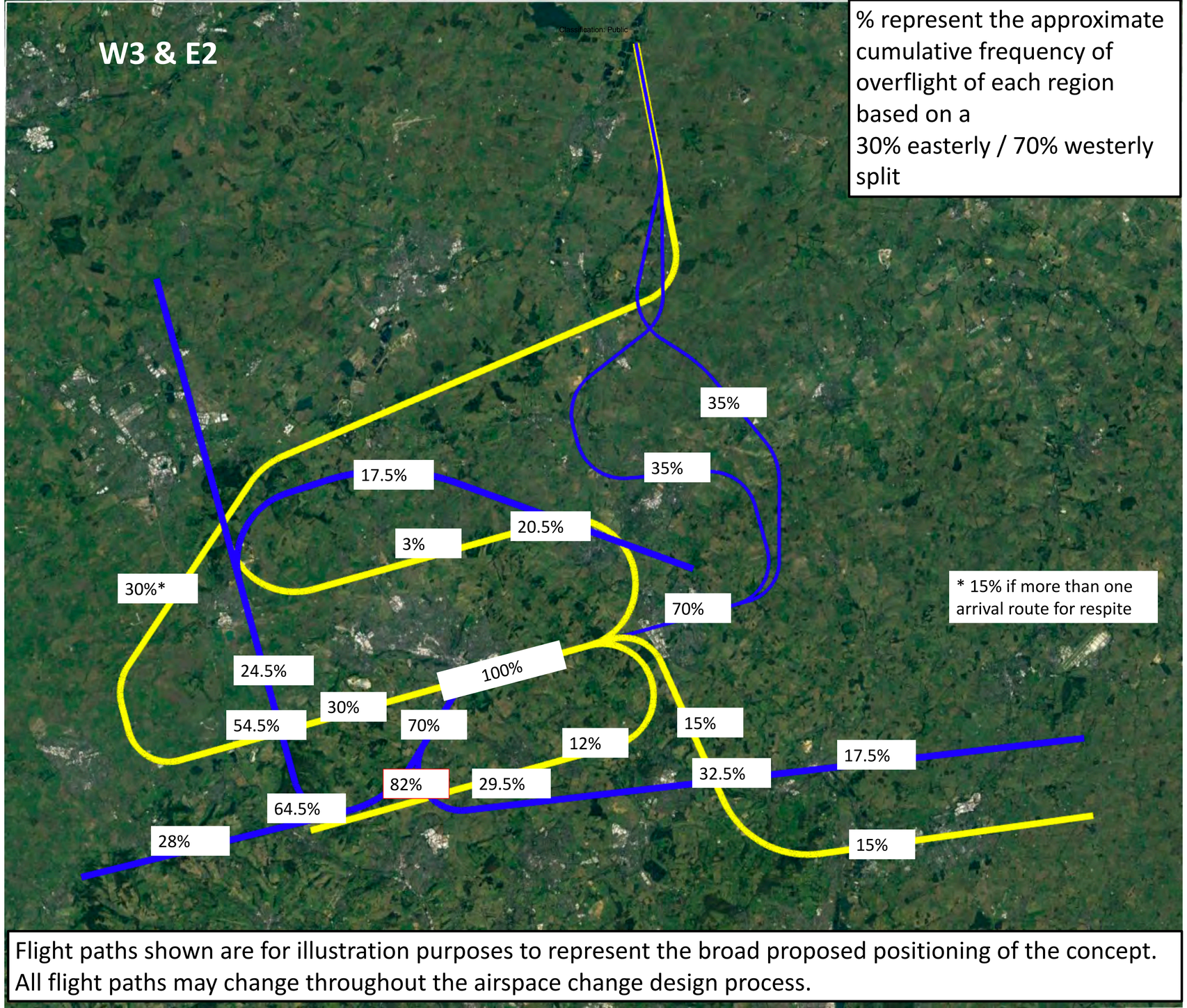
W3 & E1

% represent the approximate cumulative frequency of overflight of each region based on a
30% easterly / 70% westerly split



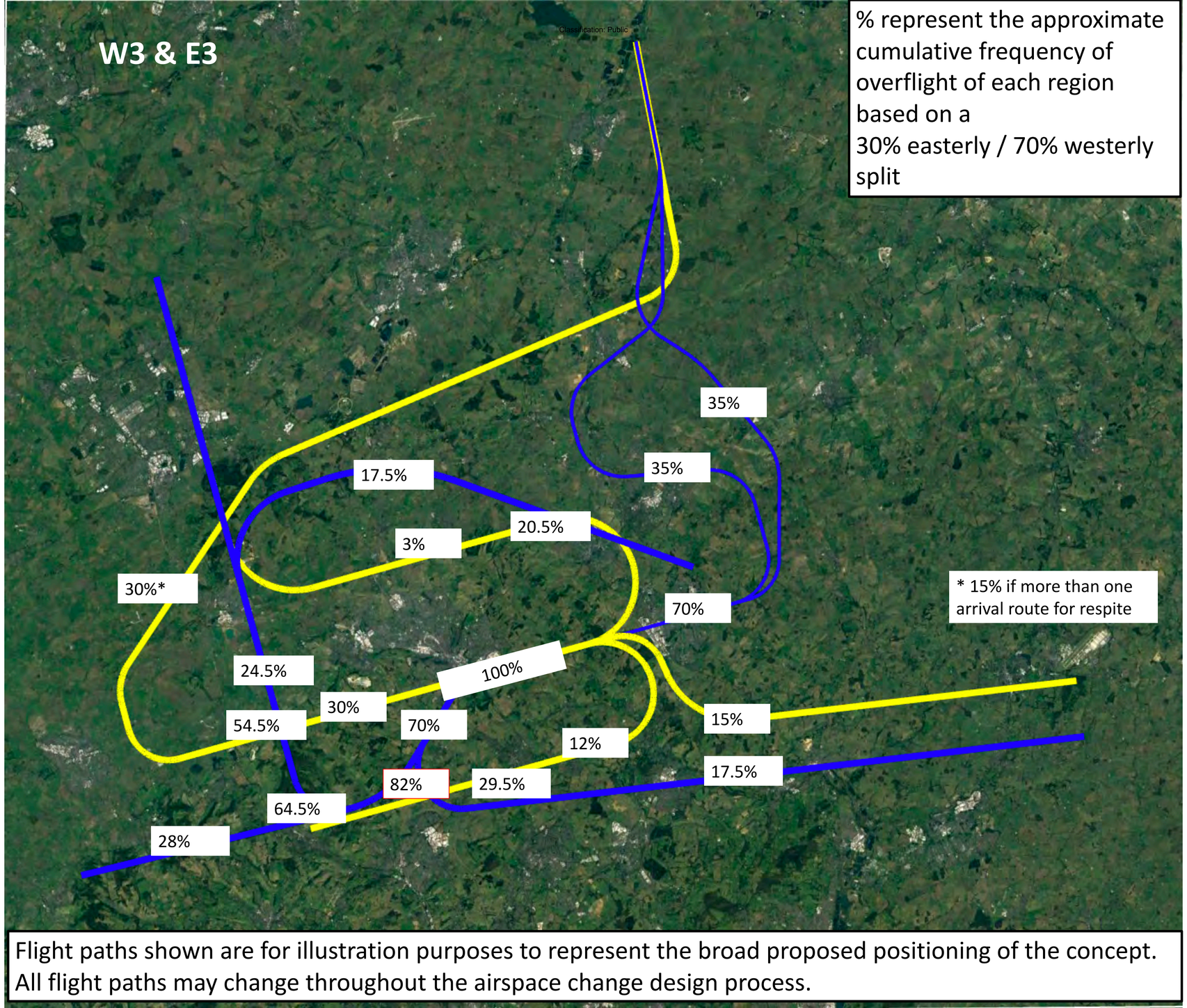
Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

W3 & E2



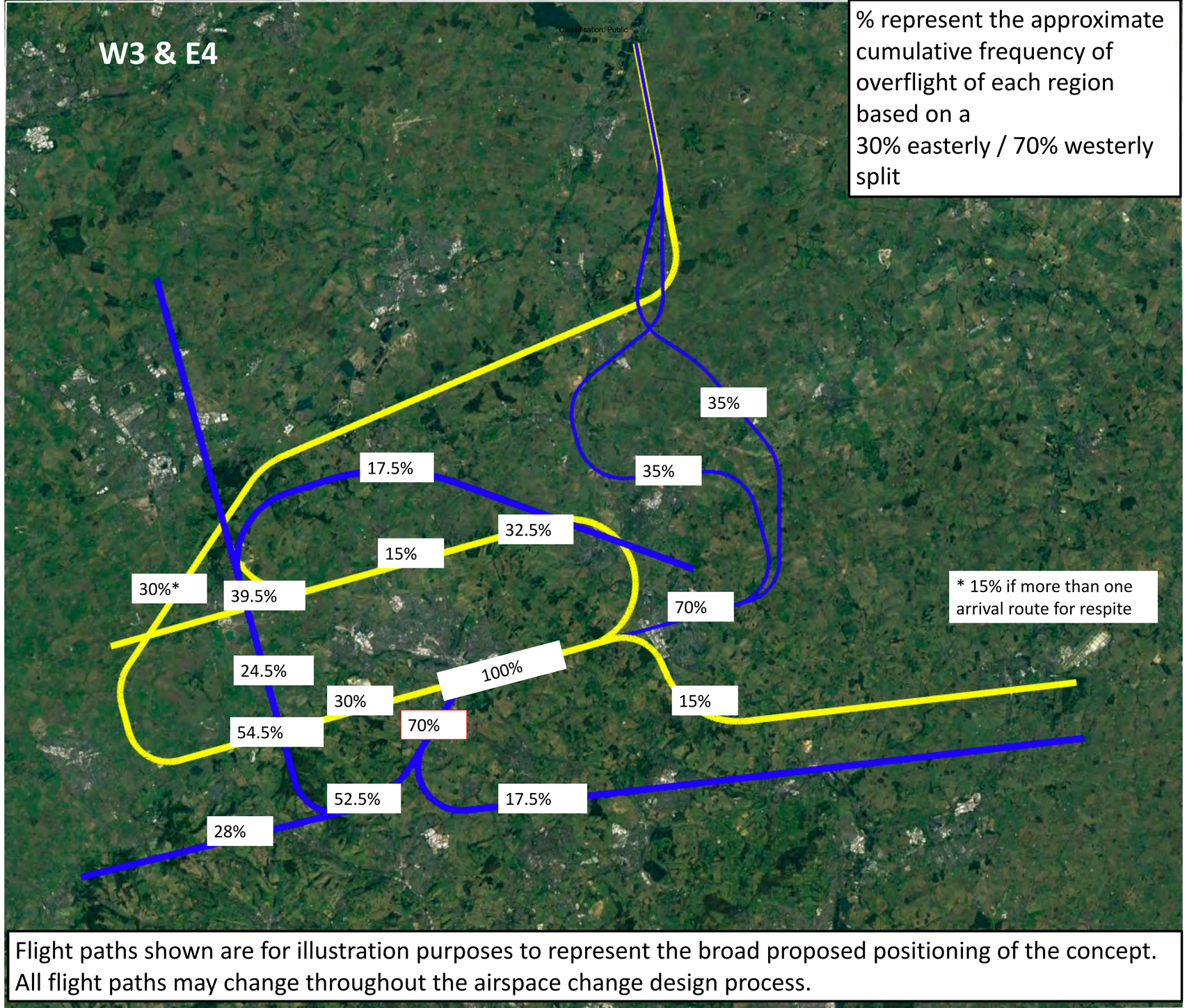
Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

W3 & E3



Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

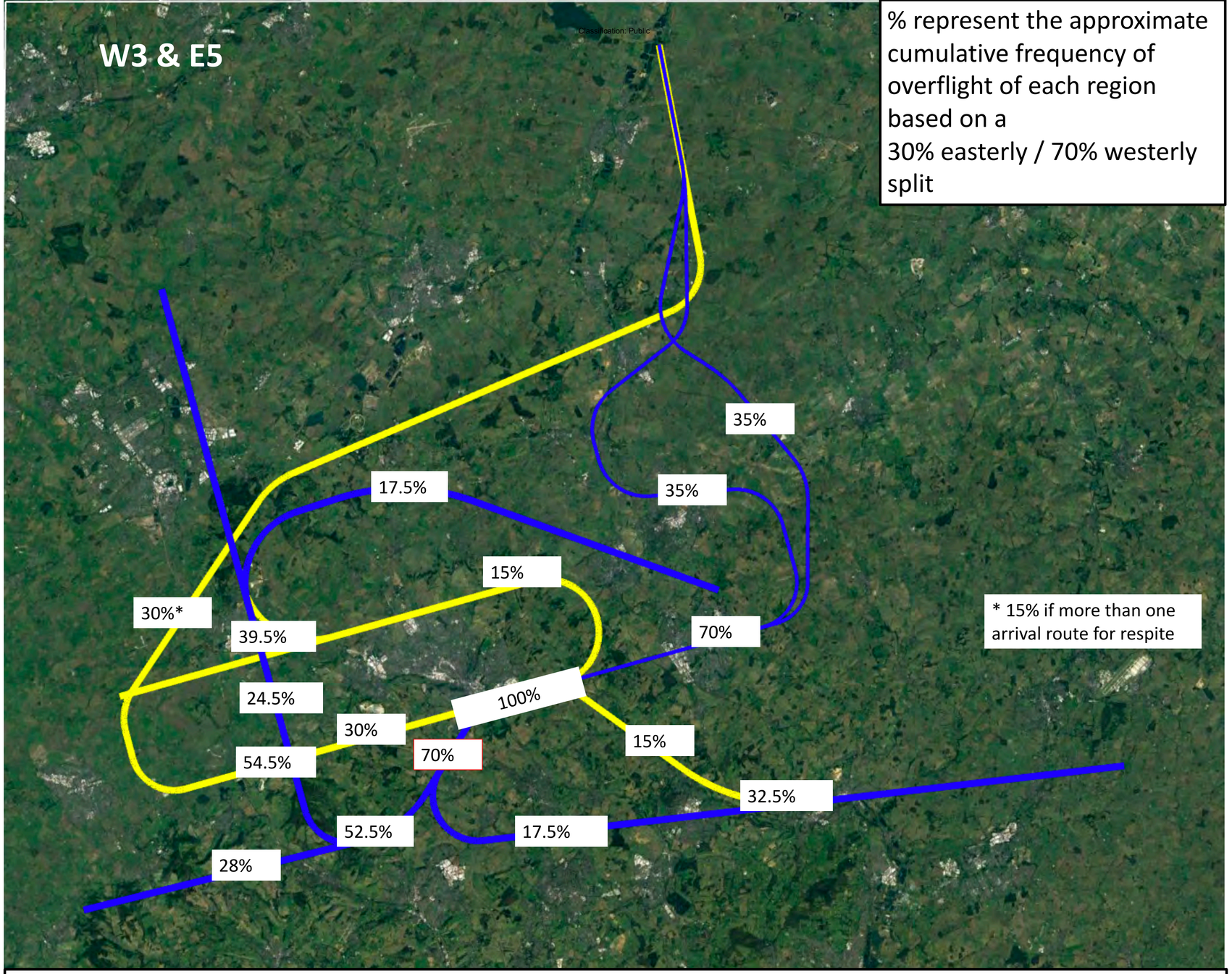
W3 & E4



Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

W3 & E5

% represent the approximate cumulative frequency of overflight of each region based on a
30% easterly / 70% westerly split

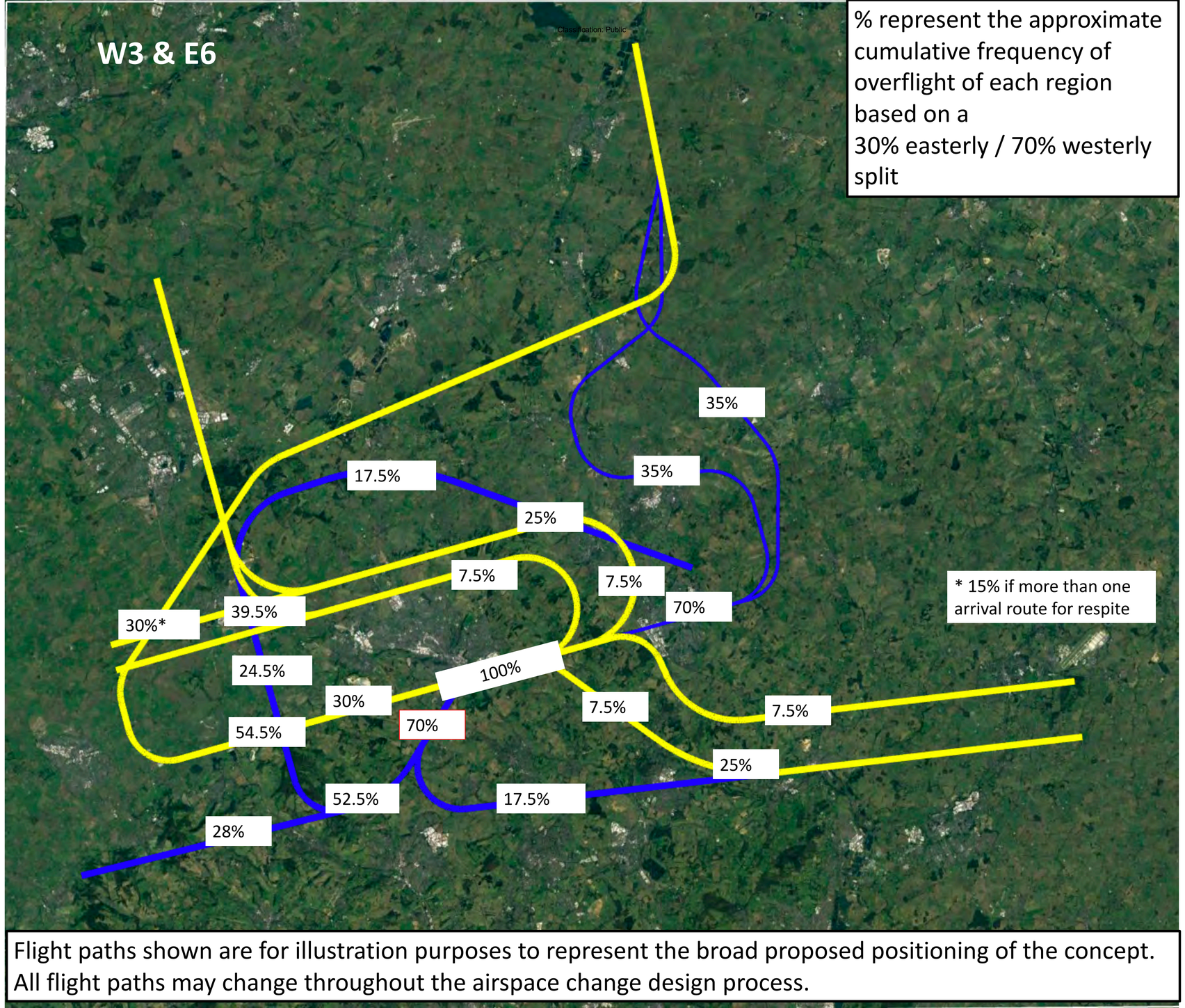


* 15% if more than one arrival route for respite

Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

W3 & E6

% represent the approximate cumulative frequency of overflight of each region based on a
30% easterly / 70% westerly split

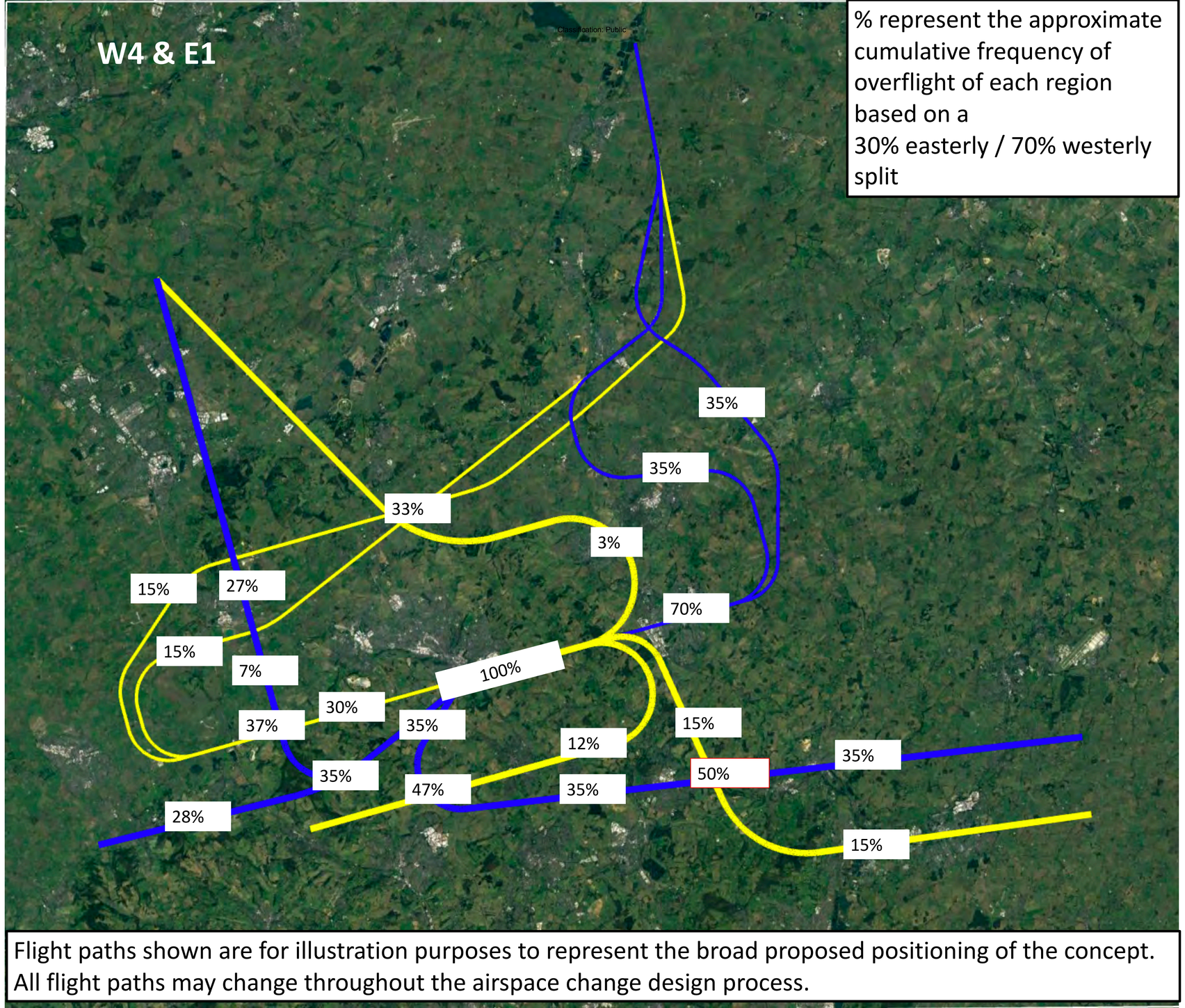


* 15% if more than one arrival route for respite

Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

W4 & E1

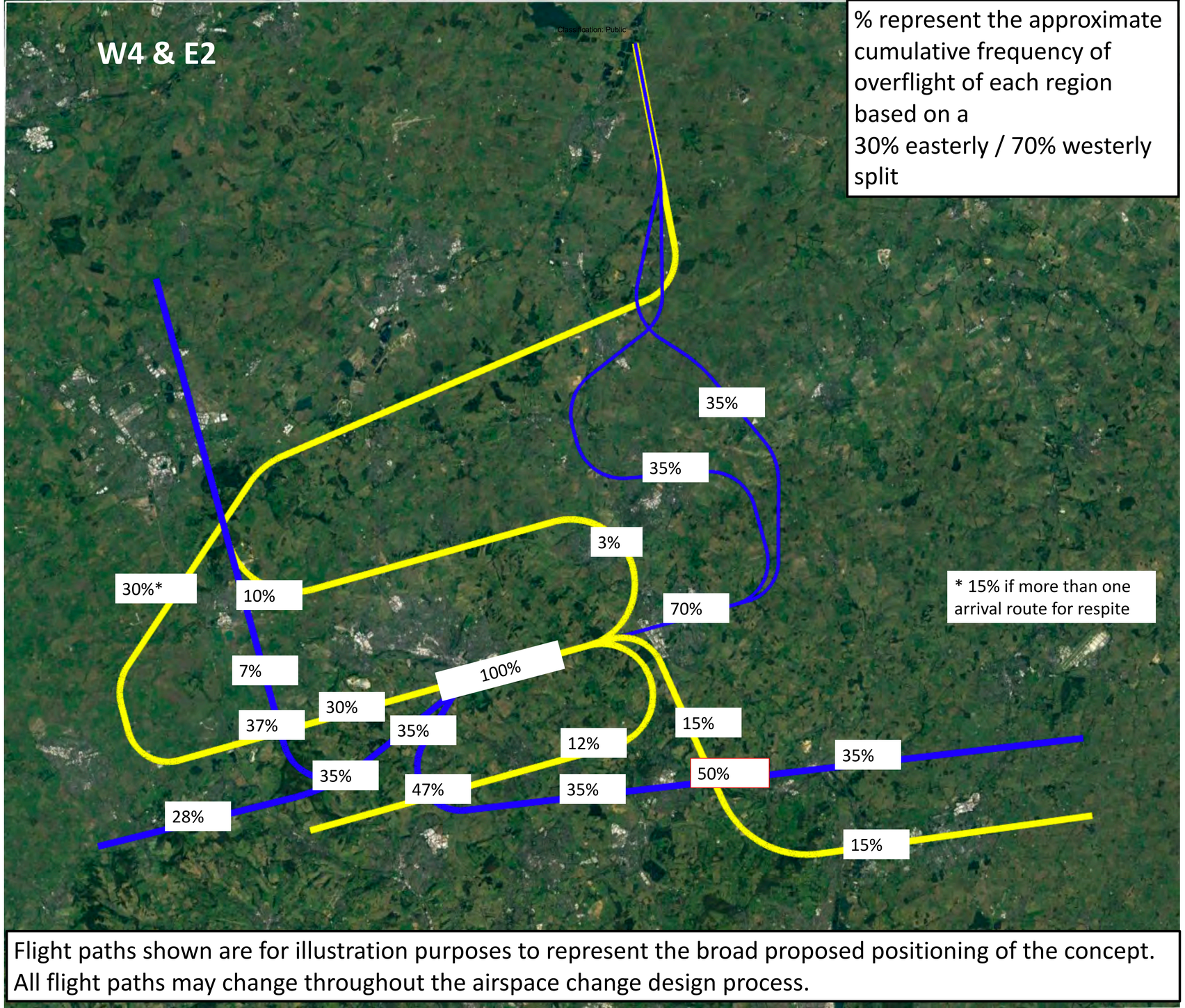
% represent the approximate cumulative frequency of overflight of each region based on a
30% easterly / 70% westerly split



Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

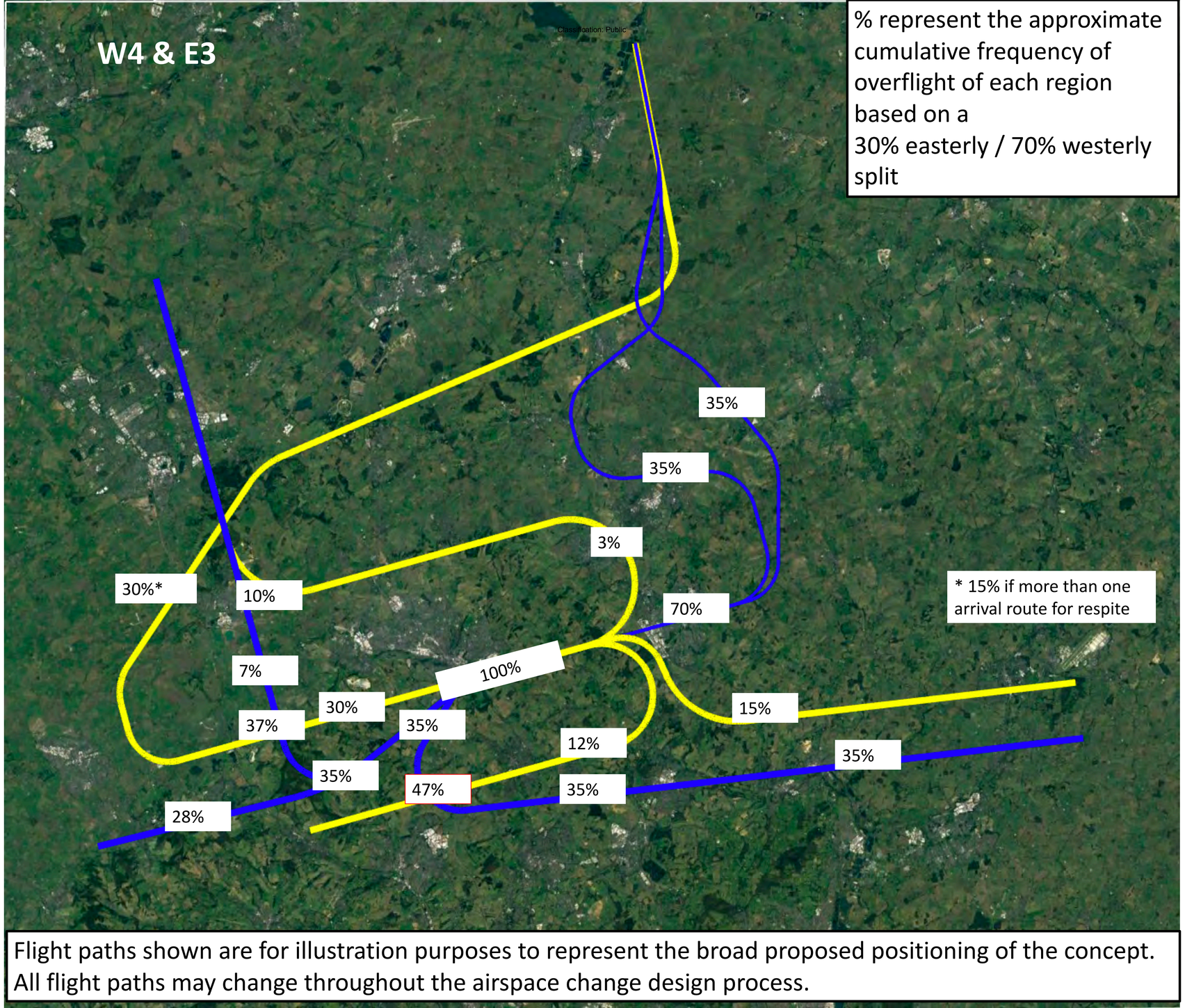
W4 & E2

% represent the approximate cumulative frequency of overflight of each region based on a
30% easterly / 70% westerly split



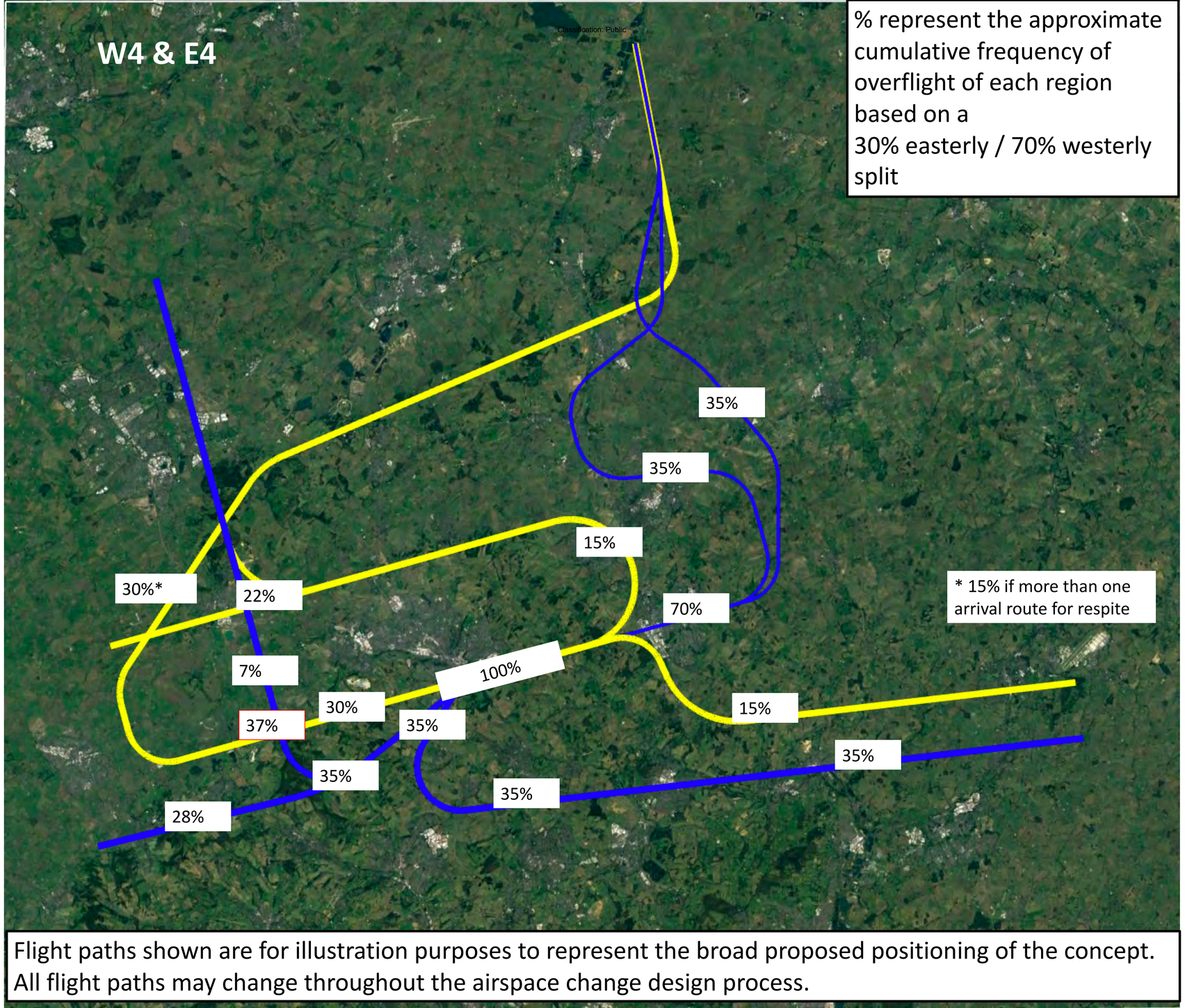
Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

W4 & E3



Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

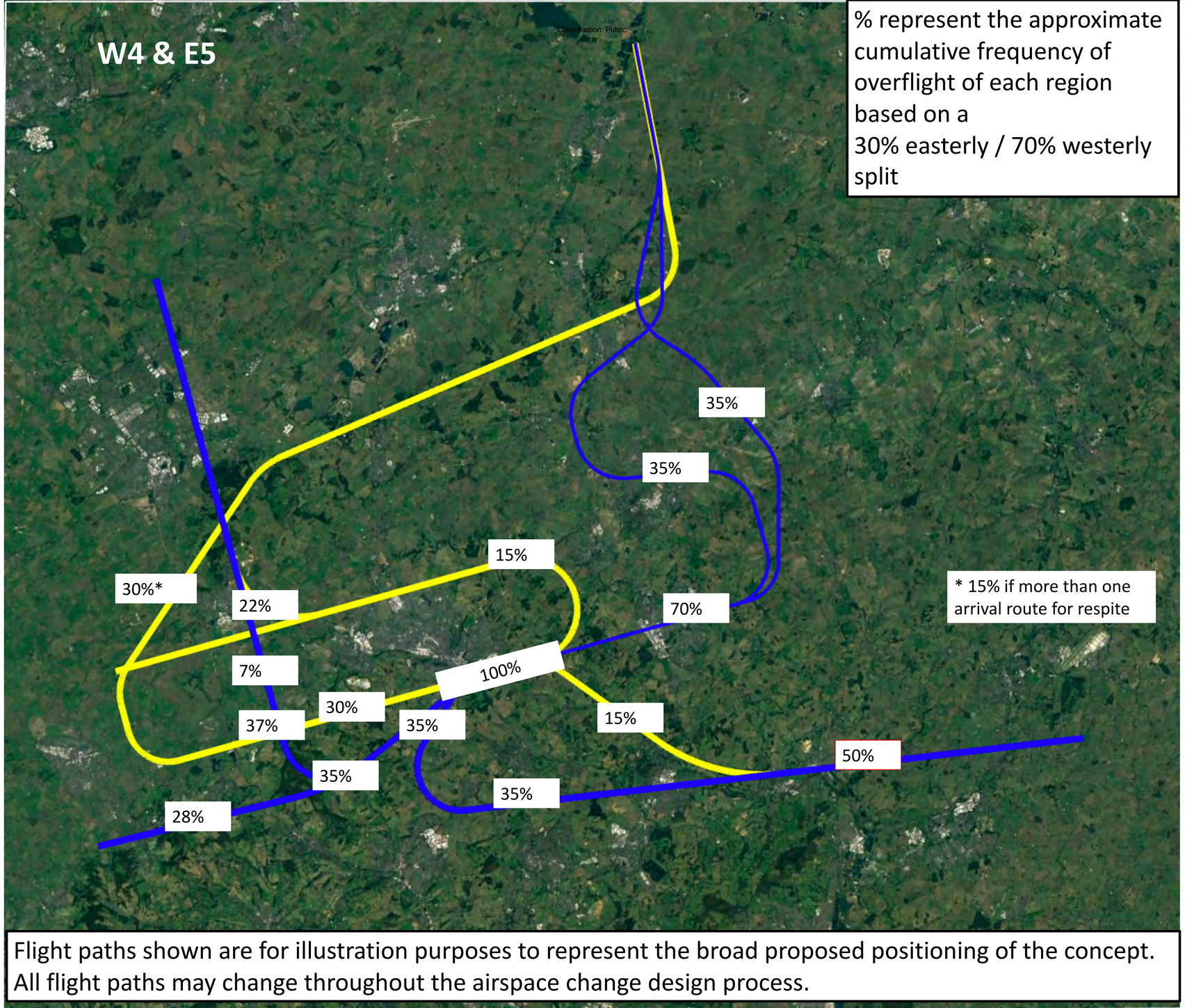
W4 & E4



Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

W4 & E5

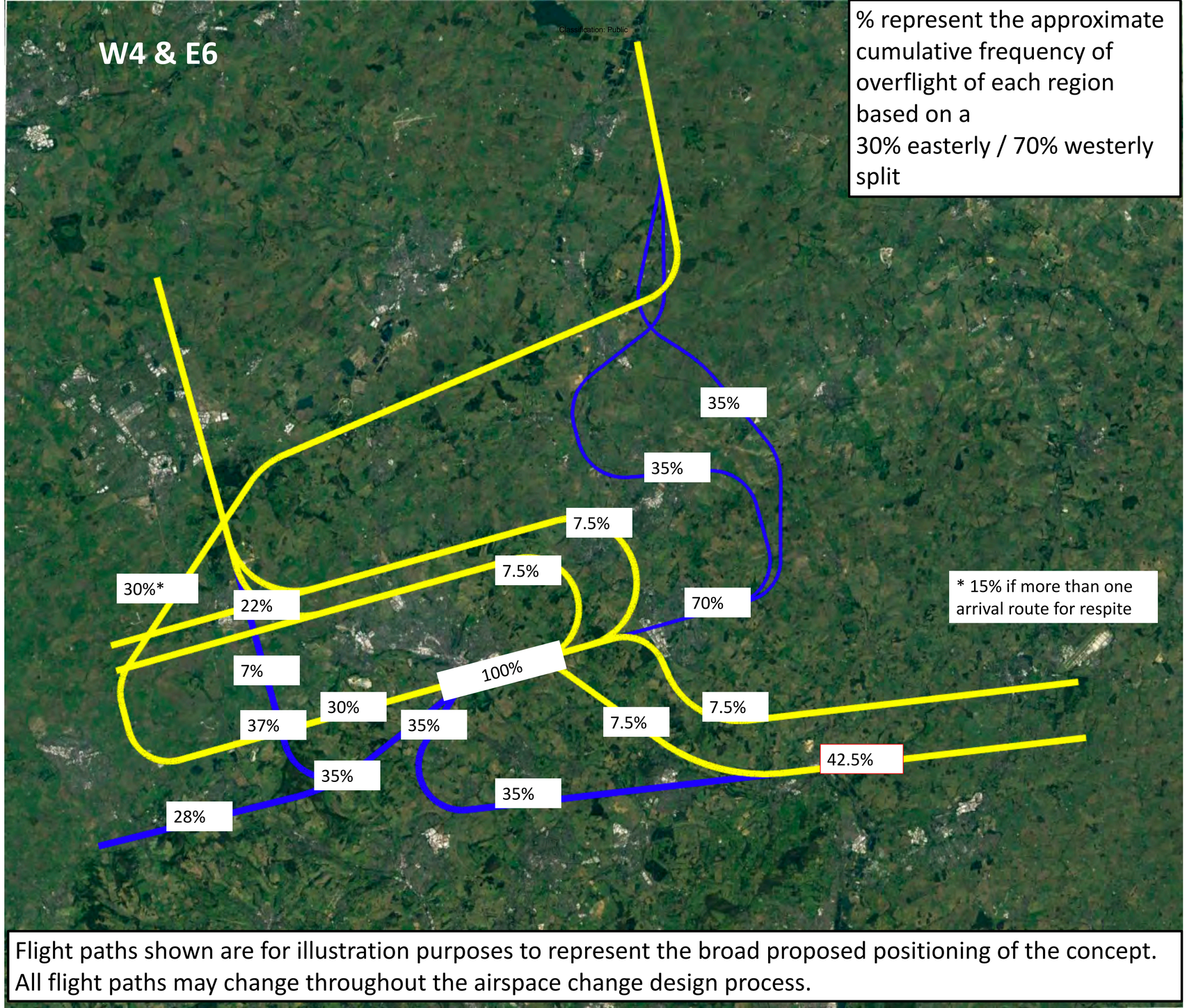
% represent the approximate cumulative frequency of overflight of each region based on a
30% easterly / 70% westerly split



* 15% if more than one arrival route for respite

Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

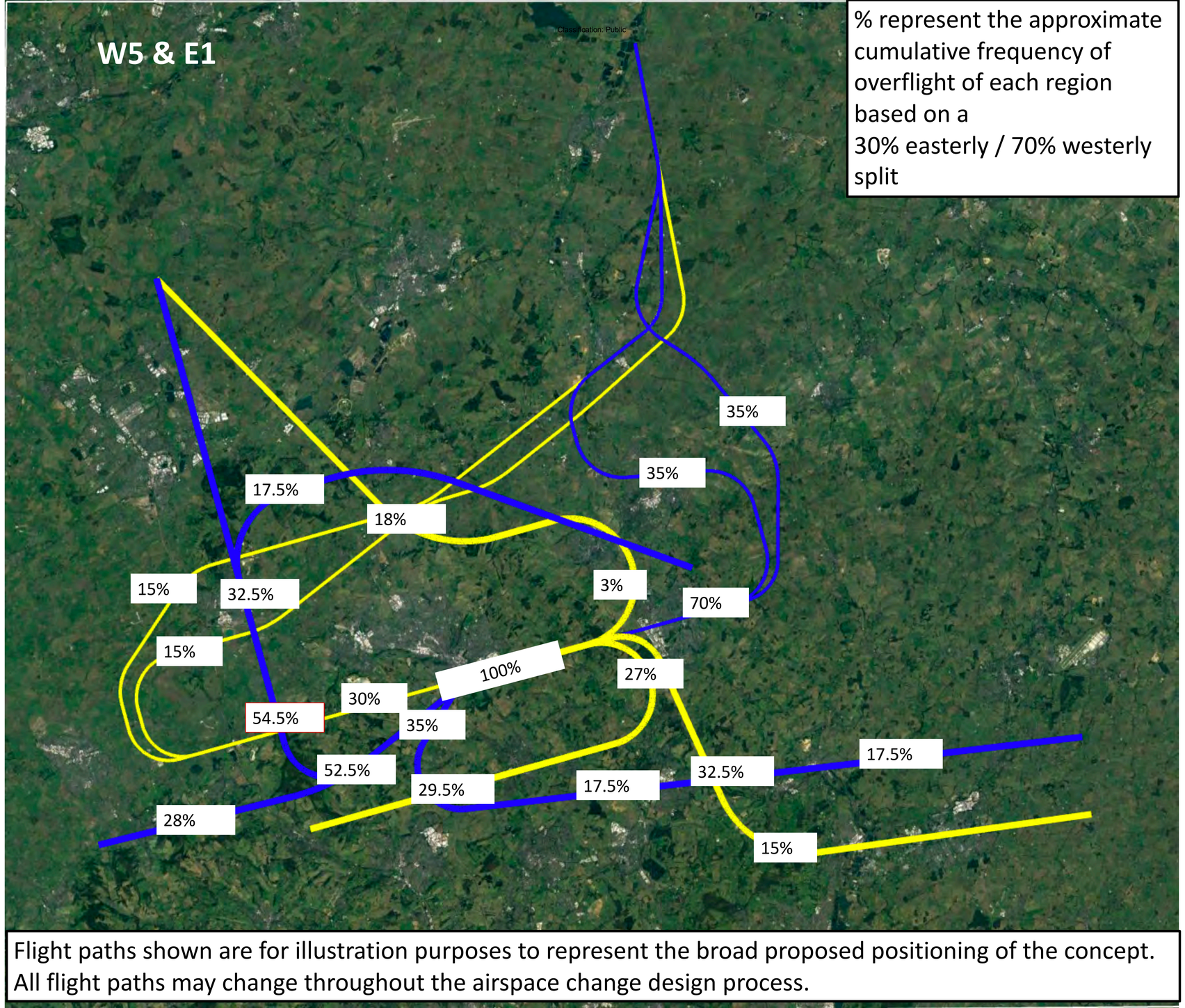
W4 & E6



Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

W5 & E1

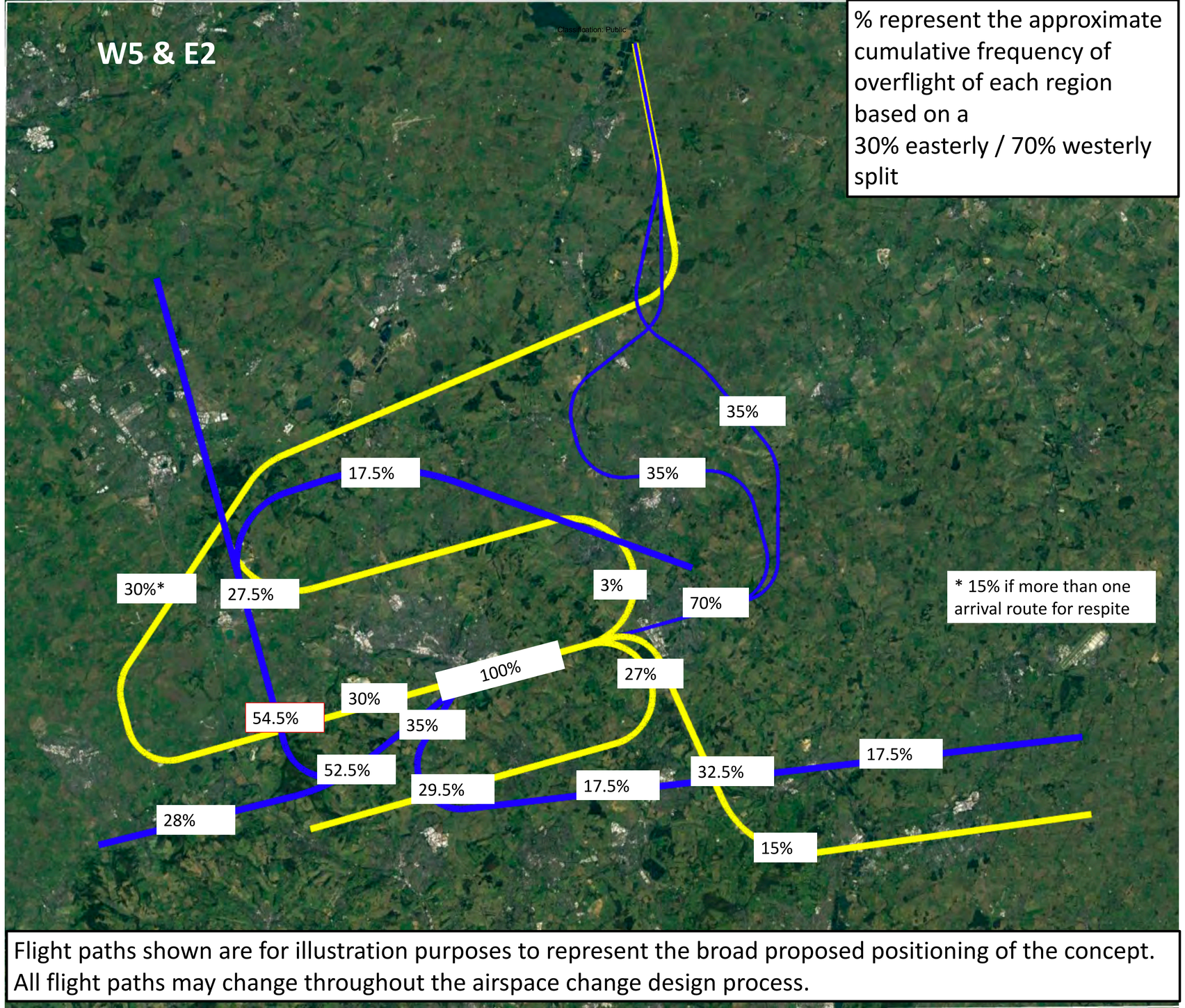
% represent the approximate cumulative frequency of overflight of each region based on a
30% easterly / 70% westerly split



Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

W5 & E2

% represent the approximate cumulative frequency of overflight of each region based on a
30% easterly / 70% westerly split



* 15% if more than one arrival route for respite

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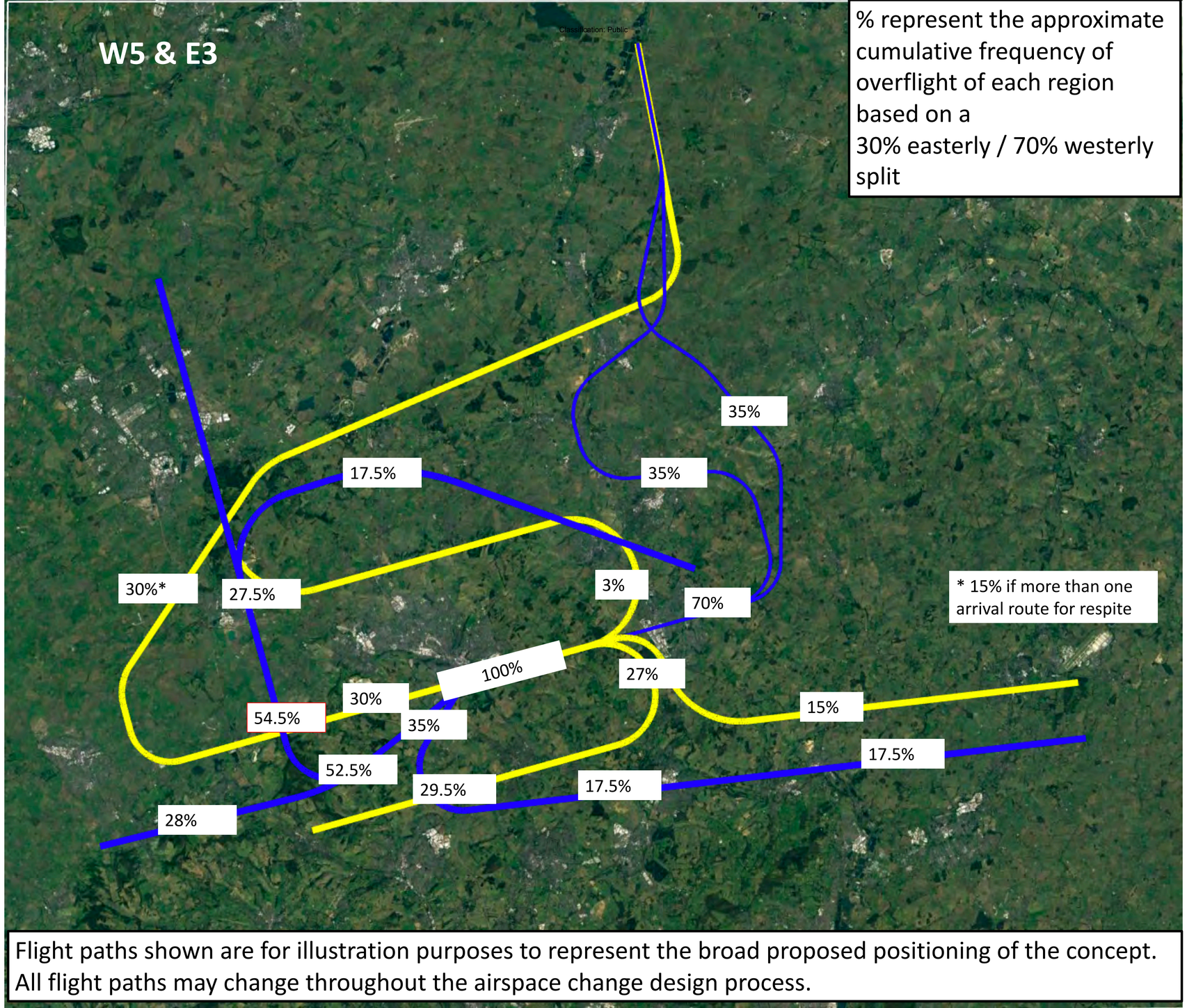
W5 & E3

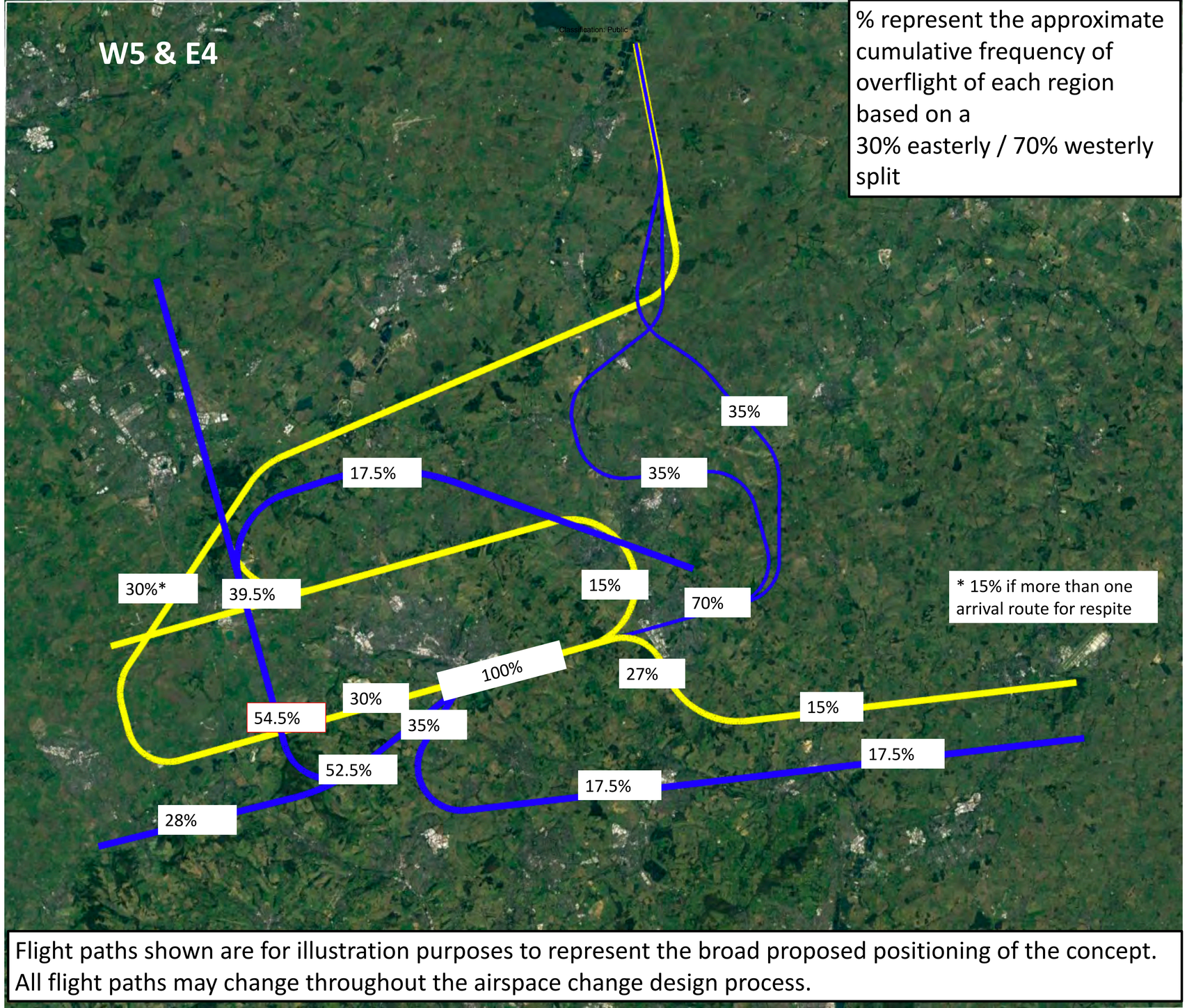
% represent the approximate cumulative frequency of overflight of each region based on a
30% easterly / 70% westerly split



* 15% if more than one arrival route for respite

Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

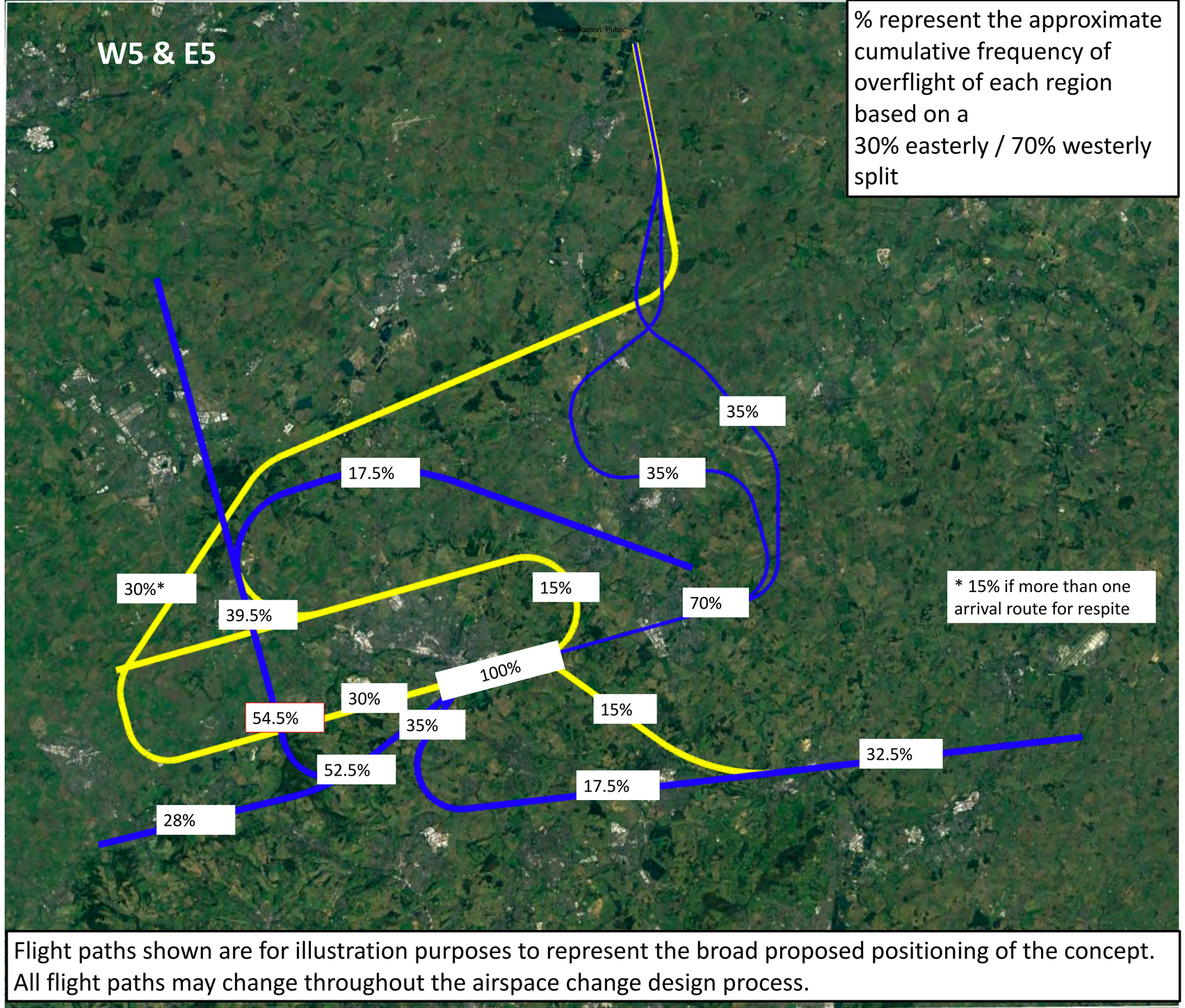
W5 & E4



Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

W5 & E5

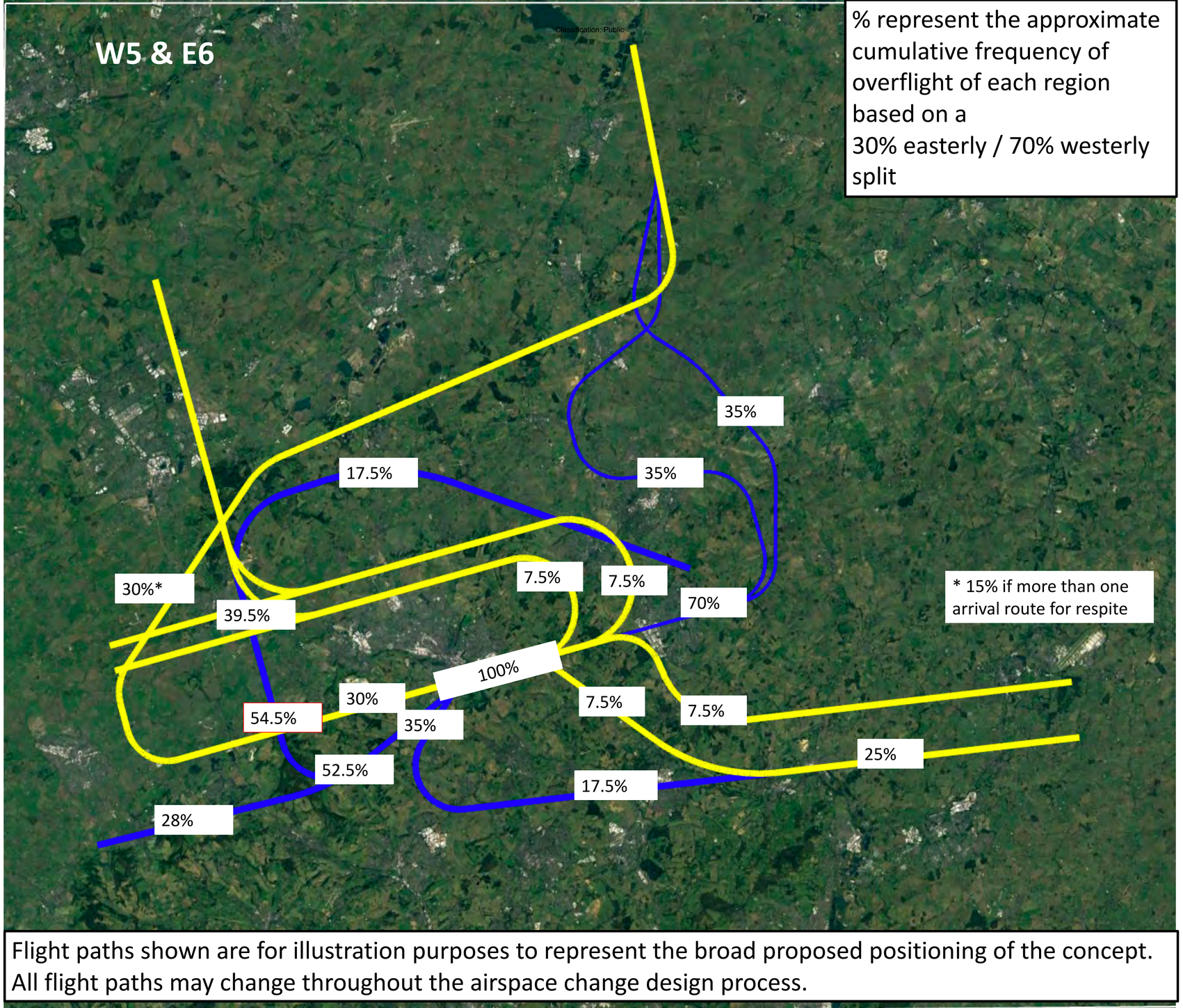
% represent the approximate cumulative frequency of overflight of each region based on a
30% easterly / 70% westerly split



* 15% if more than one arrival route for respite

Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

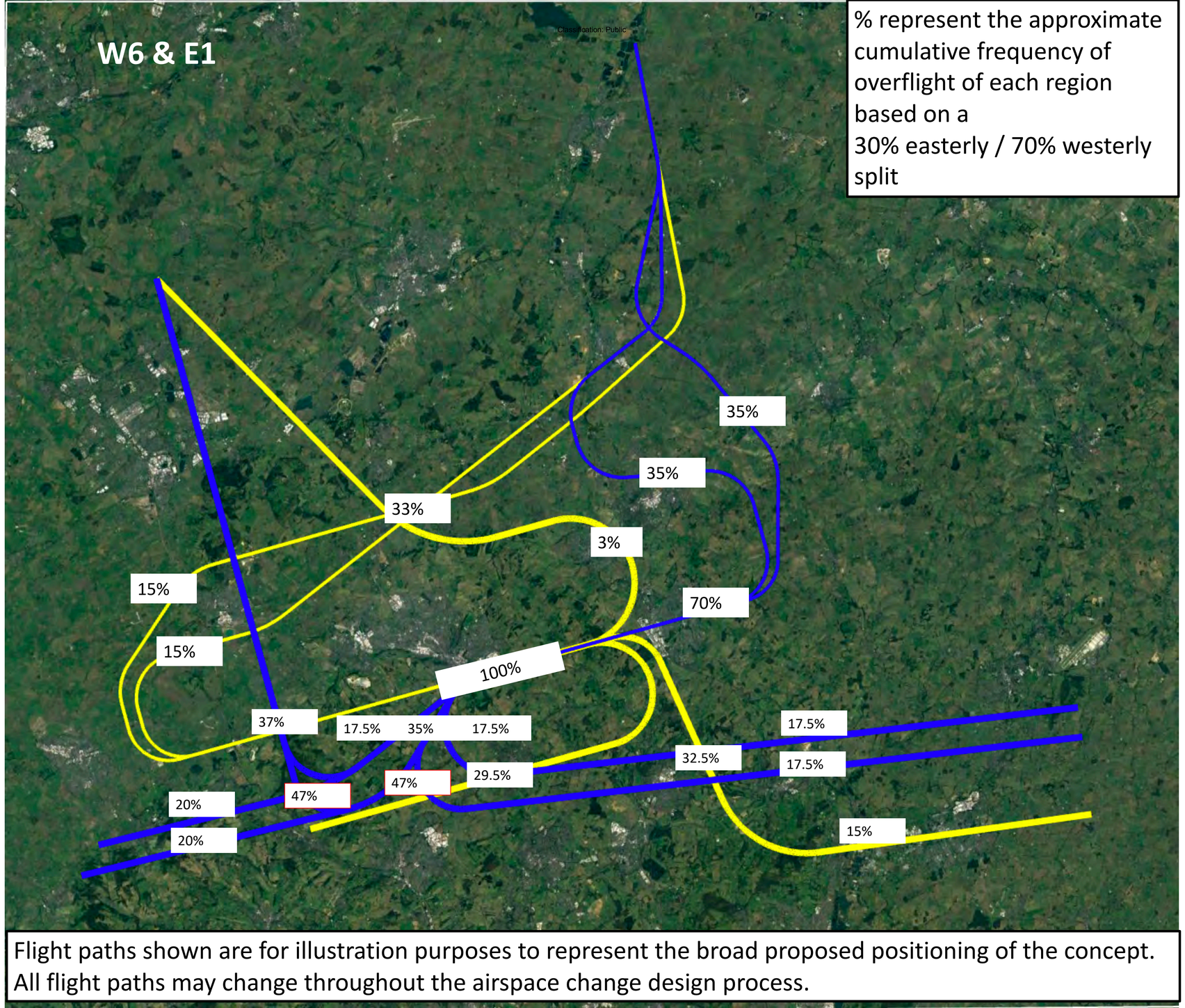
W5 & E6



Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

W6 & E1

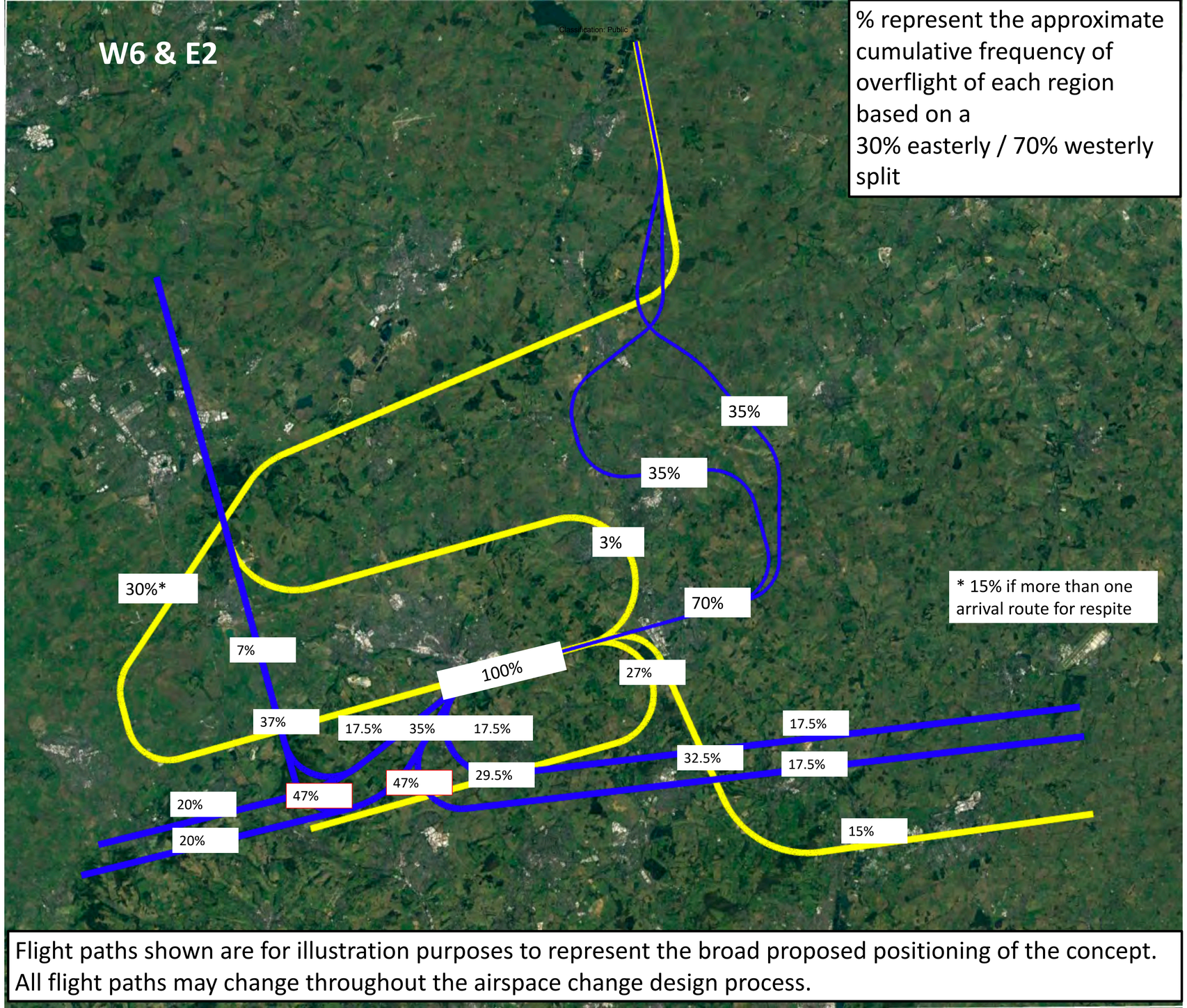
% represent the approximate cumulative frequency of overflight of each region based on a
30% easterly / 70% westerly split



Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

W6 & E2

% represent the approximate cumulative frequency of overflight of each region based on a
30% easterly / 70% westerly split



* 15% if more than one arrival route for respite

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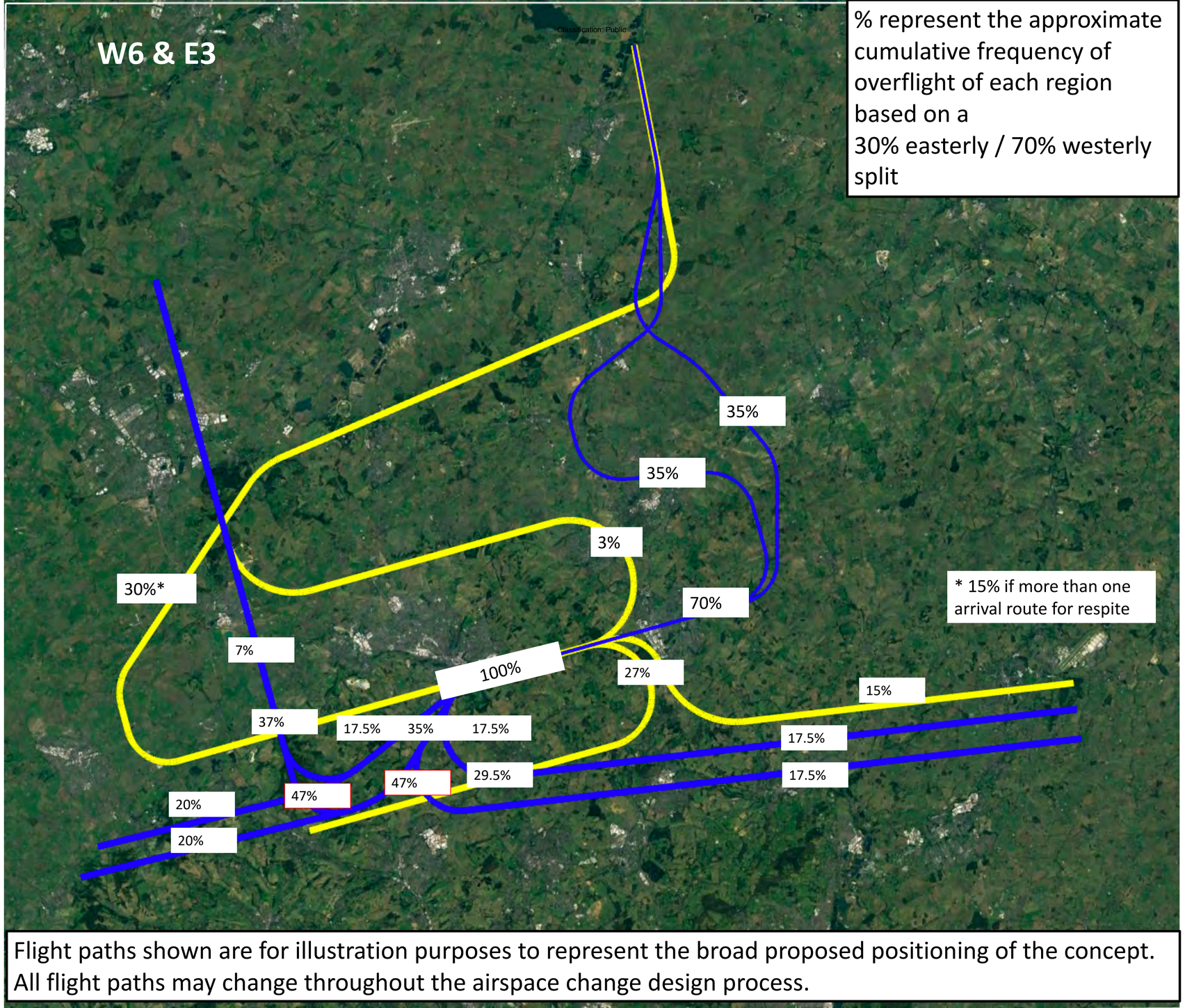
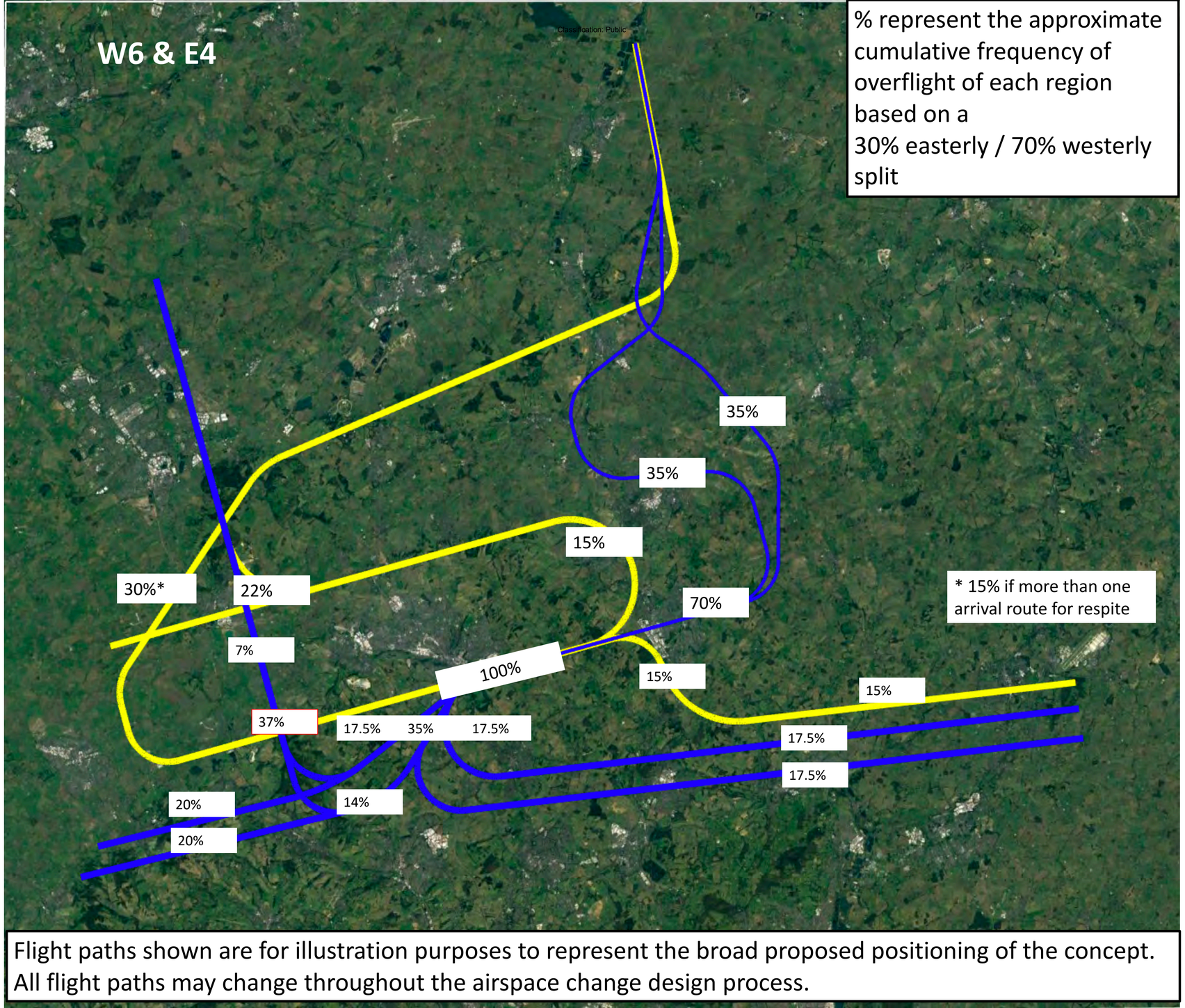
W6 & E3



Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

W6 & E4

% represent the approximate cumulative frequency of overflight of each region based on a
30% easterly / 70% westerly split

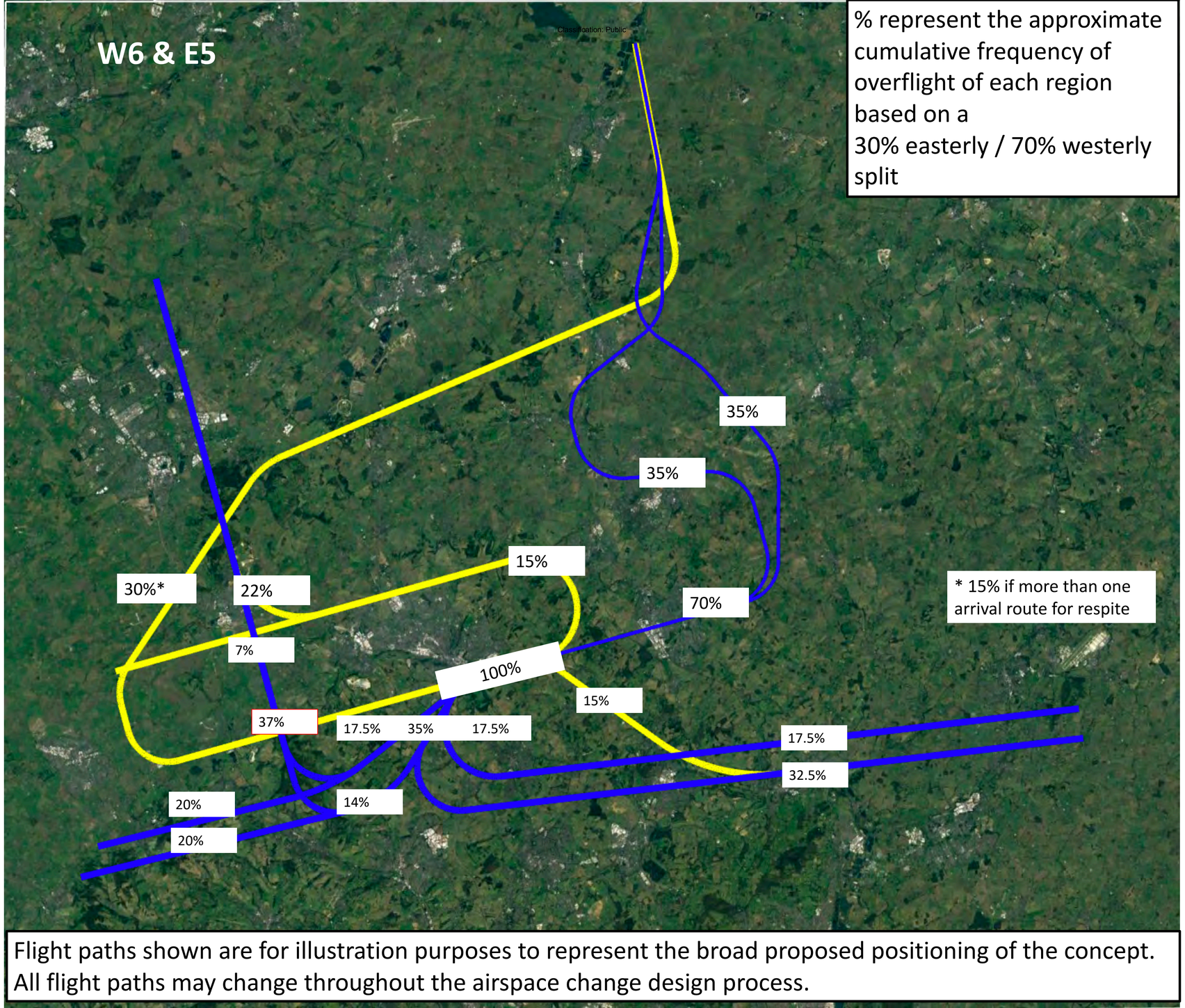


* 15% if more than one arrival route for respite

Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

W6 & E5

% represent the approximate cumulative frequency of overflight of each region based on a
30% easterly / 70% westerly split



* 15% if more than one arrival route for respite

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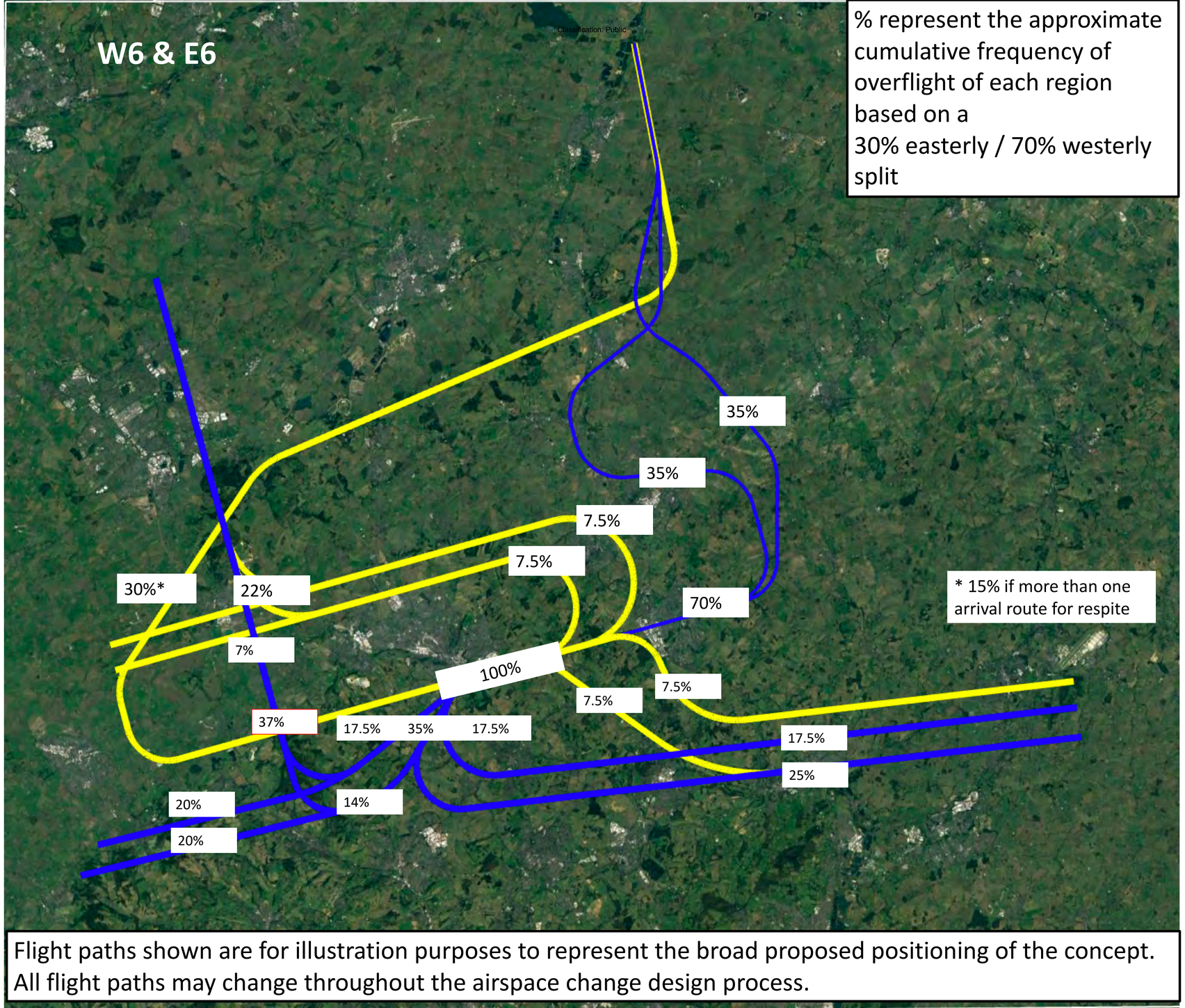
W6 & E6

% represent the approximate cumulative frequency of overflight of each region based on a
30% easterly / 70% westerly split



* 15% if more than one arrival route for respite

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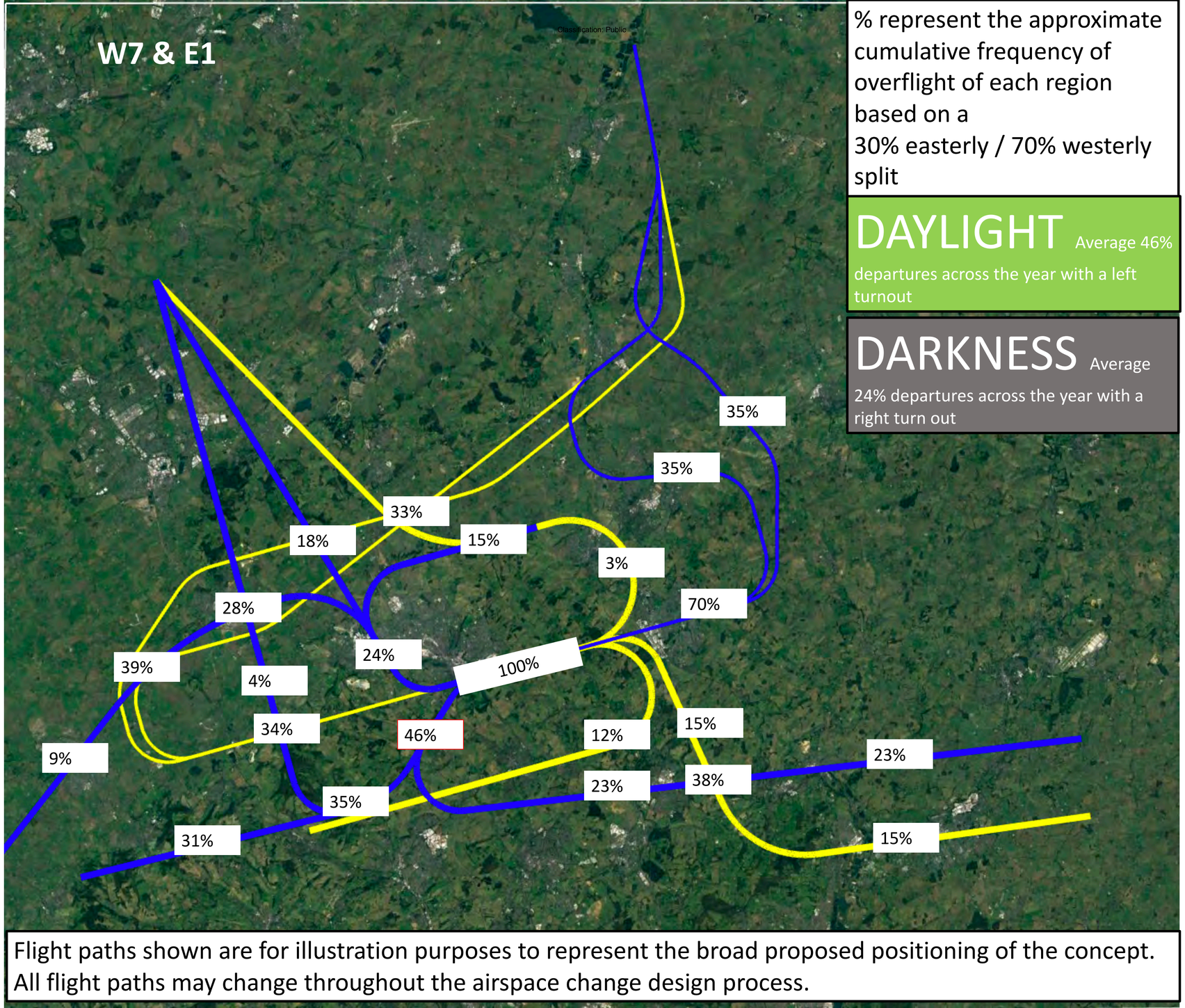
W7 & E1



% represent the approximate cumulative frequency of overflight of each region based on a
30% easterly / 70% westerly split

DAYLIGHT Average 46%

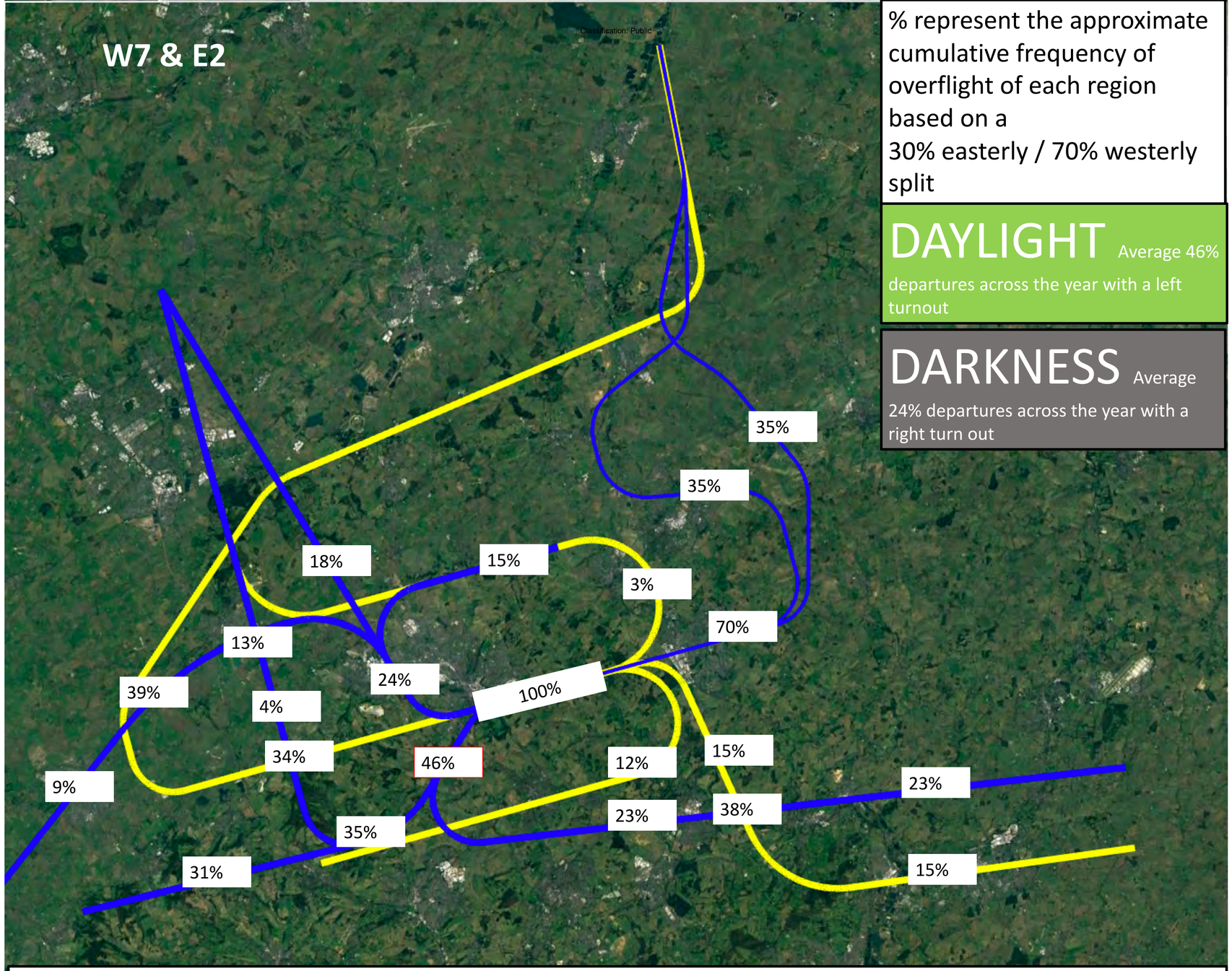
departures across the year with a left turnout

DARKNESS Average

24% departures across the year with a right turn out

Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

W7 & E2



% represent the approximate cumulative frequency of overflight of each region based on a
30% easterly / 70% westerly split

DAYLIGHT Average 46%

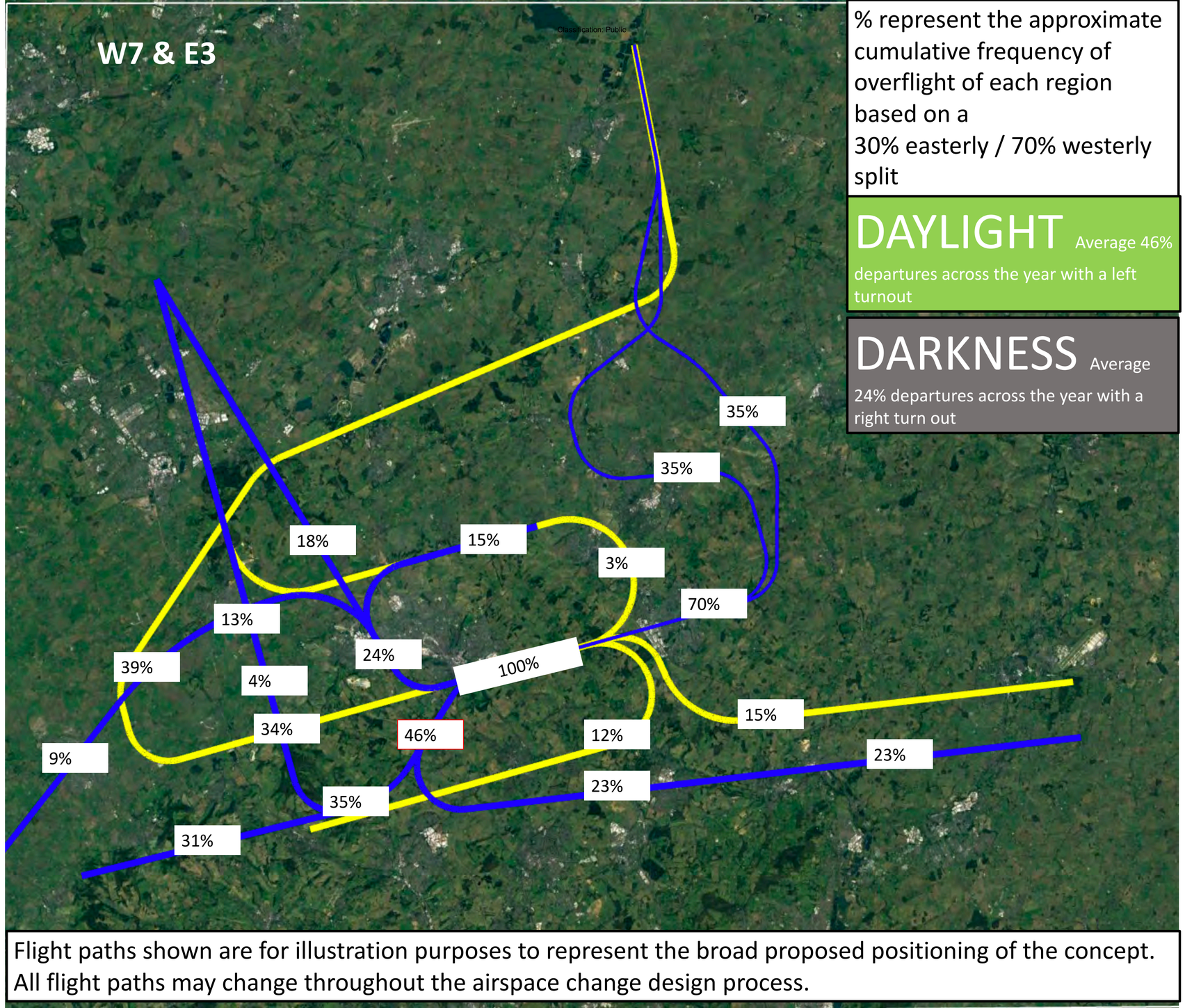
departures across the year with a left turnout

DARKNESS Average

24% departures across the year with a right turn out

Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

W7 & E3



% represent the approximate cumulative frequency of overflight of each region based on a
30% easterly / 70% westerly split

DAYLIGHT Average 46%

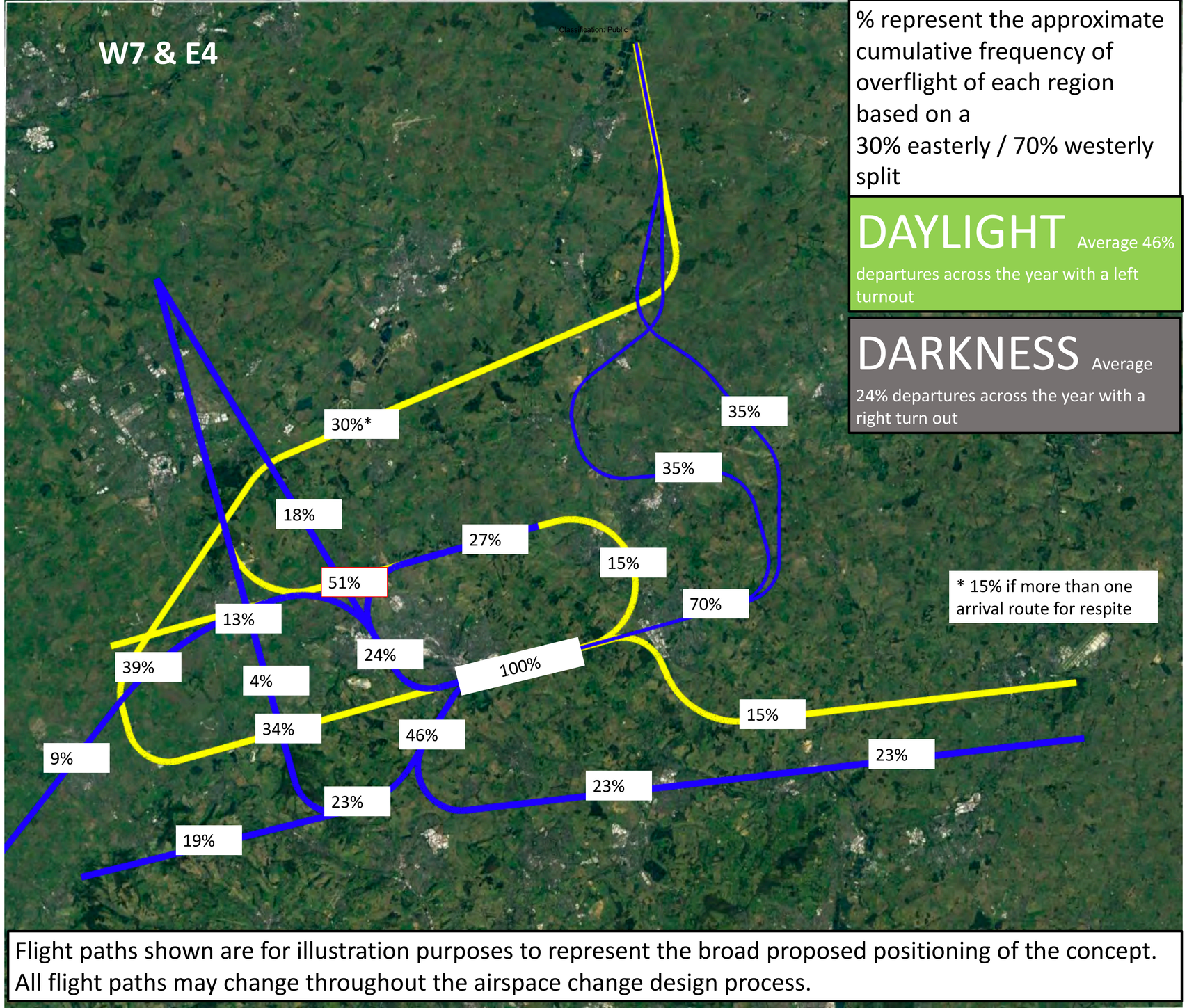
departures across the year with a left turnout

DARKNESS Average

24% departures across the year with a right turn out

Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

W7 & E4



% represent the approximate cumulative frequency of overflight of each region based on a
30% easterly / 70% westerly split

DAYLIGHT Average 46%

departures across the year with a left turnout

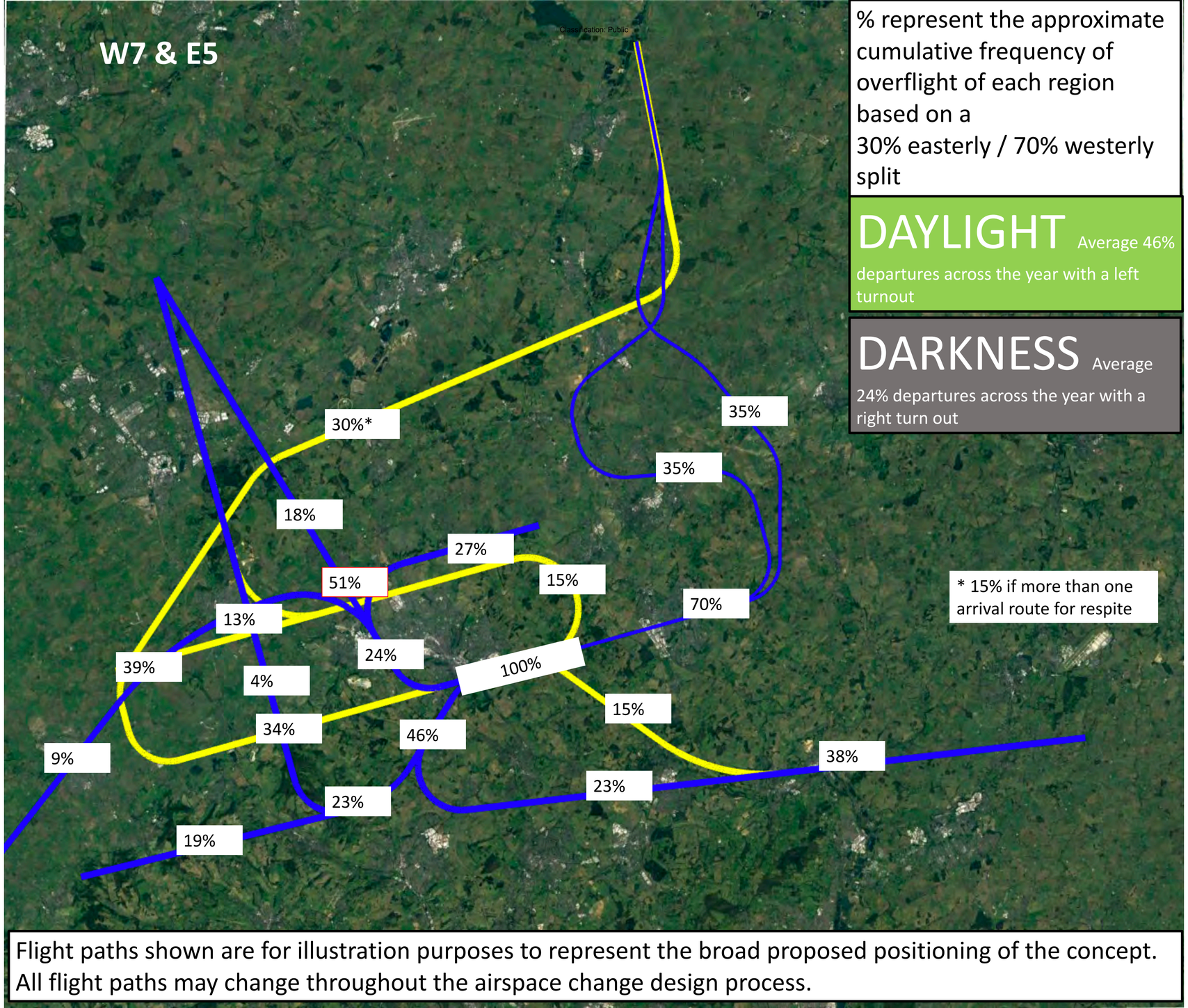
DARKNESS Average

24% departures across the year with a right turn out

* 15% if more than one arrival route for respite

Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

W7 & E5



% represent the approximate cumulative frequency of overflight of each region based on a
30% easterly / 70% westerly split

DAYLIGHT Average 46%

departures across the year with a left turnout

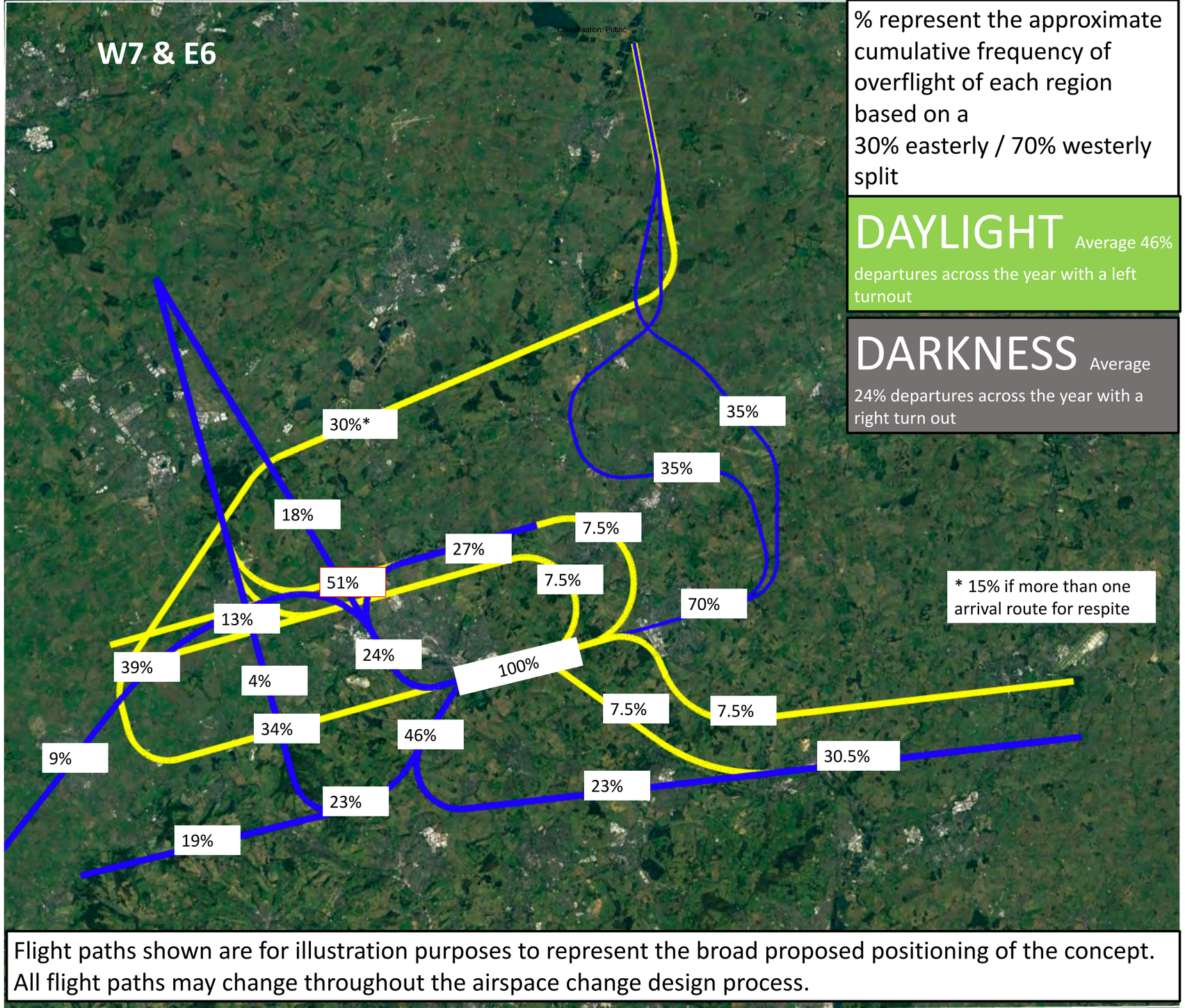
DARKNESS Average

24% departures across the year with a right turn out

* 15% if more than one arrival route for respite

Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

W7 & E6



% represent the approximate cumulative frequency of overflight of each region based on a
30% easterly / 70% westerly split

DAYLIGHT Average 46%

departures across the year with a left turnout

DARKNESS Average

24% departures across the year with a right turn out

* 15% if more than one arrival route for respite

Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

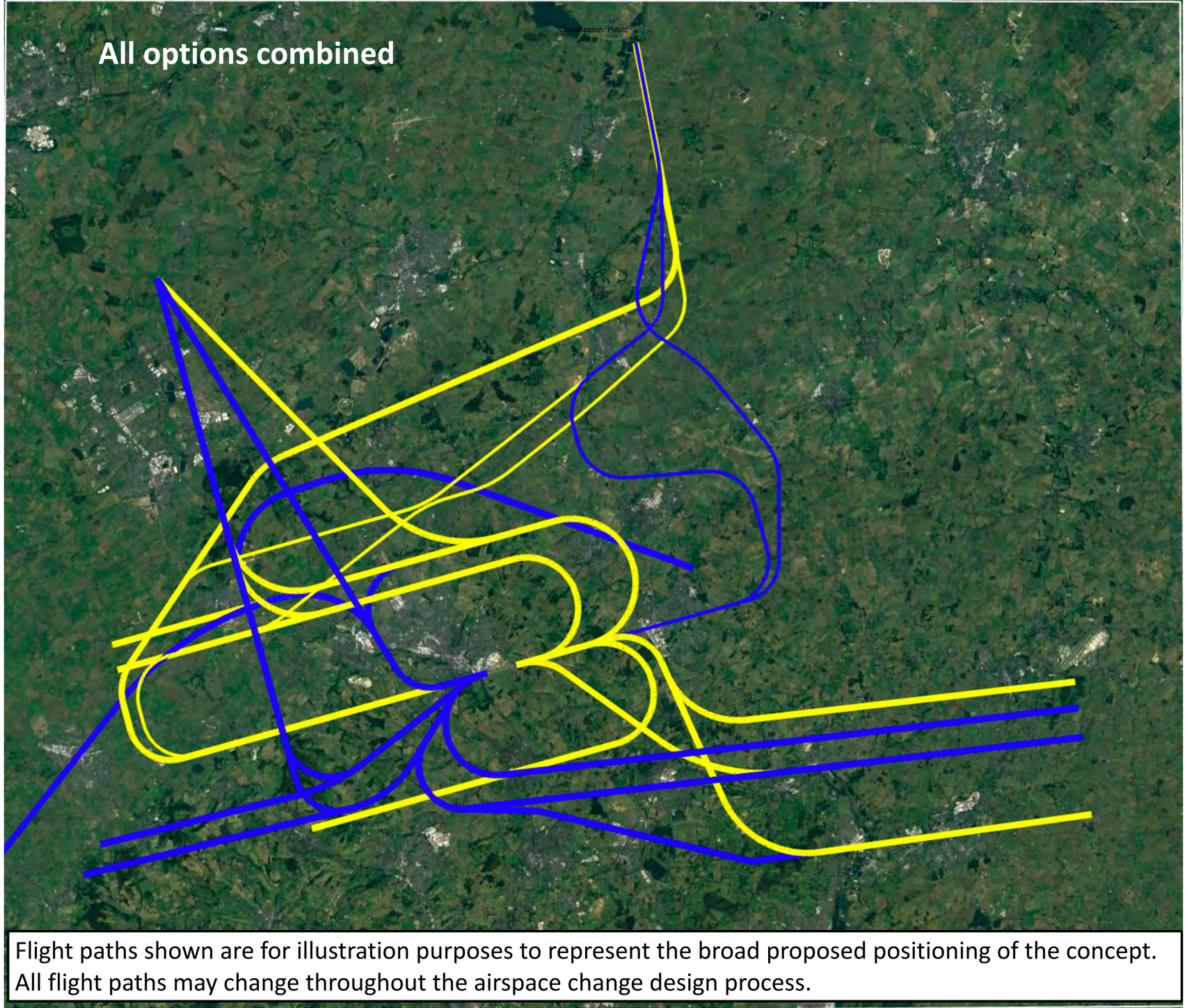
All options combined

ALL FLIGHT PATHS ILLUSTRATIVE ONLY

Altitude markers assume continuous climb to 7,000ft only at an 8% climb gradient and continuous descent from at least 7,000ft on a 3˚ (5.24%) descent gradient.

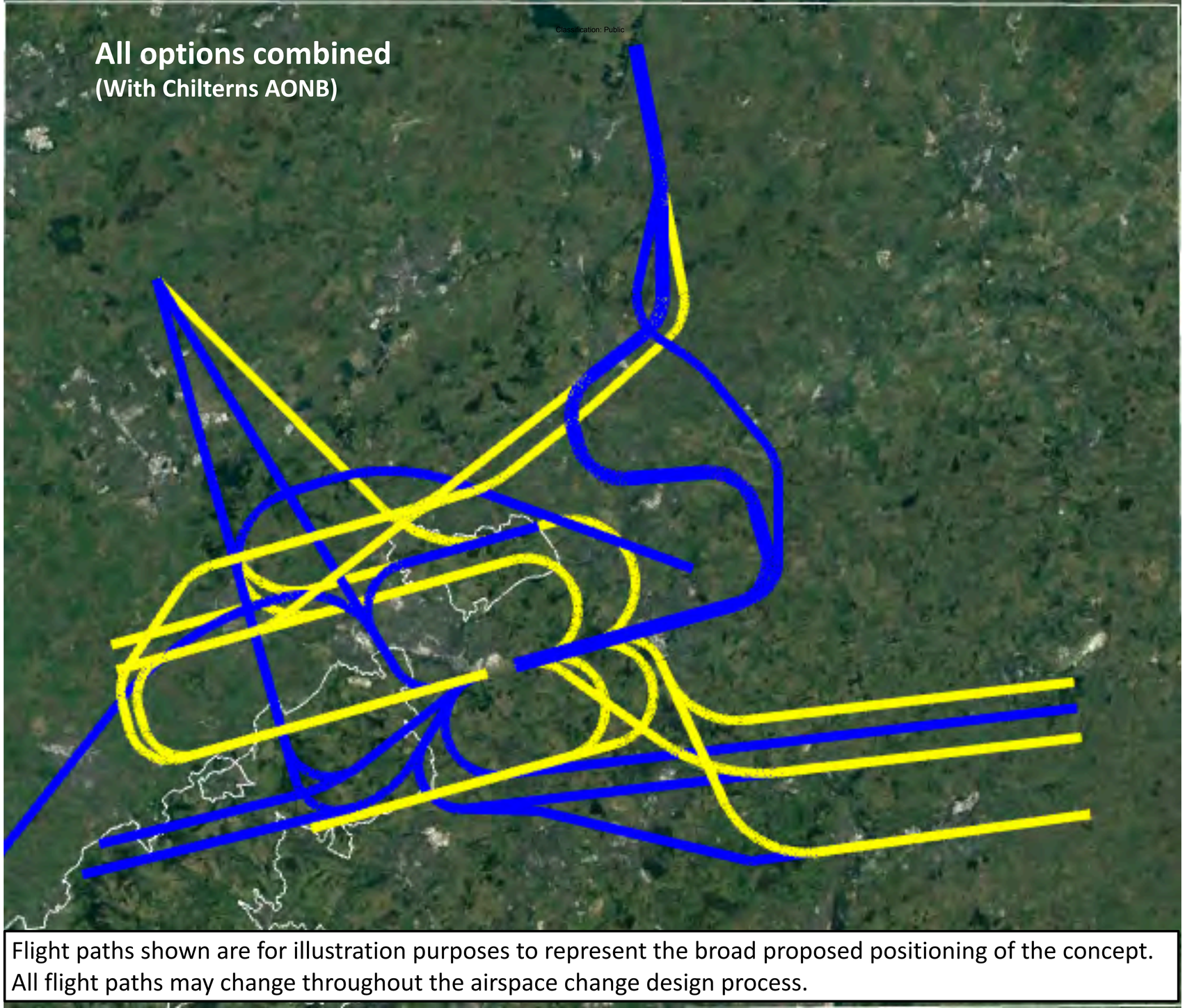
For departures, this assumes the aircraft starts climb from the very end of the runway. However, aircraft start climb approximately 2/3 down the runway so the altitudes shown here can be considered pessimistic.

All options combined

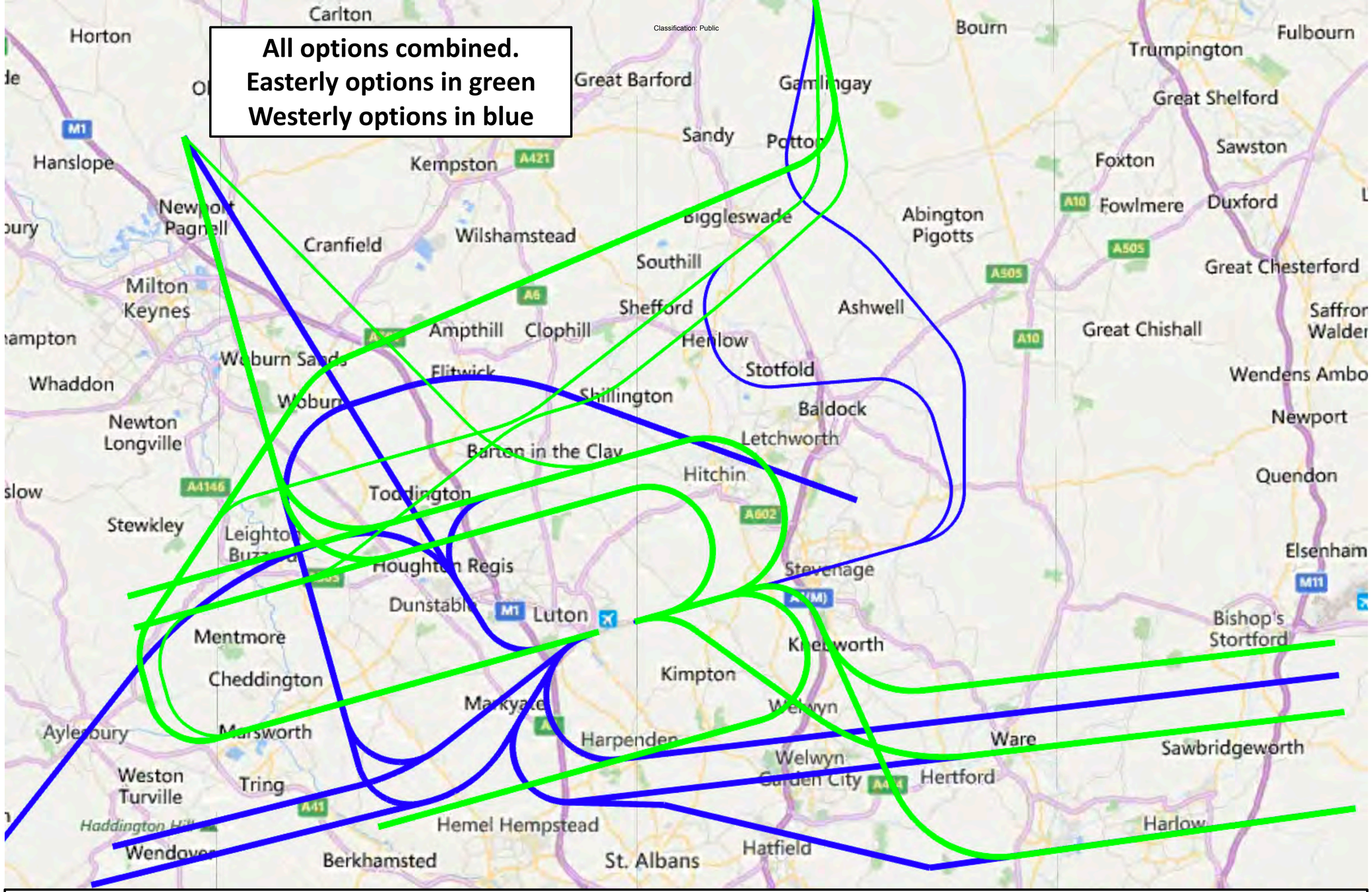


Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

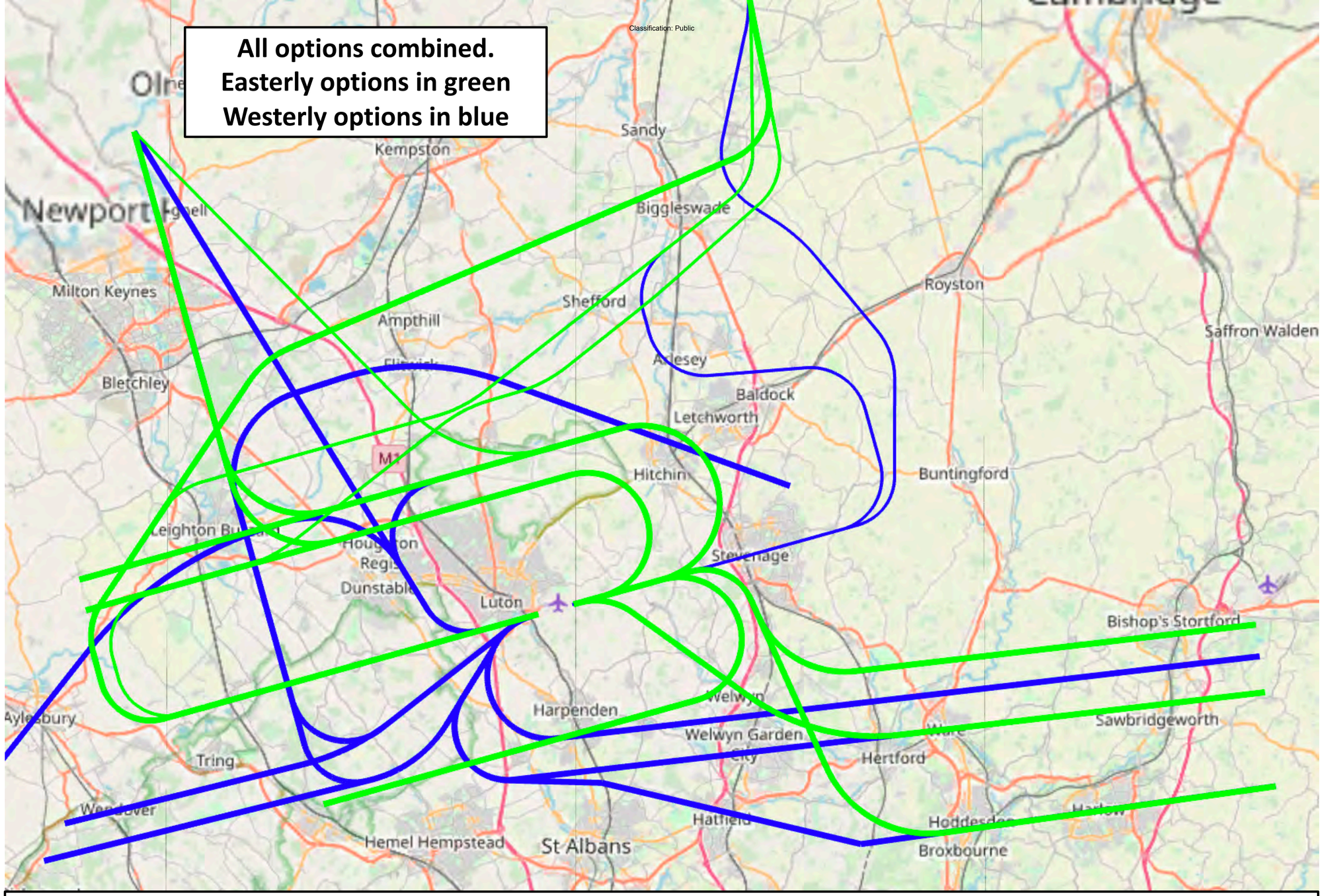
All options combined
(With Chilterns AONB)



Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

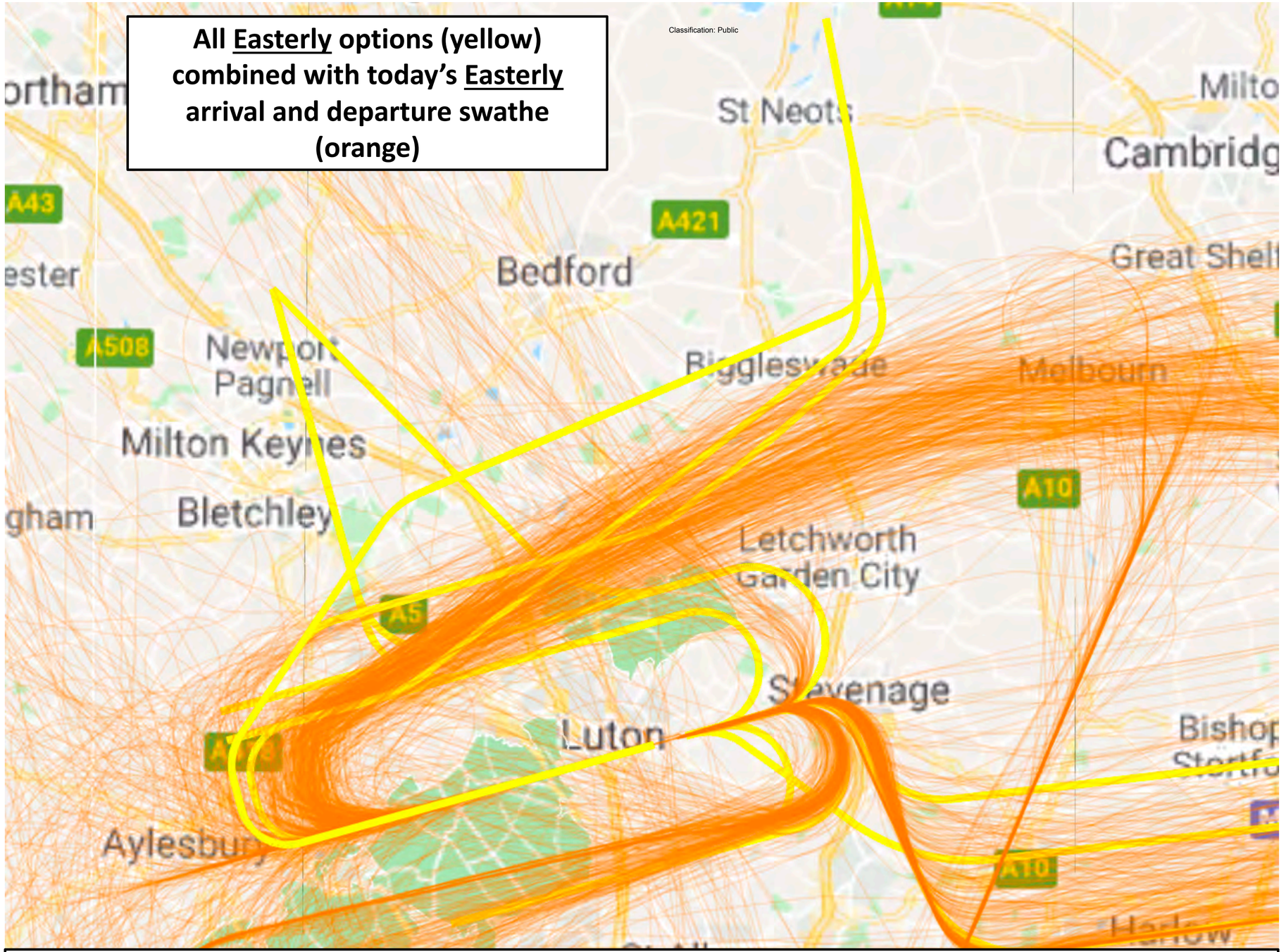


Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept.
All flight paths may change throughout the airspace change design process.

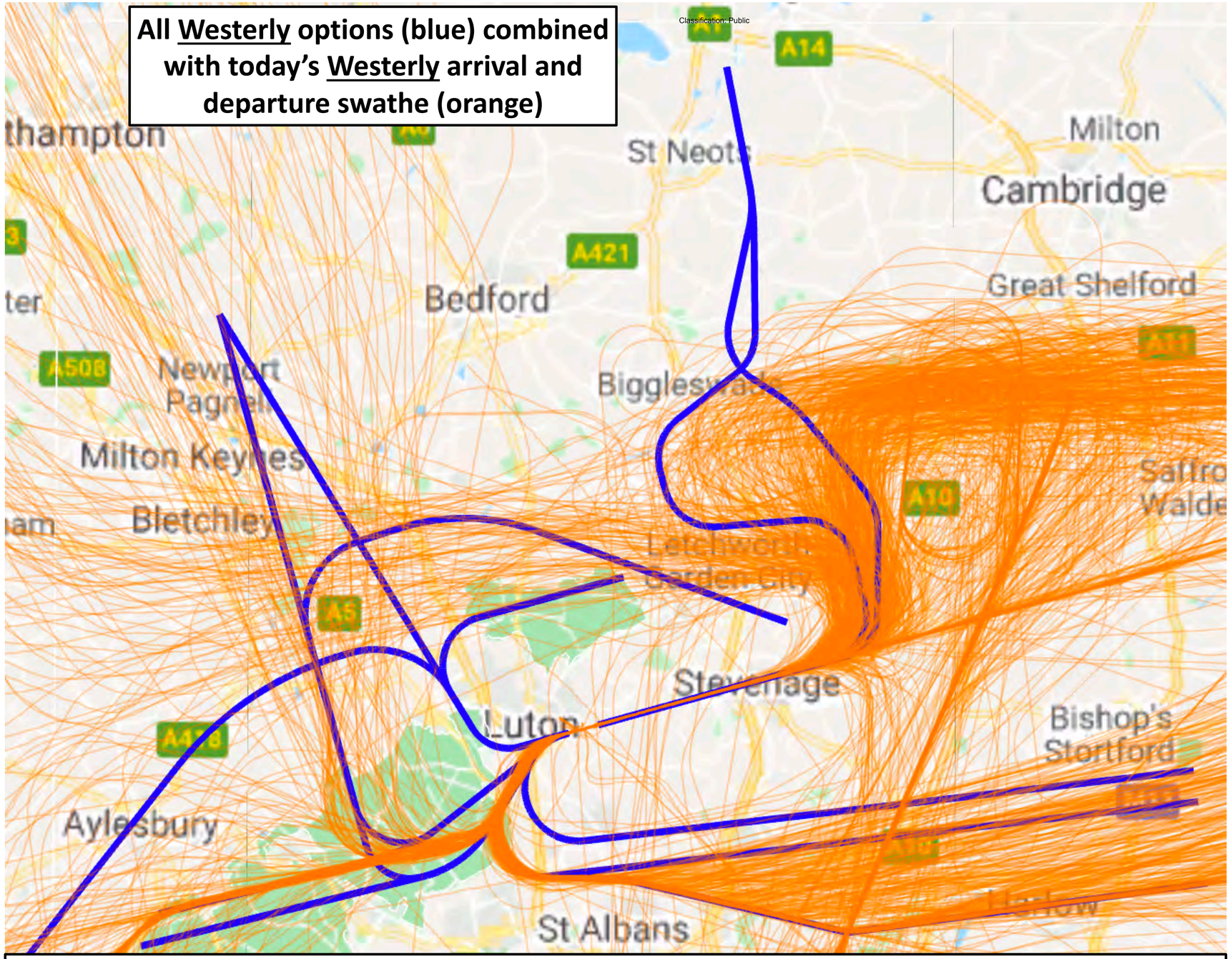


Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept.
All flight paths may change throughout the airspace change design process.

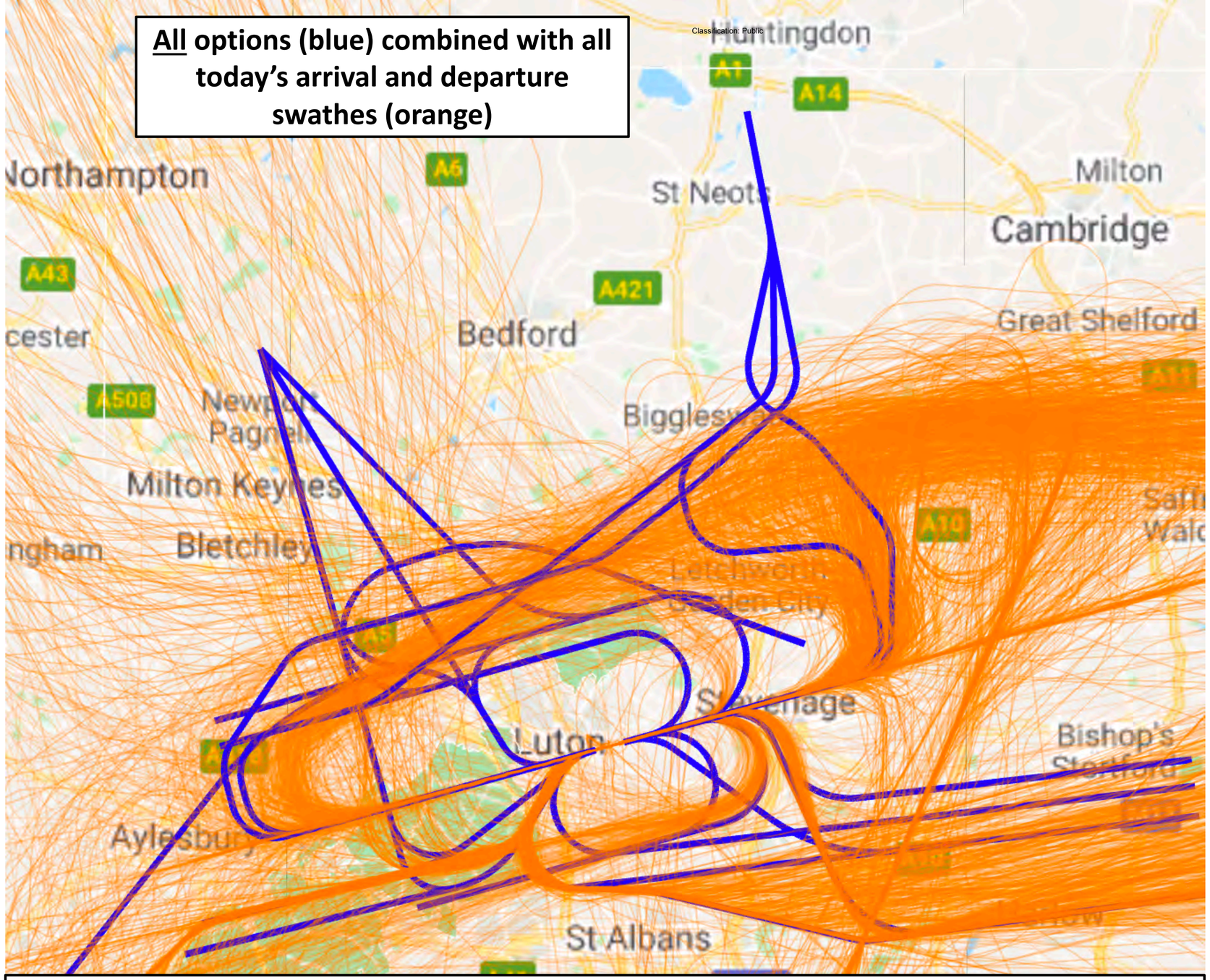
All Easterly options (yellow) combined with today's Easterly arrival and departure swathe (orange)



Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept.
All flight paths may change throughout the airspace change design process.



Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

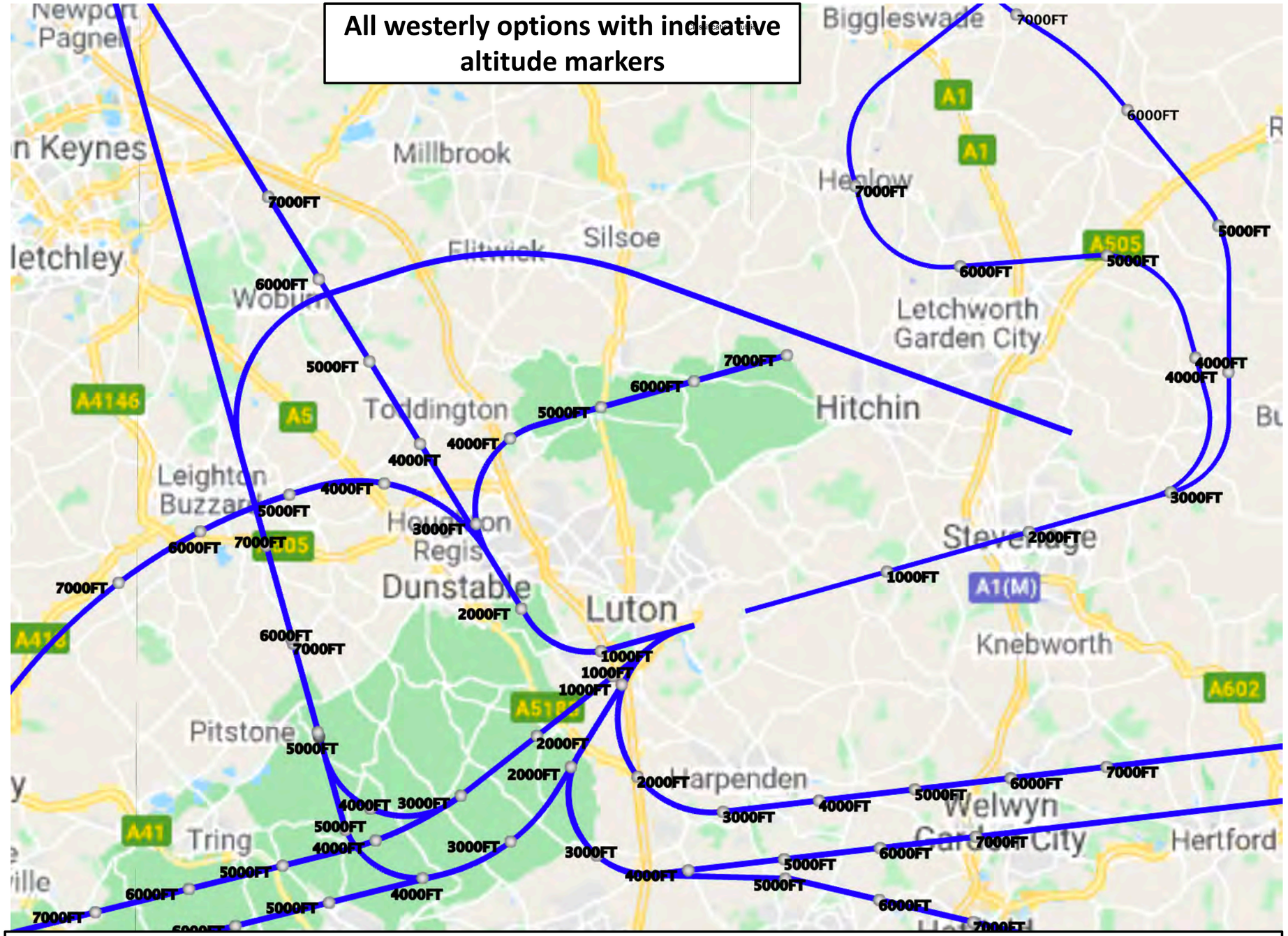


Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

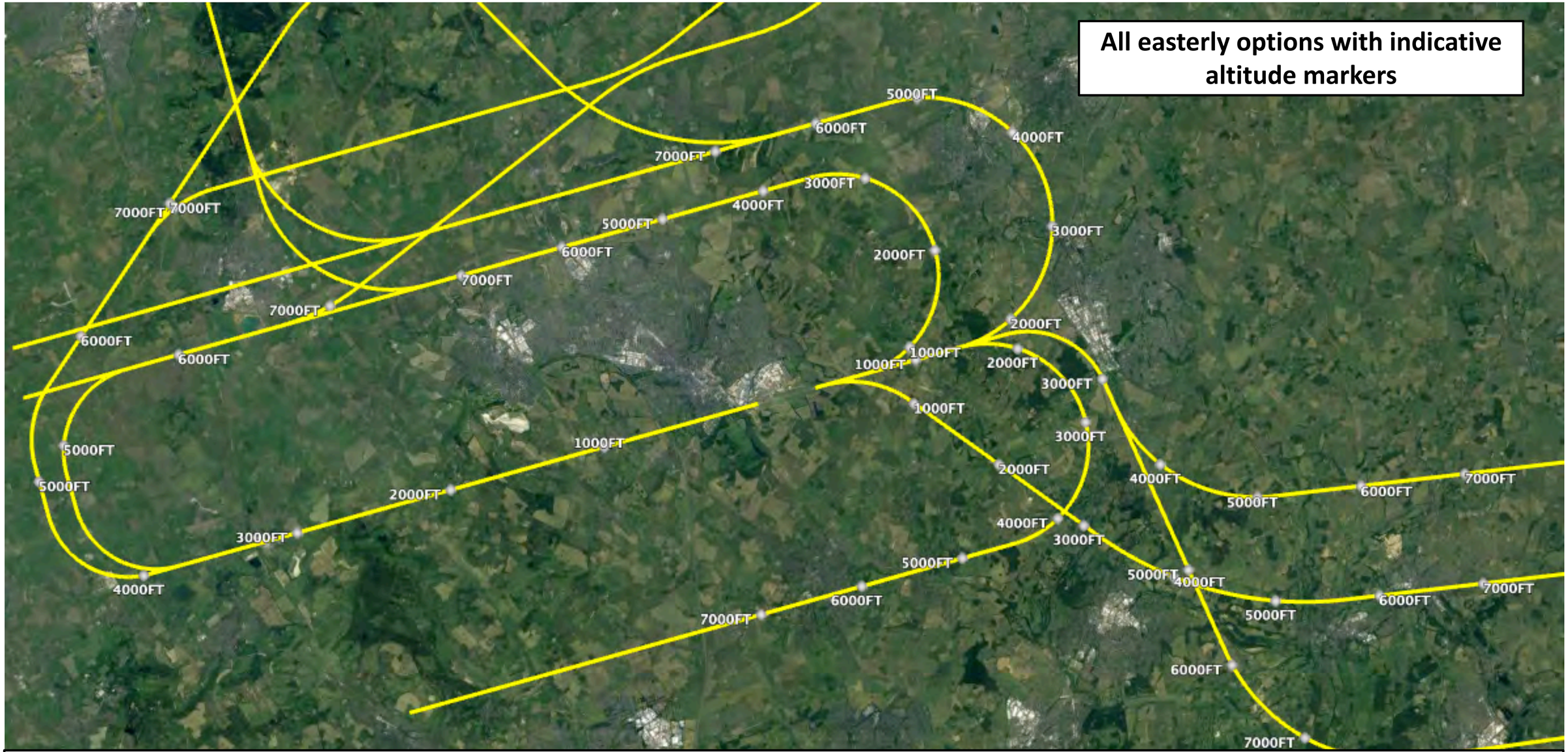
All westerly options with indicative altitude markers

1,000ft altitude markers based on 8% climb gradient or 3˚ (5.24%) descent gradient.
For departures, this assumes the aircraft starts climb from the very end of the runway. However, aircraft start climb approximately 2/3 down the runway so the altitudes shown here can be considered pessimistic.

All westerly options with indicative altitude markers



1,000ft altitude markers based on 8% climb gradient or 3˚ (5.24%) descent gradient.
For departures, this assumes the aircraft starts climb from the very end of the runway. However, aircraft start climb approximately 2/3 down the runway so the altitudes shown here can be considered pessimistic.



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This table shows highest % of overflight for each concept in any one area, excluding immediate climb out and final approach

	E1	E2	E3	E4	E5	E6
W1	82%	82%	82%	70%	70%	70%
W2	82%	82%	82%	70%	70%	70%
W3	82%	82%	82%	70%	70%	70%
W4	50%	50%	47%	37%	50%	42.5%
W5	54.5%	54.5%	54.5%	54.5%	54.5%	54.5%
W6	47%	47%	47%	37%	37%	37%
W7	46%	46%	46%	51%	51%	51%

Conclusions of initial options development in relation to DP5:

Should provide an equitable distribution of traffic where possible, through e.g:

- Use of multiple routes
- New route structures
- Options (mechanisms) for respite

In order to share the noise in the most equitable manner, where possible:

- RWY 08 CPT departures should turn left to provide respite from those under the 26 MATCH track
- The RWY 26 departures should have at least a 2-way initial split as soon as possible because 70% of all departures currently follow this initial track. This will be challenging due to the proximity of the gliding sites
- RWY 08 MATCH departures should follow a different track to the latter part of the RWY 26 MATCH track
- Offloading RWY 26 MATCH departures onto the existing RWY26 CPT/OLY path is not equitable. Use of a right turn for MATCH should only occur if it does not overfly those communities already under the RWY26 CPT track i.e immediate right turn when available.
- RWY 08 departures should turn off the centerline earlier than today to provide respite from more people under final approach to RWY 26

Design issues:

- If the RWY 08 OLY and CPT departures were to only be replicated they need enhancement to provide more efficient departure separations. This is due to the CPT and OLY departure routes ‘wrapping around’ too close to the initial climb out.

- The proximity of gliding sites makes options for the initial turn of Runway 26 departures especially challenging.

- The designs of the arrival transitions to Runway 08 for AD6 are not compatible with a FASI-S design option that sees a left turn out for Runway 08 CPT departures.

Next steps

We welcome your feedback from today's session. Please respond to AirspaceModernisation@ltn.aero by **Thursday 31st March**

We will also be engaging with industry for their feedback on our approach to developing the options.

This includes working with adjacent airports (Heathrow, Northolt, London City, Stansted) to understand interactions with their designs.

Once we have incorporated the feedback received we will perform a 'design principle evaluation'. This is where each option is evaluated against all the Design principles and sets out how each option has responded to the principles. We may discontinue options at this stage.

The design principle evaluation will be published on the CAA airspace change portal. We expect this to be Q2 2020.

We will then perform an Initial Options Appraisal on all remaining options which will also be published this year.

We are currently targeting a Stage 2 Gateway with the CAA in July 2020. However this is now subject to alignment with the 'FASI-S Masterplan' which may result in a delay to our Stage 2 gateway. We will update you as soon as we know more.