

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

Appendix B - Stakeholder Engagement Log, Material
& Correspondence

Part One



Stakeholder Engagement Log

Date	Stakeholder	Method of Engagement	Subject of Engagement	Evidence of Engagement	Location
10-Jan-20	Community & Local Stakeholders	Email	Invitation to Airspace Engagement Day	Email	Pages 5-6
18-Feb-20	Community & Local Stakeholders	Workshop	Airspace Engagement Day	Attendees Meeting Notes	Pages 7-9
20-Feb-20	Community & Local Stakeholders	Email	Follow up to Airspace Engagement Day	Email	Pages 10-12
28-Feb-20	Community Stakeholder	Email	Request for further information	Email	Page 13
28-Feb-20	Community Stakeholder	Email	Request for further information	Email	Page 14
4-Mar-20		Email	Luton response to 28 Feb 20 requests	Email	Page 15
4-Mar-20	Community Stakeholder	Email	Follow up to Luton email 04/03	Email	Page 16
24 Mar-20		Email	Luton response to 04/03 Email	Email	Page 17-18
25-Mar-20	Community & Local Stakeholders	Email	Follow up to Airspace Engagement Day & deadline extension	Email Presentation	Page 19 Pages 20-119
ACP PAUSED DUE TO COVID-19					
01-Dec-20	CAMWG	Meeting		-	
23-Feb-21	CAMWG	Meeting		-	
27-Apr-21	CAMWG	Meeting		-	
13-May-21	Stansted Airport	Online Meeting	Stage 2 Technical meeting	-	
29-Jun-21	CAMWG	Meeting		-	
13-Jul-21	Heathrow	Online Meeting	Stage 2 Technical meeting	-	
15-Jul-21	LTMA Programme Coordination Meeting (ACOG)	Online Meeting		-	
23-Jul-21	NATMAC	Email	Stage 2A Engagement	Email	Page 120

	FLOPC	Email	Stage 2A Engagement	Email	Page 121
	MOD/Northolt	Email	Stage 2A Engagement	Email	Page 122
	Airports	Email	Stage 2A Engagement	Email	Page 123
	MOD/Northolt	Email	Stage 2A Engagement	Email	Page 124
27-Jul-21	Additional Stakeholders	Email	Stage 2A Engagement	Email	Page 125
	Additional Stakeholders	Email	Stage 2A Engagement	Email	Page 126
	Additional Stakeholders	Email	Stage 2A Engagement	Email	Page 127
				Presentation	Pages 128-210
29-Jul-21	LTMA Technical Working Group (ACOG)	Online Meeting		-	
16-Aug-21	All Stakeholders	Email	Reminder of Stage 2A Feedback Deadline	Email	Page 211
26-Aug-21	LTMA Technical Working Group (ACOG)	Online Meeting		-	
6-Sep-21	CAMWG	Workshop		-	
16-Sep-21	Heathrow	Online Meeting	Stage 2 Technical meeting	-	
	ACOG				
20-Sep-21	NERL	Online Meeting	Stage 2 Technical meeting	-	
	ACOG				
22 Sep-21	LTMA Programme Coordination Meeting (ACOG)	Online Meeting		-	
23-Sep-21	LTMA Technical Working Group (ACOG)	Online Meeting		-	
18-Oct-21	Stansted Airport	Online Meeting	Luton/Stansted Option Engagement Session (ACOG in attendance)	-	
28-Oct-21	LTMA Technical Working Group (ACOG)	Workshop	Stage 2 Technical meeting	-	
2-Dec-21	NATS NERL	Online Meeting	Stage 2 Technical meeting	-	

6-Dec-21	CAMWG	Meeting		-	
8-Dec-21	LTMA Technical Working Group (ACOG)	Online Meeting	Stage 2 Technical meeting		
8-Dec-21	London City	Online Meeting	Stage 2 Technical meeting	-	
20-Dec-21	RAF Northolt	Online Meeting	Luton/RAF Northolt FASI-S Bi-Lateral	-	
12-Jan-22	London City	Workshop	Design Options workshop	-	
21-Dec-21	See stakeholder list	Email	ACP Update & invitation to February workshop	Email Invitee List	Page 212 Pages 213-221
27-Jan-21	LTMA Technical Working Group (ACOG)	Online Meeting	Stage 2 Technical meeting	-	
31-Jan-22	CAMWG	Workshop		-	
4-Feb-22	LTMA Programme Coordination Meeting (ACOG)	Online Meeting	Stage 2 Technical meeting	-	
9-Feb-22	NATS NERL	Workshop		-	
22-Feb-22	Multiple Stakeholders	Workshop	ACP Update – DP Evaluation & Initial Options Appraisal	Presentation Attendees	Appendix D Page 222

-----Original Appointment-----

From: [REDACTED]

Sent: 10 January 2020 10:31

[REDACTED]

Subject: LLA Airspace update day

When: 18 February 2020 10:00-16:00 (UTC+00:00) Dublin, Edinburgh, Lisbon, London.

Where: Putteridge Bury Conference Centre, University of Bedfordshire, LU2 8LE

Good morning all,

I am emailing you as a member of LLACC, NTSC or our Airspace Change focus group.

On the 18th February 2020, we will be holding an airspace update day at Putteridge Bury Conference Centre, which you are welcome to attend.

The format of the day will be as follows:

10:00hrs - FASI-S engagement on comprehensive list of options

12:30hrs – Lunch

13:30hrs – NATS Swanwick will be presenting on the runway 26 MATCH airspace change

14:30hrs – Tea and Coffee

14:45hrs – LLA/NATS AD6 arrivals progress update

16:00hrs – Close

Tea and Coffee will be served from 09:30hrs for those that wish to arrive slightly earlier.

It will be a flexible day, so you can pick and choose those sessions which are of most interest to you and your organisation; although of course you can also come for the full day.

Please be aware that we do have limited space, so we are restricting places to 2 representatives per organisation, please accept or decline this invitation so I can understand the numbers attending to ensure we provide sufficient refreshments.

Kind regards,



Airspace and Noise Performance Manager
London Luton Airport
Percival House,
Percival Way,
Luton, LU2 9NU



[w london-luton.co.uk](http://www.london-luton.co.uk)



London Luton Airport

London Luton Airport Operations Limited (LLAOL) – FASI-S ACP
 Meeting Notes from workshop held on 18th February 2020
 Putteridge Bury Conference Centre

Attendees

██████████ – Bedfordshire Association of Town and Parish Councils	██████████ – Hertfordshire Association of Parish and Town Councils
██████████ – Chilterns Conservation Board	██████████ – LADACAN
██████████ – Stevenage Borough Council	██████████ – Breachwood Green Parish Council
██████████ – Aylesbury Vale District Council	██████████ – Kings Walden Parish Council
██████████ – Buckinghamshire County Council	██████████ – Stop Luton Airport Expansion (SLAE)
██████████ – Buckinghamshire County Council	██████████ – Luton Borough Council
██████████ – North Herts District Council	██████████ – HarpendenSky
██████████ – North Herts District Council	██████████ – St Albans Quieter Skies
██████████ – PAIN	██████████ – St Albans Quieter Skies
██████████ – Buckinghamshire and Milton Keynes Association of Local Councils	██████████ – Breachwood Green Society
██████████ – Dacorum Borough Council	██████████ – East Herts Council
██████████ – LLACC Chair	██████████ – Hertfordshire County Council
██████████ – Bickerdike Allen Partners	██████████ – London Luton Airport Limited
██████████ – York Aviation representing London Luton Airport Limited	██████████ – Trax International Ltd
██████████ - LLAOL	██████████ – Trax International Ltd
██████████ - LLAOL	██████████ – Trax International Ltd
██████████ - LLAOL	██████████ – NATS Luton

Purpose LLAOL invited members of the London Luton Airport Consultative Committee (LLACC), Noise and Track Sub-Committee (NTSC) and Local Authorities to attend a Stage 2 FASI-S workshop on 18th February 2020. The workshop intended to explore and test LLAOL’s approach to developing design options and share LLAOL’s initial comprehensive list of options already developed.

Discussion LLAOL opened the meeting and introduced Trax International Ltd (Trax) who would lead the session.

Trax provided an overview of the CAP 1616 process and advised participants that the CAA approved LLAOL’s Stage 1 gateway in June 2019.

Trax explained that since the Stage 1 Gateway LLAOL had received correspondence from the CAA referring to the Airspace Modernisation Strategy (AMS) and Masterplan, this correspondence is on the CAA Airspace Change Portal. The correspondence was to include the AMS and Masterplan within the Design

Principles. LLAOL has agreed with the CAA, that Design Principle 2 will incorporate the aims of the AMS but discussions were still ongoing between LLAOL and the CAA regarding the Masterplan, as it has not been published yet.

Design Principle 2 currently states:

Must meet the 3 aims of the NPSe, Air Navigation Guidance 2017 and all appropriate Government aviation policies, and updates thereof.

This was explained to all representatives in the session with key paragraphs of the AMS provided.

There were questions from attendees surrounding the relationship between FASI-S and AD6. Trax explained that FASI-S would be implemented after the SAIP AD6 change to arrivals. However, depending on the AD6 solution implemented, some arrival flight paths will still need to be re-designed as part of FASI-S which could therefore change from the AD6 designs. Where lateral changes to AD6 flight paths are not required, FASI-S would still look to optimise their vertical profile.

Trax clarified that 'design space' for Luton airport had been created based on neighbouring airports and the capabilities of aircraft. This provided areas where new designs could be created, known as design envelopes.

Trax presented all the options developed so far and advised that the flight paths shown were for illustrative purposes only to demonstrate each concept. All options taken forward following Stage 2 process will be refined to best balance impacts and benefits.

Some attendees questioned the area used by Dunstable Gliding Club, and commented that this area should be available for Luton departure routes as these areas have been free from Luton departures for many years. Trax explained that some design options did route through this area with the thought that they would only be available during the hours of darkness. Attendees requested to see options that went through the airspace delegated to Dunstable at all times of Westerly Operations.

ACTION: LLAOL will be engaging with General Aviation Stakeholder which includes Dunstable Gliding Club and will explore further options.

Trax presented all designs created so far and explained that more designs can still be created throughout the process. The designs so far assumed an 8% climb gradient.

The design options presented included 'overflight percentages' which showed the approximate percentage of total movements which would go on each route. This was to help articulate to what extent each option met Design Principle 5, which states:

Should provide an equitable distribution of traffic where possible.

Attendees commented that it would be helpful if the maps included altitude bands to help appreciate some of the potential impacts associated with the designs, LLAOL agreed to do this. Pictures were also requested to show how the options compared to current flightpaths.

ACTION: LLAOL will share an updated slide pack with altitude bands and existing overflight on the designs.

After showing all design options, Trax presented a table, that illustrated the highest percentage of overflight of a single area (averaged across easterly and westerly operations) in order to see which designs best provided an equitable spread of traffic. This can be used as an aid to help community representatives understand the impacts.

Next Steps

At the end of the session, it was explained that LLAOL now requires input from the community representatives with any feedback on the session to be sent to AirspaceModernisation@ltn.aero by Thursday 31st March.

ACTION: Community representatives to provide feedback on designs to LLAOL by 31st March 2020.

Post meeting note: This deadline has now been extended until Friday 10th April due to COVID-19.

LLAOL will also be conducting engagement will be taking place with industry, adjacent airports and General Aviation users.

After all feedback has been received LLAOL and Trax 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; options can be discounted at this stage.

It is expected that the design principle evaluation will be published on the CAA airspace change portal in Q2 2020 but LLAOL advised this timeline was subject to change. Following the design principle evaluation, LLAOL/Trax will then perform an Initial Options Appraisal on all remaining options which will also be published ahead of the Stage 2 Gateway.

From: [REDACTED]
Sent: 28 February 2020 14:36
To: [REDACTED]
Subject: RE: Airspace Engagement Day presentations - 18th February 2020

Hi all,

Thank you for your patience whilst we have been adding indicative altitude markers to our FASI-S designs.

I am pleased to say that this has now been completed and I will be sending an updated slide pack via WeTransfer today, the updated slides are 91 and 92. Please look out for this email as sometimes they go into junk. If you have any problems receiving the file please do let me know and we can explore alternative options for sending the file.

As a reminder, we are seeking feedback on the concept of the options by Friday 27th March which should be sent to airspacemodernisation@ltn.aero.

Kind regards,

[REDACTED]



[REDACTED]
Airspace and Noise Performance Manager
London Luton Airport
Percival House,
Percival Way,
Luton, LU2 9NU

www.london-luton.co.uk

From: [REDACTED]
Sent: 20 February 2020 13:28
To: [REDACTED]
Subject: Airspace Engagement Day presentations - 18th February 2020

Hi all,

Thank you to those of you that attended our airspace engagement day on Tuesday.

This is a follow up email with some of the information we spoke, as well as the presentations.

FASI-S

Following this email I will send these slides via WeTransfer (if you do not receive this please check your junk mail as sometimes it goes into there), this will give you a link whereby the slides can be downloaded, this is due to the size of the file. There will be an update to these slides which shows the altitude markers on the routes, however this will be distributed when complete.

The link to the CAA's Airspace Change Portal for this change is:

<https://airspacechange.caa.co.uk/PublicProposalArea?pID=109>

As part of Stage 2a of the CAP1616 Airspace Change process we are engaging on our initial comprehensive list of options which have been developed using our design principles from Stage 1b. It should be noted that the flight paths shown are purely for illustrative purposes only to demonstrate the broad positioning of flight paths in each option. Any options taken forward through the process will be subject to more detailed investigation for the optimal positioning in order to best address the design principles. We are seeking feedback on the concept of the options by Friday 27th March which should be sent to airspacemodernisation@ltn.aero.

I've listed below some things to think about to help guide the type of feedback we are looking for:

- Have we developed a comprehensive list of options which are aligned with the design principles?
- Are there any further options you think we need to explore to meet the design principles?
- Do you think the way we have shown the equitable spread of aircraft (by using percentages on the routes) is reasonable?
- Do you think that our overall approach to design options development is comprehensive?

I hope this information helps and if I can be of any further assistance please do let me know.

Kind regards,

[Redacted]



[Redacted]
Airspace and Noise Performance Manager
London Luton Airport
Percival House,
Percival Way,
Luton, LU2 9NU

[Redacted]
www.london-luton.co.uk

From: [REDACTED]
Sent: 28 February 2020 15:58
To: [REDACTED]
Subject: Re: Airspace Engagement Day presentations - 18th February 2020

Received, thanks. Much more useful, particularly in helping to assess the real value of some of the so-called "respite options" in the light of CAP1498 and its definition of "overflight". That suggests to me that some of them offer illusory "respite", though to be certain of this I'd need distance scales on the maps as well.

best regards,

[REDACTED]

-----Original Message-----

From: [REDACTED]
To: [REDACTED]
Sent: Fri, 28 Feb 2020 14:36
Subject: RE: Airspace Engagement Day presentations - 18th February 2020

Hi all,

Thank you for your patience whilst we have been adding indicative altitude markers to our FASI-S designs.

I am pleased to say that this has now been completed and I will be sending an updated slide pack via WeTransfer today, the updated slides are 91 and 92. Please look out for this email as sometimes they go into junk. If you have any problems receiving the file please do let me know and we can explore alternative options for sending the file.

As a reminder, we are seeking feedback on the concept of the options by Friday 27th March which should be sent to airspacemodernisation@ltn.aero.

Kind regards,

[REDACTED]



From: [REDACTED]
Sent: 28 February 2020 15:08
To: [REDACTED]
Subject: RE: Airspace Engagement Day presentations - 18th February 2020

Hi [REDACTED]

Many thanks.

Is there any way at all that you could send just slides 91 and 92 with the tracks plotted against a map rather than against a satellite view? We can work out more or less where most paces are, but other folk may struggle and it would really help to have place labels.

Hopefully it's just a matter of someone pushing a button to select the map view...?

Best regards,

[REDACTED]

From: [REDACTED]
Sent: 28 February 2020 14:36
To: [REDACTED]
Subject: RE: Airspace Engagement Day presentations - 18th February 2020

Hi all,

Thank you for your patience whilst we have been adding indicative altitude markers to our FASI-S designs.

I am pleased to say that this has now been completed and I will be sending an updated slide pack via WeTransfer today, the updated slides are 91 and 92. Please look out for this email as sometimes they go into junk. If you have any problems receiving the file please do let me know and we can explore alternative options for sending the file.

As a reminder, we are seeking feedback on the concept of the options by Friday 27th March which should be sent to airspacemodernisation@ltn.aero.

Kind regards,

[REDACTED]



 London

From: [REDACTED]
Sent: 04 March 2020 14:30
To: [REDACTED]
Subject: RE: Airspace Engagement Day presentations - 18th February 2020

Hi both,

Following on from the comments that you have suggested regarding the FASI-S maps, we have made some changes.

We have added two new slides with a google maps background, these are now on slides 92 and 94. I will need to send these via WeTransfer rather than just the two slides, as these will need to be kept in the context of the wider presentation.

I will be sending these now, if you have any further comments please do let me know; otherwise I will send to the wider group next week.

Thanks.

Kind regards,

[REDACTED]



[REDACTED]
Airspace and Noise Performance Manager
London Luton Airport
Percival House,
Percival Way,
Luton, LU2 9NU

[REDACTED]
[w london-luton.co.uk](http://www.london-luton.co.uk)

From: [REDACTED]
Sent: 04 March 2020 14:58
To: [REDACTED]
Subject: Re: Airspace Engagement Day presentations - 18th February 2020

[REDACTED]

Got the bundle, thanks. Three cheers for broadband: I've got horrid memories of transferring files using

64kb/s dial-up.....

I was less concerned with the underlying geography, interesting though it is, than having a simple distance with which I could assess the lateral separation of the various options; I can work them out, near as dammit, using an OS map alongside the slides. A simple scale like that would, I think, have been useful on all of the visuals from 26 onwards.

[REDACTED]

From: [REDACTED]
Sent: 25 March 2020 13:55
To: [REDACTED]
Subject: RE: Airspace Engagement Day presentations - 18th February 2020

Hi [REDACTED]

It is definitely uncertain times at the airport at the moment. It's very strange with most of the stands full with aircraft, and even some parked on taxiways. Although most of us are now working from home where we can.

Keep safe and hopefully this will all pass quickly.

Kind regards,

[REDACTED]



[REDACTED]
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London Luton Airport
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Percival Way,
Luton, LU2 9NU

[REDACTED]
www.london-luton.co.uk

From: [REDACTED]
Sent: 24 March 2020 16:36
To: [REDACTED]
Subject: RE: Airspace Engagement Day presentations - 18th February 2020

[REDACTED]

Thanks: it'll help a bit. I was looking not at the specific areas involved but at the extent to which some of the possible would have offered perceivable respite. I imagine that things might be a bit frantic up there: I can't imagine how safe distancing works in respect of any component of the few flights that seem to be operating - almost all of them being Eastern European movements.

[REDACTED]

On Tuesday, 24 March 2020 [REDACTED] wrote:

Hi [REDACTED]

Sorry it has taken me a while to get back to you.

Unfortunately we have been unable to add a scale to the slides, but for context, for the departures, every 1000ft altitude marker is 2nm (2.4 statute miles) apart and for the arrivals, every 1000ft altitude marker is 3.1nm (3.6 statute miles) apart. We will keep this in mind for further designs that we share.

Hopefully this will help in the meantime.

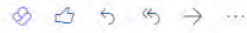
Kind regards,

[REDACTED]



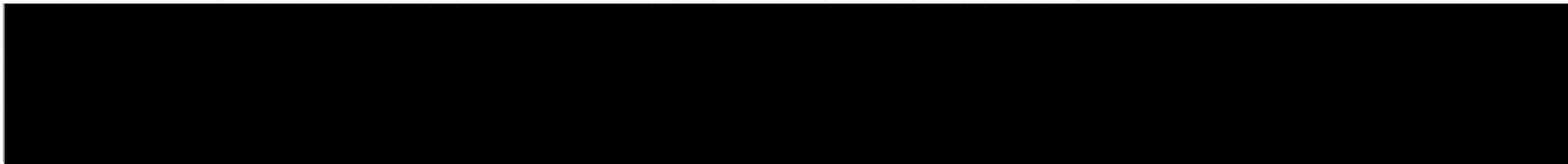
[REDACTED]
Airspace and Noise Performance Manager
London Luton Airport
Percival House,
Percival Way,
Luton, LU2 9NU

LLA Airspace Engagement Day on 18th Feb 2020 - FASI-S Meeting Notes



Wed 25/03/2020 13:52

To: [Redacted]



 London Luton Airport O...
111 KB

Good afternoon all,

I hope you are all well.

Thank you to those of you who have already sent in FASI-S feedback following the Airspace Engagement Day on the 18th February 2020. I have attached the redacted meeting notes from the FASI-S session.

Since the session, we have received requests from a representatives regarding the background maps and also for scales to be provided. We have updated the slide pack to show the routes with a different map and I will be sending this updated slide pack to everyone today via WeTransfer, so please do look out for this. Unfortunately we have been unable to add a scale to these maps, but for context, for the departures, every 1000ft altitude marker is 2nm (2.4 statute miles) apart and for the arrivals, every 1000ft altitude marker is 3.1nm (3.6 statute miles) apart.

Finally, in the session we asked for feedback by 31st March 2020, however, in light of the current UK situation we have agreed to extend this to 10th April 2020. Therefore please can you send any feedback to airspacemodernisation@ltn.aero by this date.

As always, if you have any questions, please do let me know.

Kind regards,



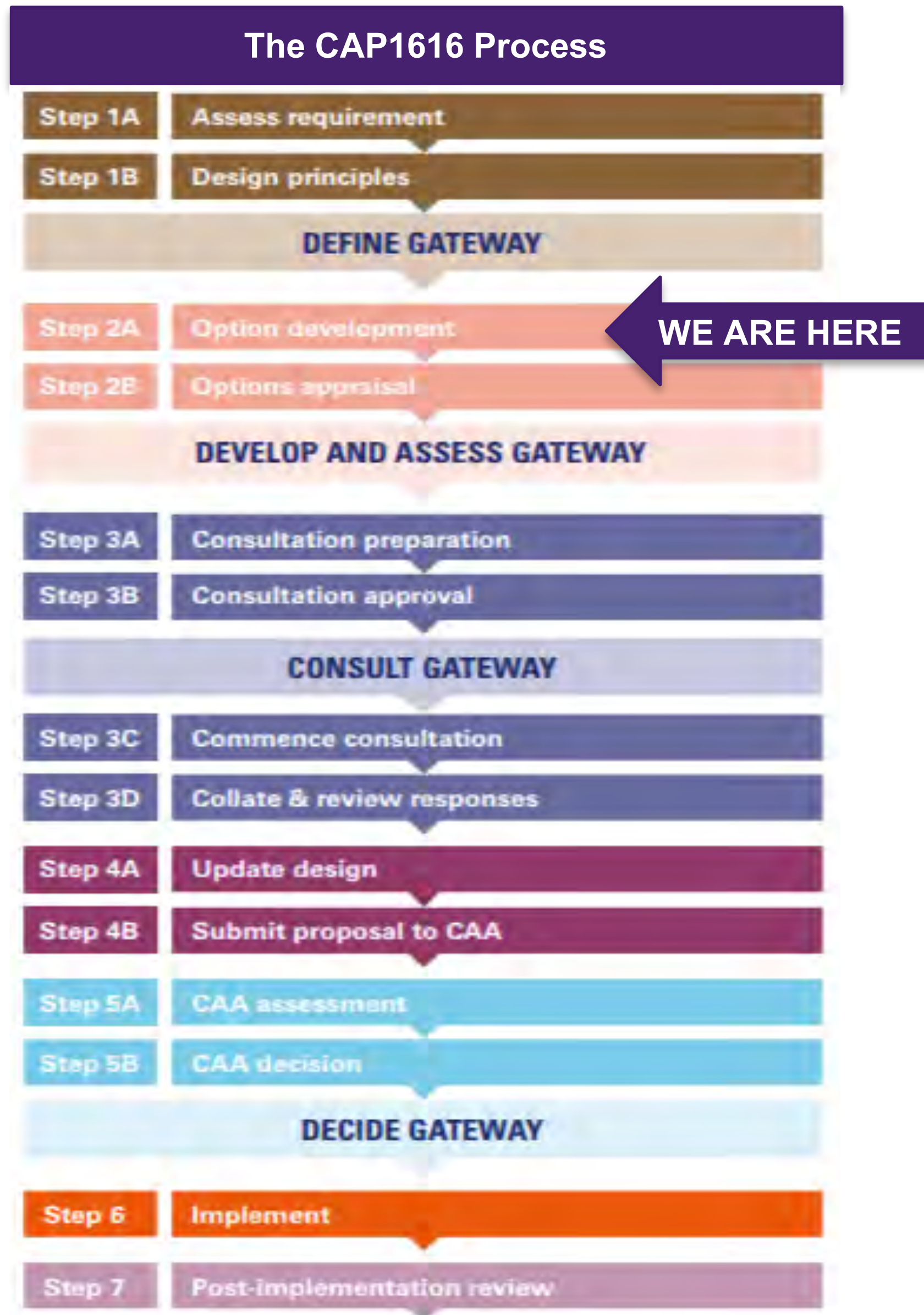
Luton FASI-S

Comprehensive list of options

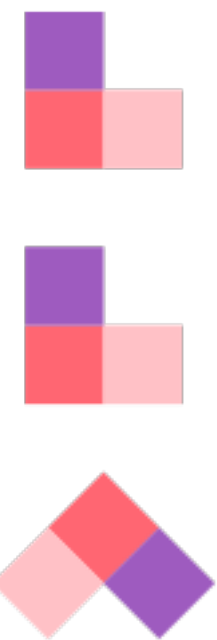
V2.0 2 March 2020



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

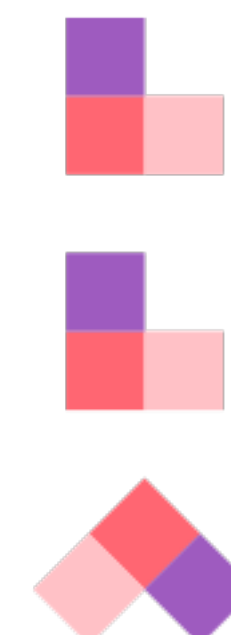
The purpose of this session is **not** to seek feedback on individual route options by examining the detailed specific geographical position of the options.

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

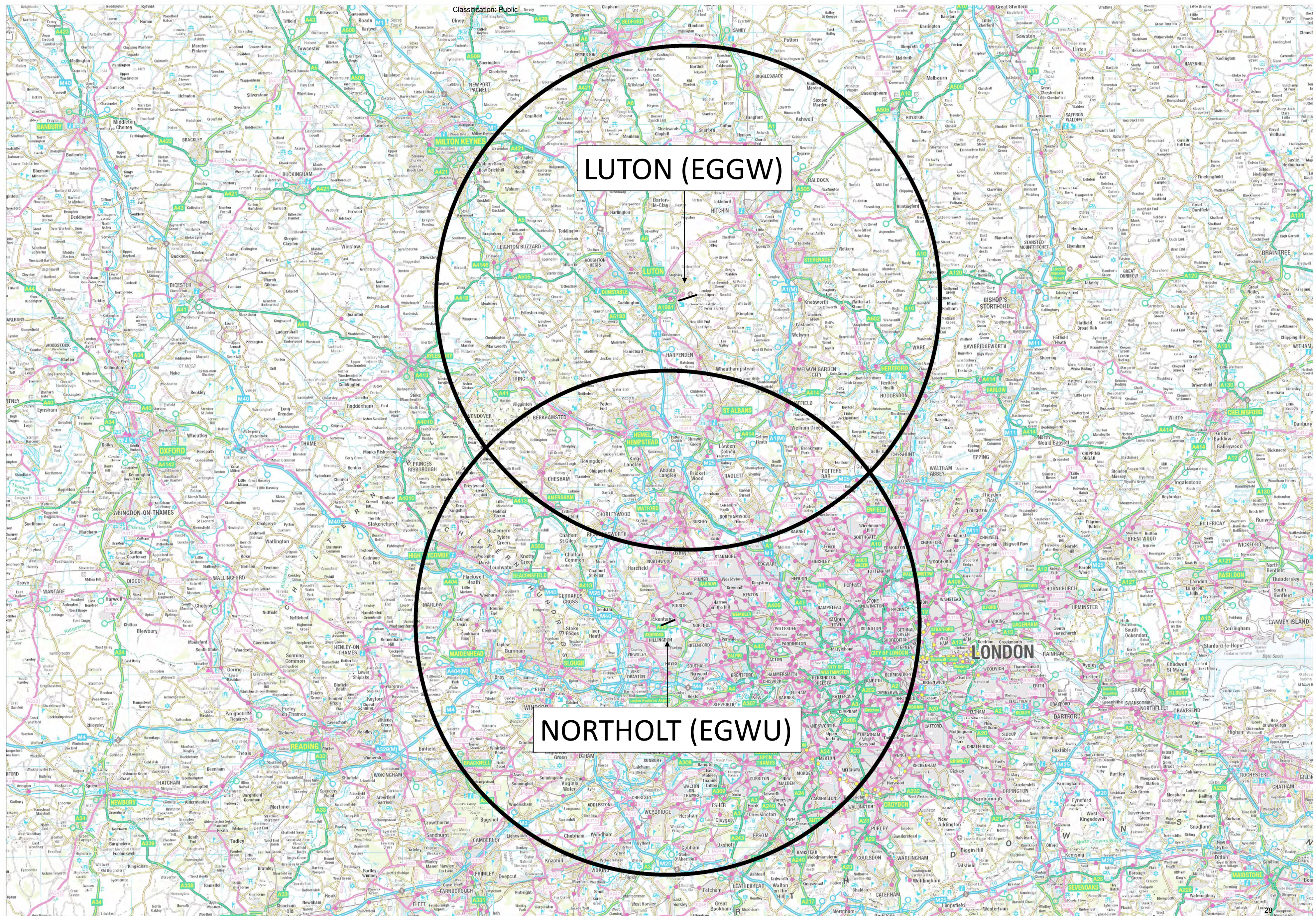
Further explanation of the Co-ordinated Modernisation Design Principle and why it is important to your proposal

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.

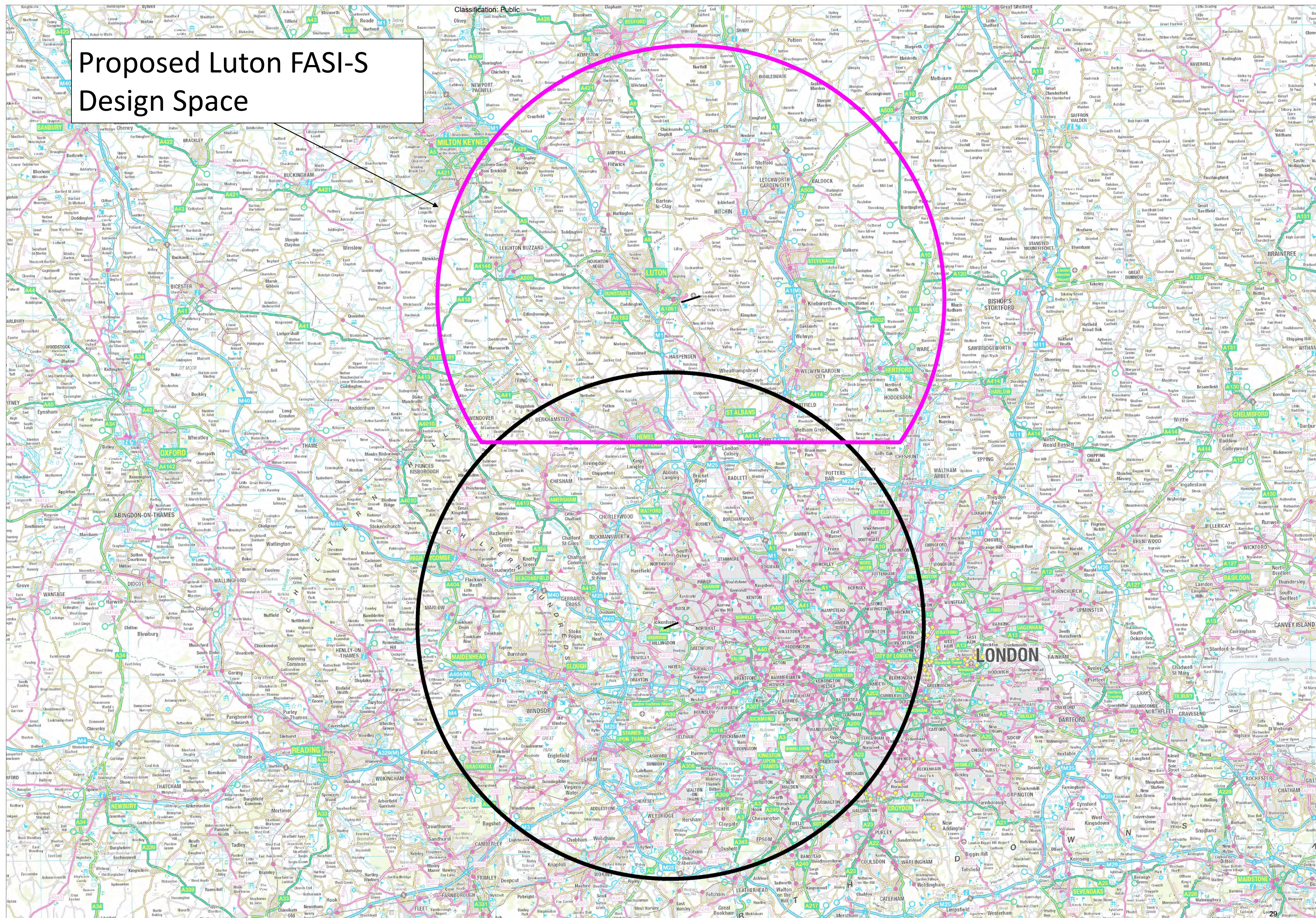


Due to the overlap between Northolt and Luton's design space and also being cognisant of Heathrow's ambitions for expansion, we reduced the size of the Luton design space to the south. This was to help facilitate adherence with:

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

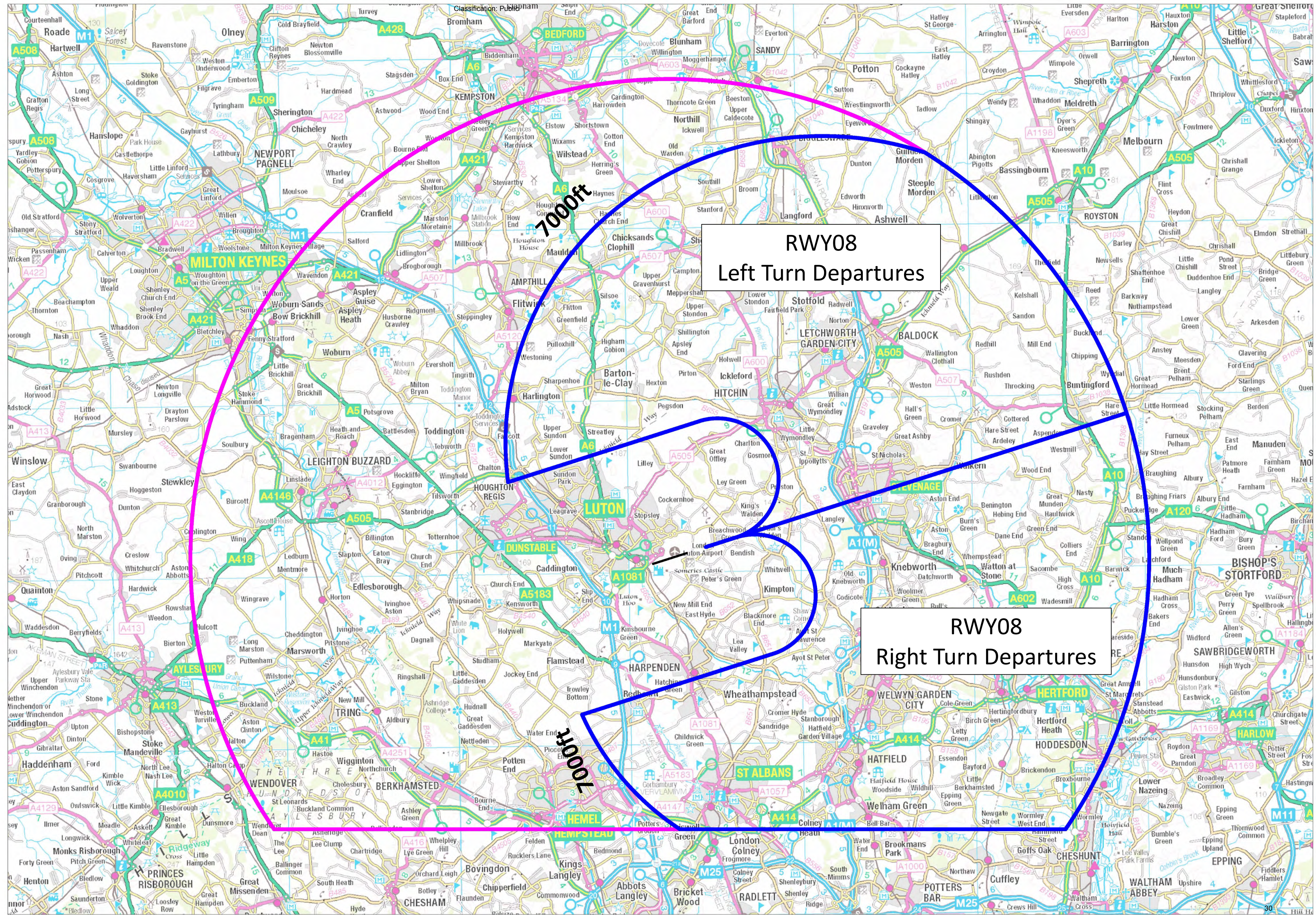
Luton Design Principle 6: *Should avoid overflying the same communities with multiple routes, & take into account routes of other airports, below 7000ft*

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



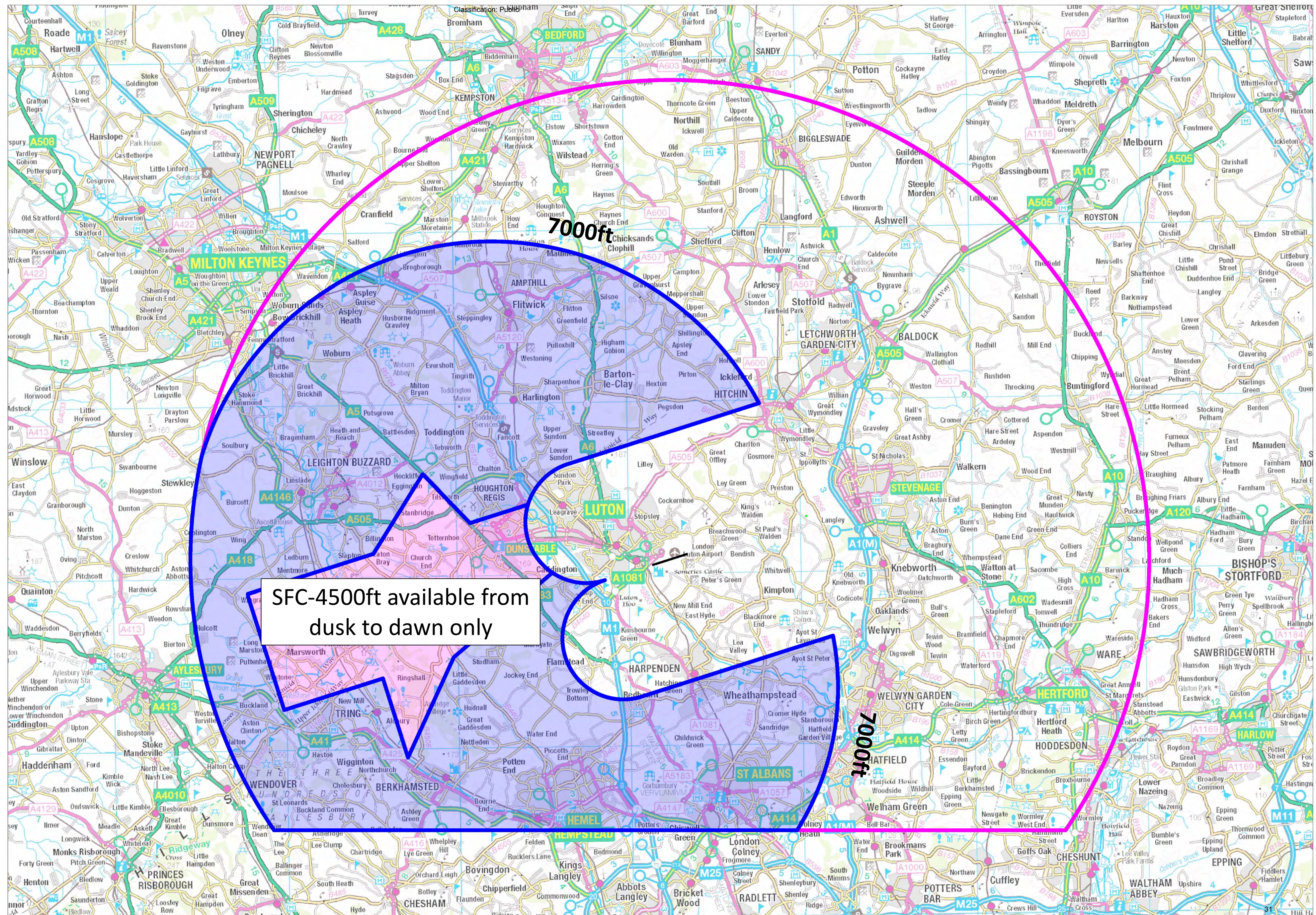
DEPARTURES
RWY08

This area is mirrored for right turns.

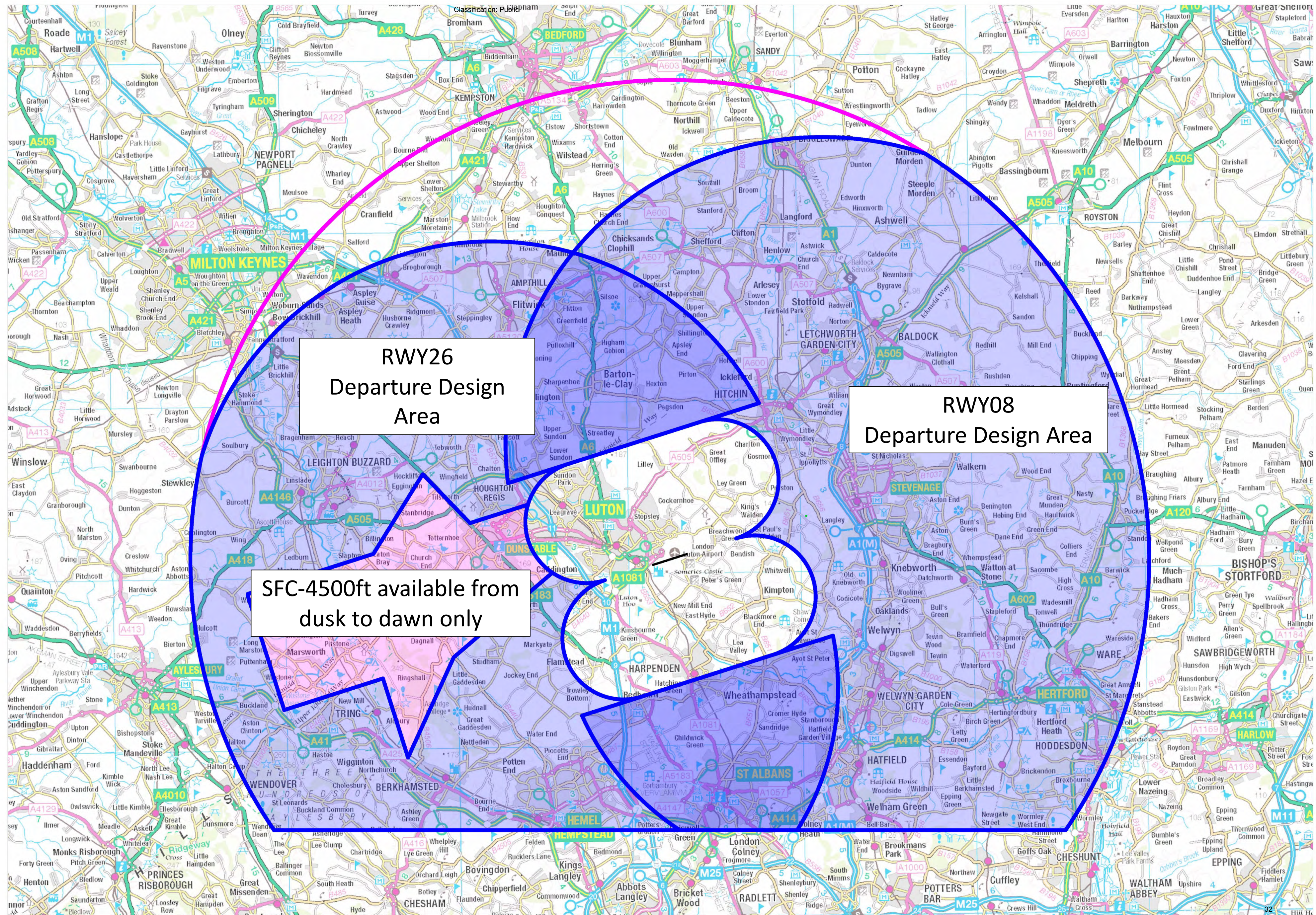


DEPARTURES RWY26

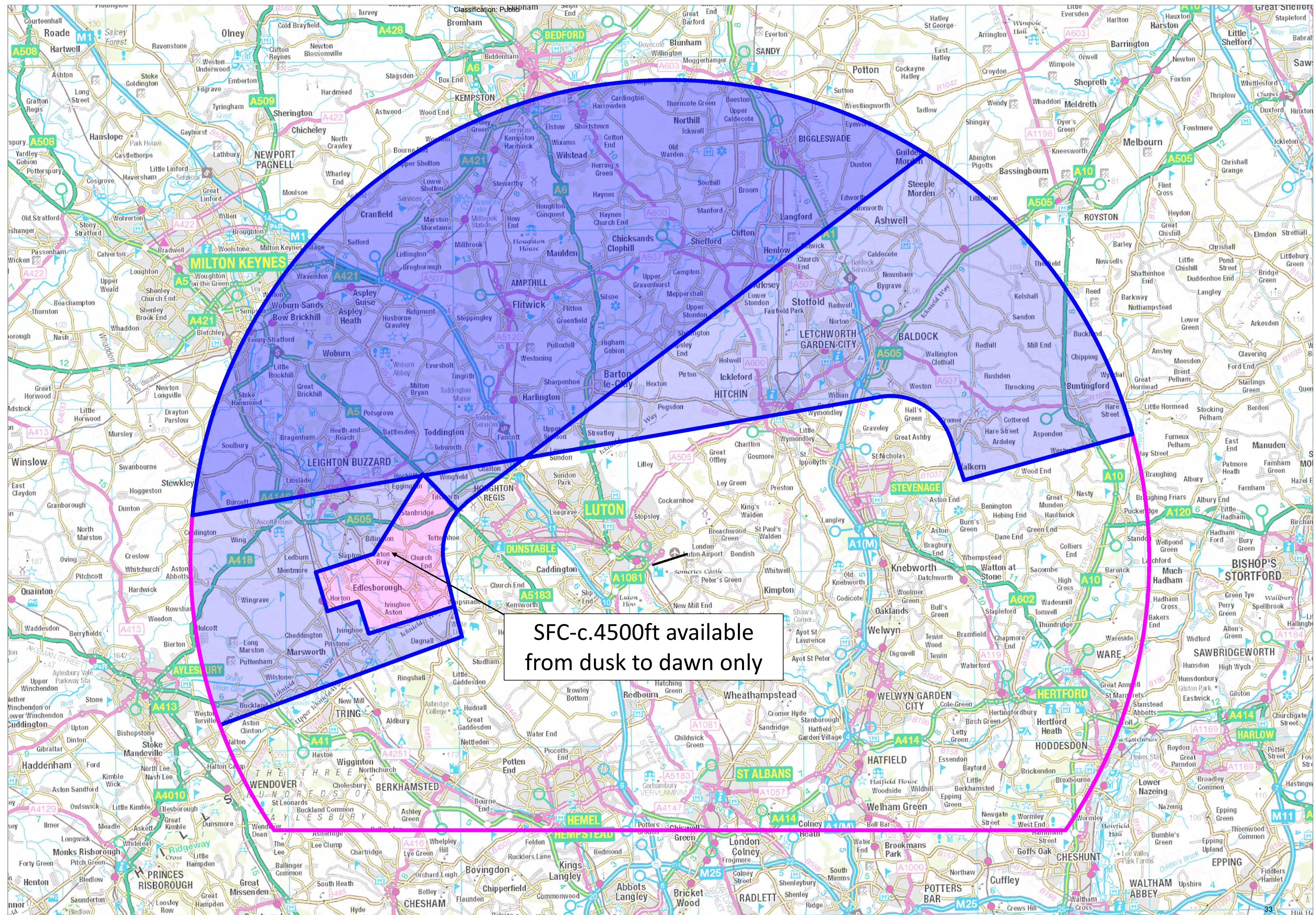
Due to gliding activity in the vicinity of Luton Airport, a portion of airspace is only available between dusk and dawn.



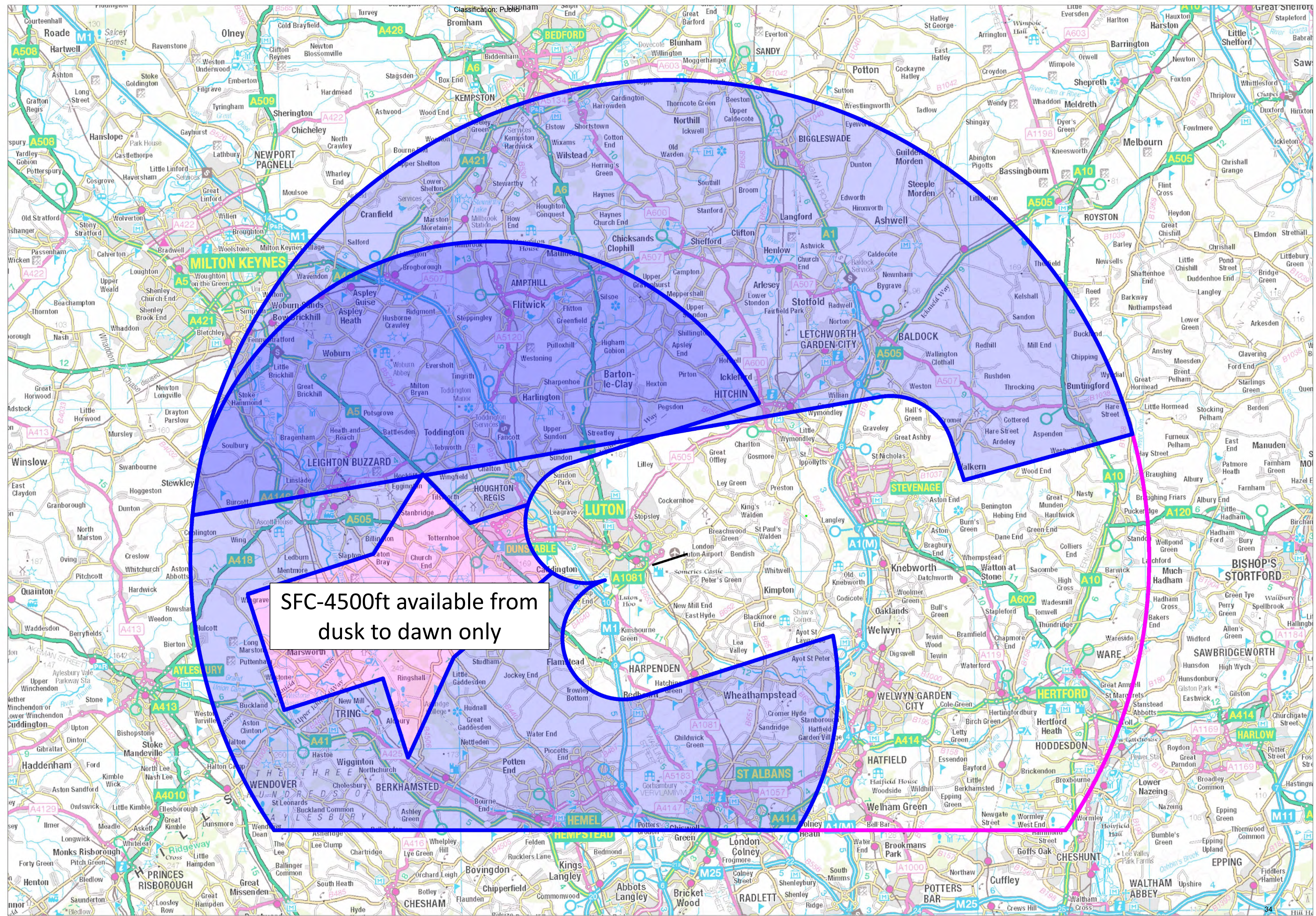
DEPARTURES DESIGN AREAS



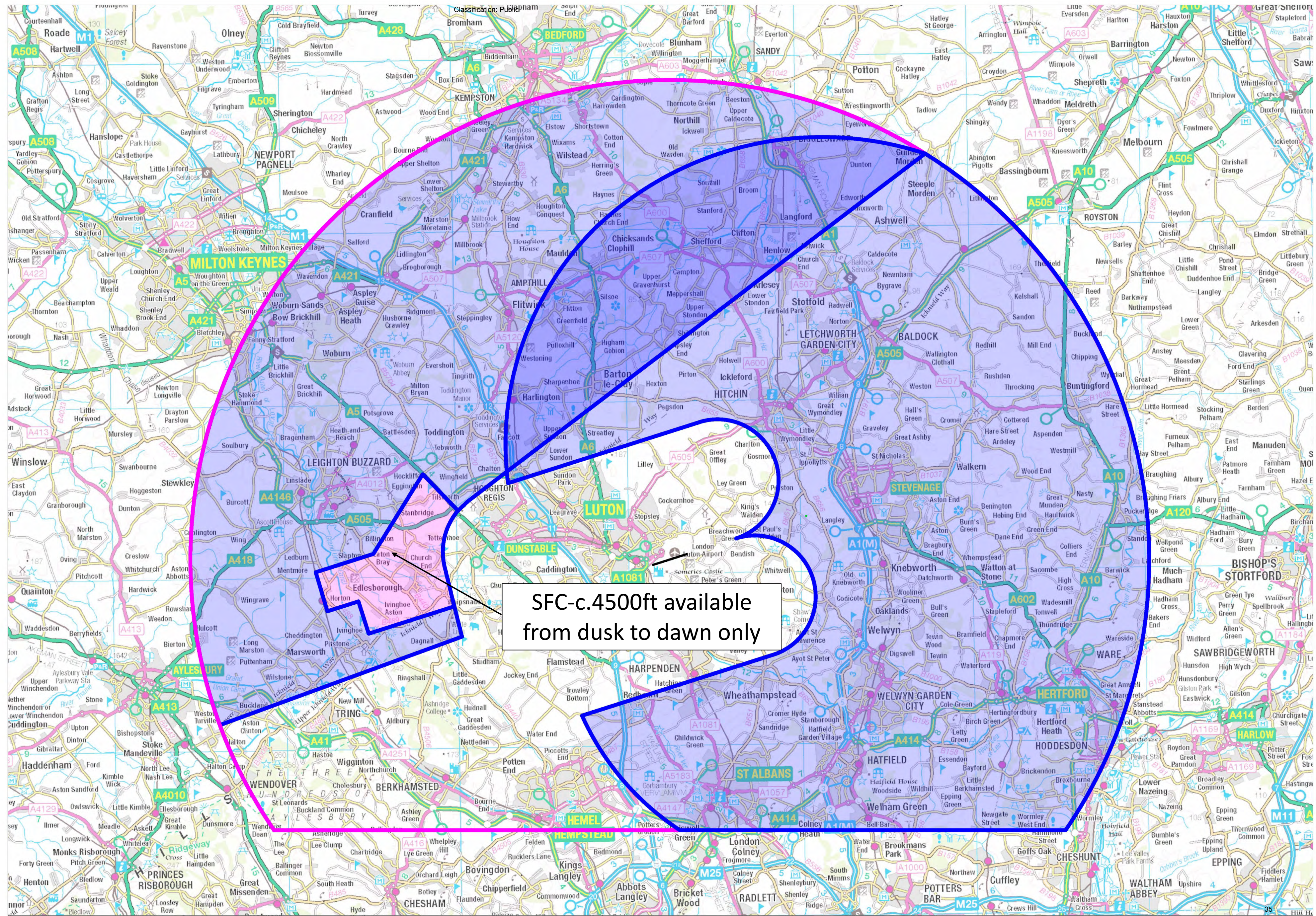
ARRIVALS DESIGN AREAS



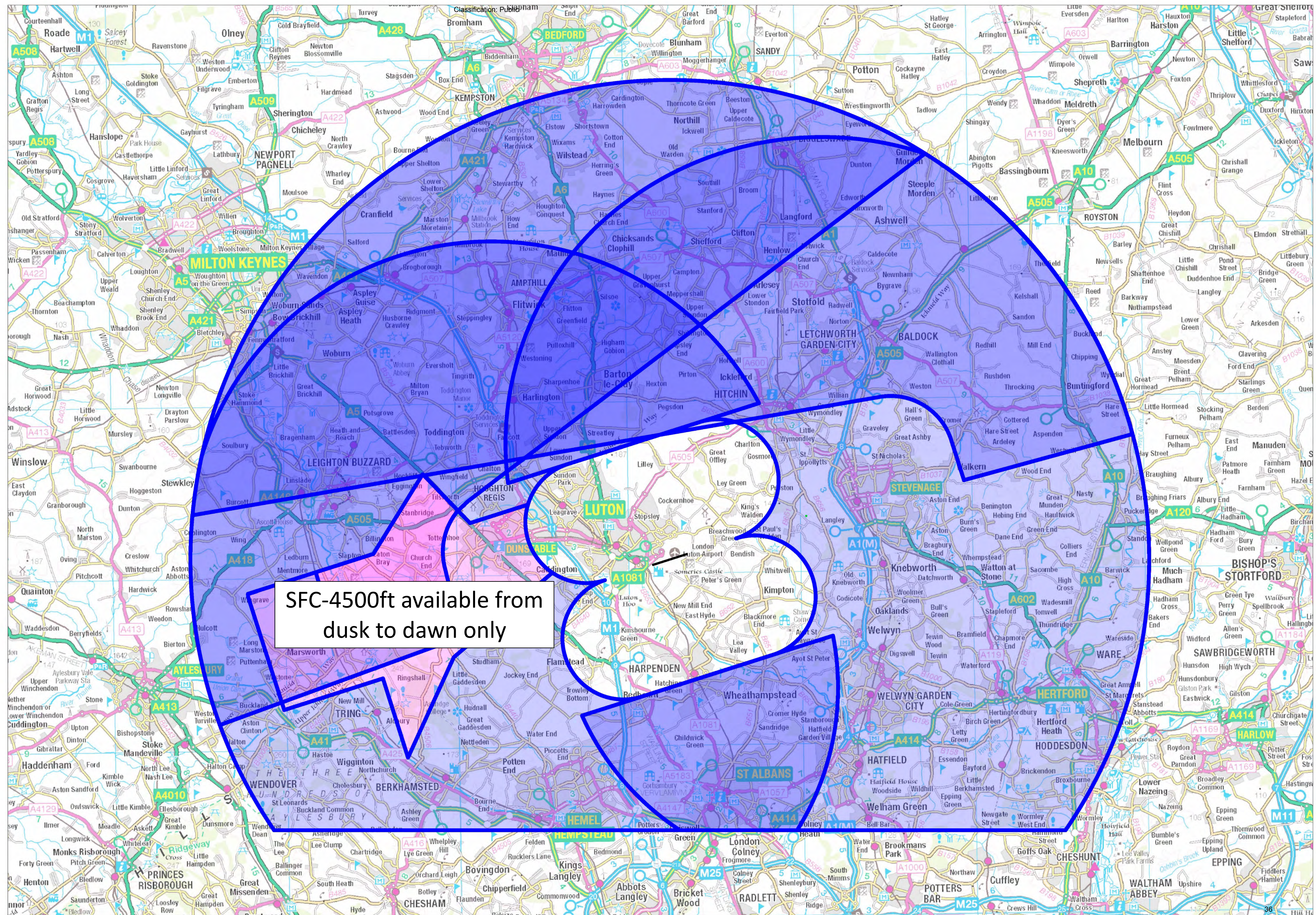
LUTON FASI-S DESIGN AREAS - WESTERLIES



LUTON FASI-S DESIGN AREAS - EASTERLIES

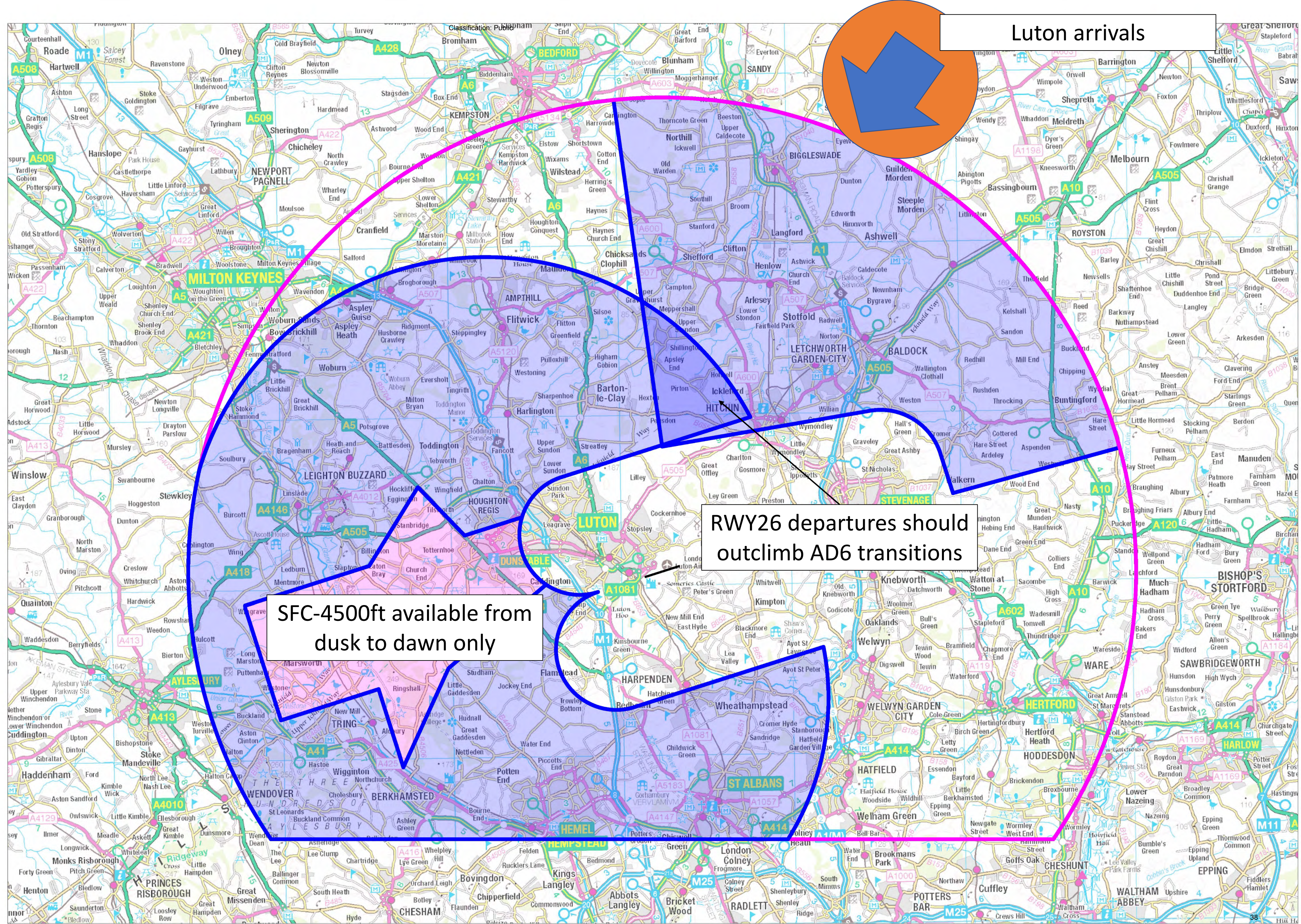


LUTON FASI-S DESIGN AREAS



Relationship with AD6

LUTON FASI-S DESIGN AREAS - WESTERLIES

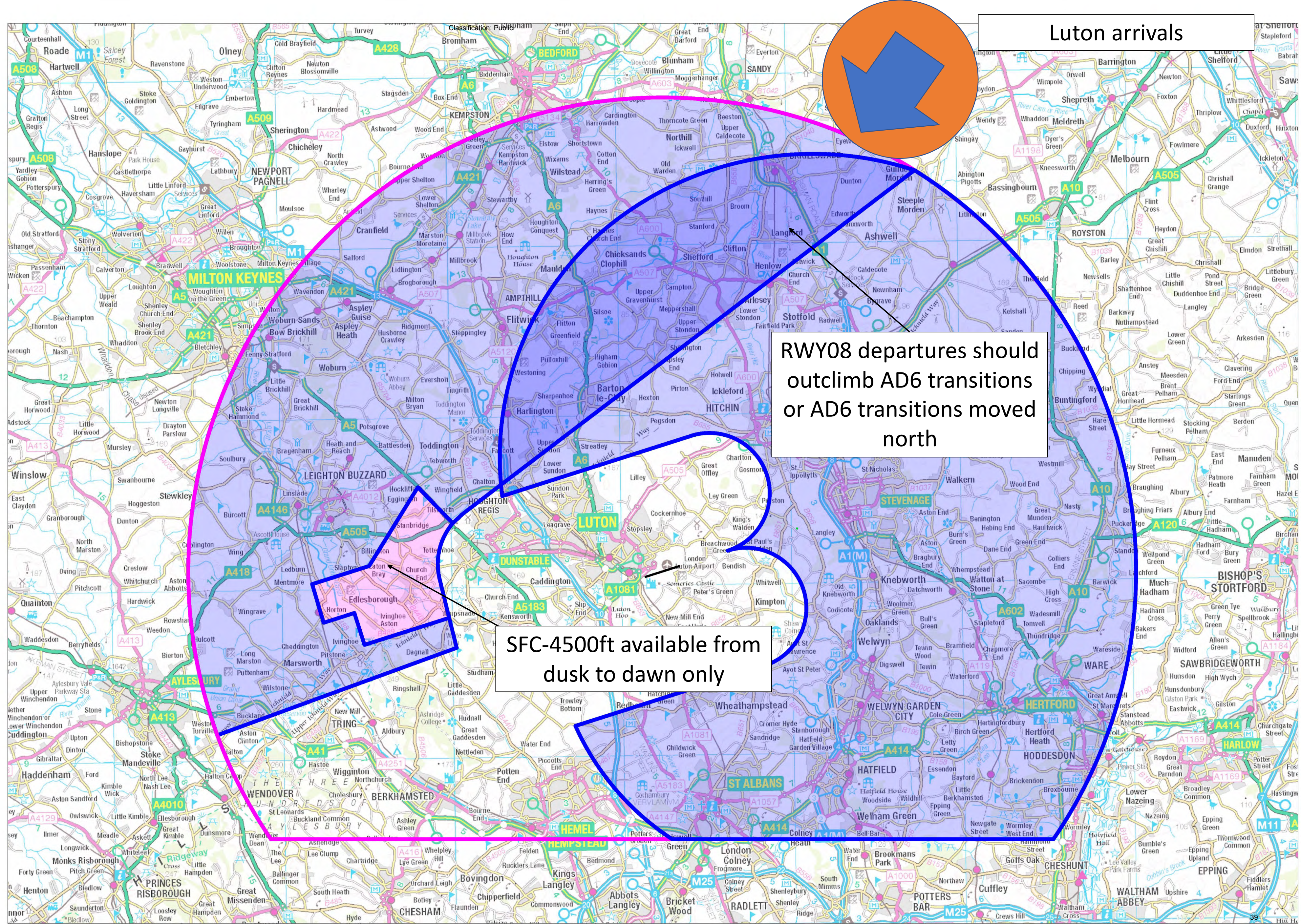


Luton arrivals

RWY26 departures should outclimb AD6 transitions

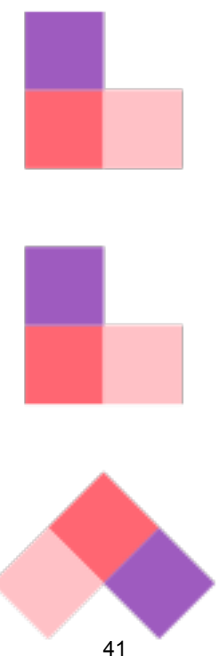
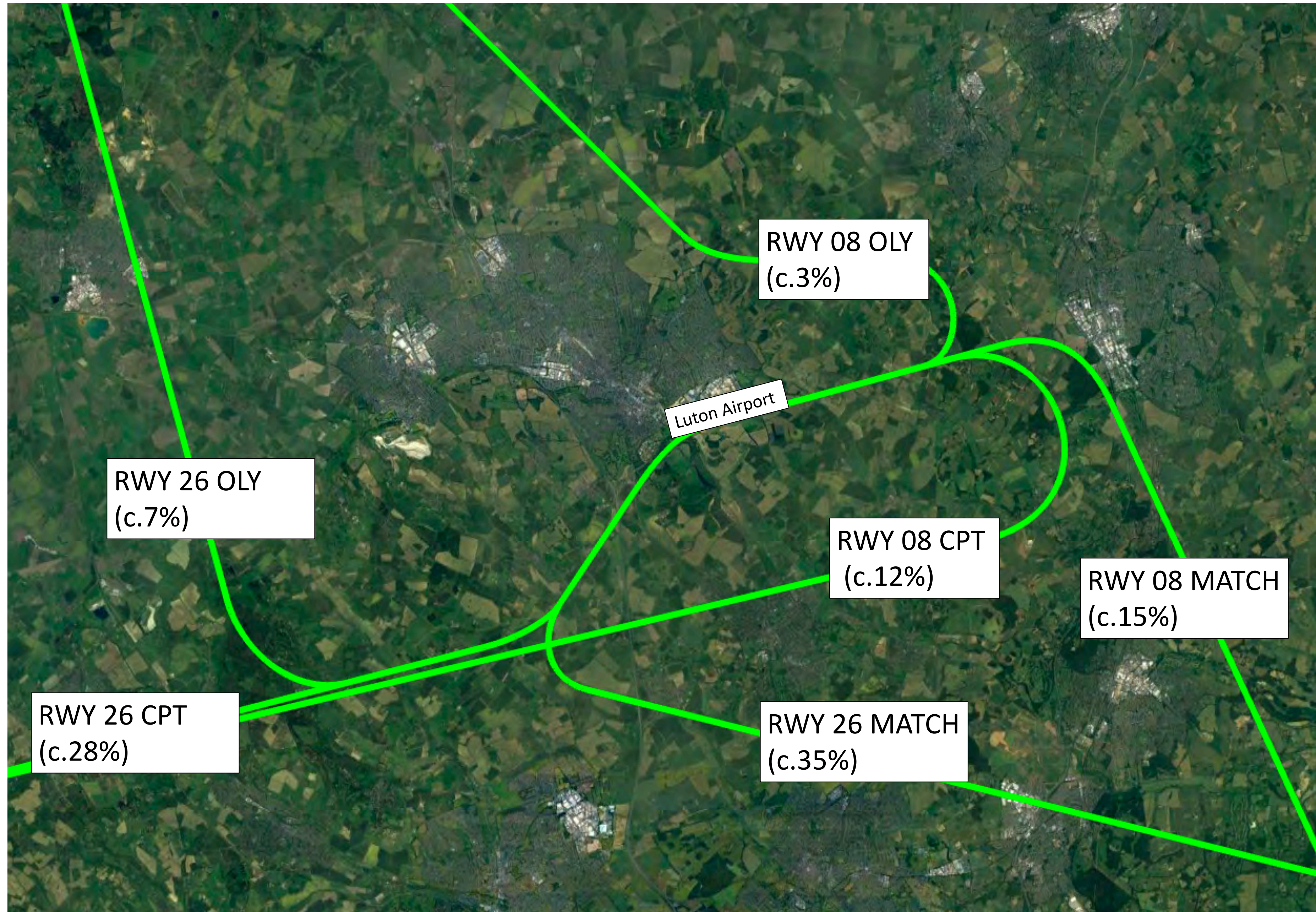
SFC-4500ft available from dusk to dawn only

LUTON FASI-S DESIGN AREAS
- EASTERLIES

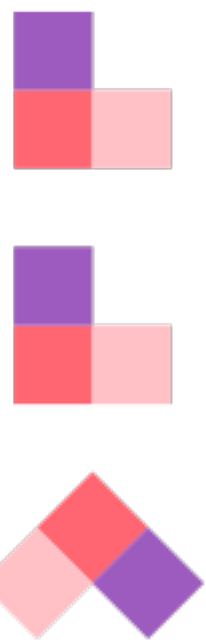
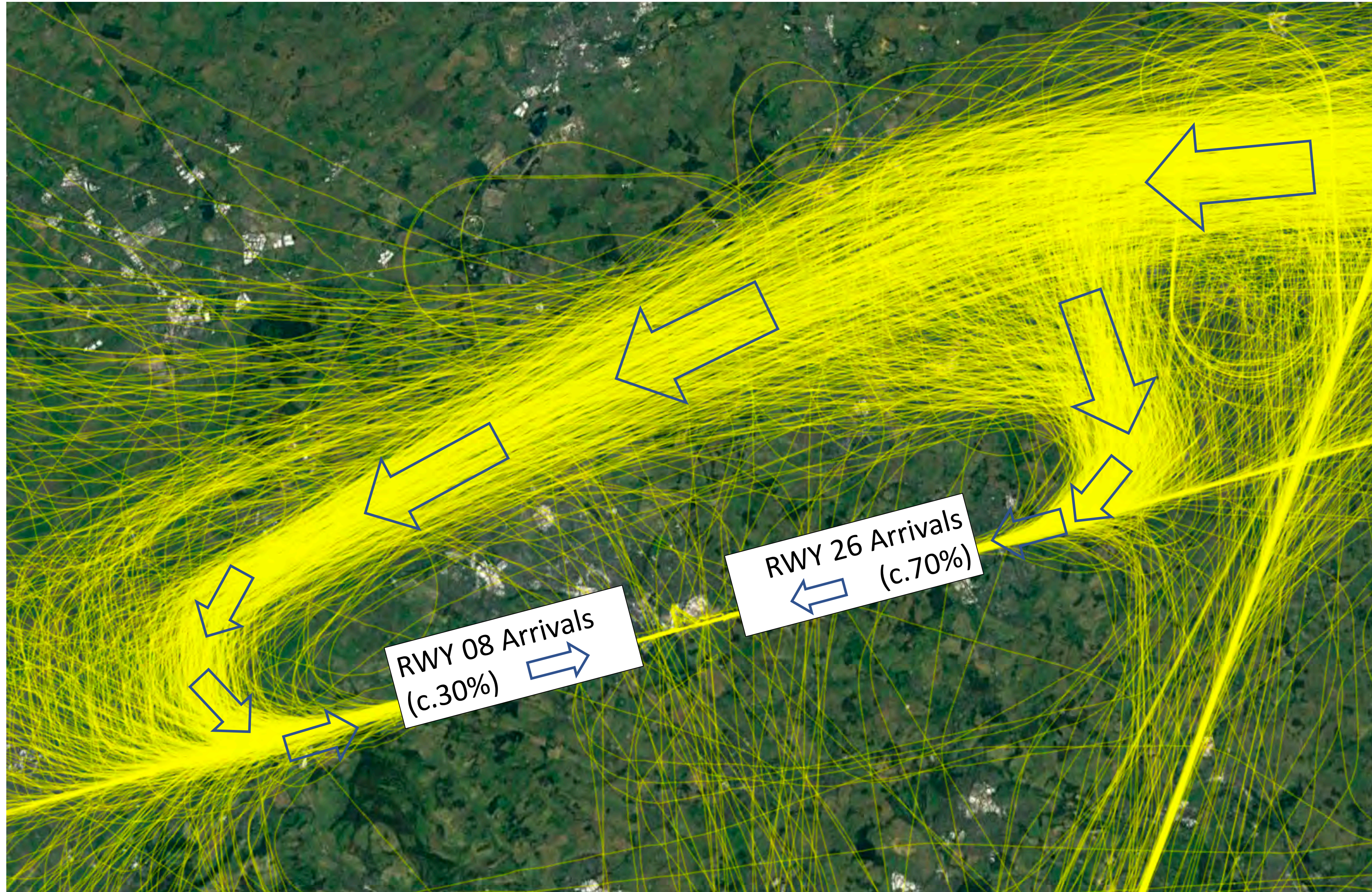


TODAY'S ROUTE STRUCTURE

Current published departure route structure and approximate usage



Classification: Public
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

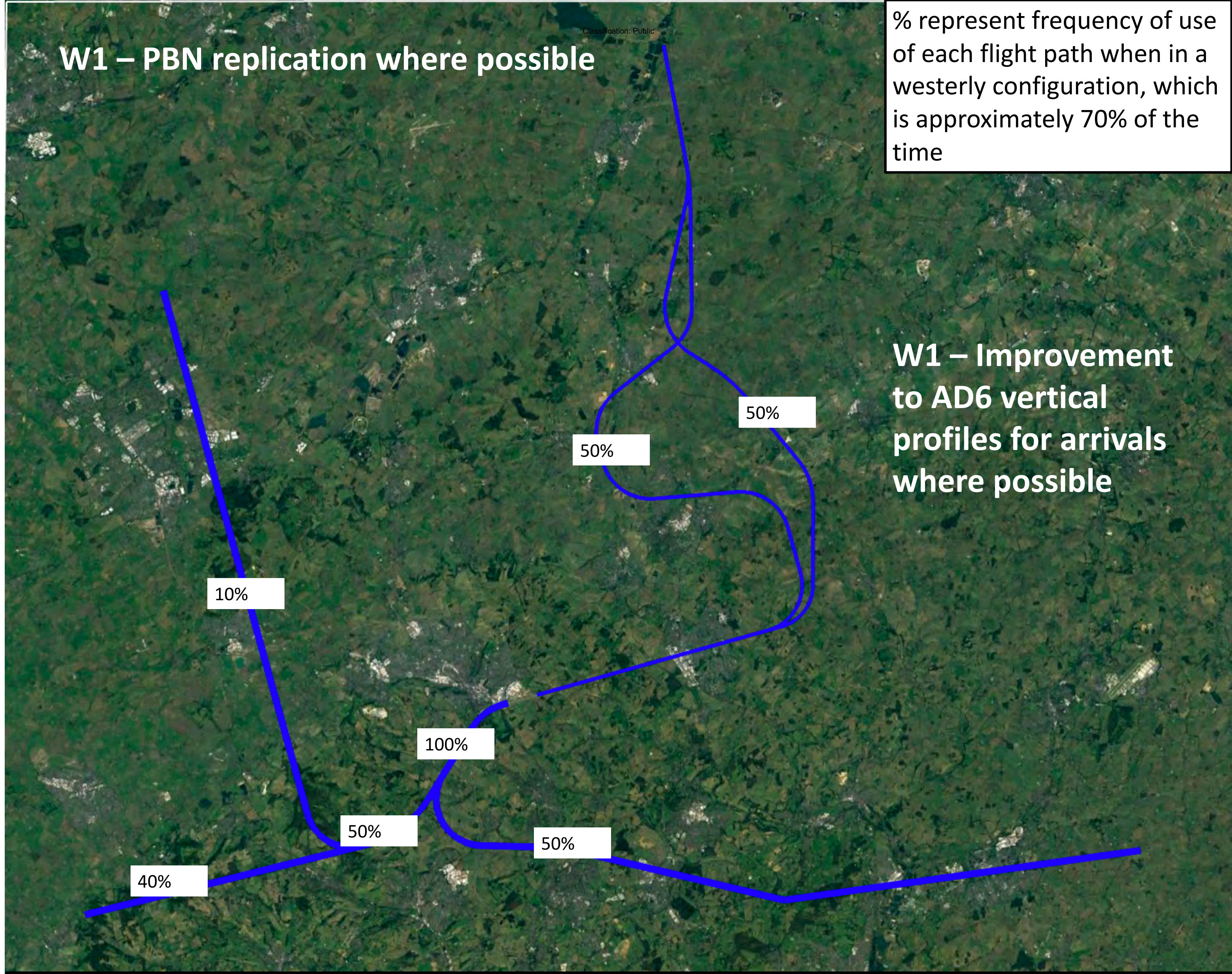
Westerly operations

ALL FLIGHT PATHS ILLUSTRATIVE ONLY

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

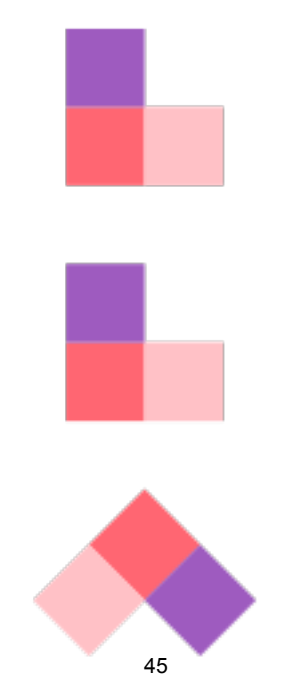
W1 – PBN replication where possible

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



W1 – 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.



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



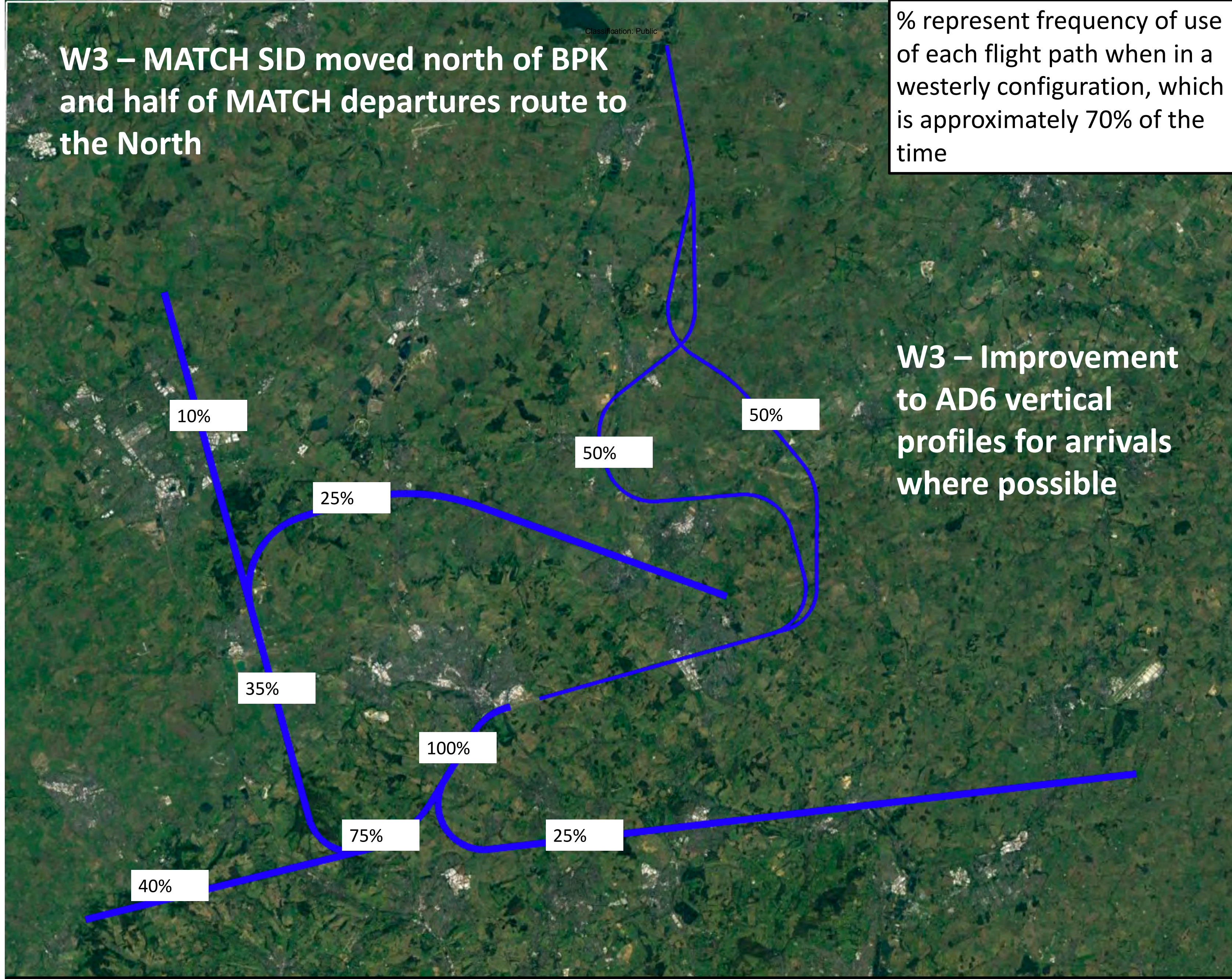
W2 – Improvement to AD6 vertical profiles for arrivals where possible

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.



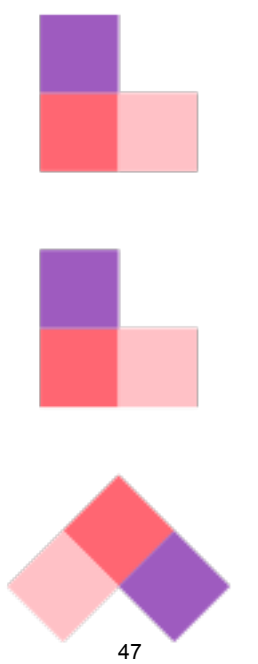
W3 – MATCH SID moved north of BPK and half of MATCH departures route to the North

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



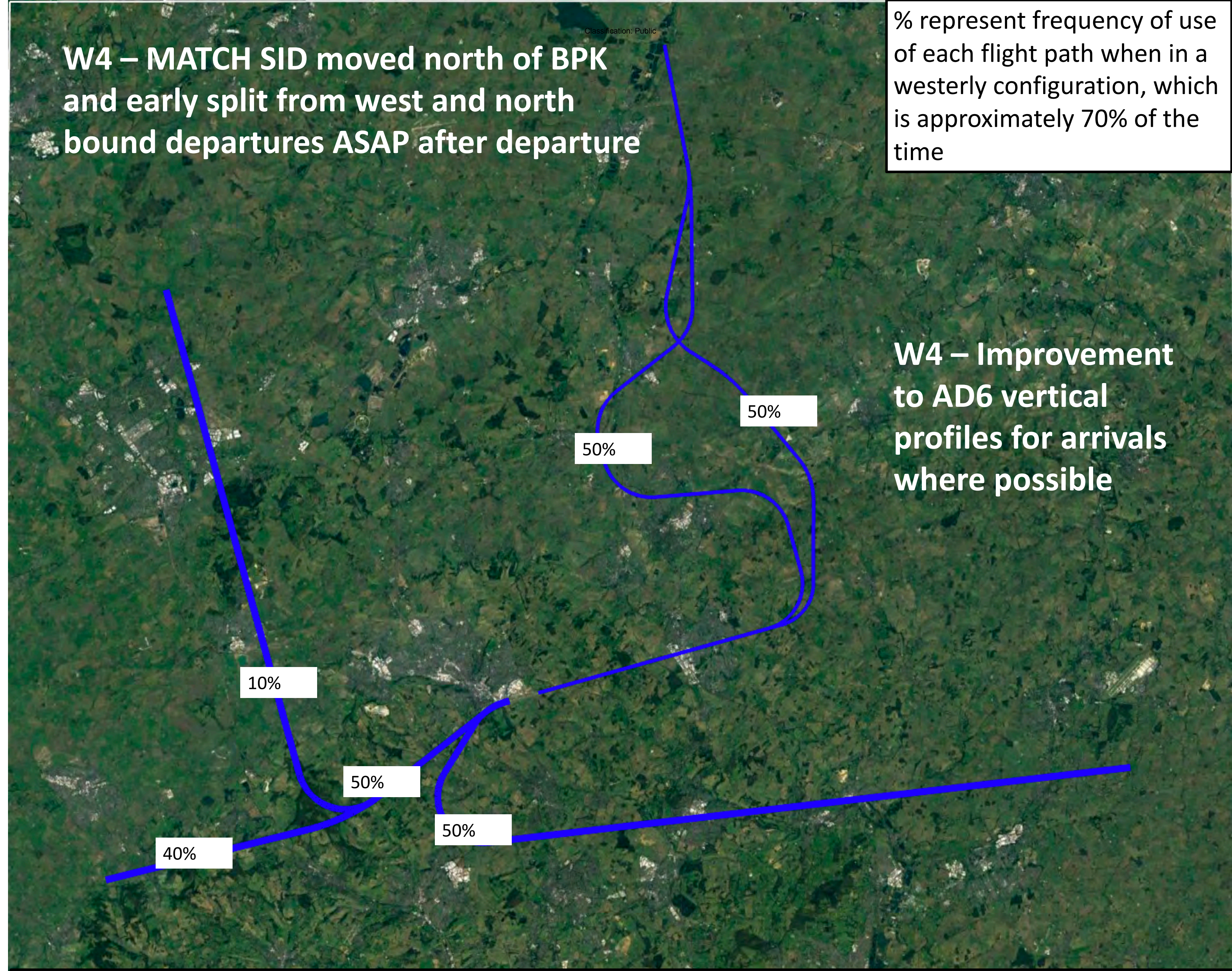
W3 – Improvement to AD6 vertical profiles for arrivals where possible

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.



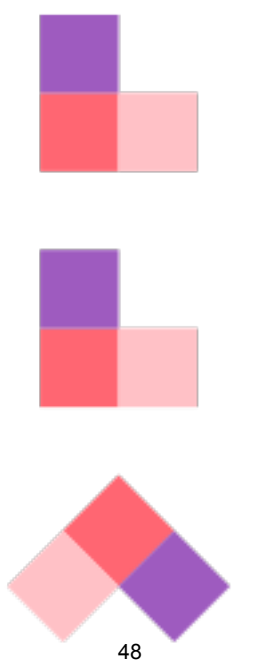
W4 – MATCH SID moved north of BPK and early split from west and north bound departures ASAP after departure

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



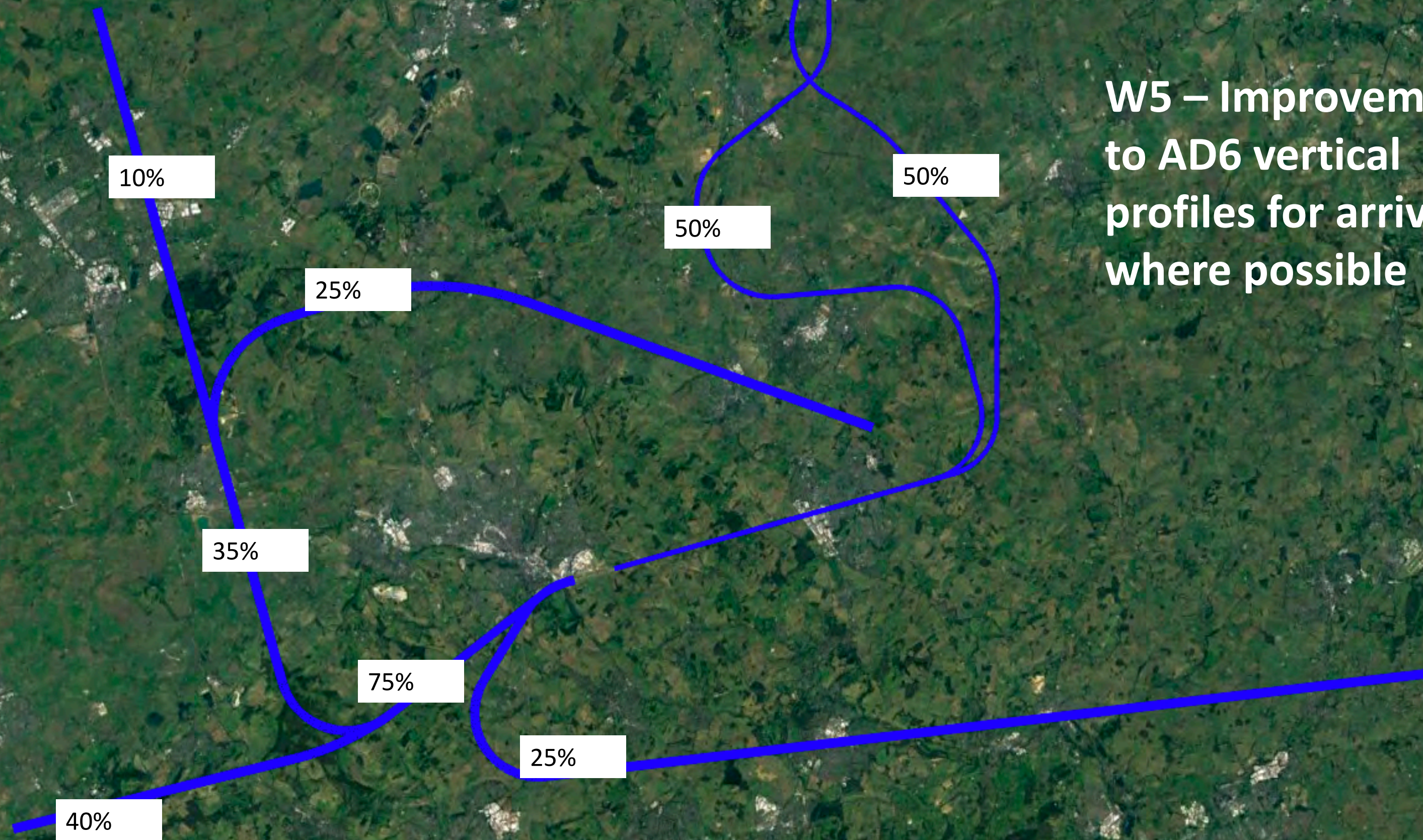
W4 – Improvement to AD6 vertical profiles for arrivals where possible

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.



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

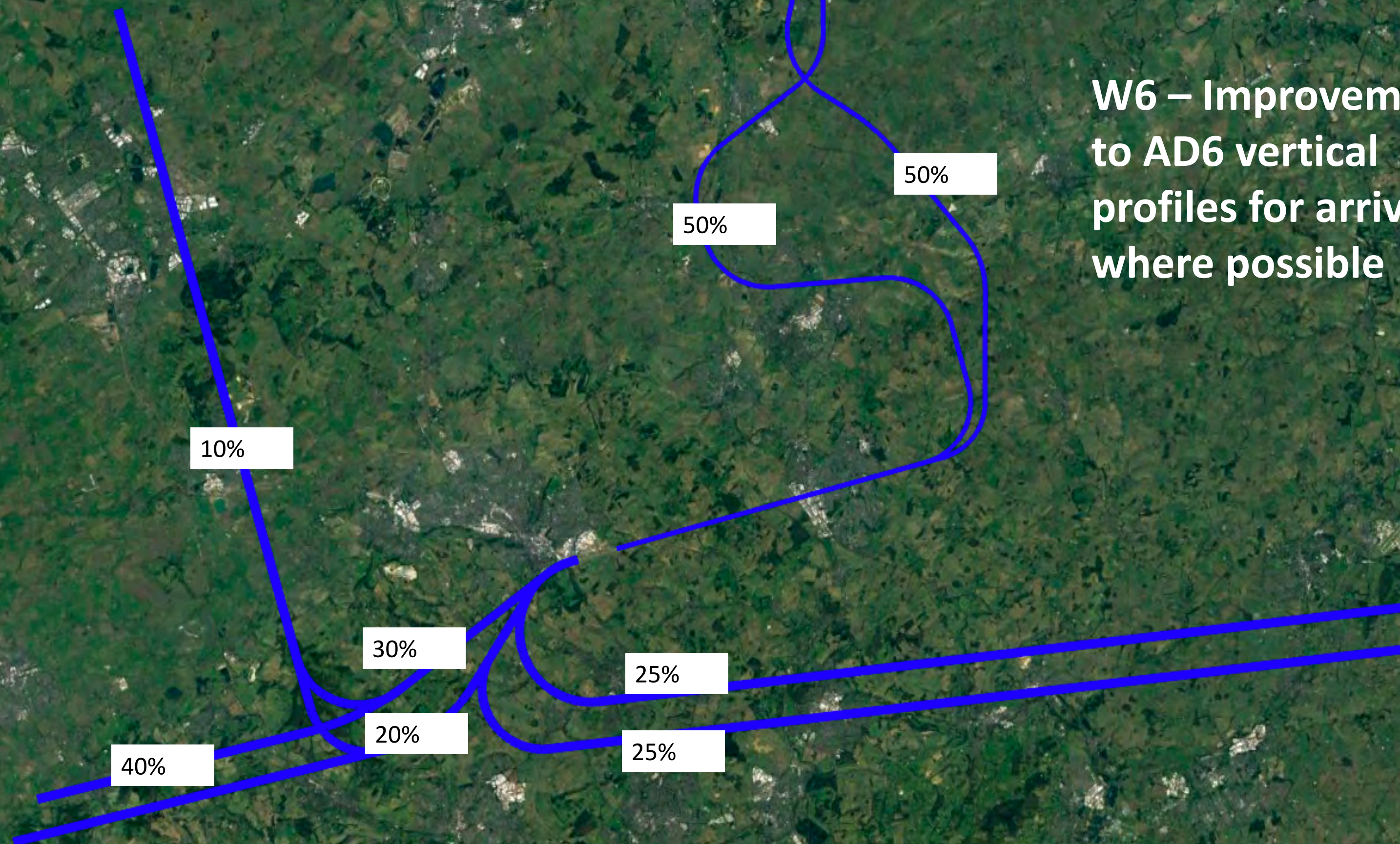
Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.



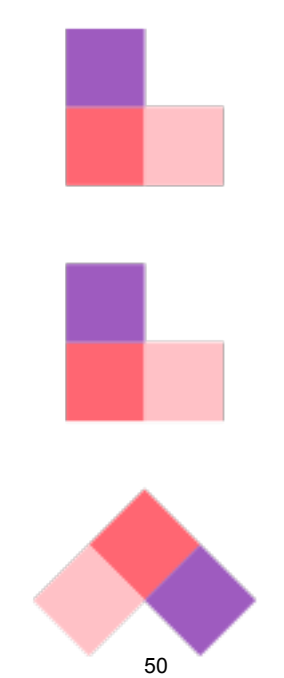
W6 – 2 MATCH SIDs offset for respite, early split from west and north bound departures ASAP after departure and also two tracks for those departures for respite

% 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



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.

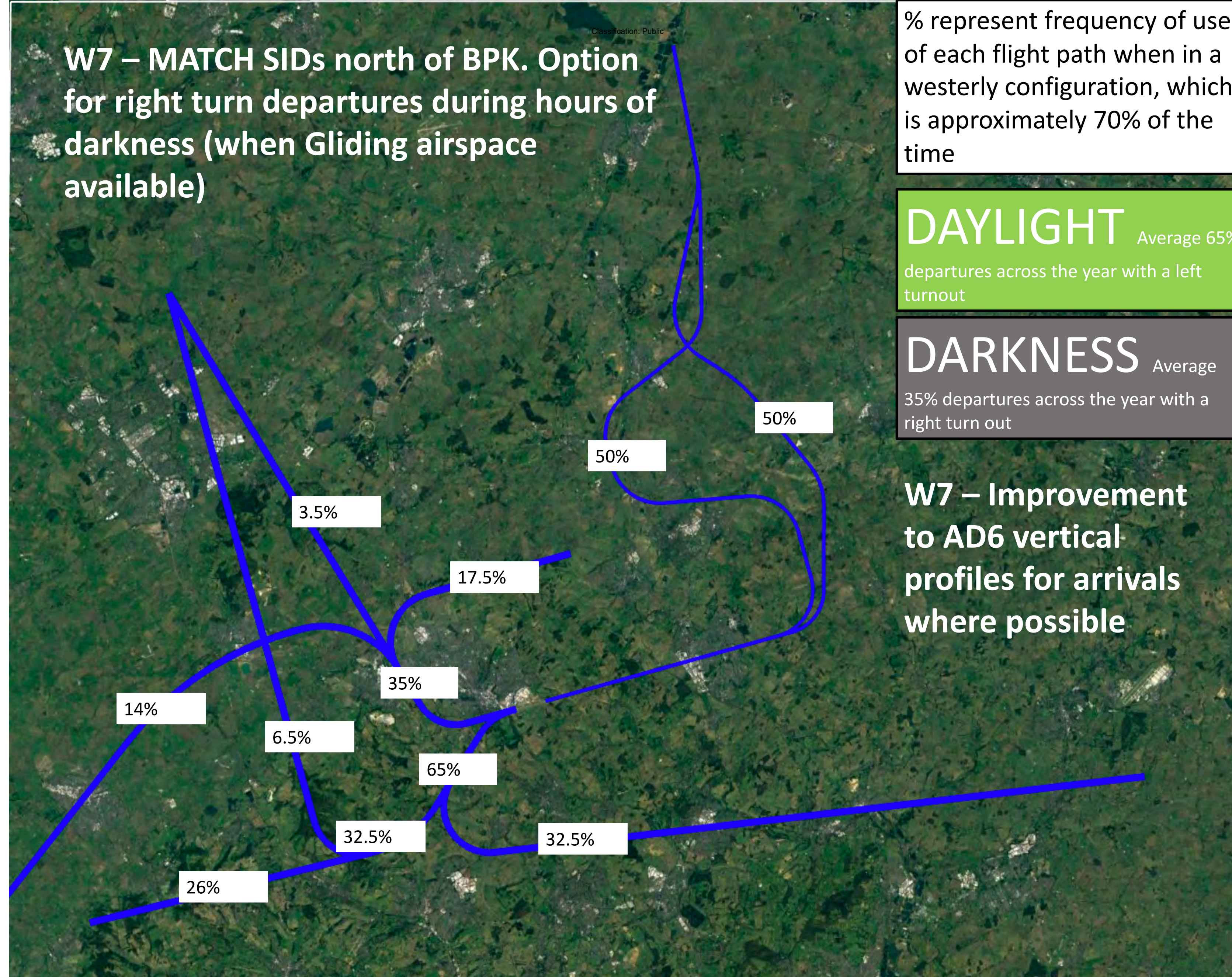


W7 – MATCH SIDs north of BPK. Option for right turn departures during hours of darkness (when Gliding airspace available)

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

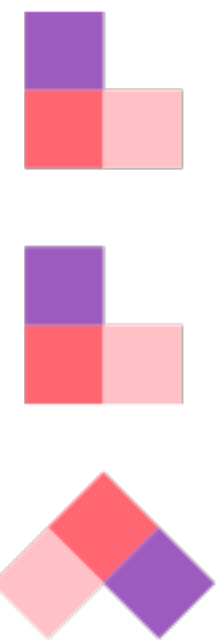
DAYLIGHT Average 65%
departures across the year with a left turnout

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



W7 – Improvement to AD6 vertical profiles for arrivals where possible

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 operations

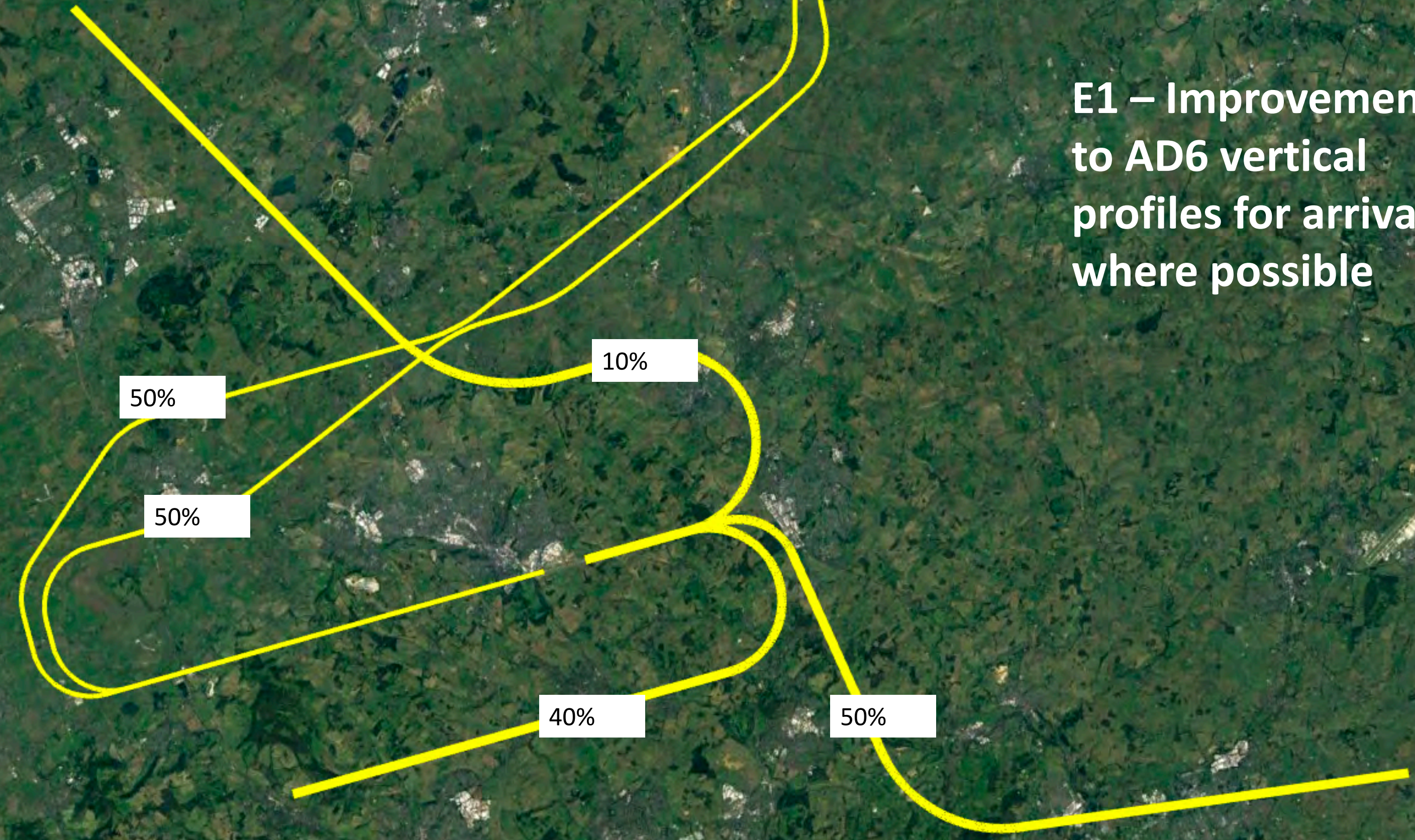
ALL FLIGHT PATHS ILLUSTRATIVE ONLY

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

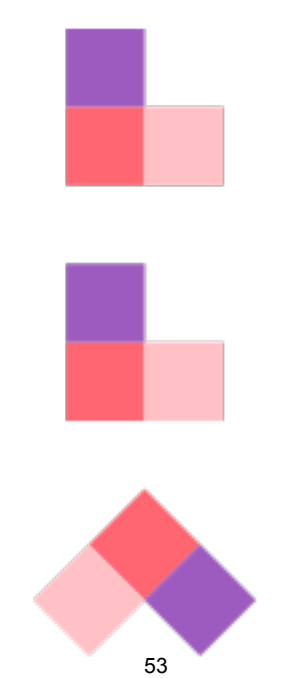
E1 – PBN replication where possible

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

E1 – 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.



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

100%*

10%

40%

50%

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.



E3 – OLY departures extended to gain height to jump arrivals. MATCH SID north of BPK

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

E3 – AD6 arrival routes moved north to facilitate climb of OLY departures. Improvements to arrival profiles expected

100%*

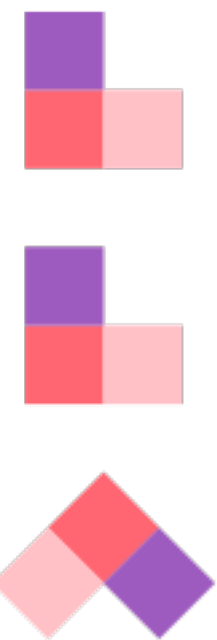
10%

* 50% if more than one arrival route for respite

50%

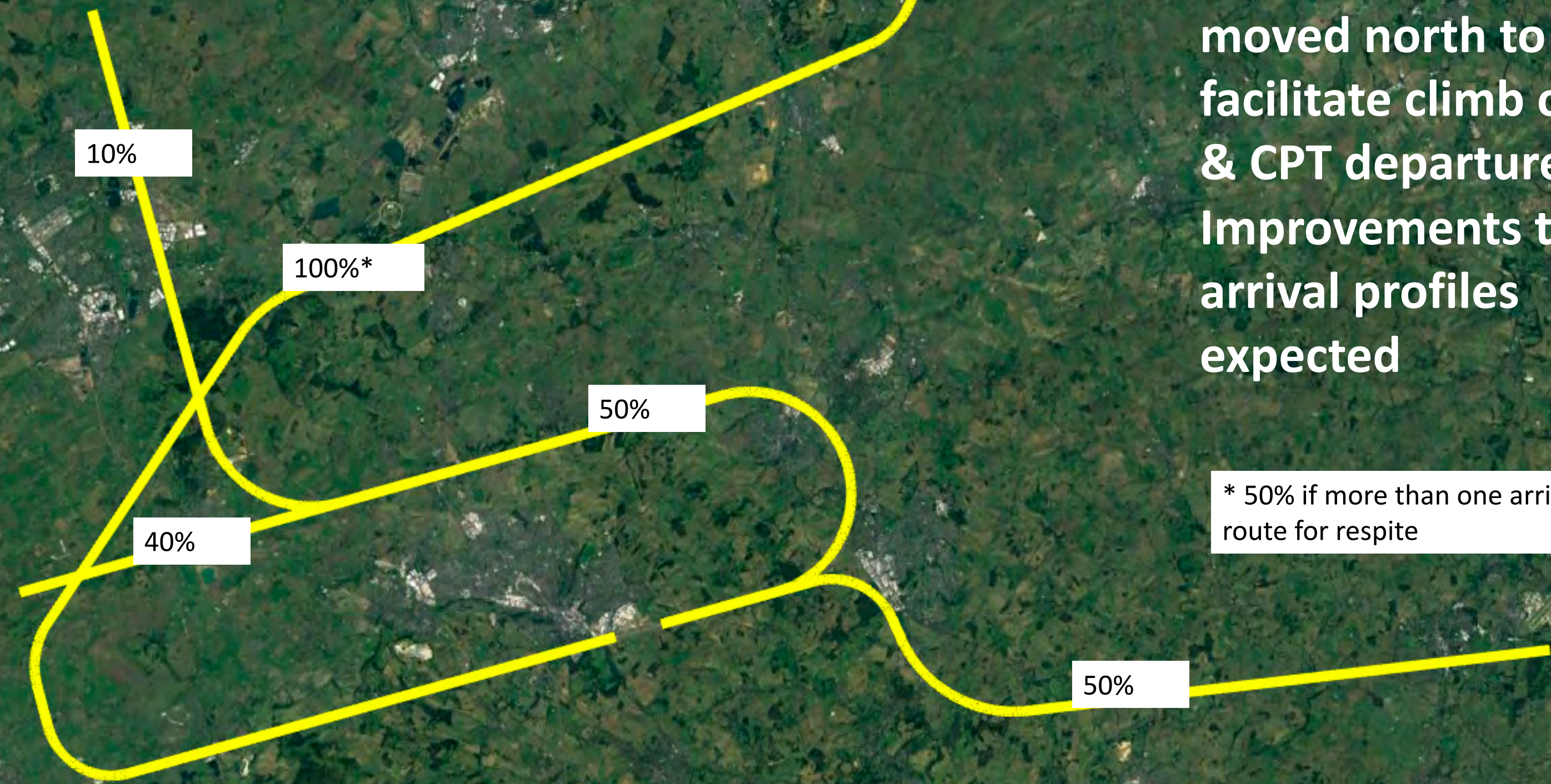
40%

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.



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

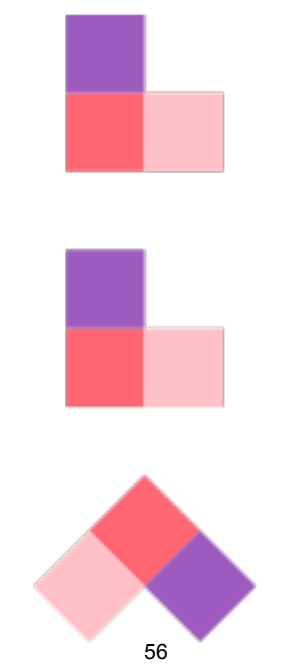
% represent frequency of use of each flight path when in an easterly configuration, which is approximately 30% of the time



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

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.



E5 – OLY departures extended to gain height to jump arrivals. CPT departure left turn out to avoid overflying 26 departure areas and all departures turn earlier than today to avoid 26 final approach

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

10%

100%*

50%

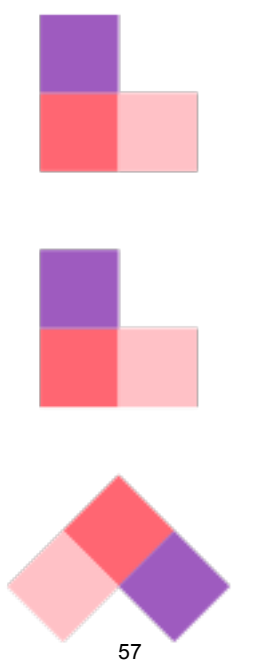
40%

50%

E5 – 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

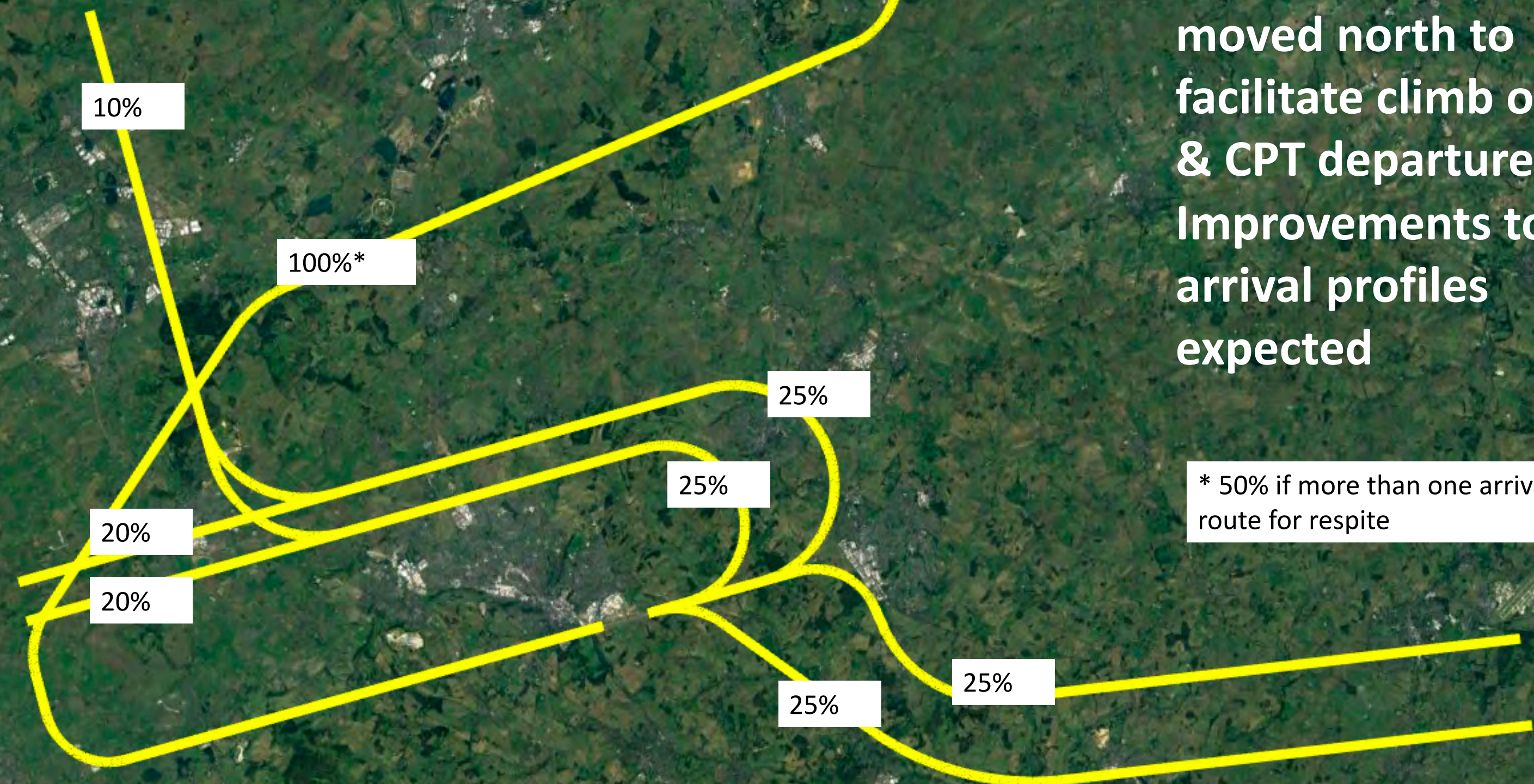
Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.



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

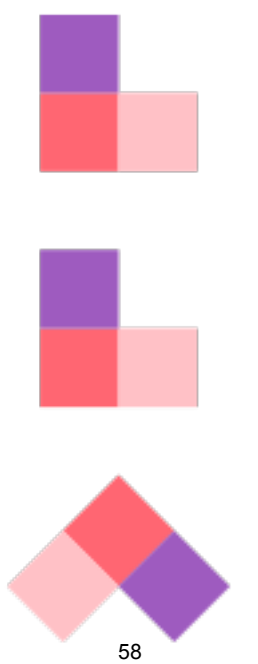
% represent frequency of use of each flight path when in an easterly configuration, which is approximately 30% of the time

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

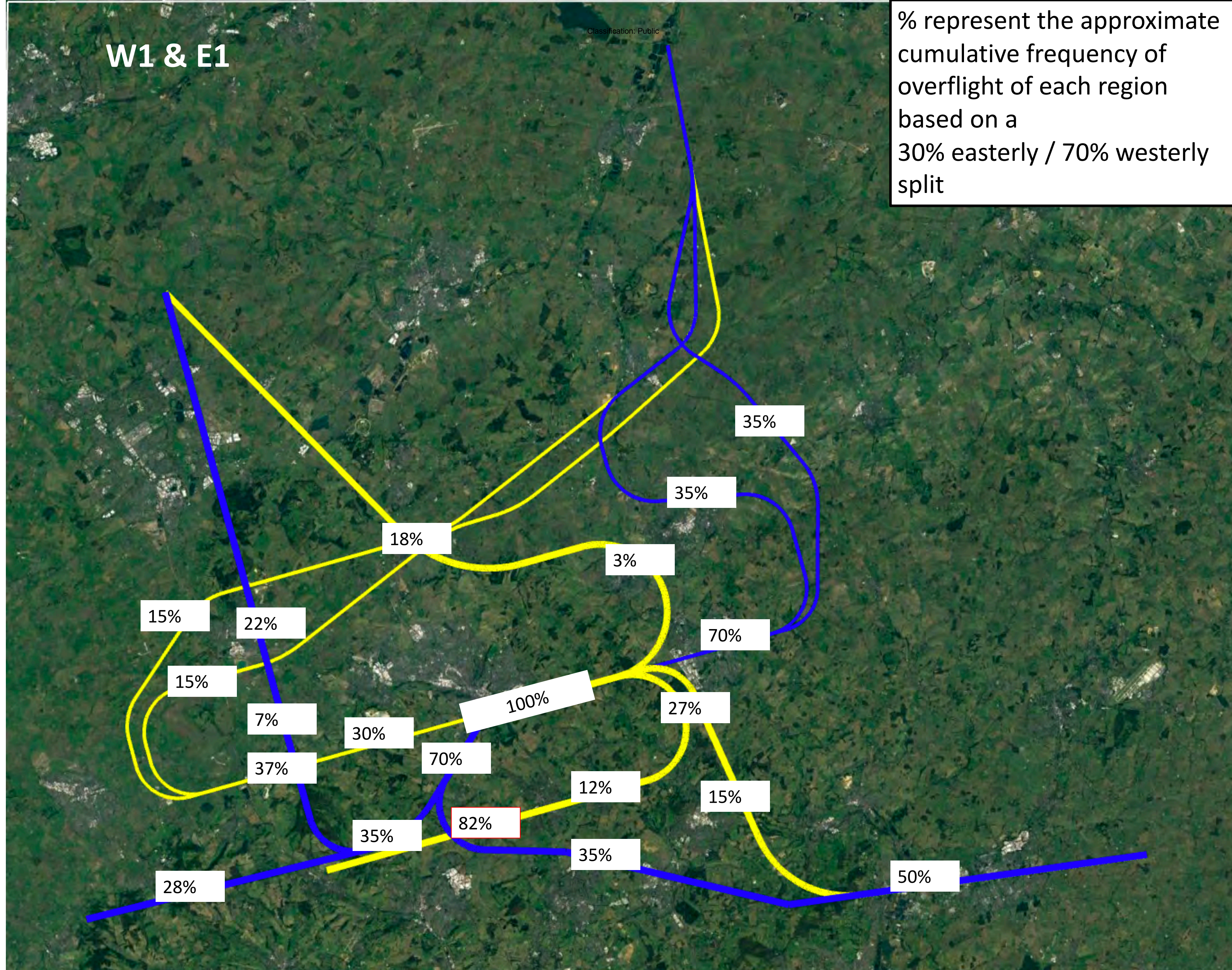
ALL FLIGHT PATHS ILLUSTRATIVE ONLY

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

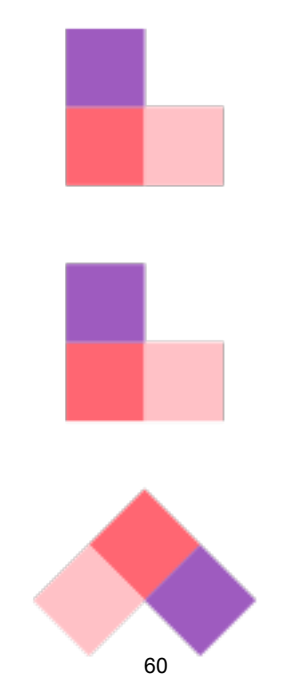
	Westerly (RWY26)	Easterly (RWY08)
MATCH	50 (35%)	50 (15%)
CPT	40 (28%)	40 (12%)
OLY	10 (7%)	10 (3%)

W1 & E1

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



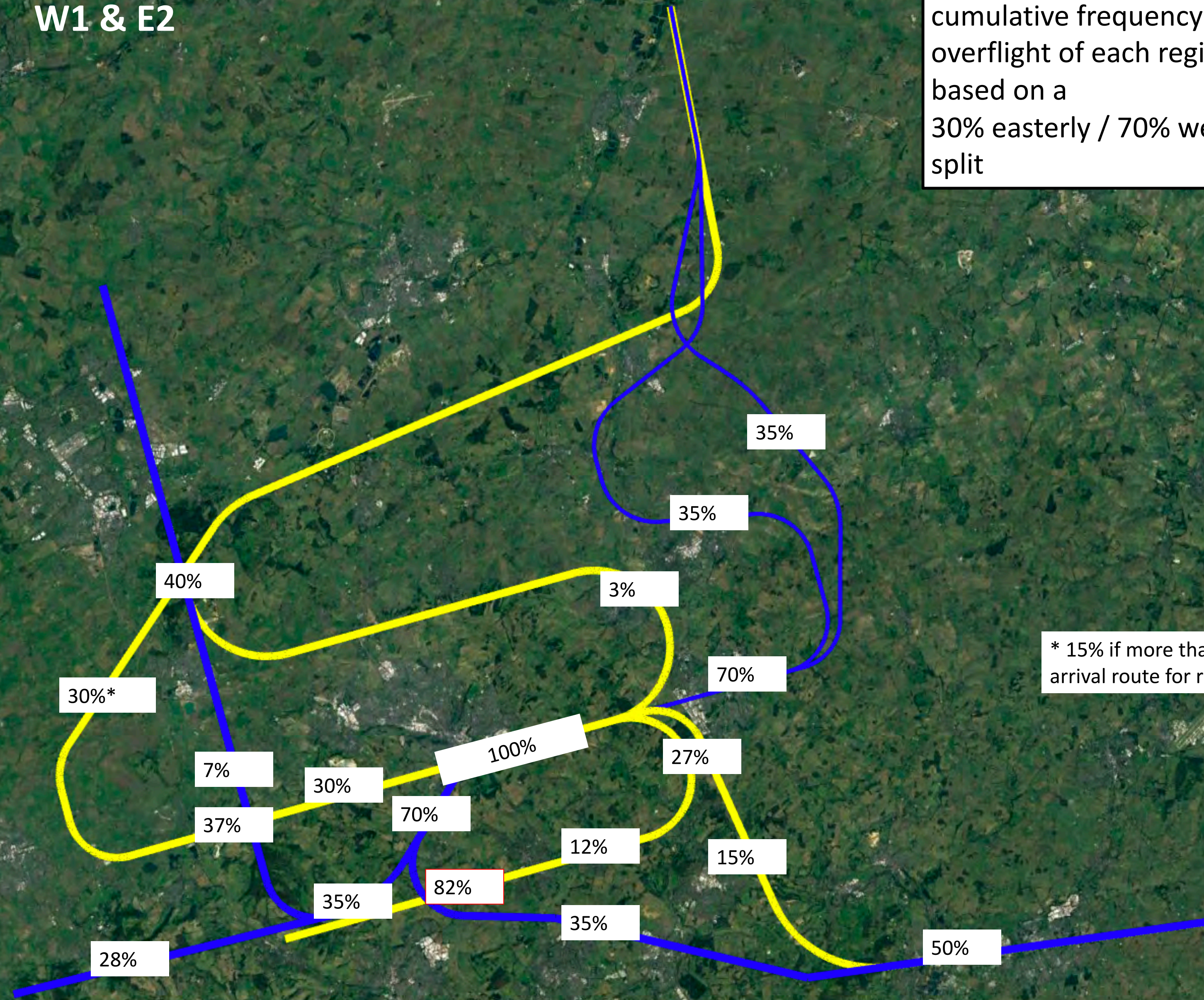
Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.



W1 & E2

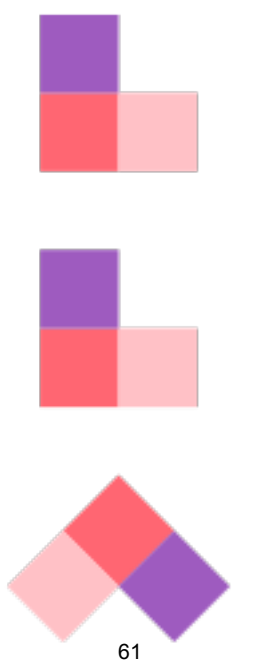
Classification: Public

% 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

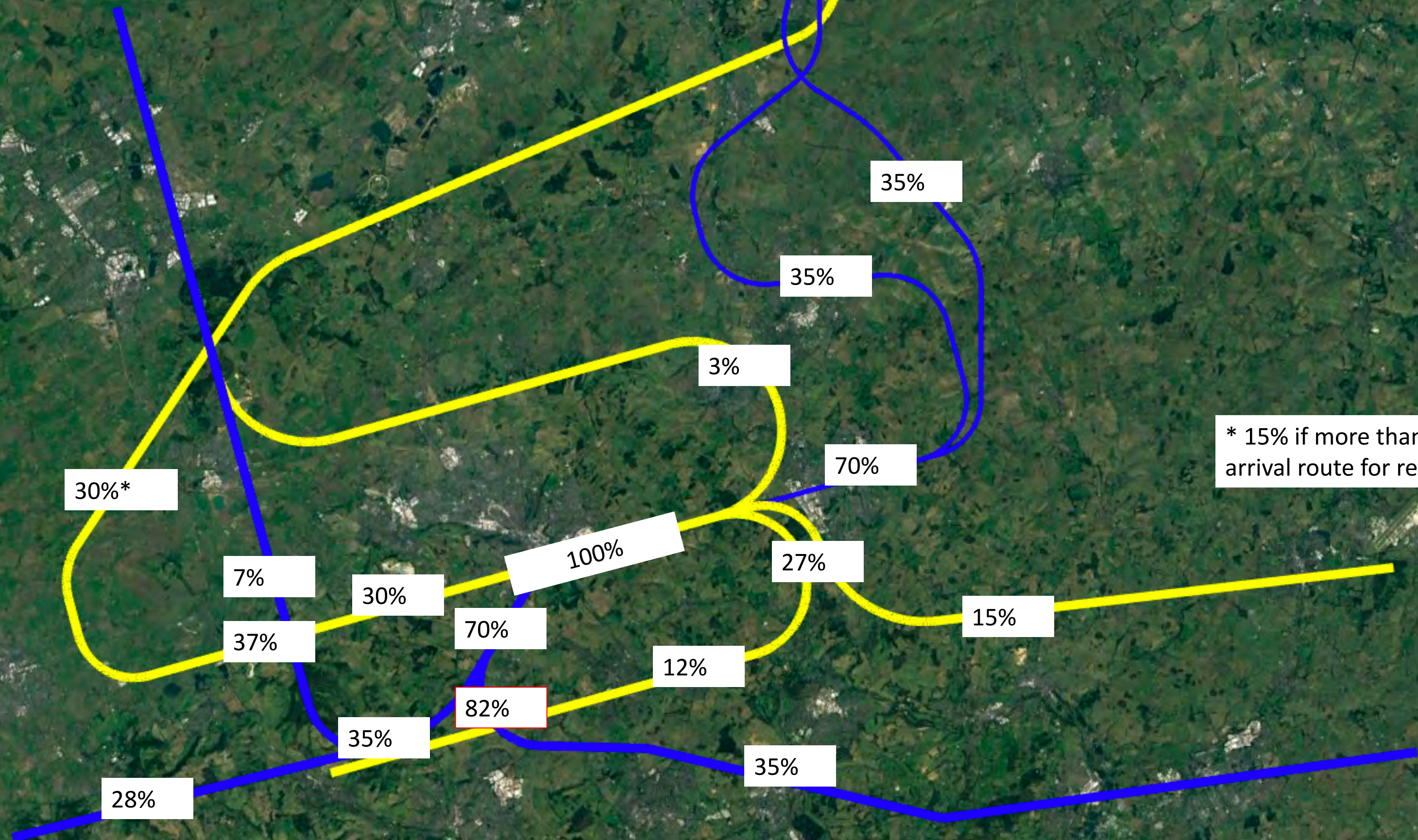
Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.



W1 & E3

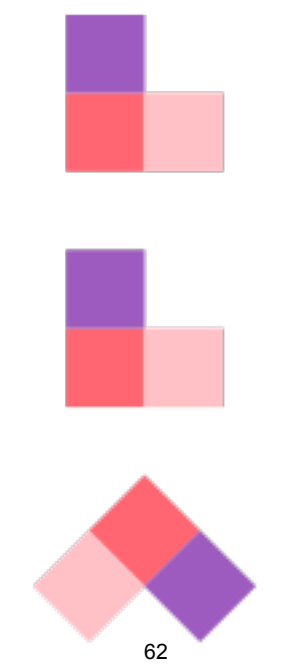
Classification: Public

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



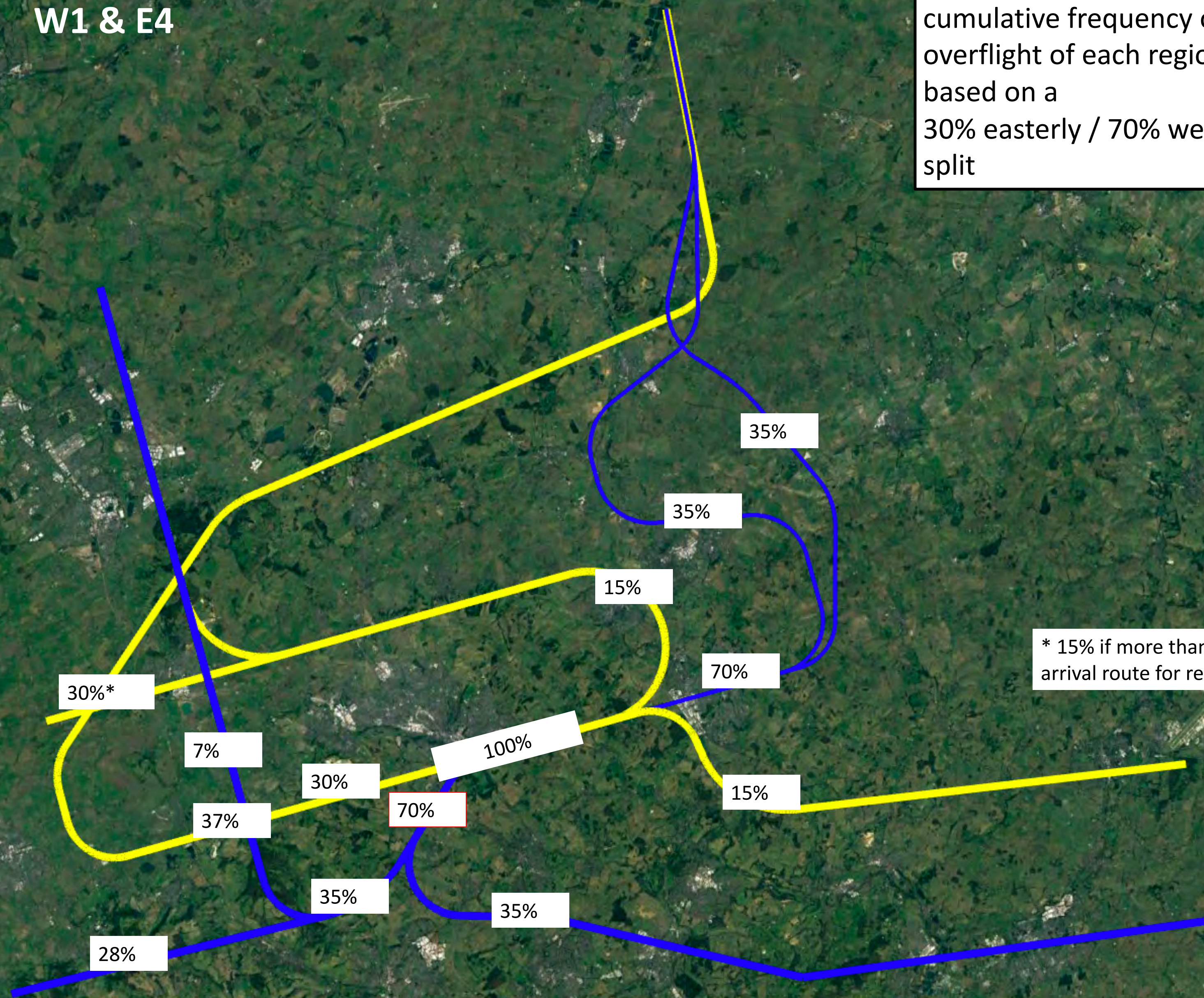
* 15% if more than one arrival route for respite

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.



W1 & E4

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



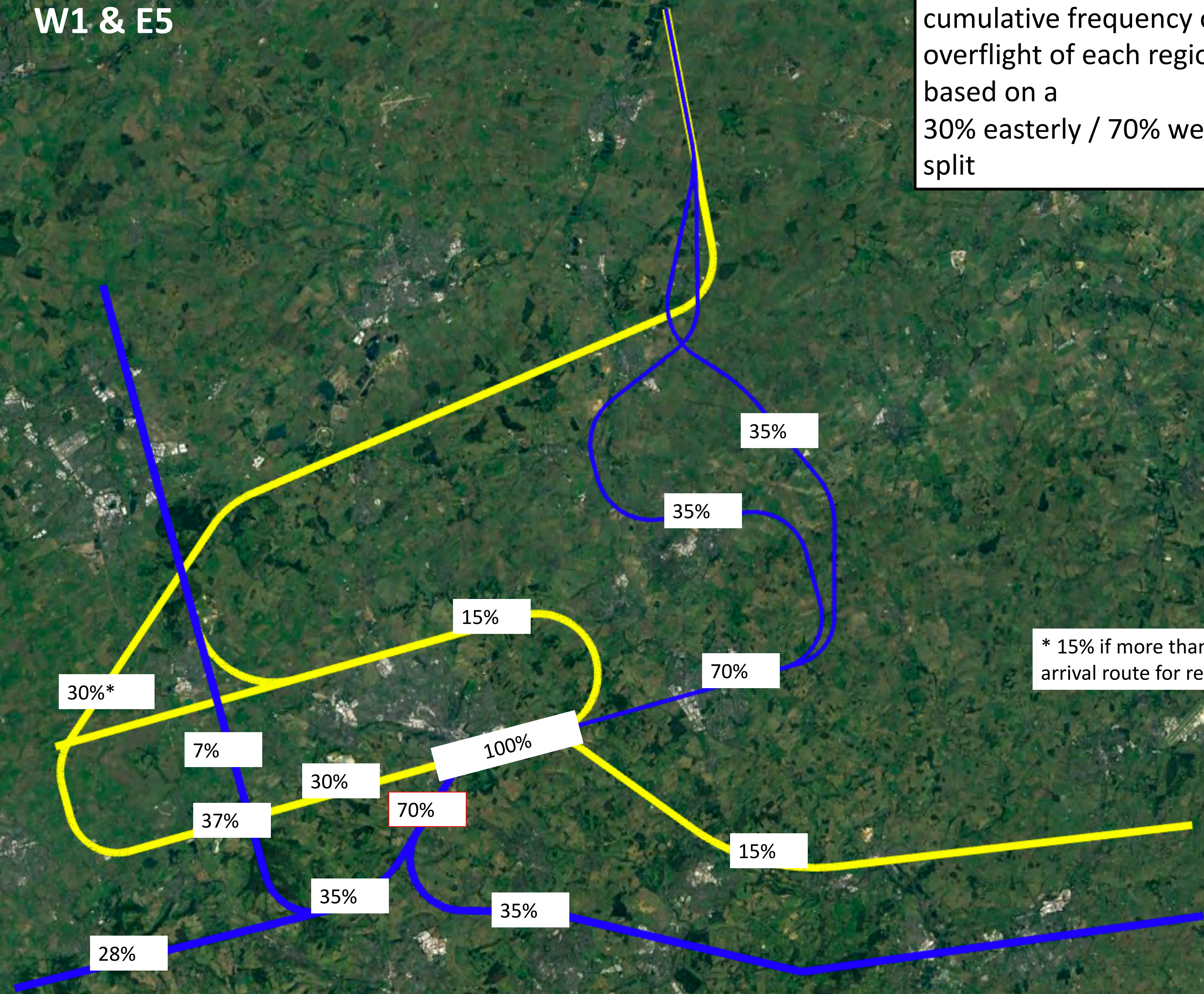
* 15% if more than one arrival route for respite

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.



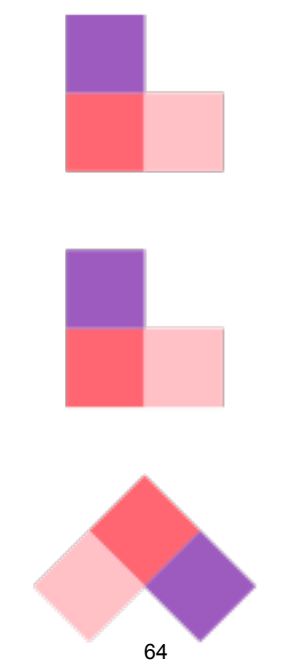
W1 & E5

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



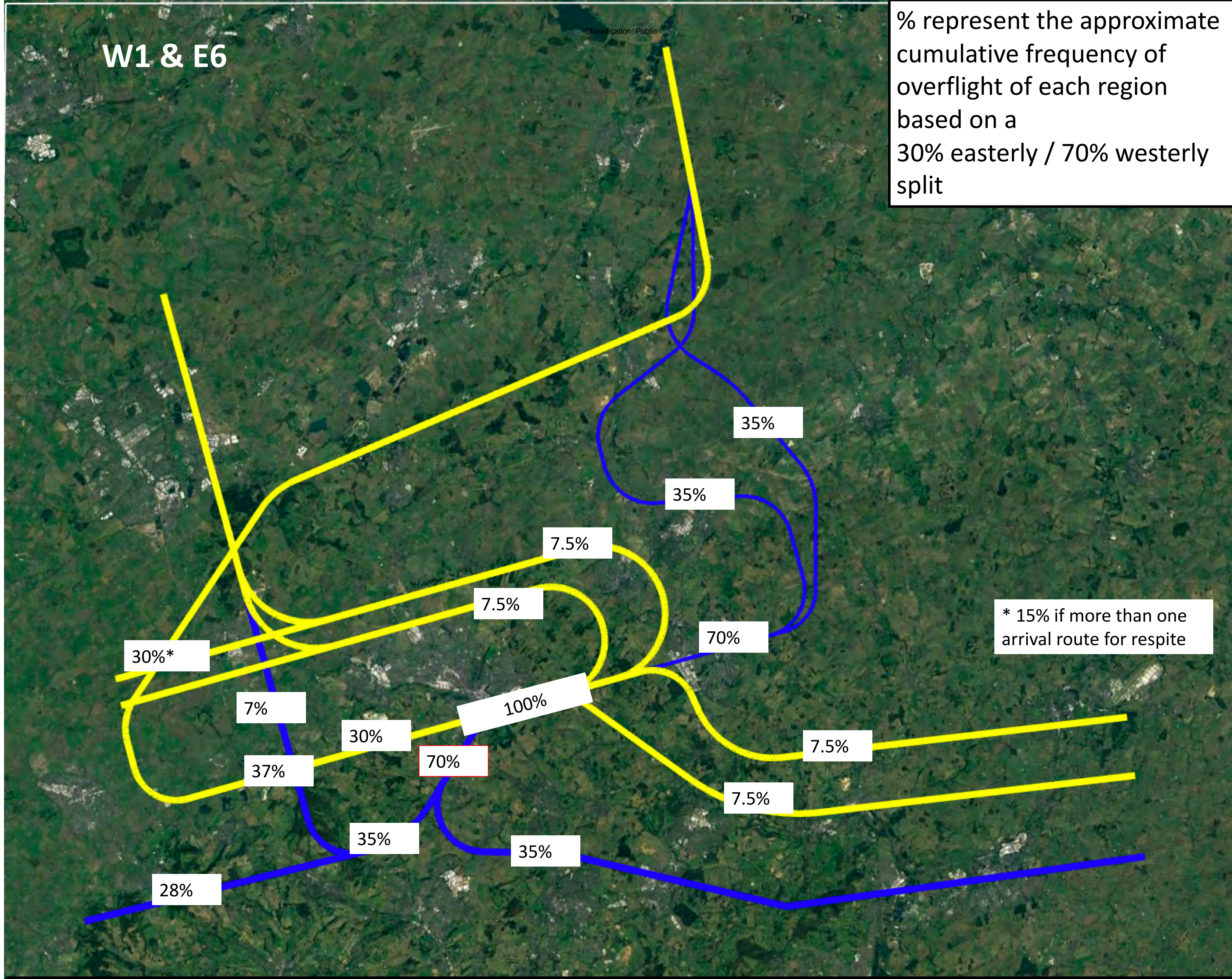
* 15% if more than one arrival route for respite

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.

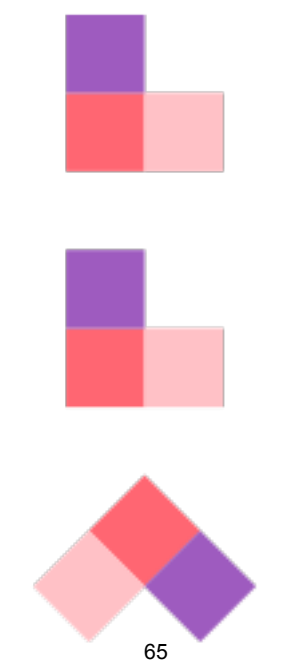


W1 & E6

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



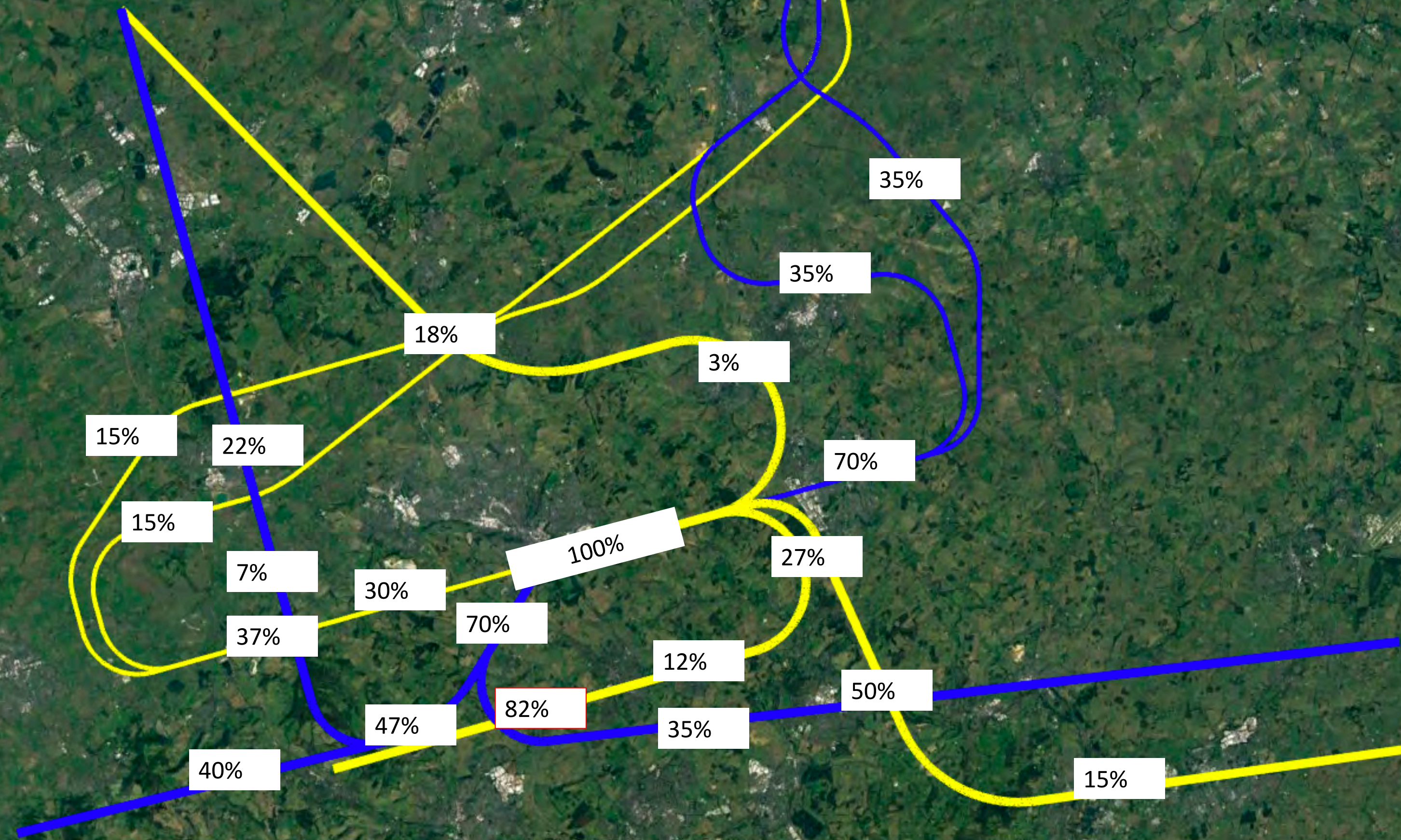
Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.



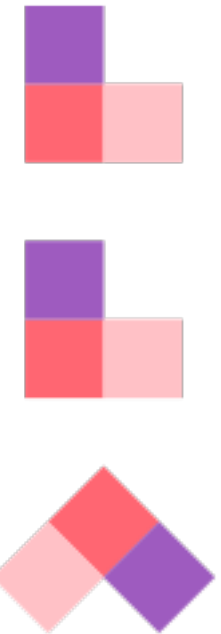
W2 & E1

Classification: Public

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

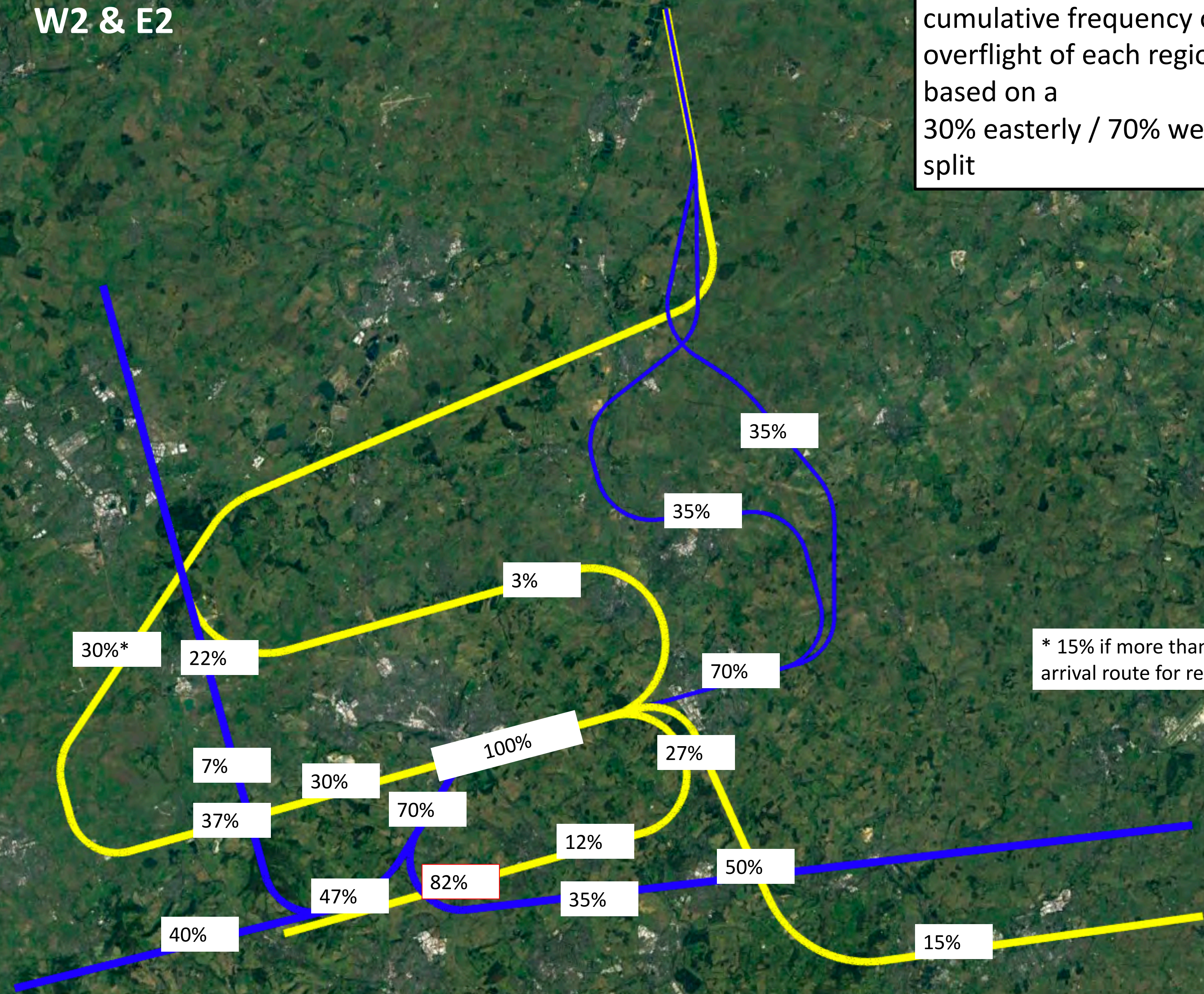


Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.



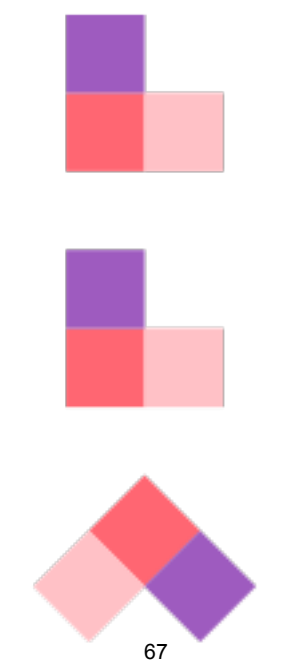
W2 & E2

% 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

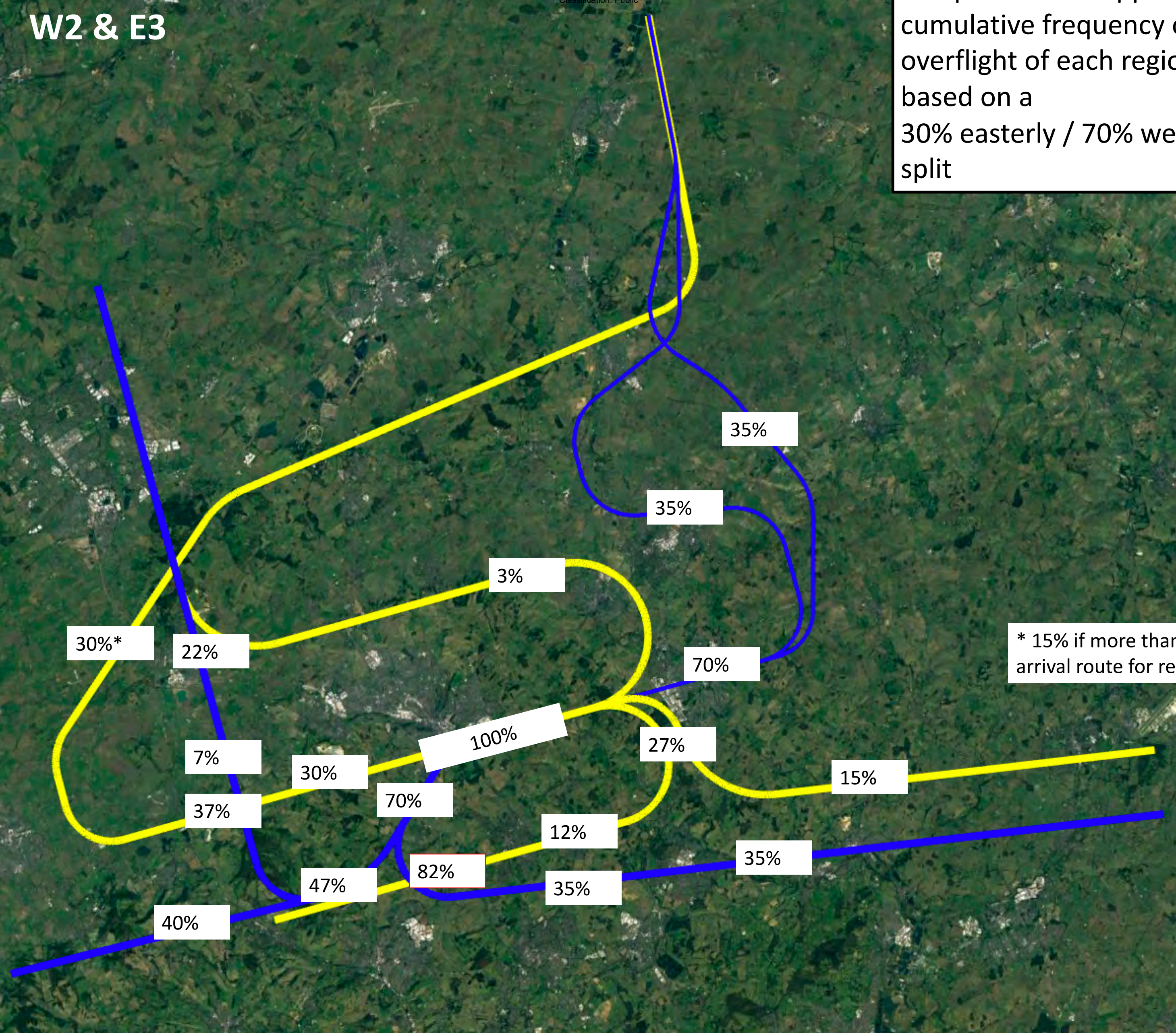
Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.



W2 & E3

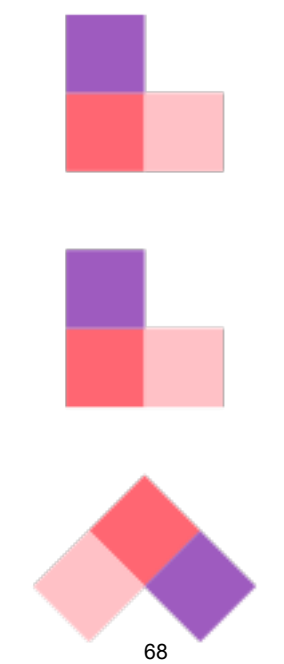
Classification: Public

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



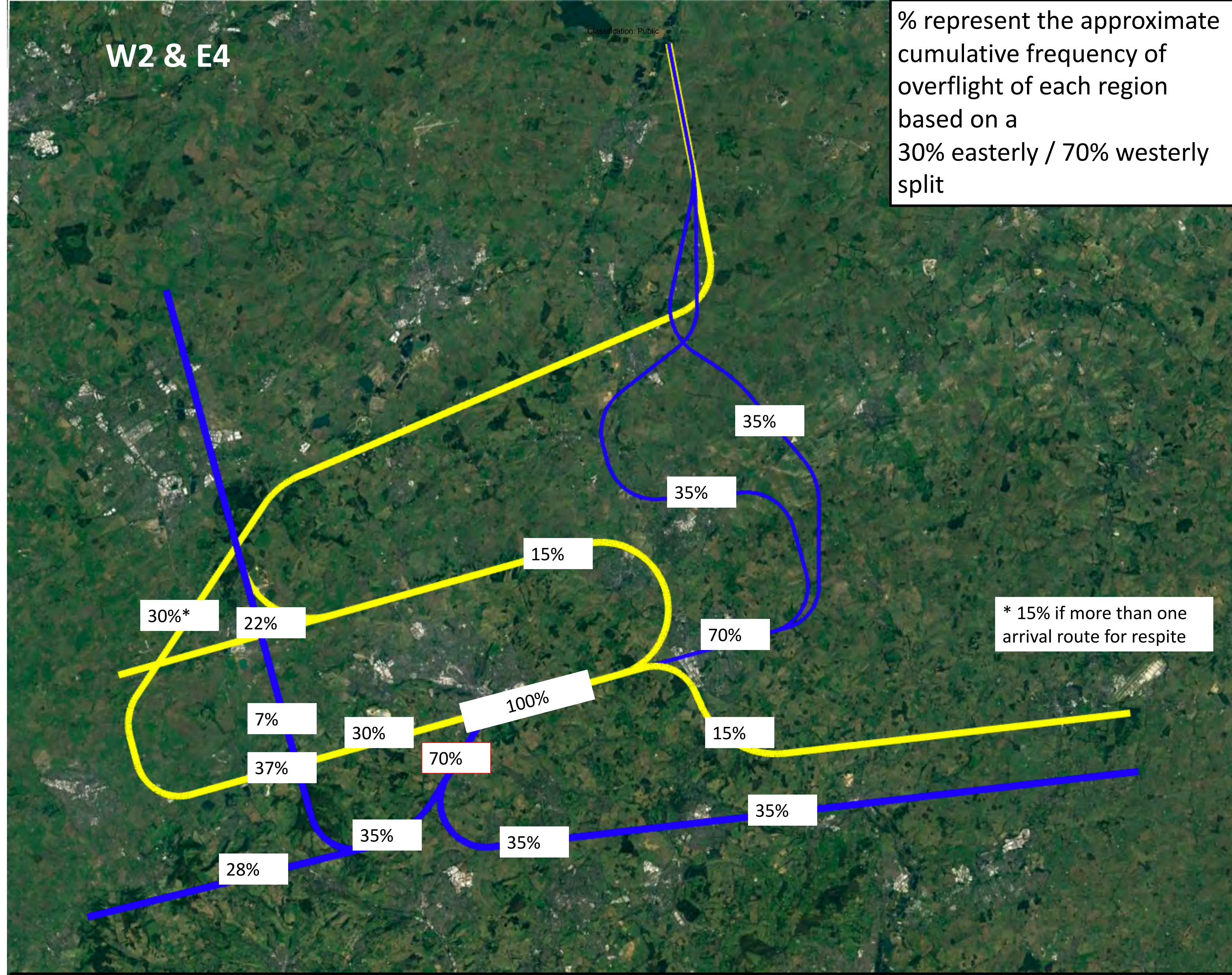
* 15% if more than one arrival route for respite

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.



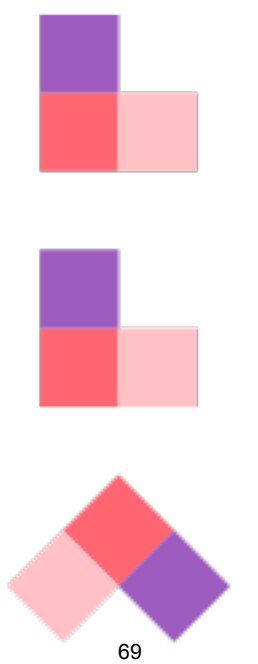
W2 & E4

% 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

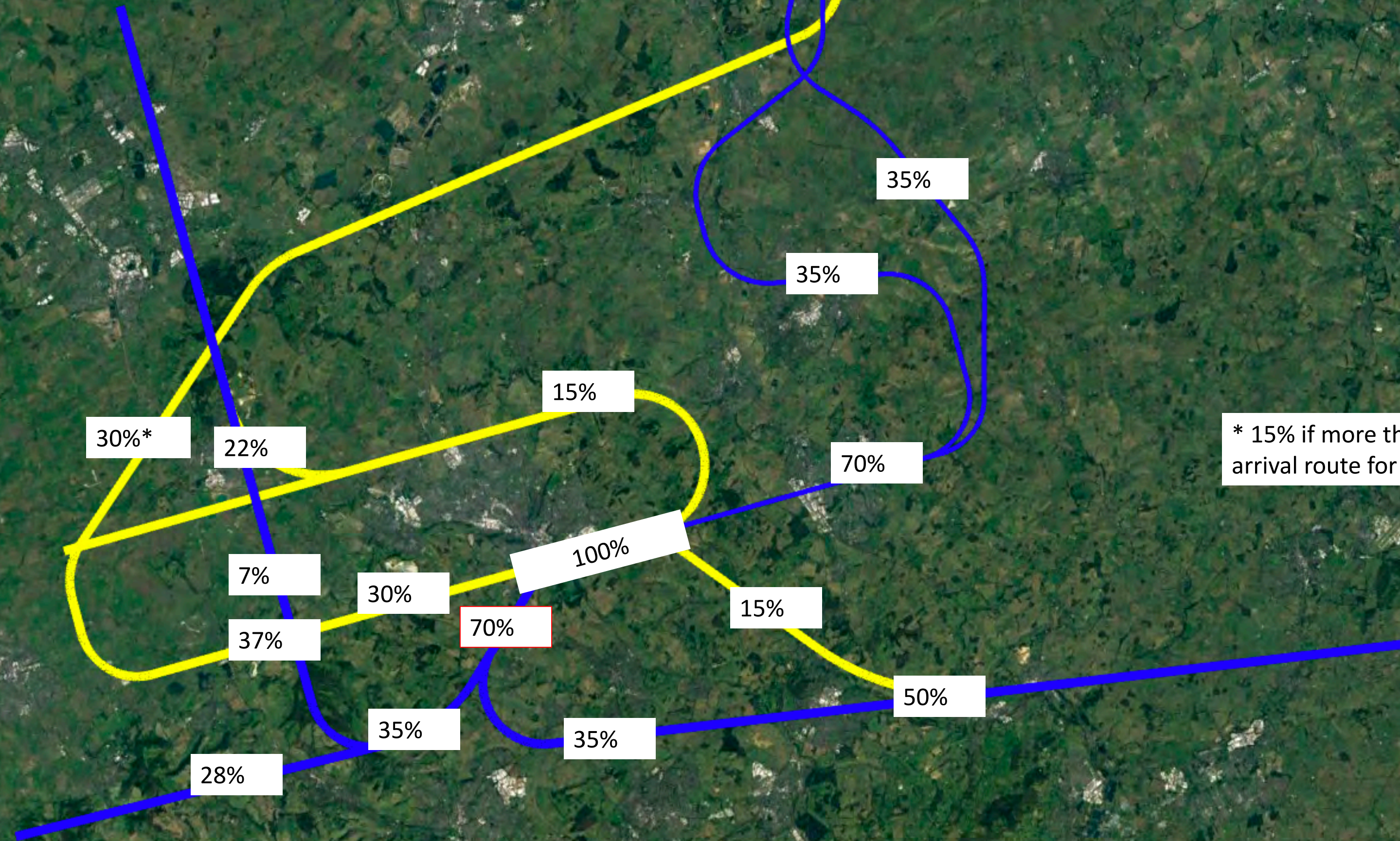
Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.



W2 & E5

Classification: Public

% 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

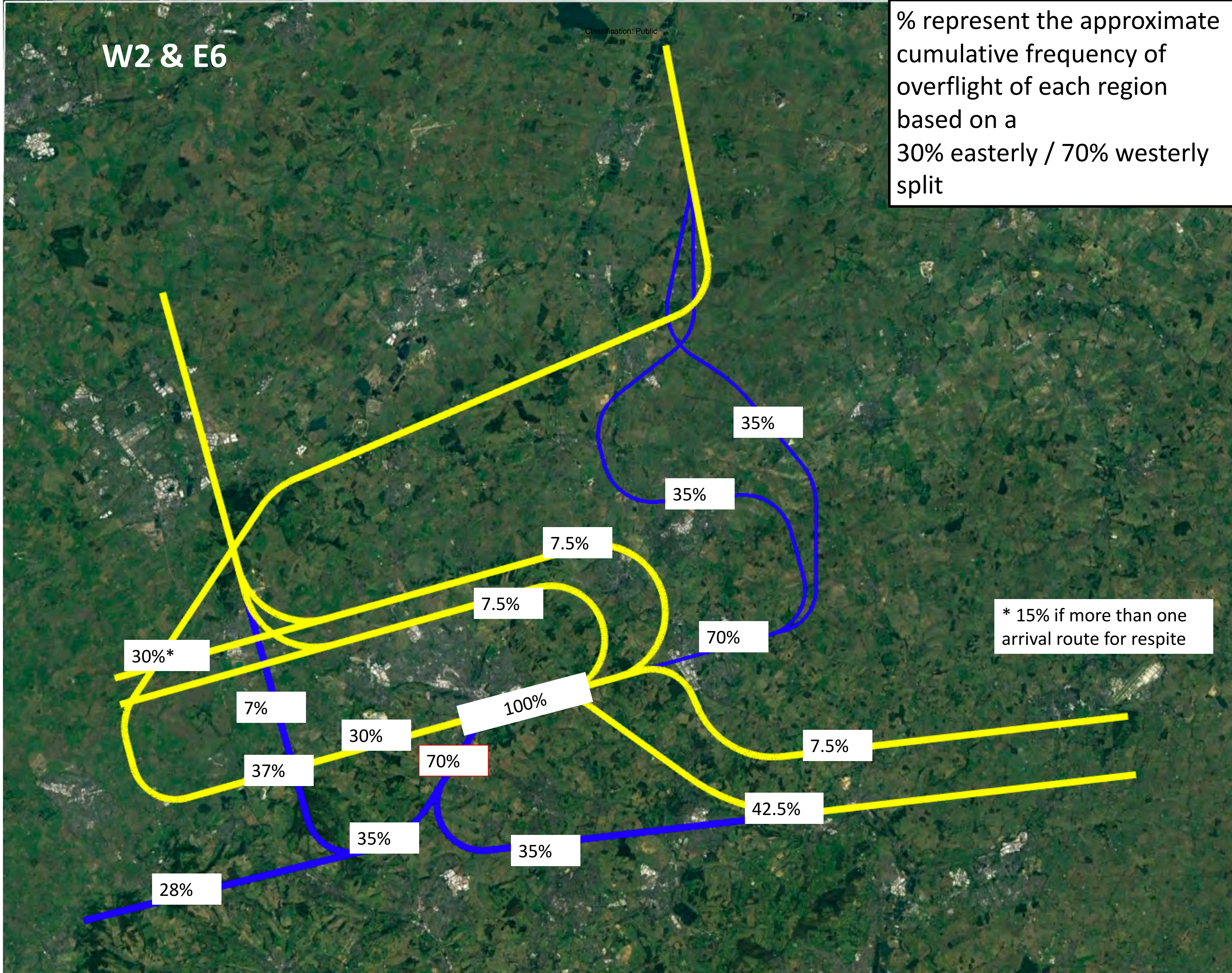
Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.



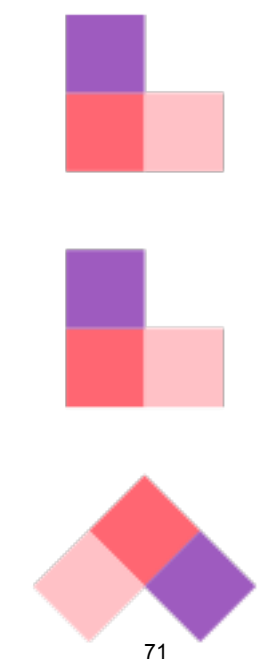
W2 & E6

Classification: Public

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



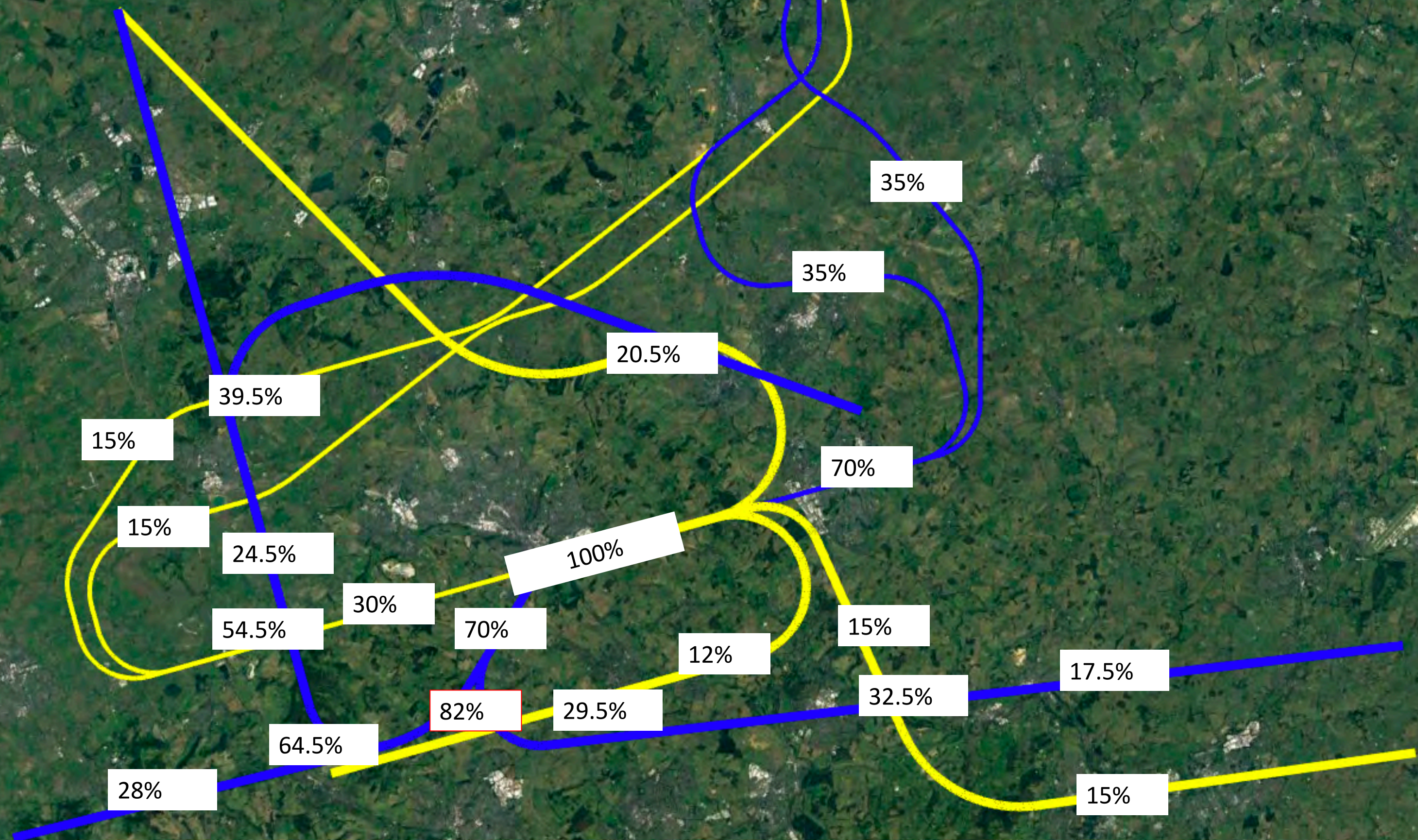
Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.



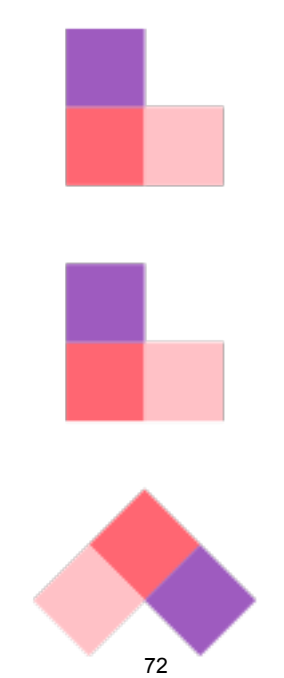
W3 & E1

Classification: Public

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



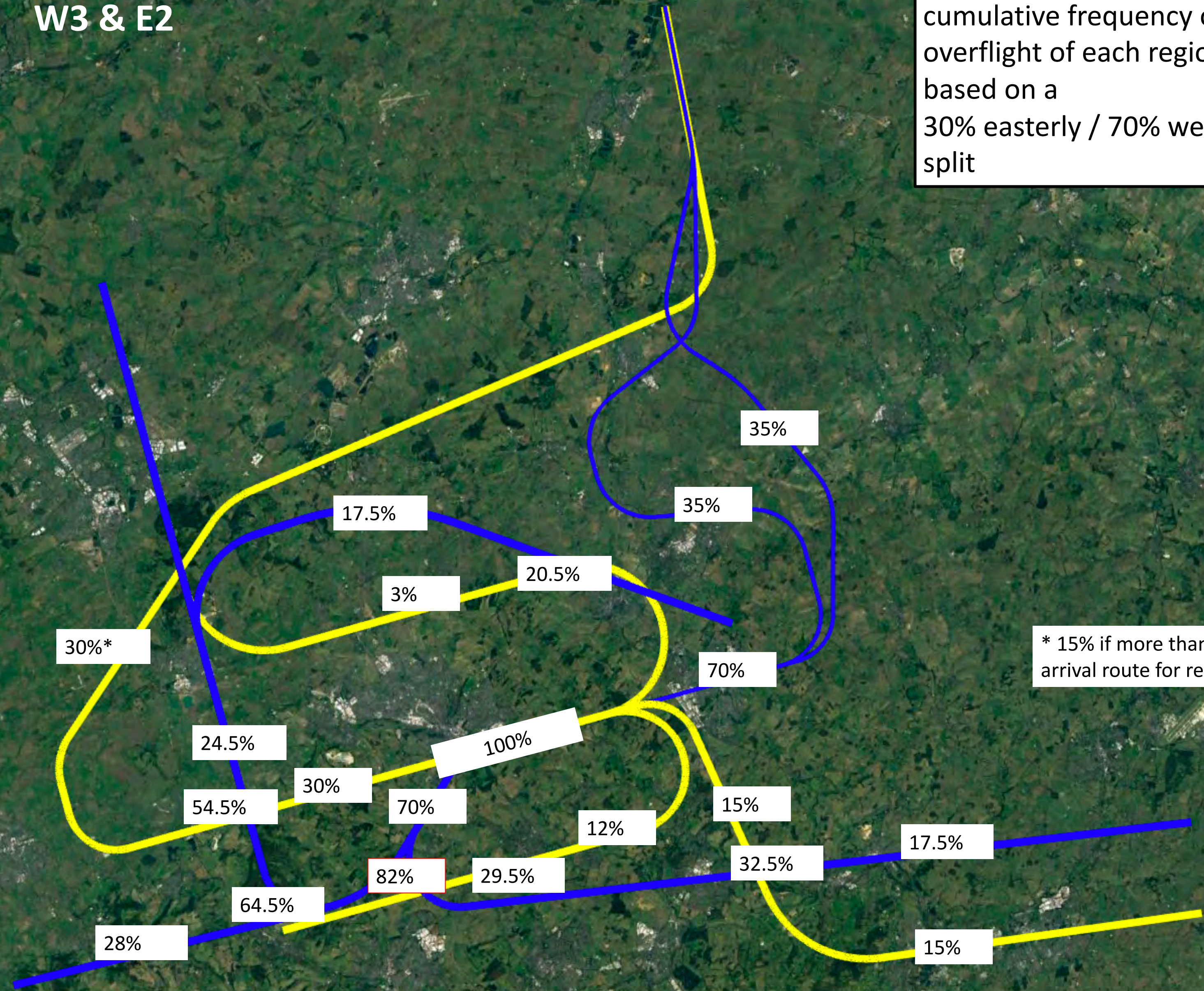
Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.



W3 & E2

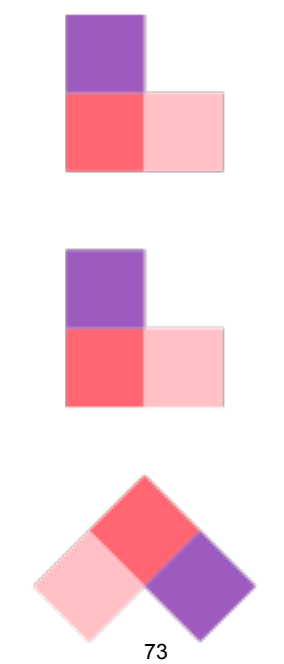
Classification: Public

% 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

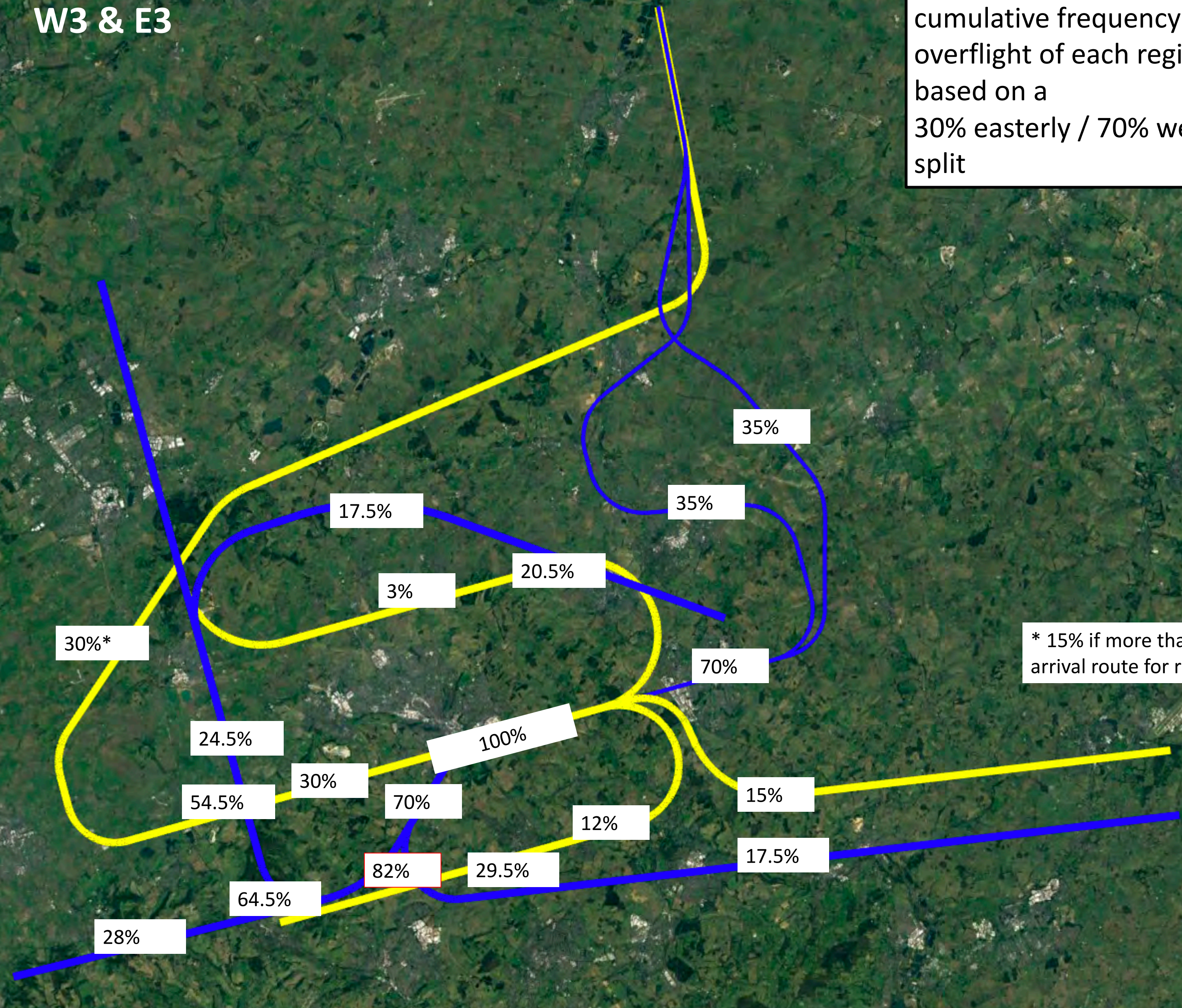
Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.



W3 & E3

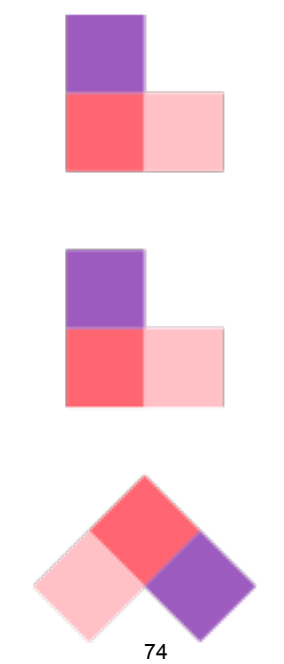
Classification: Public

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



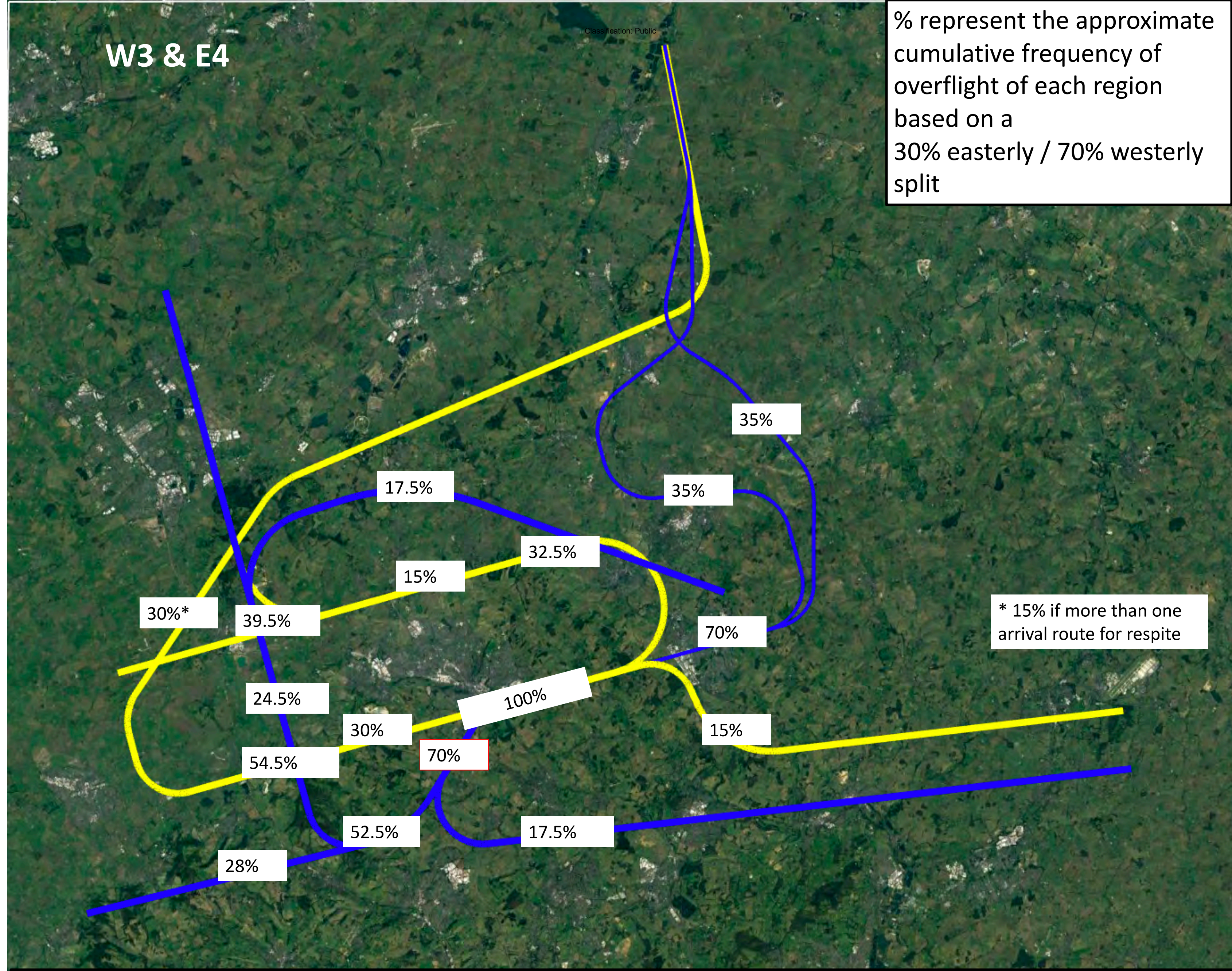
* 15% if more than one arrival route for respite

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.



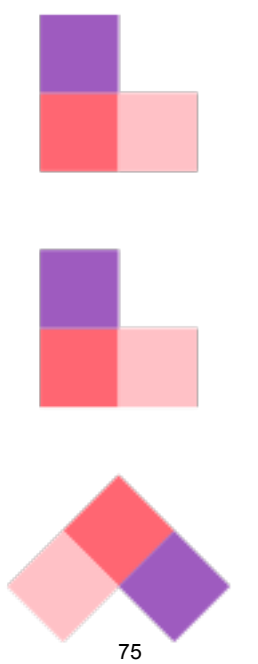
W3 & E4

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



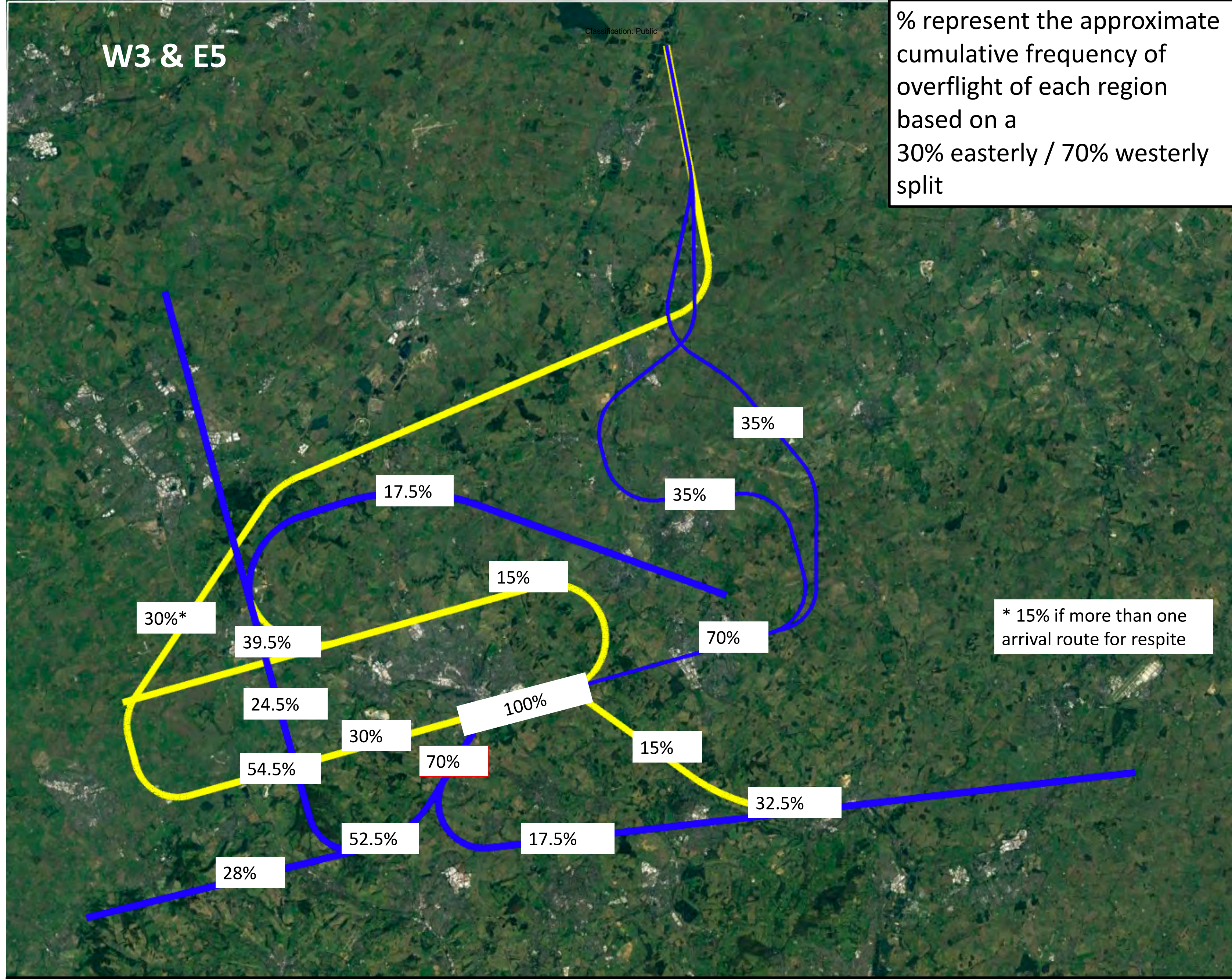
* 15% if more than one arrival route for respite

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.



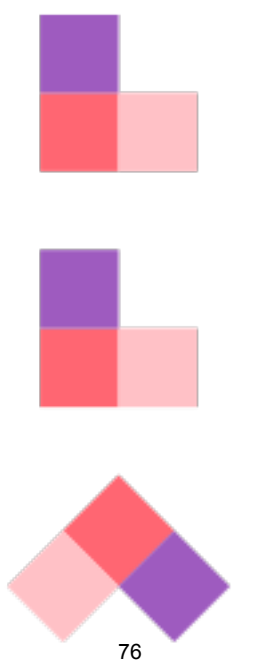
W3 & E5

% 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

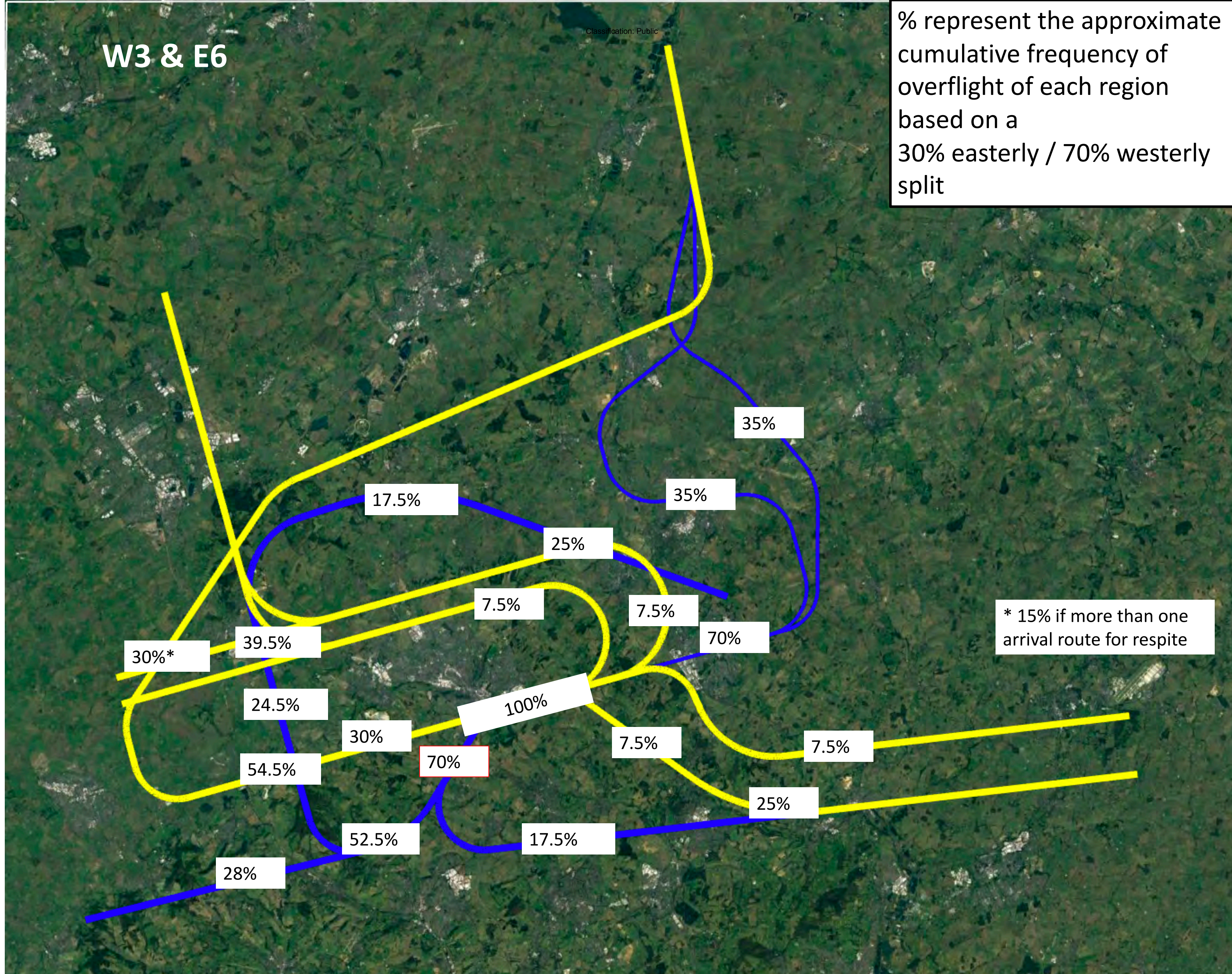
Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.



W3 & E6

Classification: Public

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



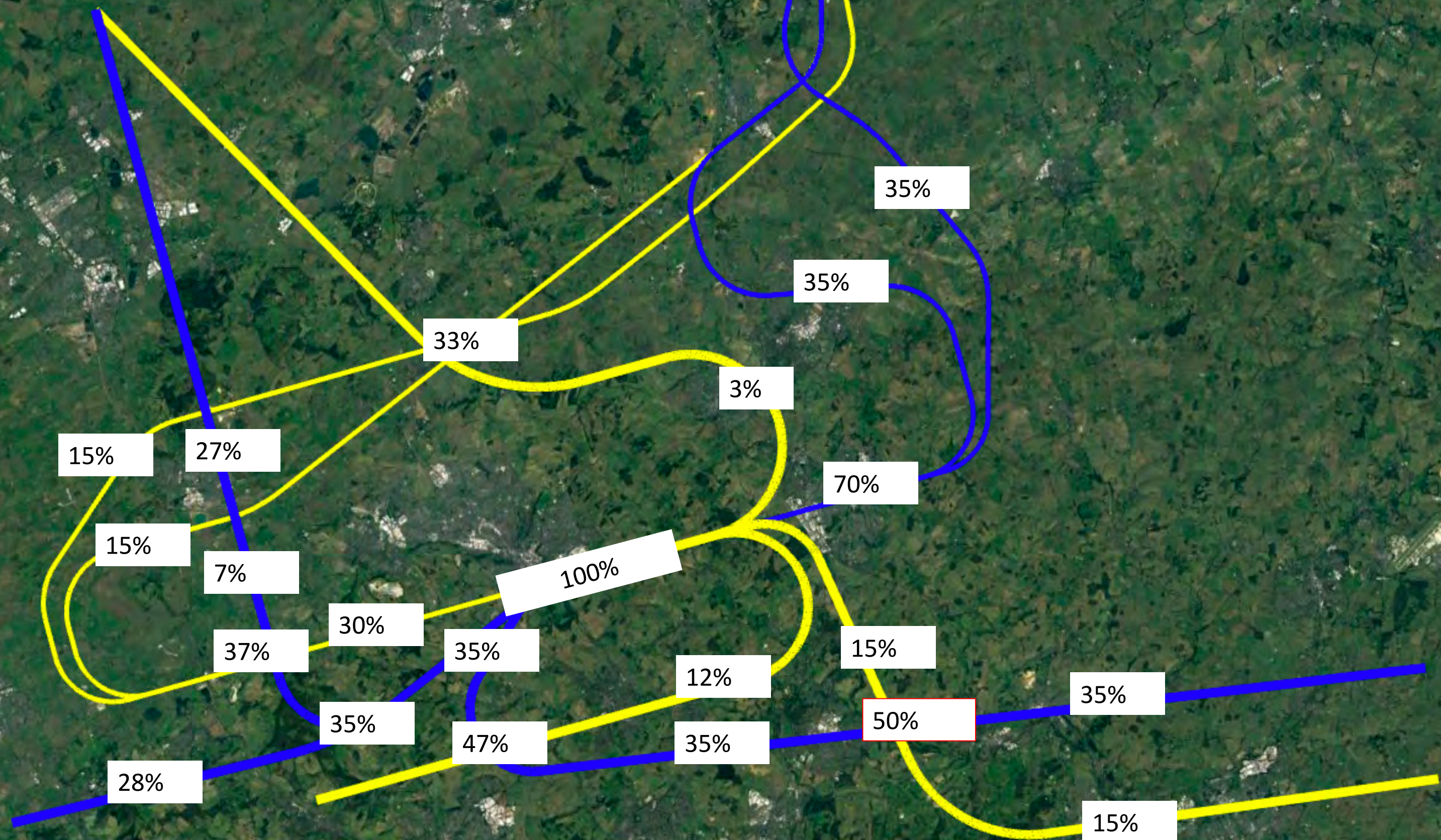
Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.



W4 & E1

Classification: Public

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



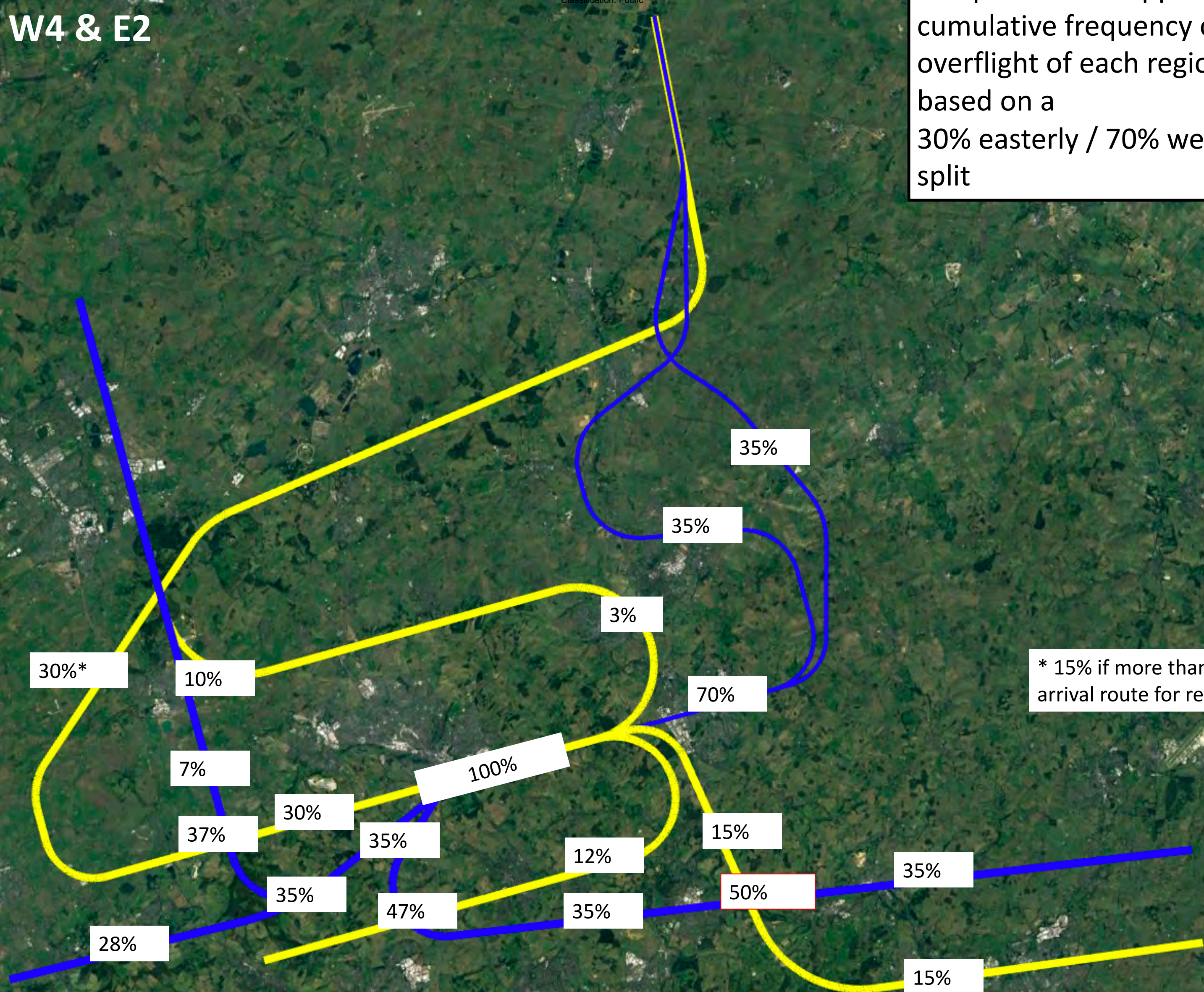
Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.



W4 & E2

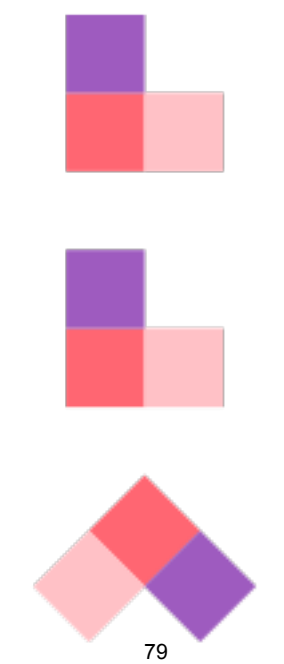
Classification: Public

% 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

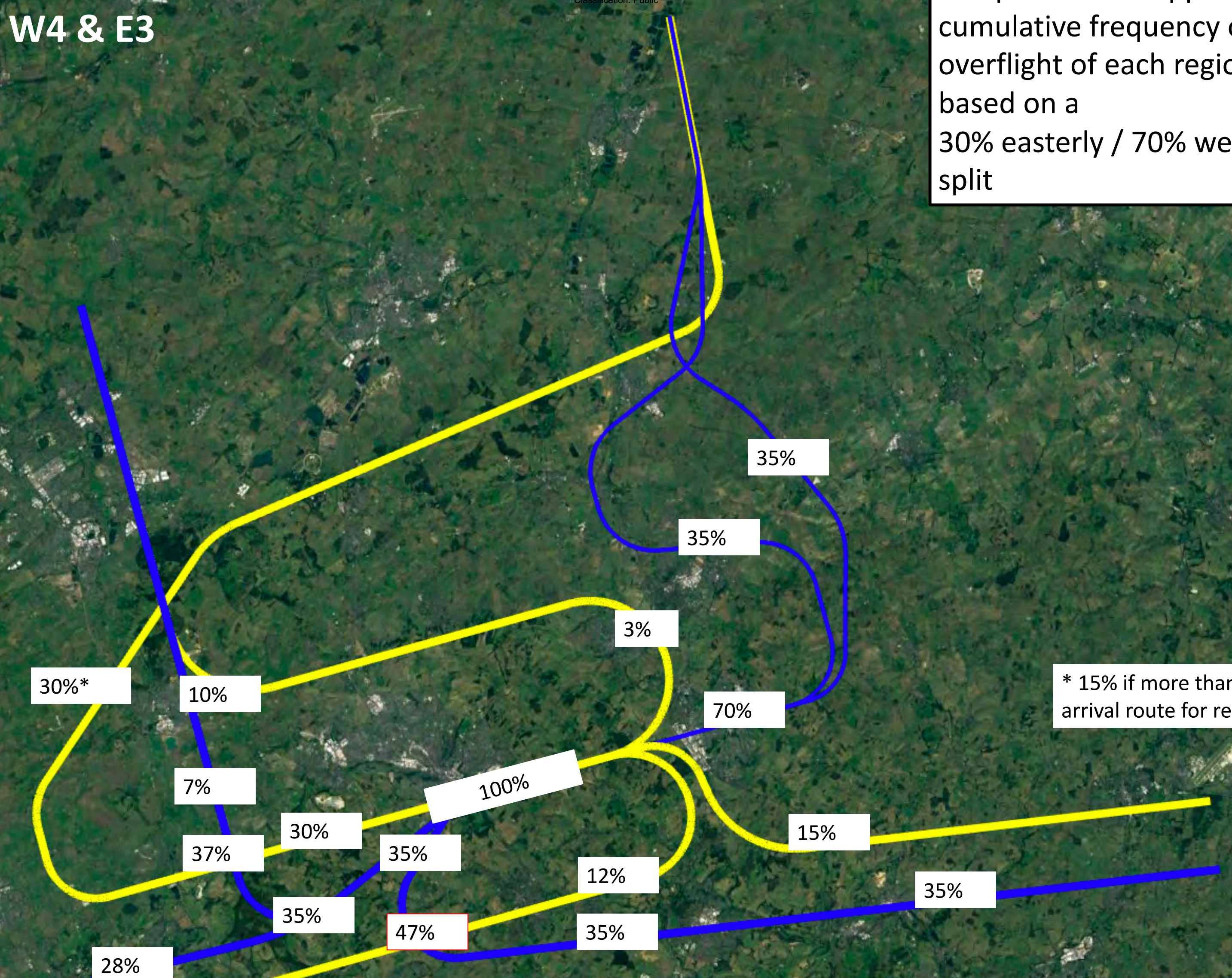
Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.



W4 & E3

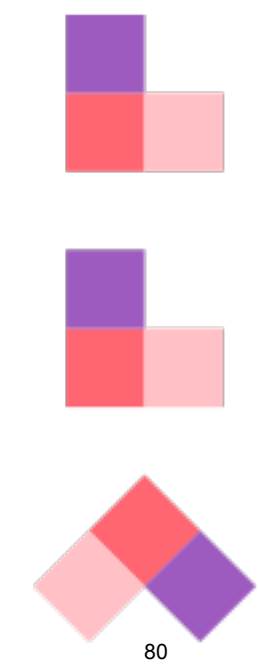
Classification: Public

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



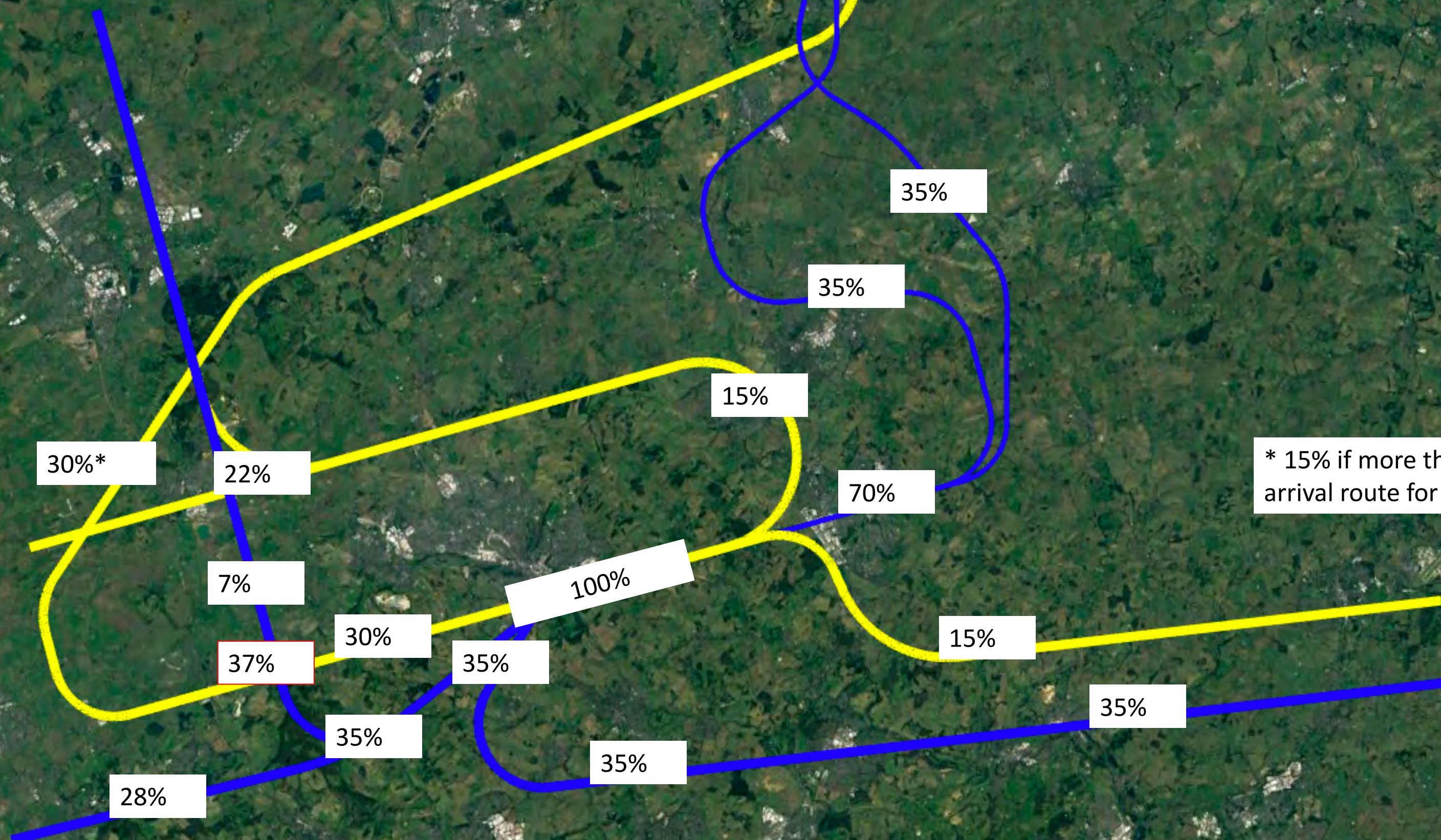
* 15% if more than one arrival route for respite

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.



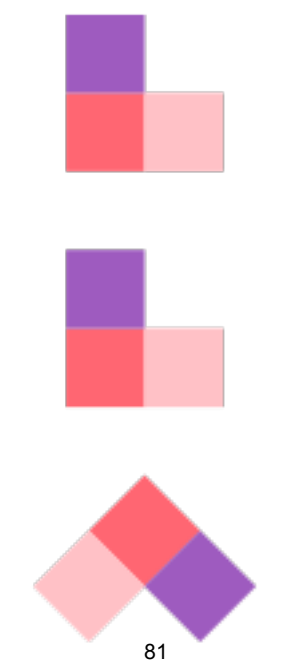
W4 & E4

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



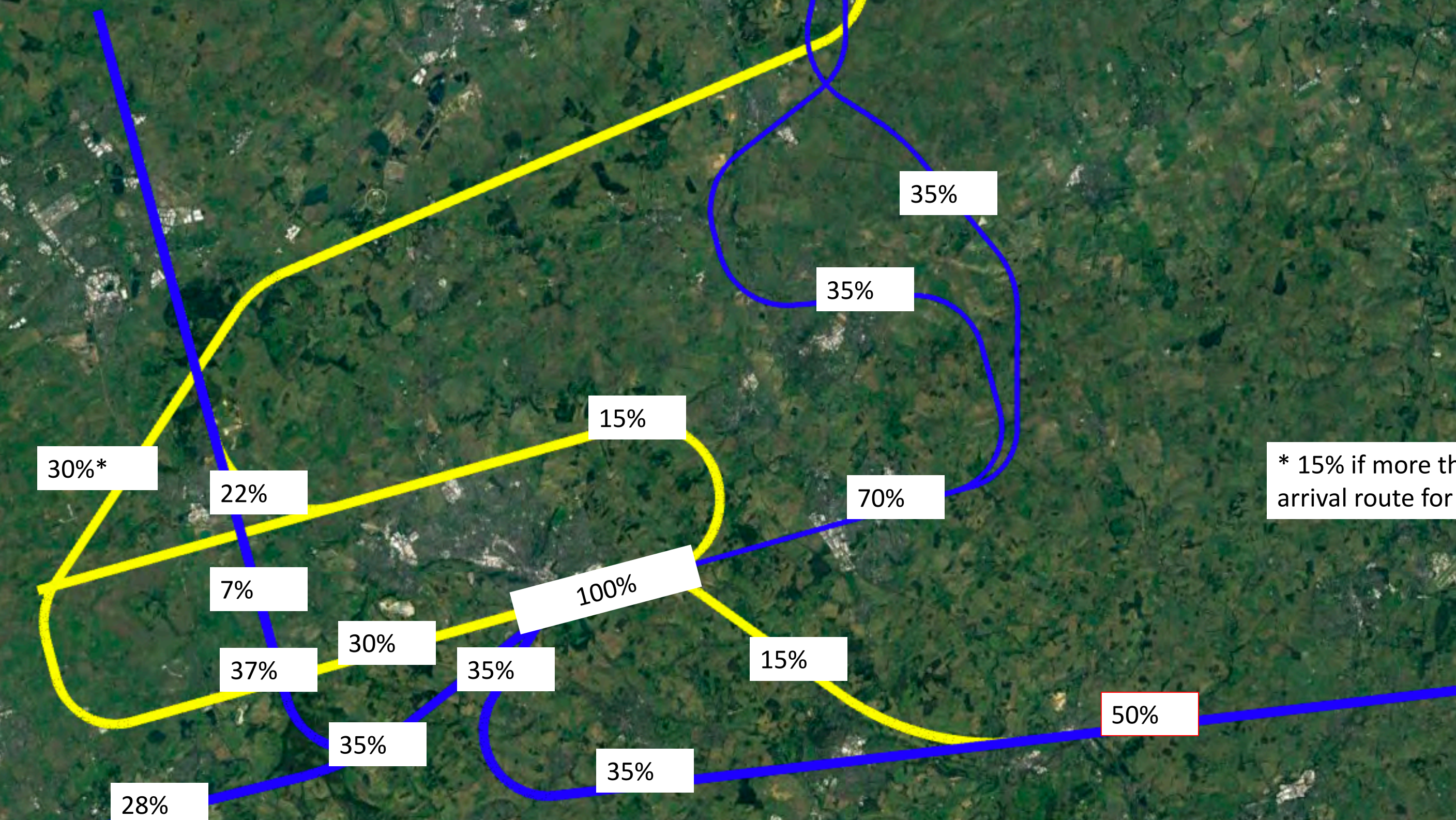
* 15% if more than one arrival route for respite

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.



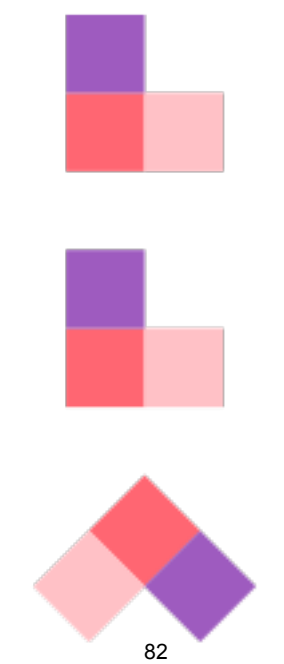
W4 & E5

% 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

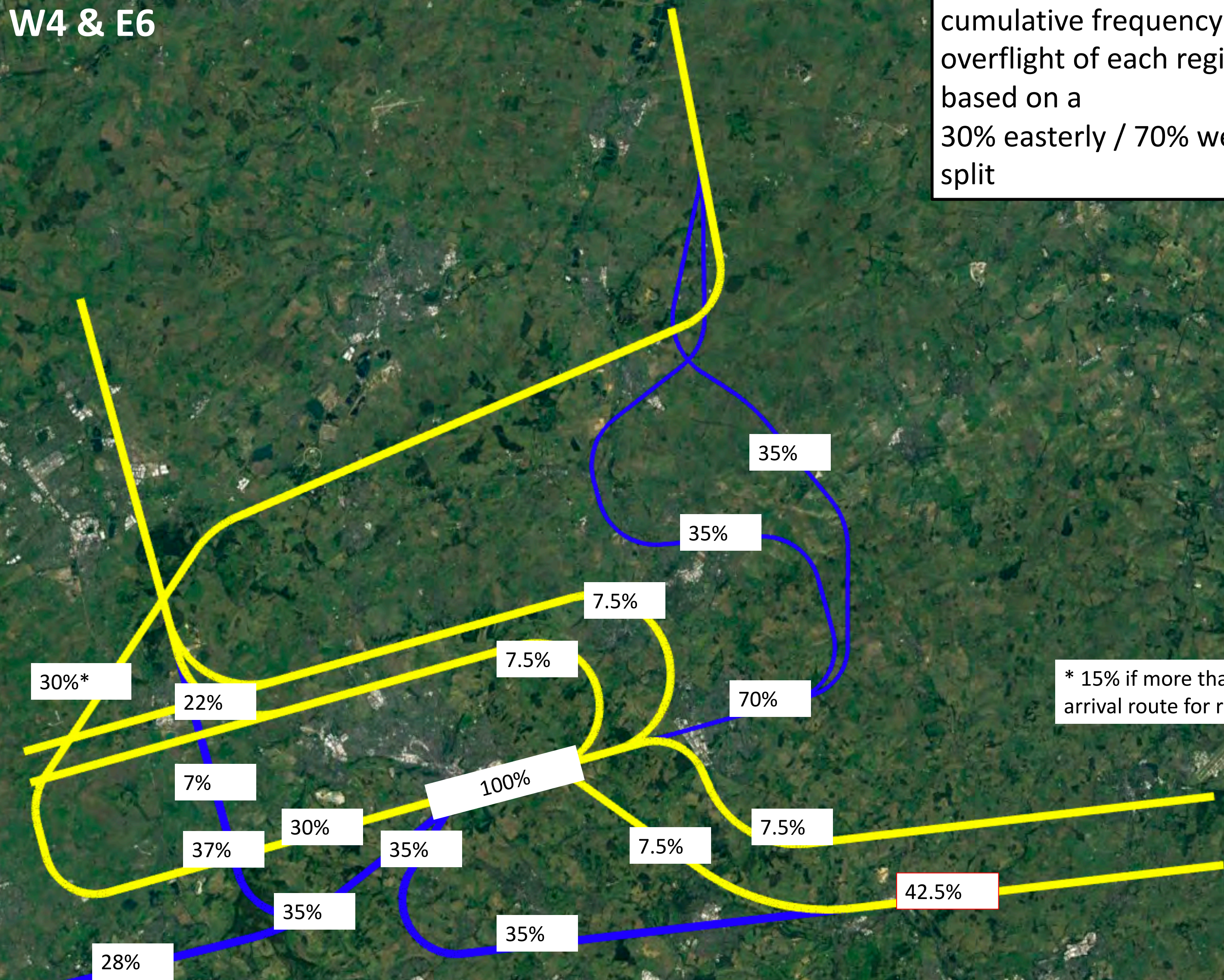
Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.



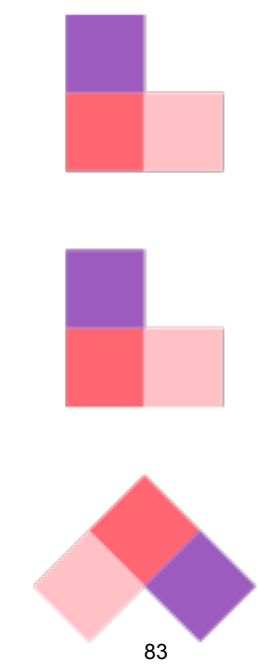
W4 & E6

Classification: Public

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

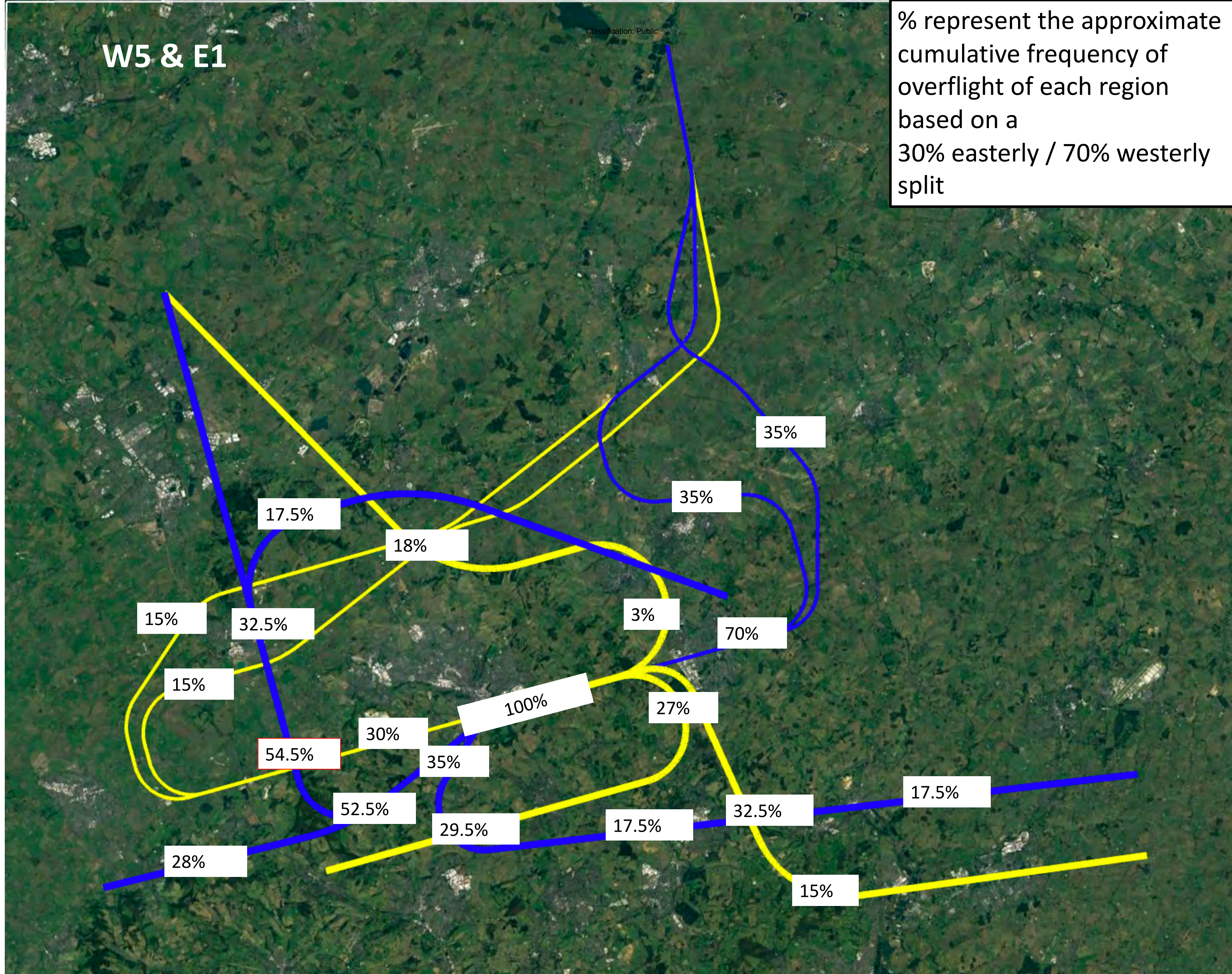


Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.



W5 & E1

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

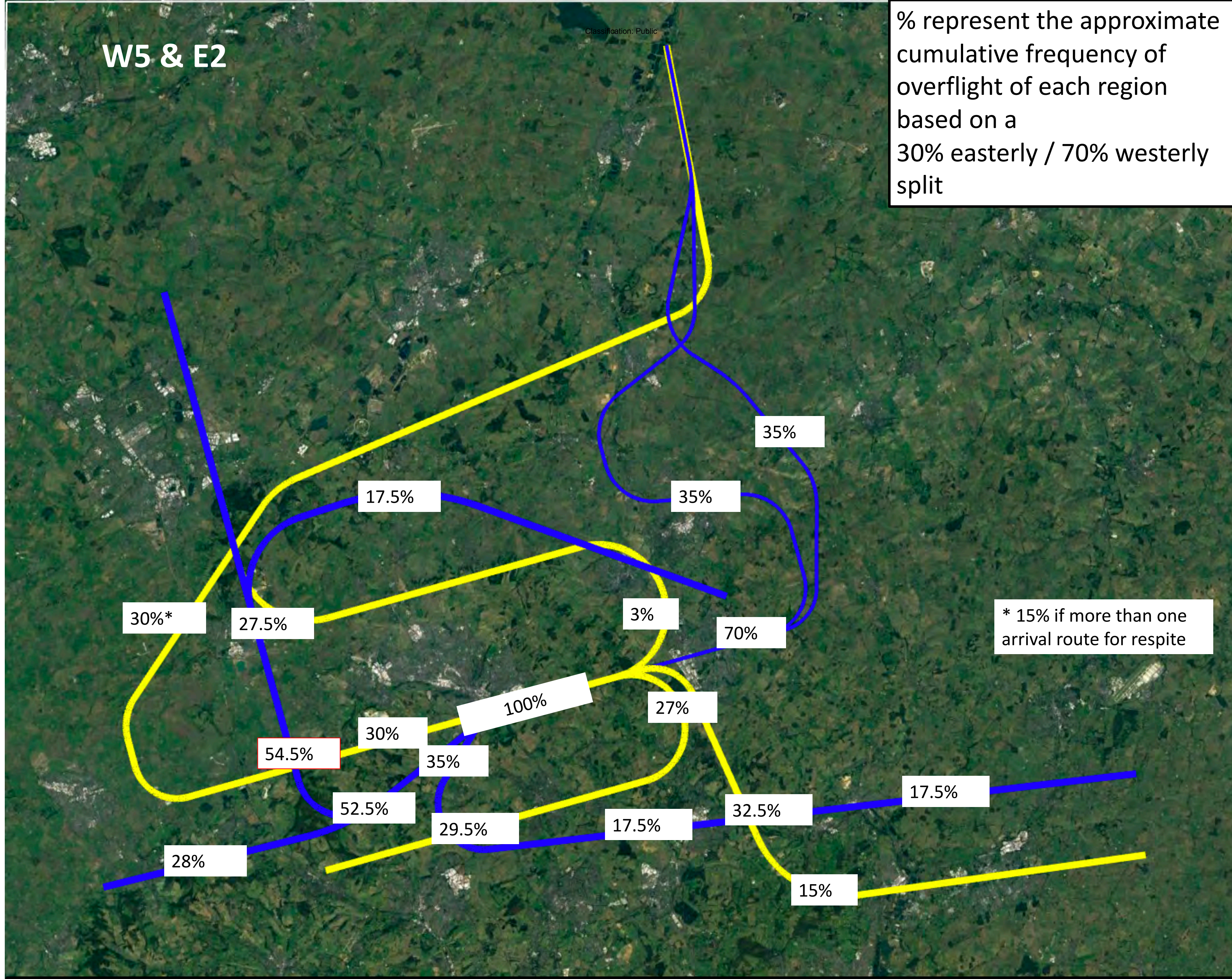


Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

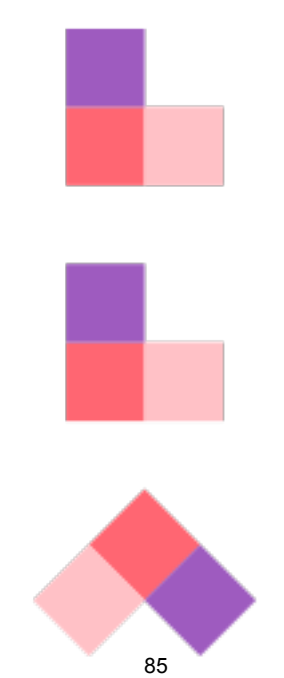


W5 & E2

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



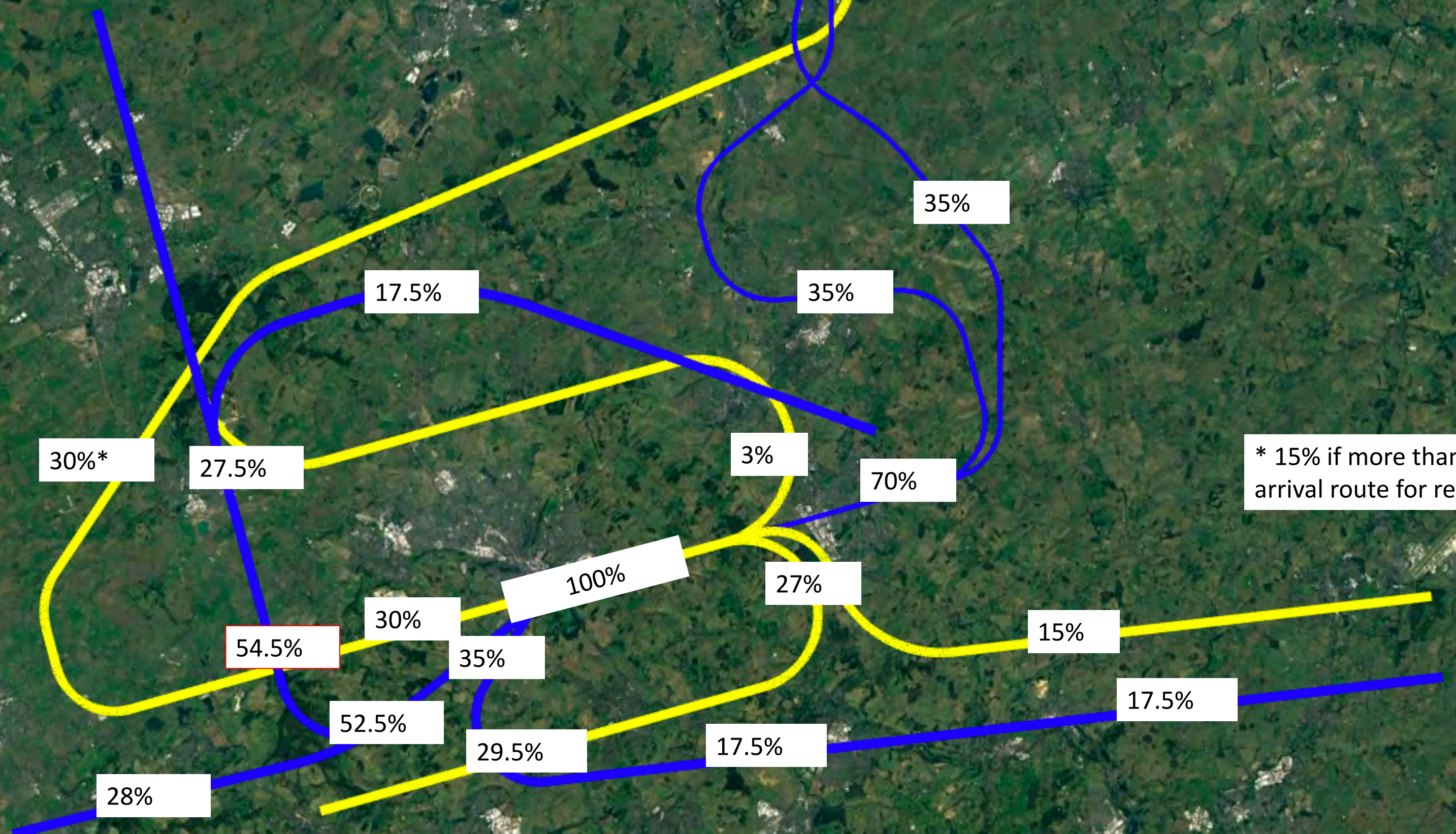
Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.



W5 & E3

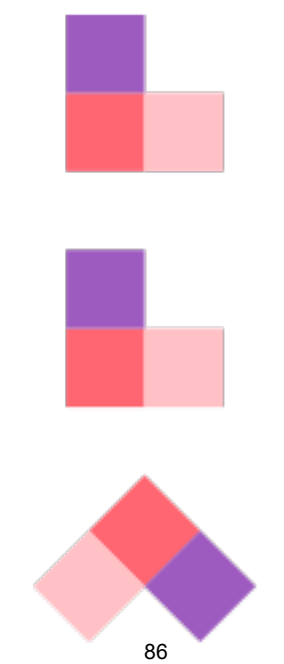
Classification: Public

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



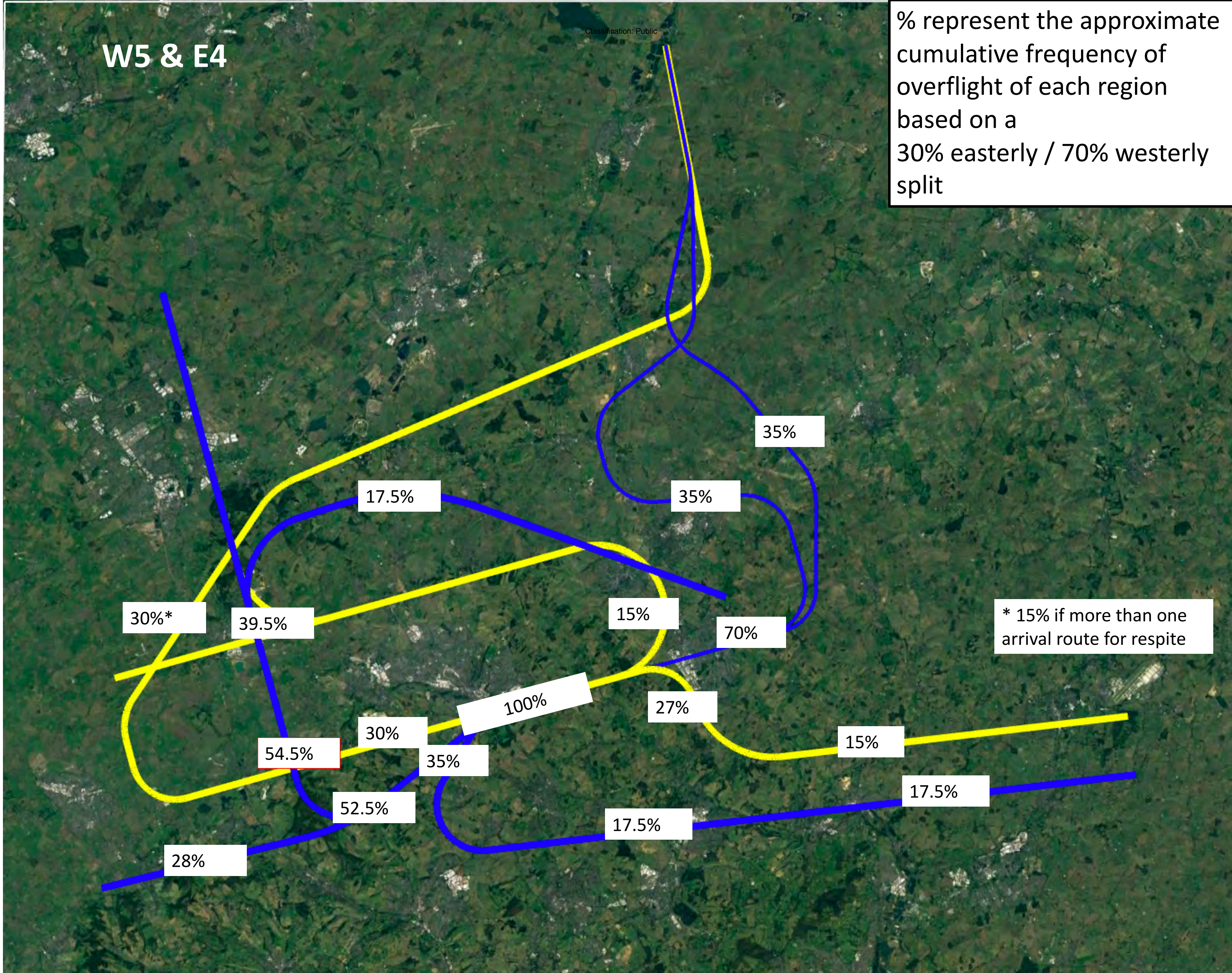
* 15% if more than one arrival route for respite

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

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



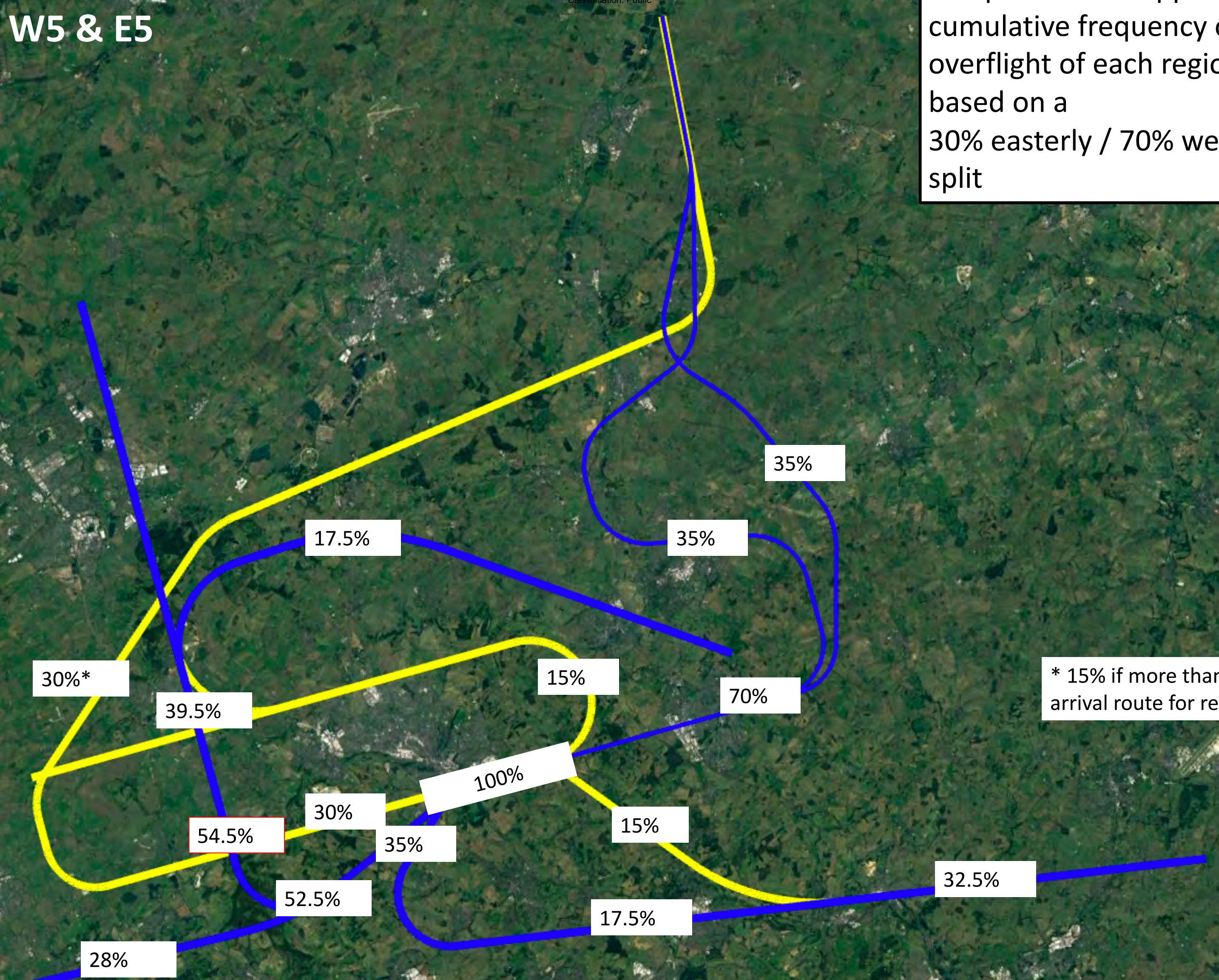
* 15% if more than one arrival route for respite

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.



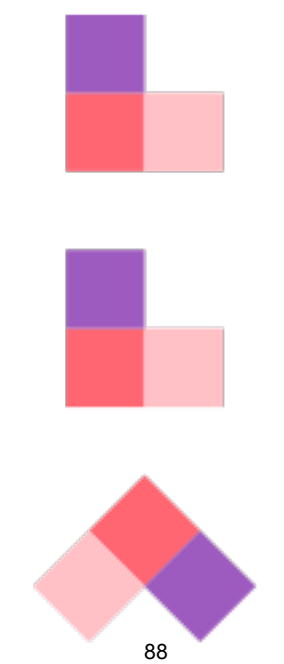
W5 & E5

% 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

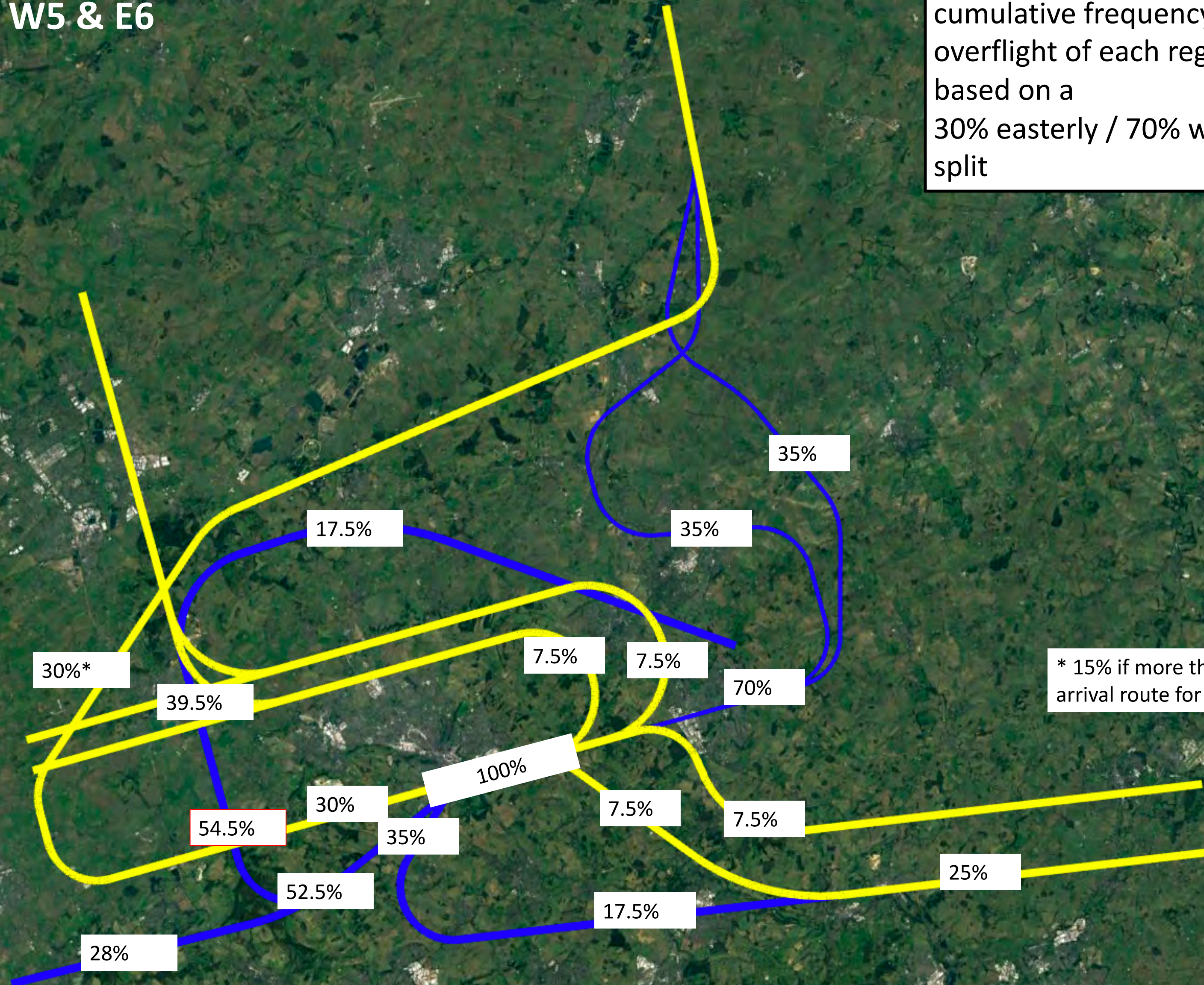
Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.



W5 & E6

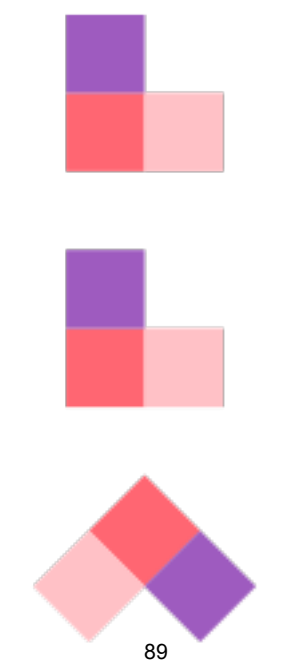
Classification: Public

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



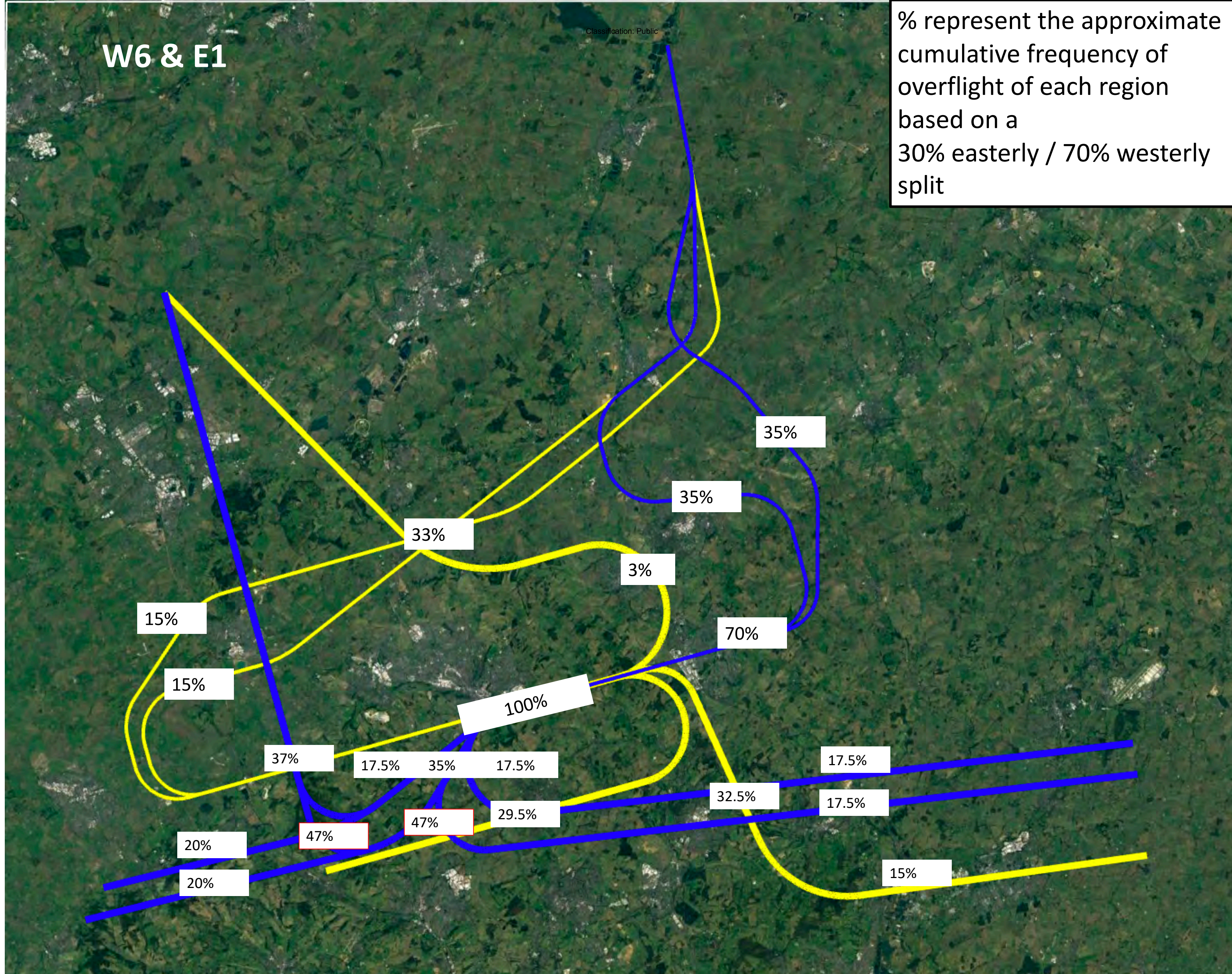
* 15% if more than one arrival route for respite

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 & E1

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

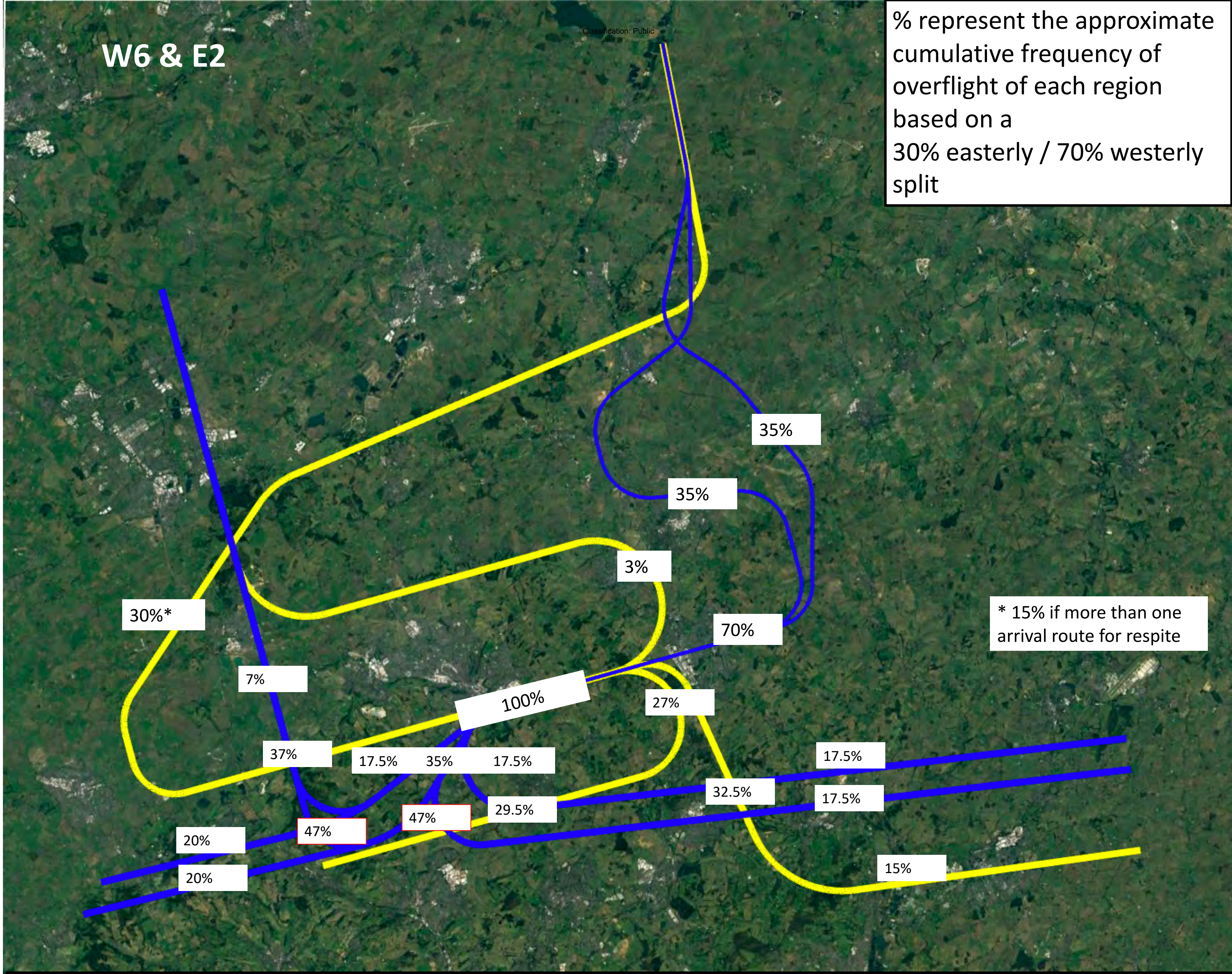


Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

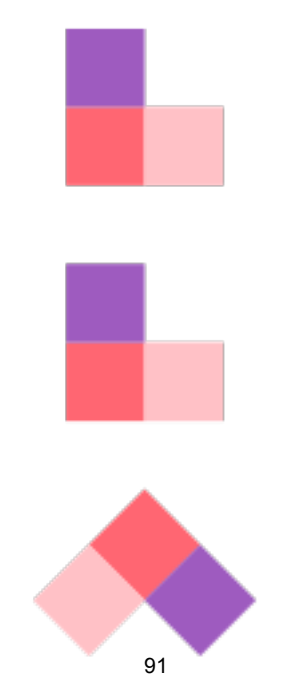


W6 & E2

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

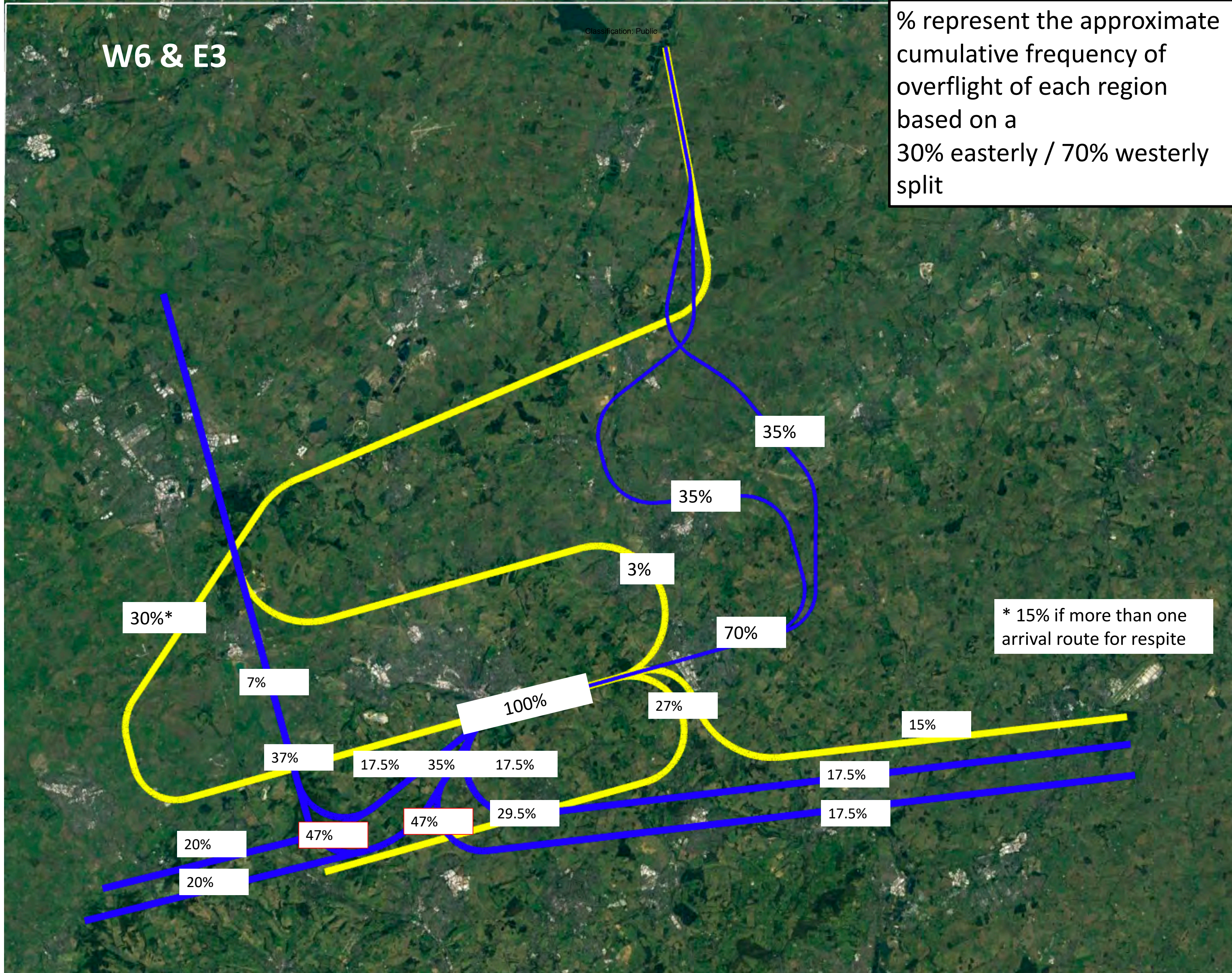


Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.

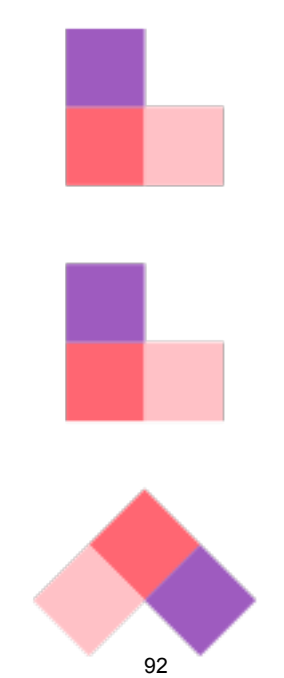


W6 & E3

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

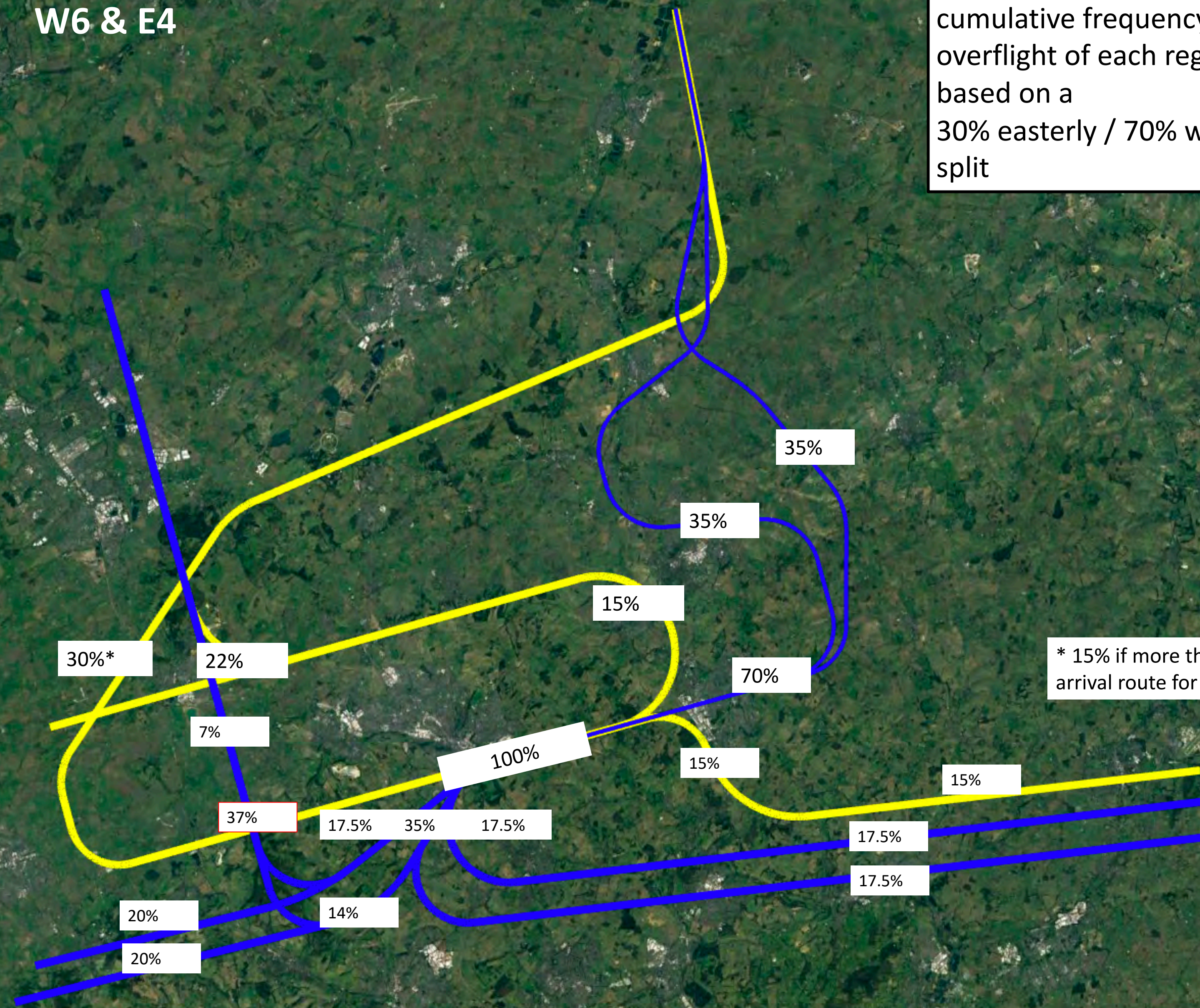


Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.



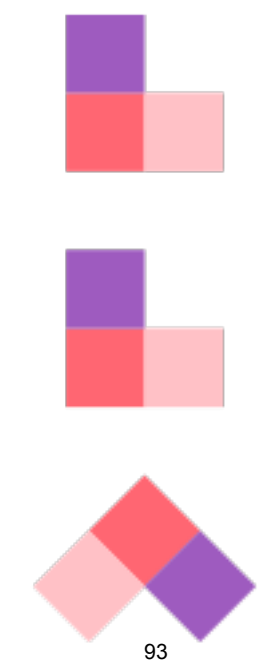
W6 & E4

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



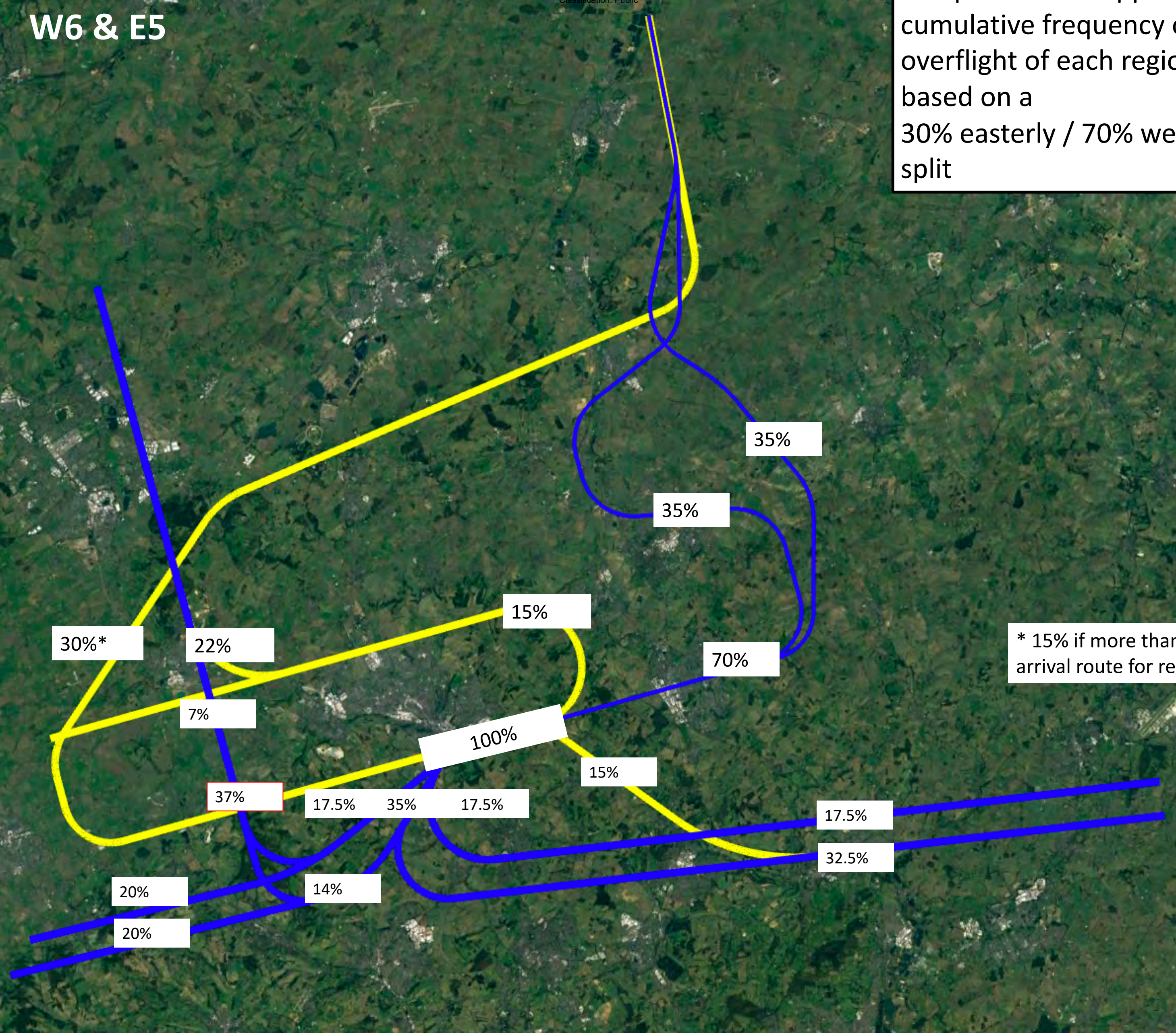
* 15% if more than one arrival route for respite

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.

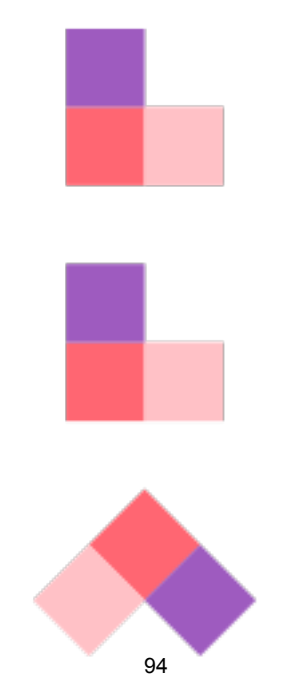


W6 & E5

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



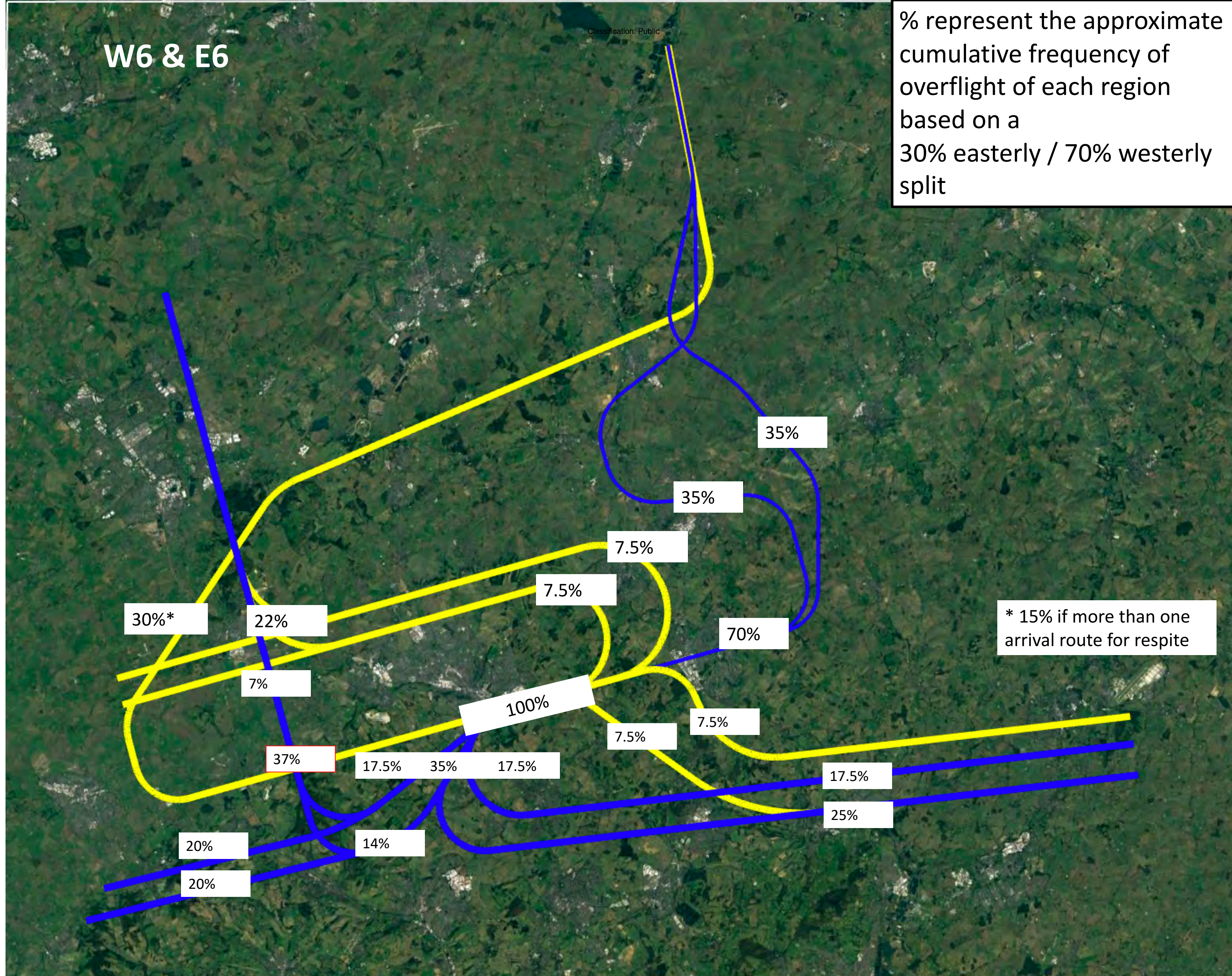
Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.



W6 & E6

Classification: Public

% 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.



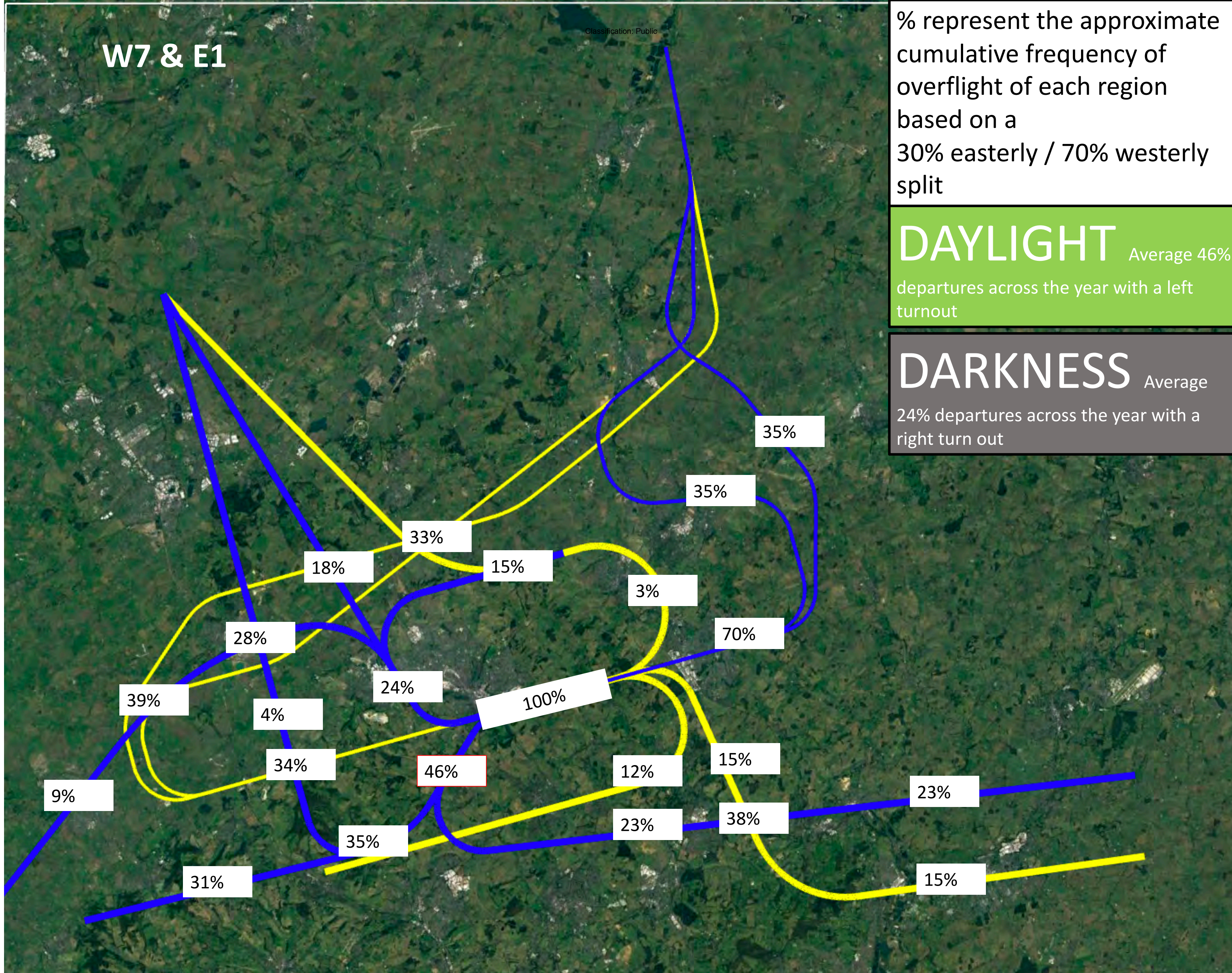
W7 & E1

Classification: Public

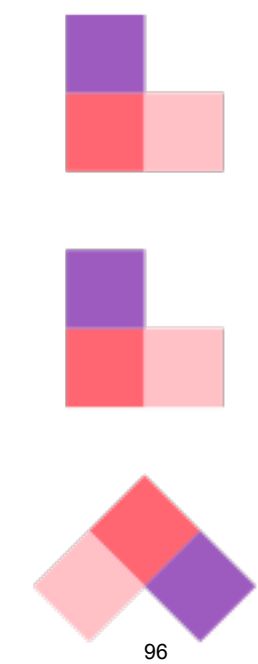
% represent the approximate cumulative frequency of overflight of each region based on a 30% easterly / 70% westerly split

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.



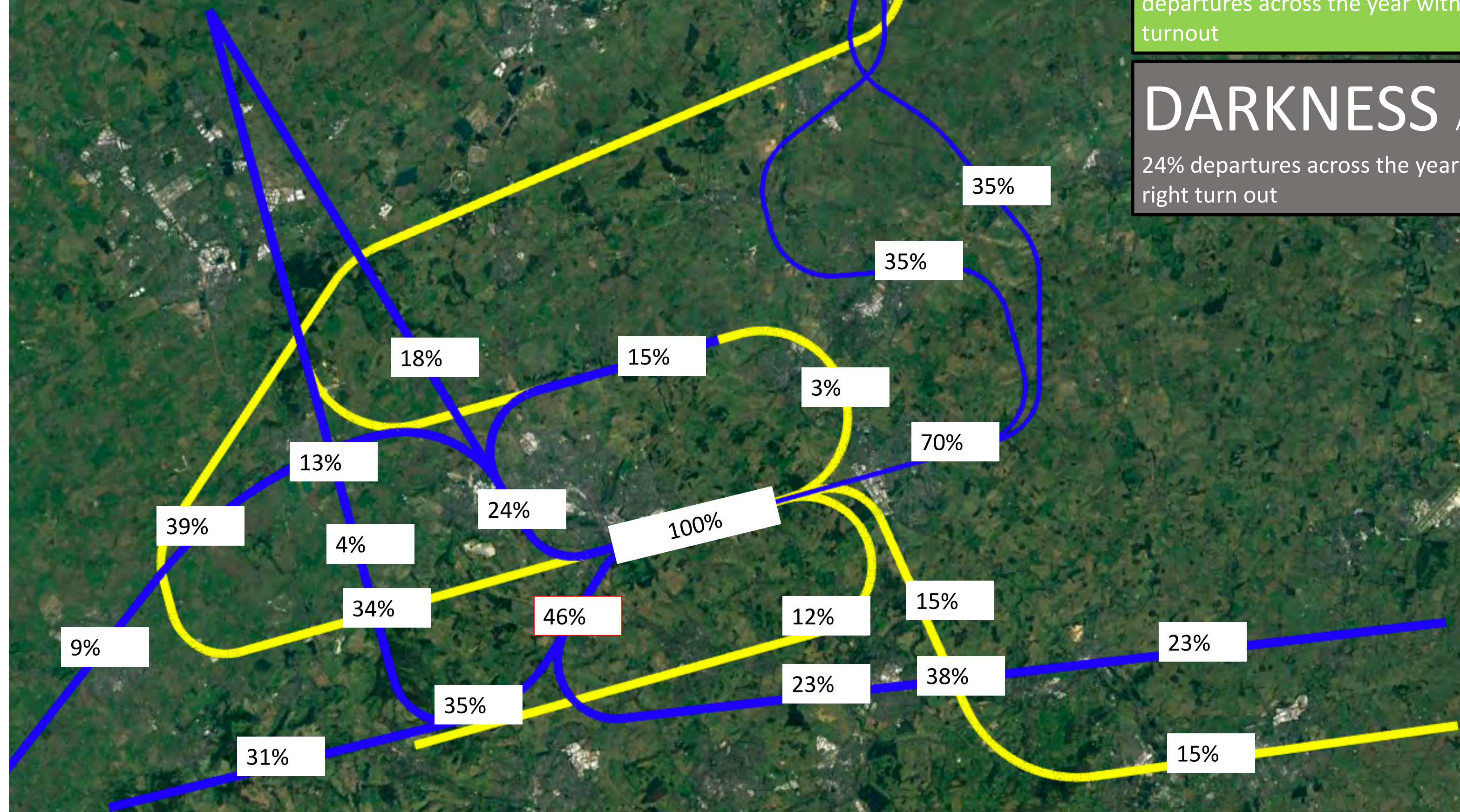
W7 & E2

Classification: Public

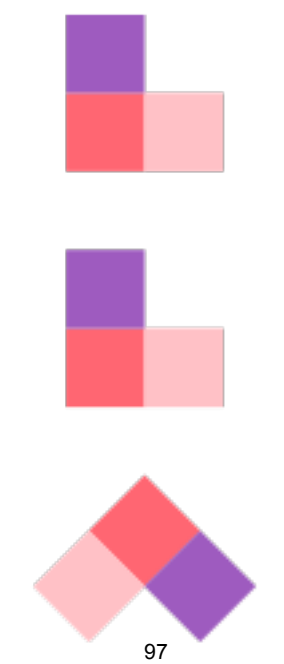
% represent the approximate cumulative frequency of overflight of each region based on a 30% easterly / 70% westerly split

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.



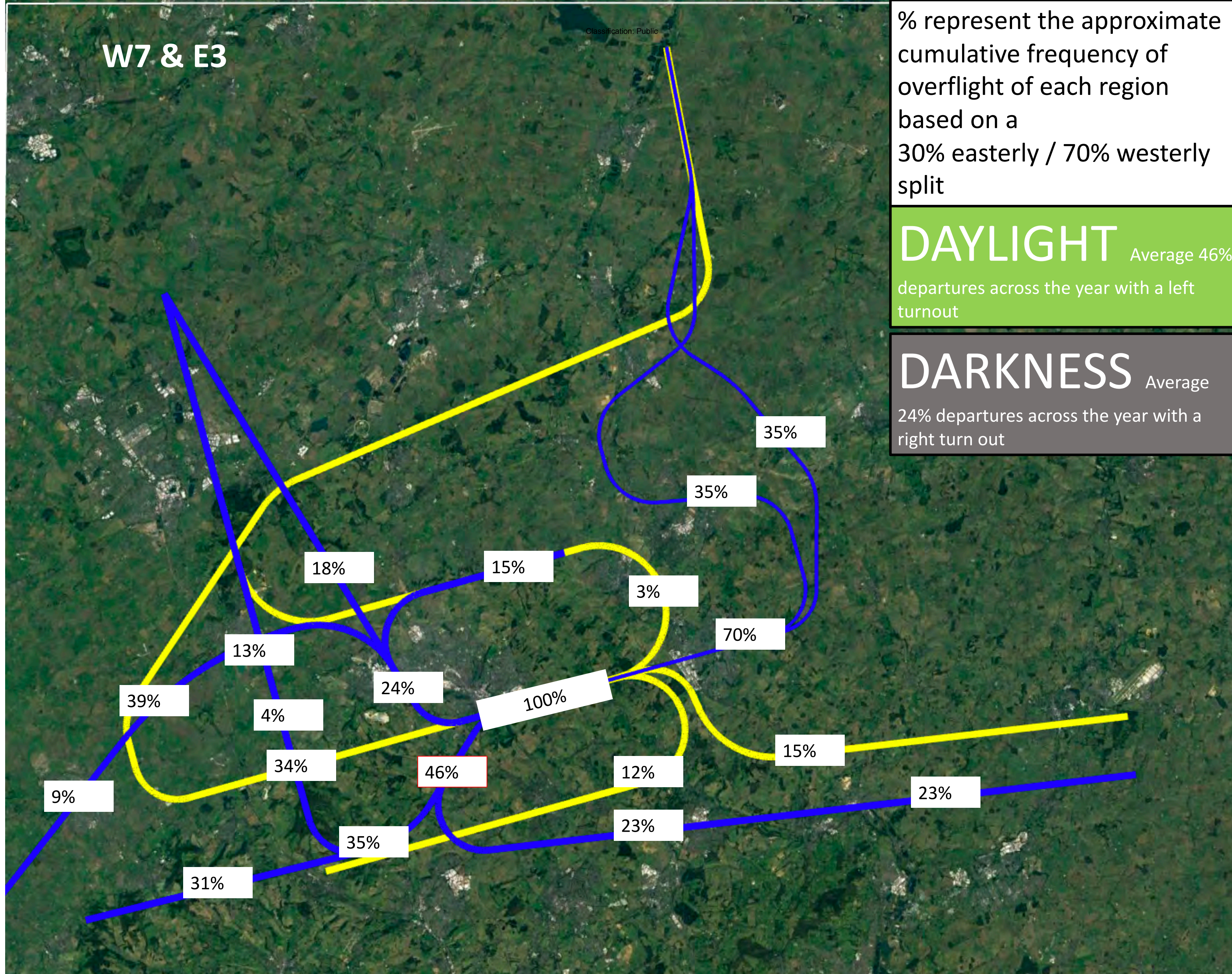
W7 & E3

Classification: Public

% 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 turnout



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.



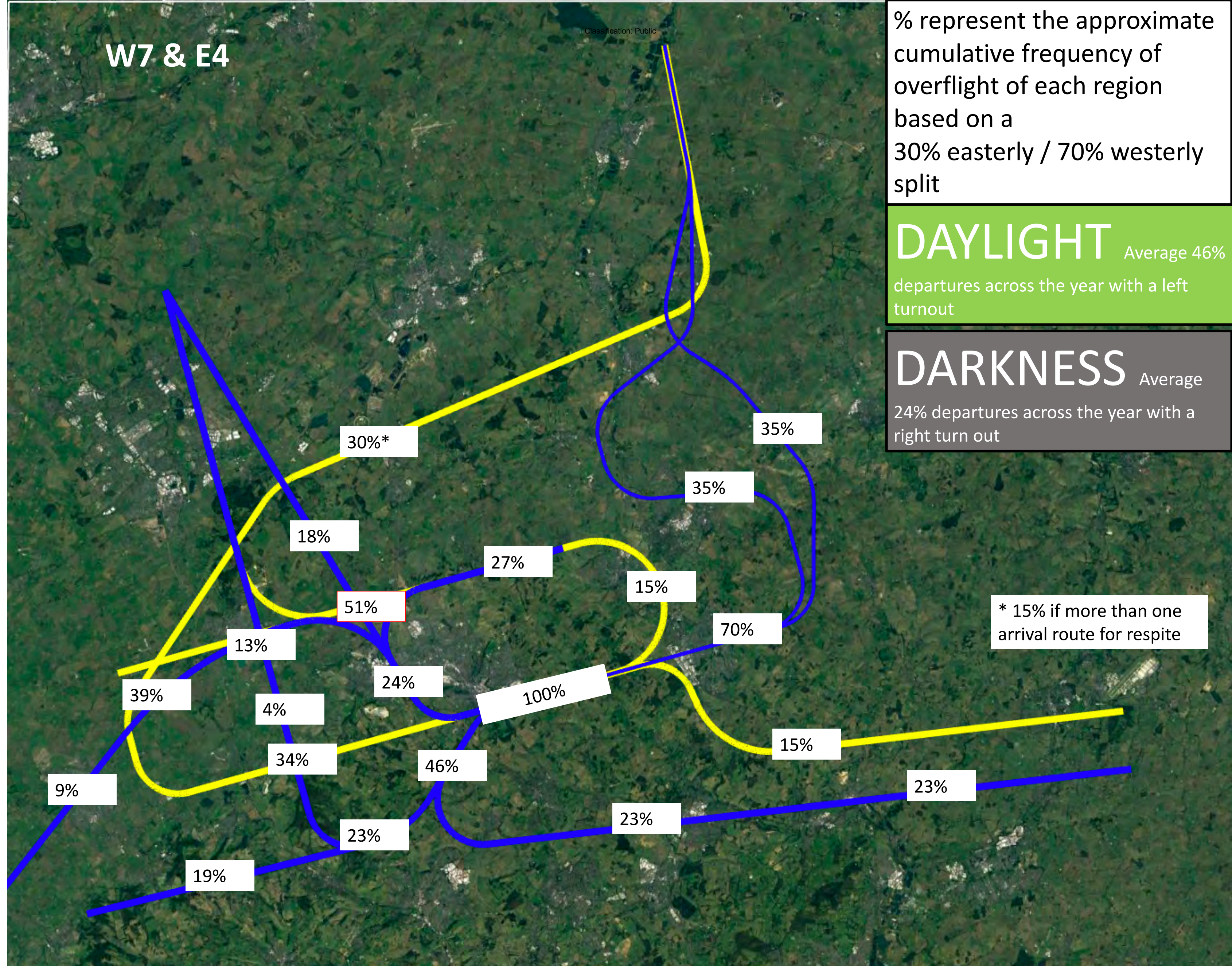
W7 & E4

Classification: Public

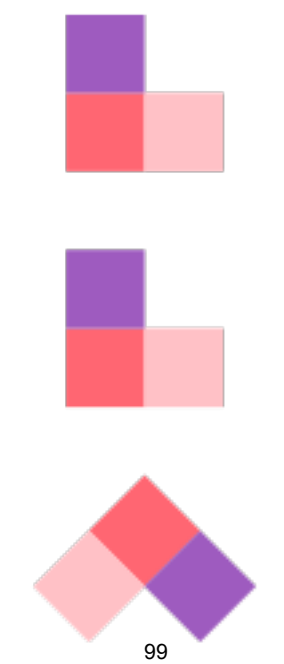
% represent the approximate cumulative frequency of overflight of each region based on a 30% easterly / 70% westerly split

DAYLIGHT Average 46%
departures across the year with a left turnout

DARKNESS Average 24%
departures across the year with a right turnout



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.



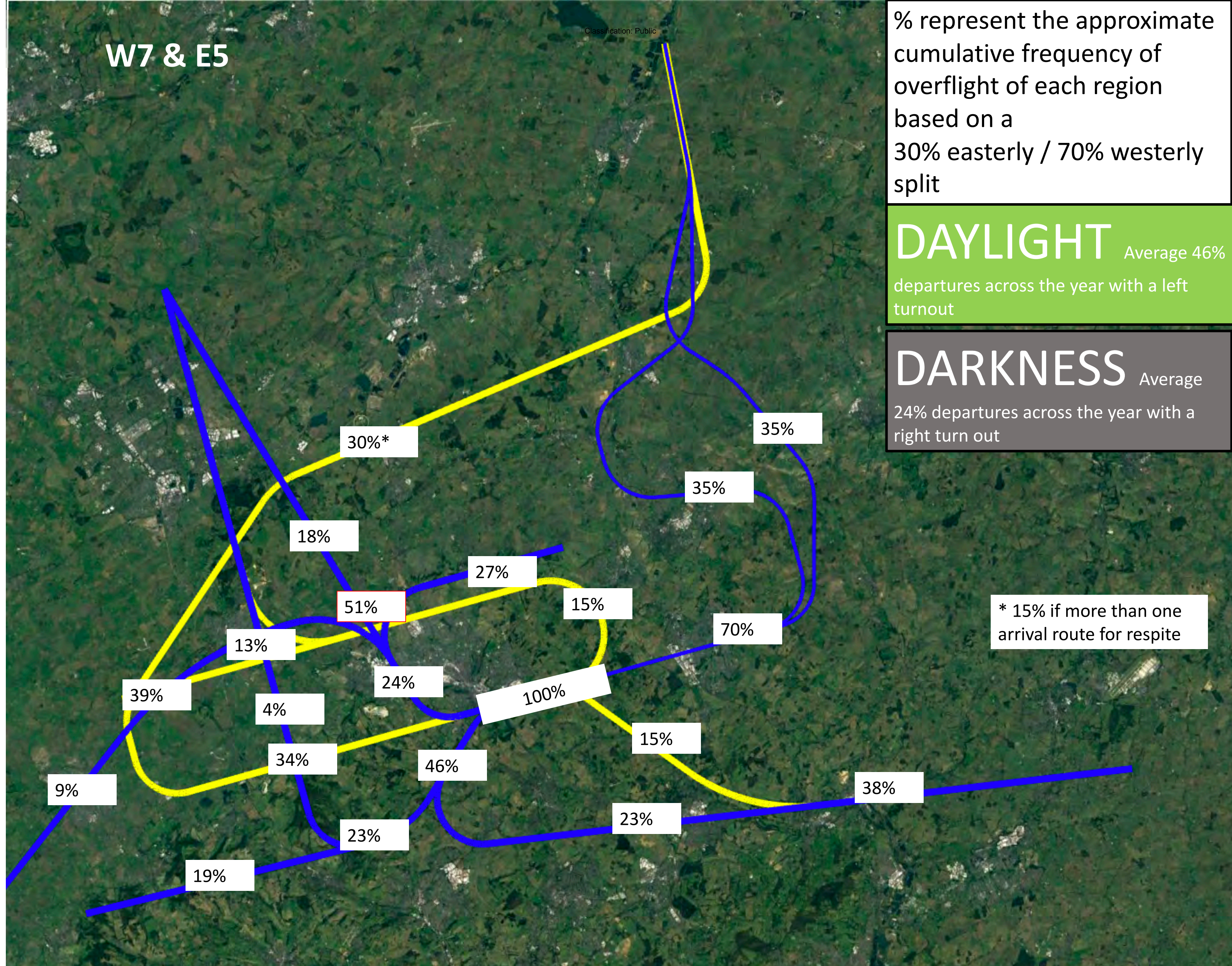
W7 & E5

Classification: Public

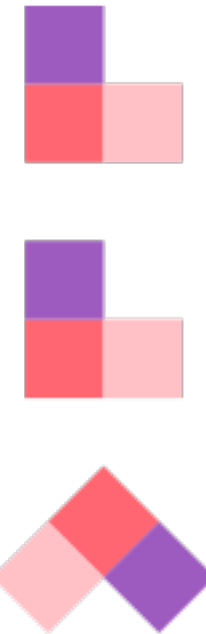
% represent the approximate cumulative frequency of overflight of each region based on a 30% easterly / 70% westerly split

DAYLIGHT Average 46%
departures across the year with a left turnout

DARKNESS Average 24%
departures across the year with a right turnout



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.



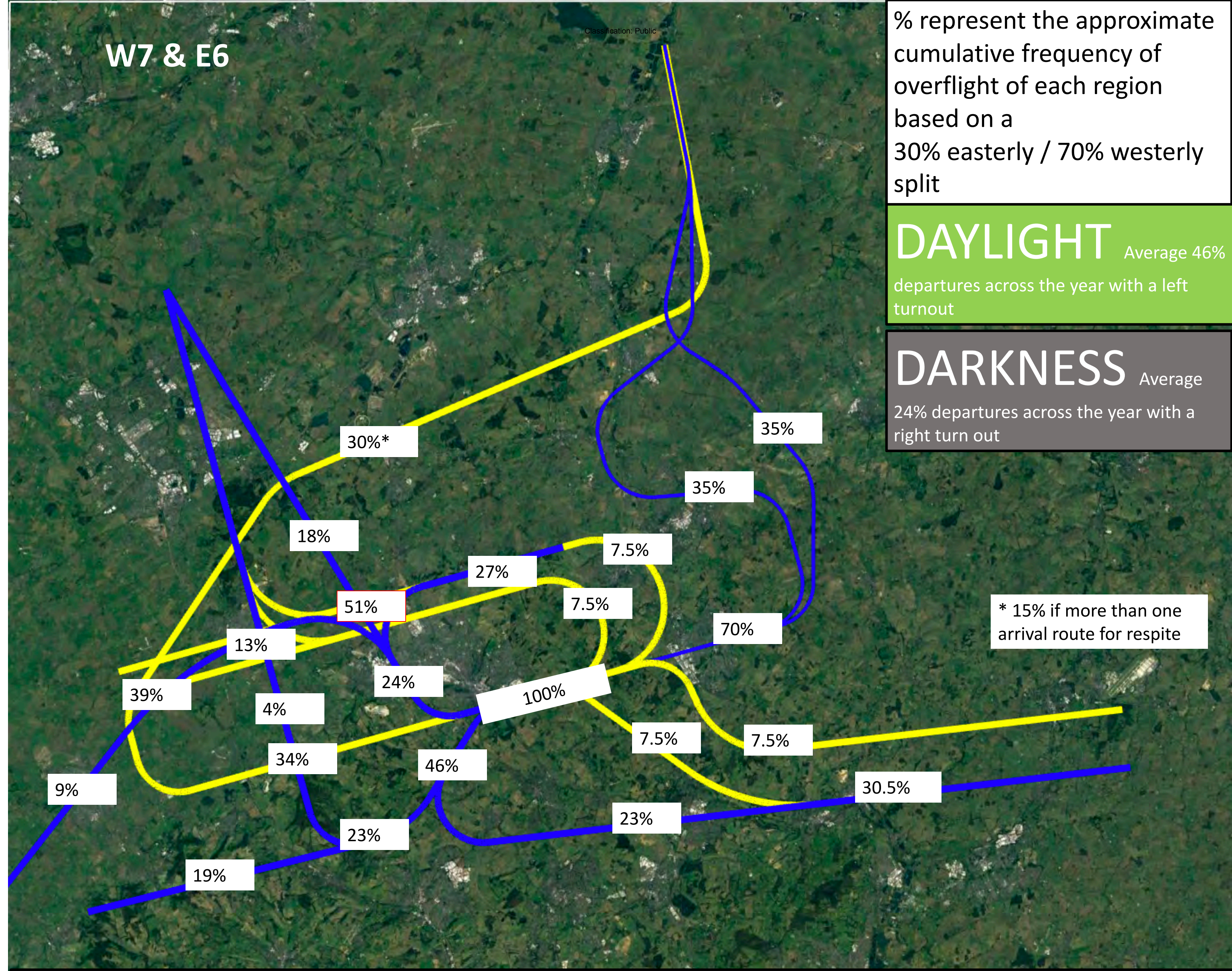
W7 & E6

Classification: Public

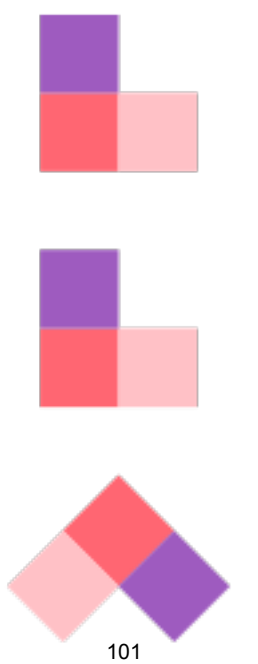
% represent the approximate cumulative frequency of overflight of each region based on a 30% easterly / 70% westerly split

DAYLIGHT Average 46%
departures across the year with a left turnout

DARKNESS Average 24%
departures across the year with a right turnout



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.



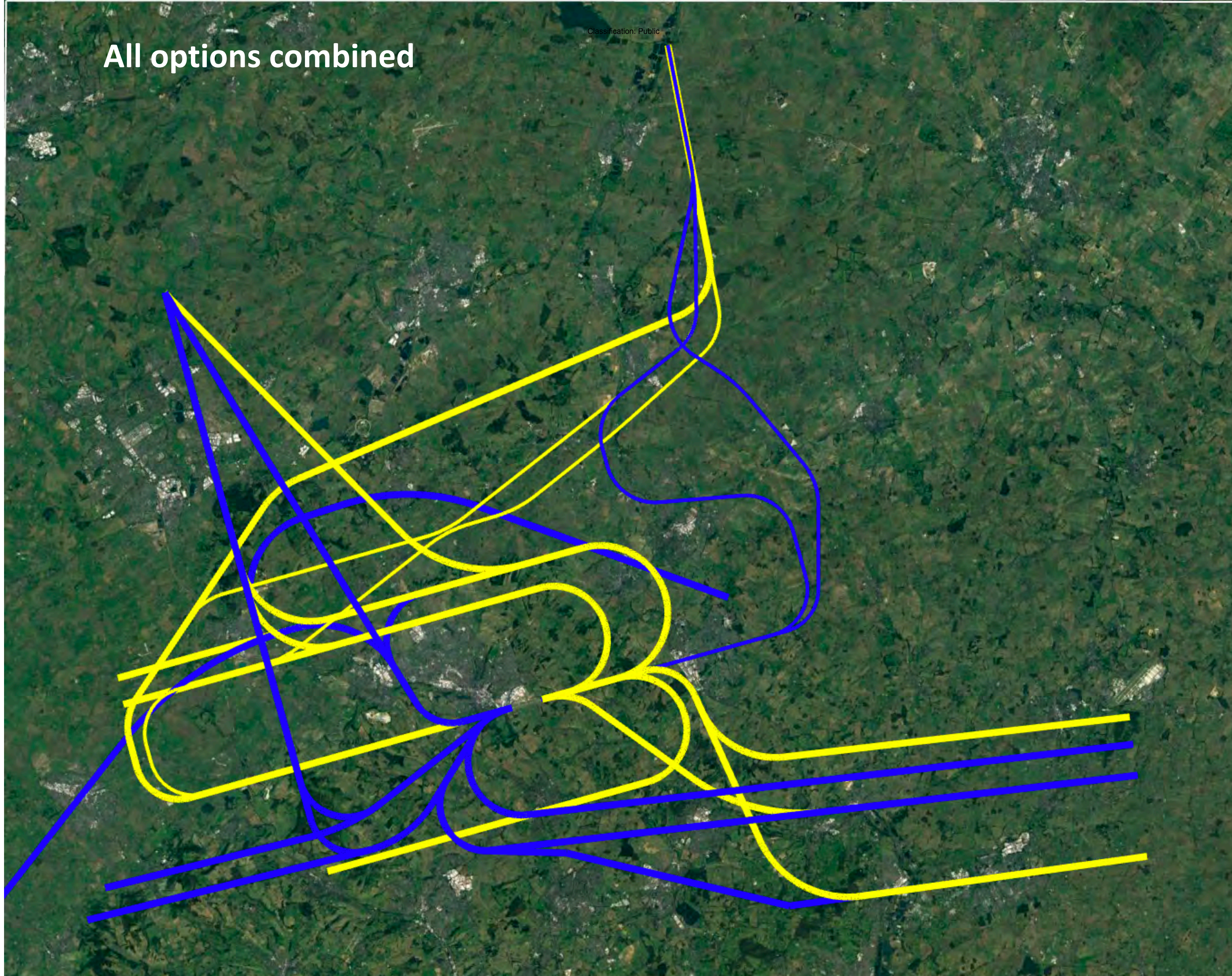
All options combined

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.

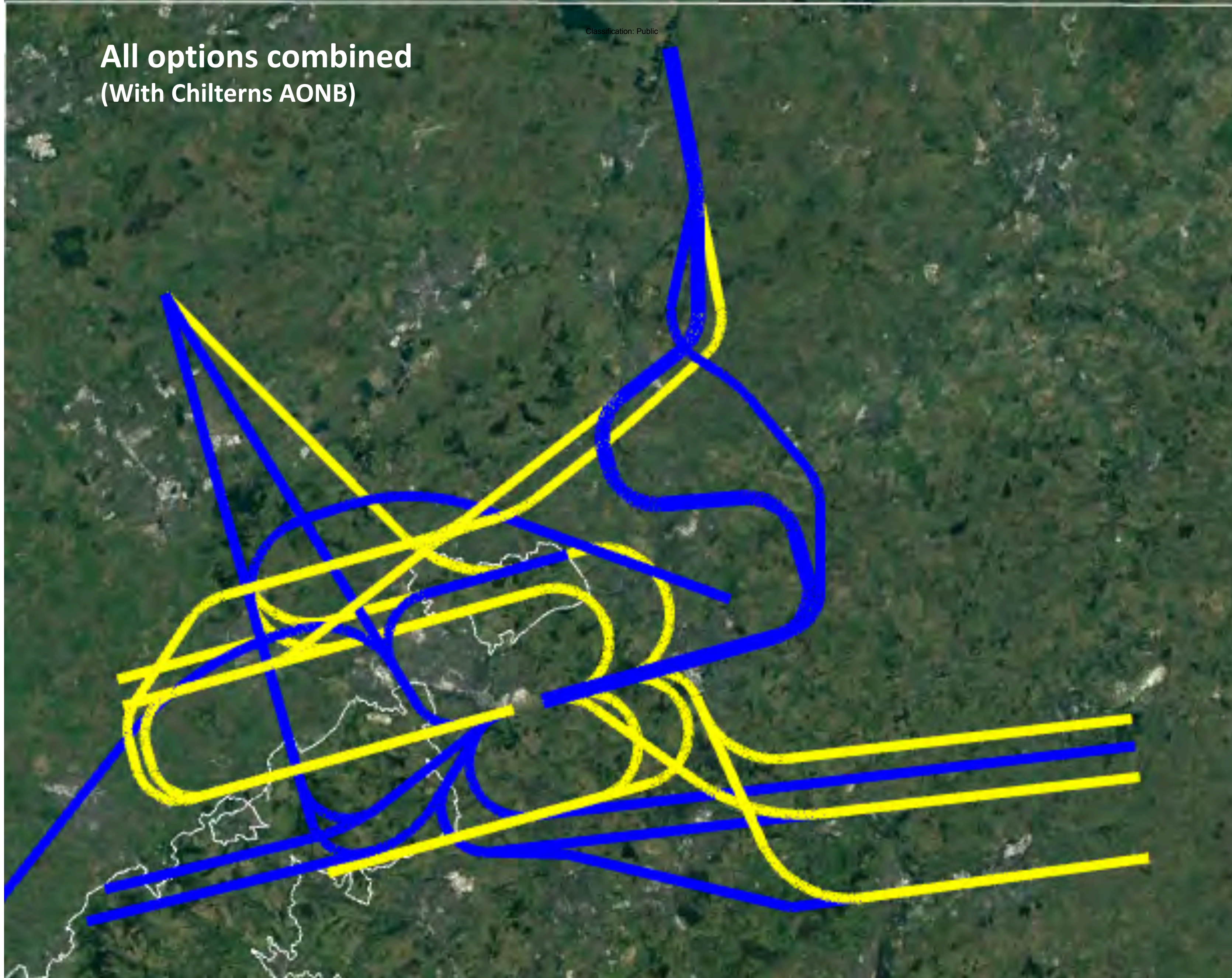
All options combined



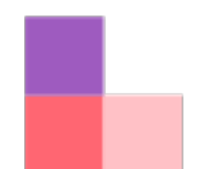
Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.



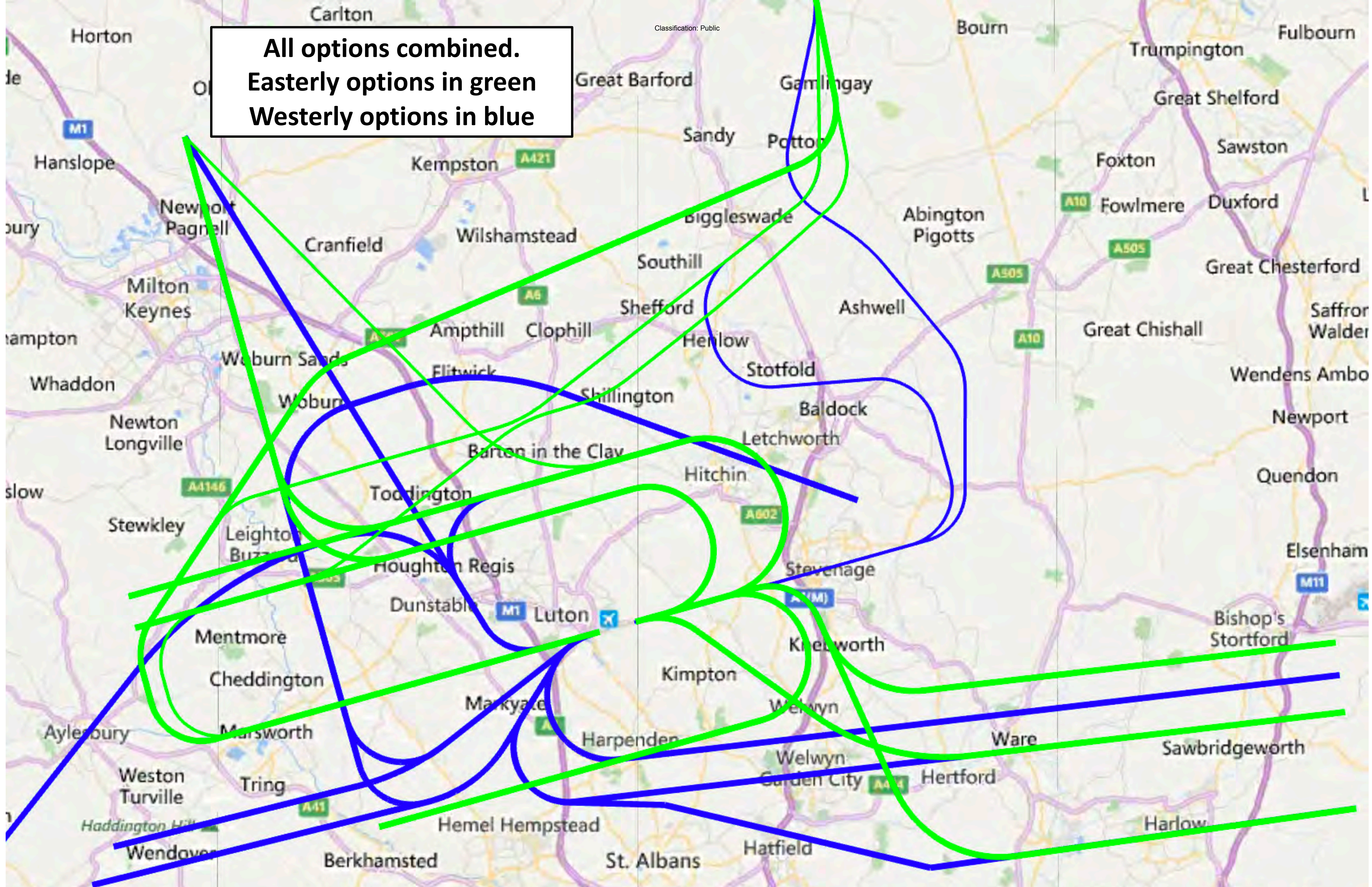
All options combined (With Chilterns AONB)



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.

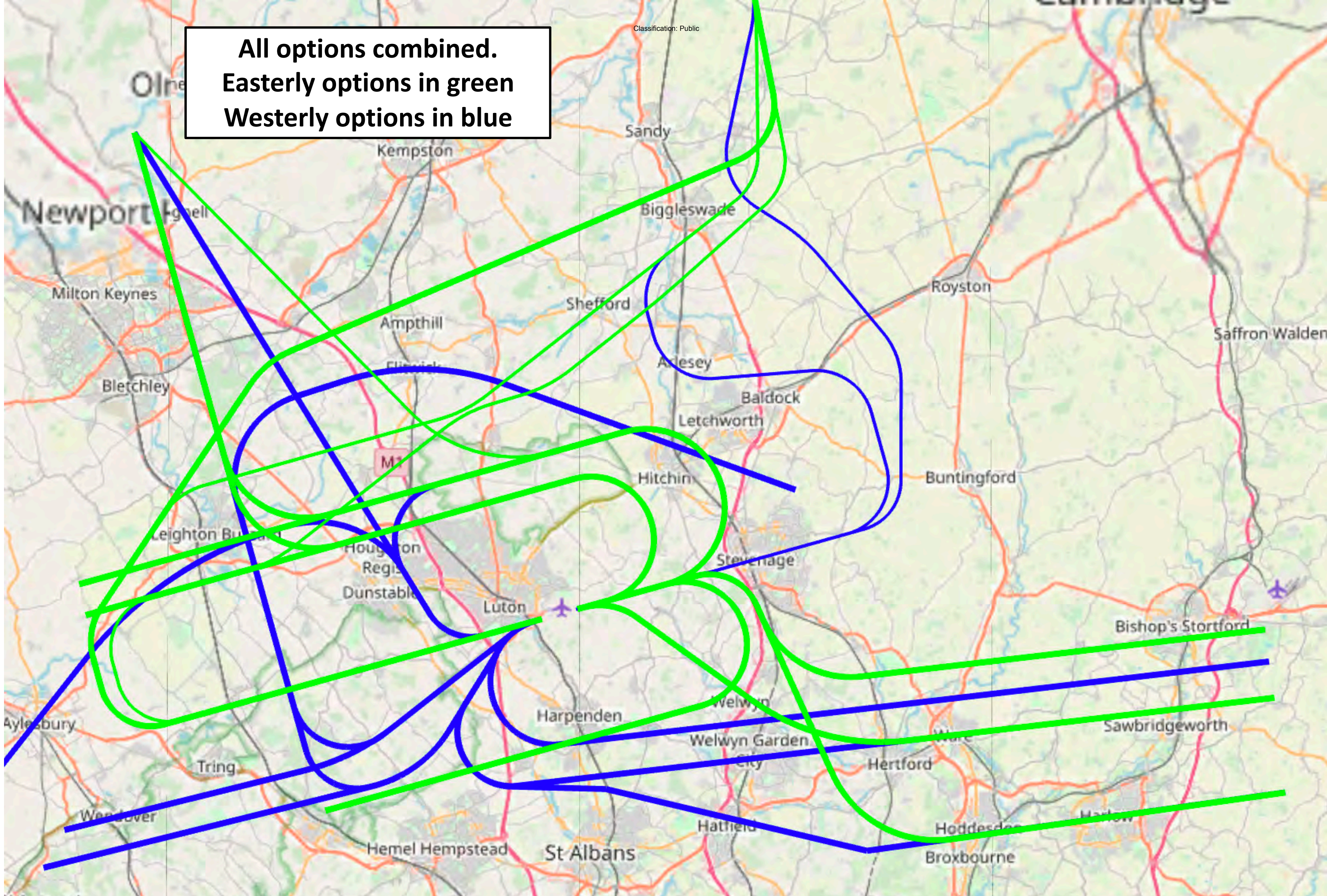


**All options combined.
Easterly options in green
Westerly options in blue**



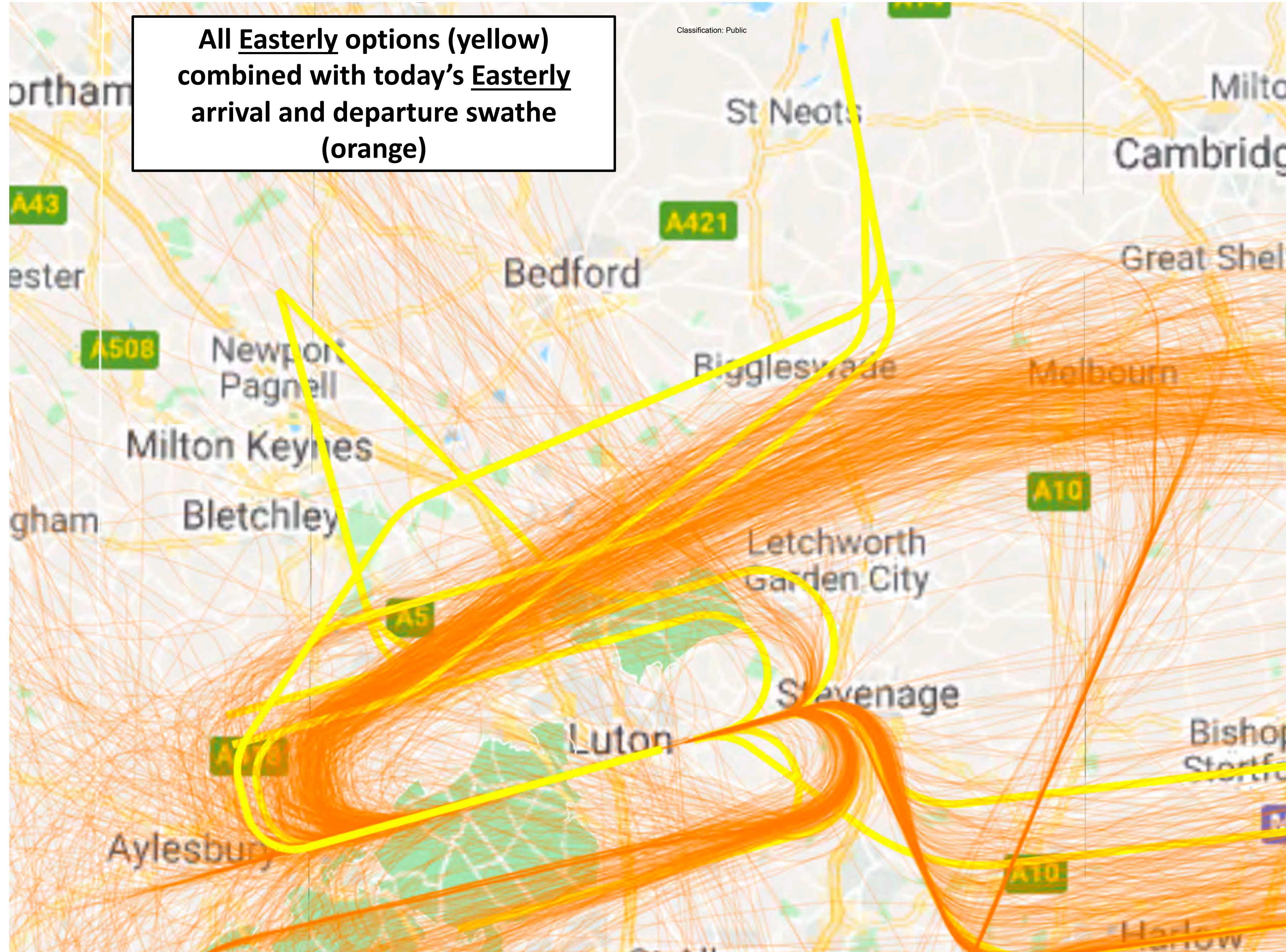
Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept.
All flight paths may change throughout the airspace change design process.

**All options combined.
Easterly options in green
Westerly options in blue**



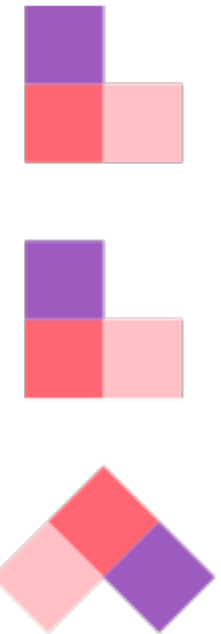
Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.



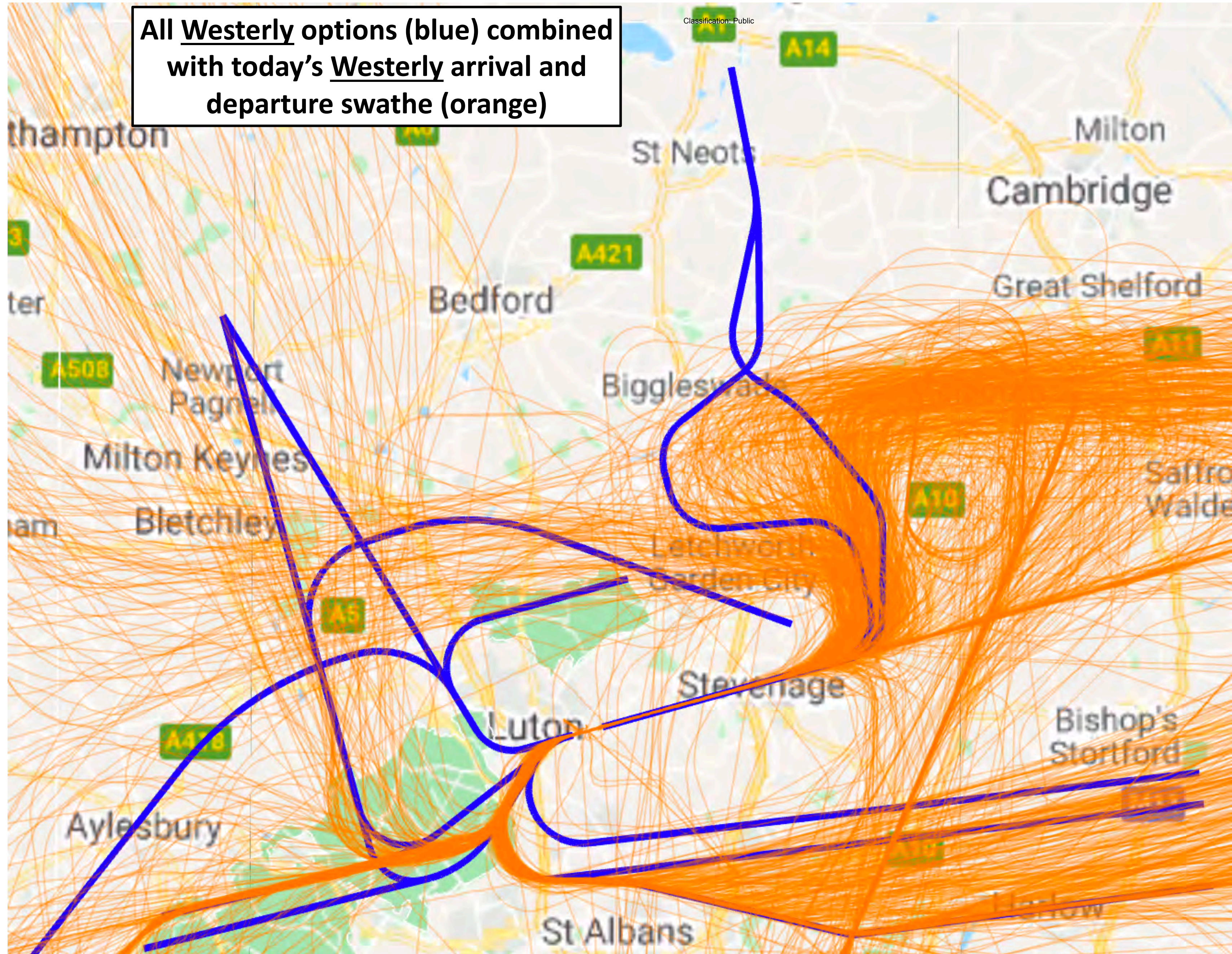


All Easterly options (yellow) combined with today's Easterly arrival and departure swathe (orange)

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.



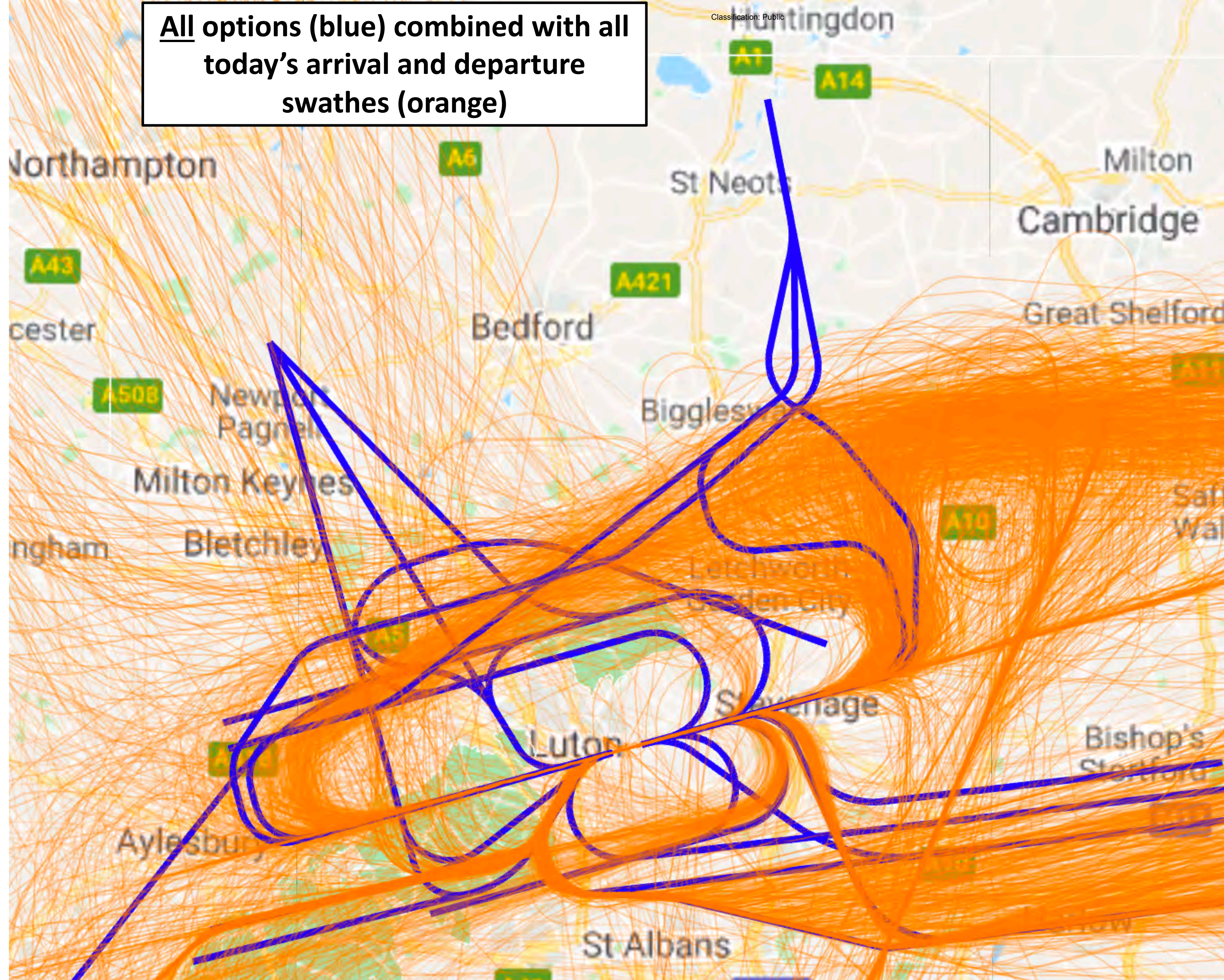
All Westerly options (blue) combined with today's Westerly arrival and departure swathe (orange)



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.



All options (blue) combined with all today's arrival and departure swathes (orange)



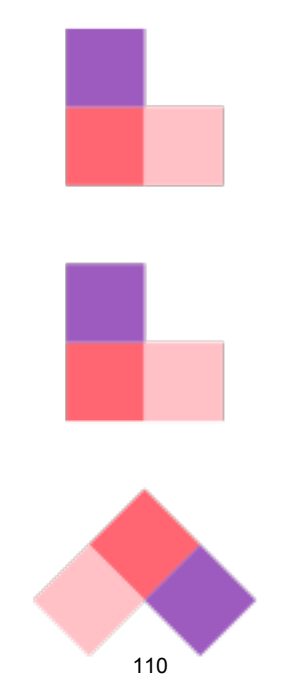
Flight paths shown are for illustration purposes to represent the broad proposed positioning of the concept. All flight paths may change throughout the airspace change design process.



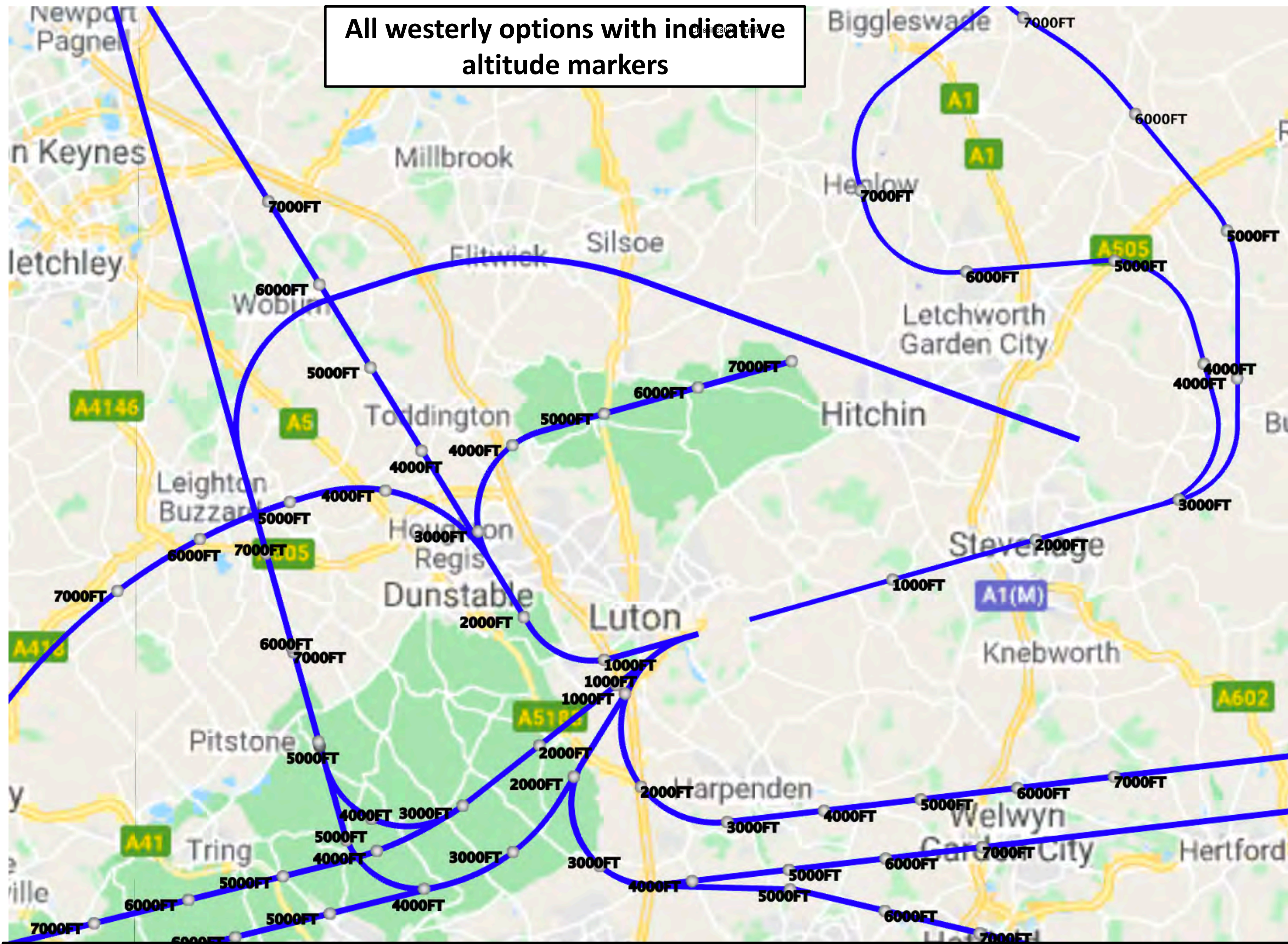
All westerly options with indicative altitude markers



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.



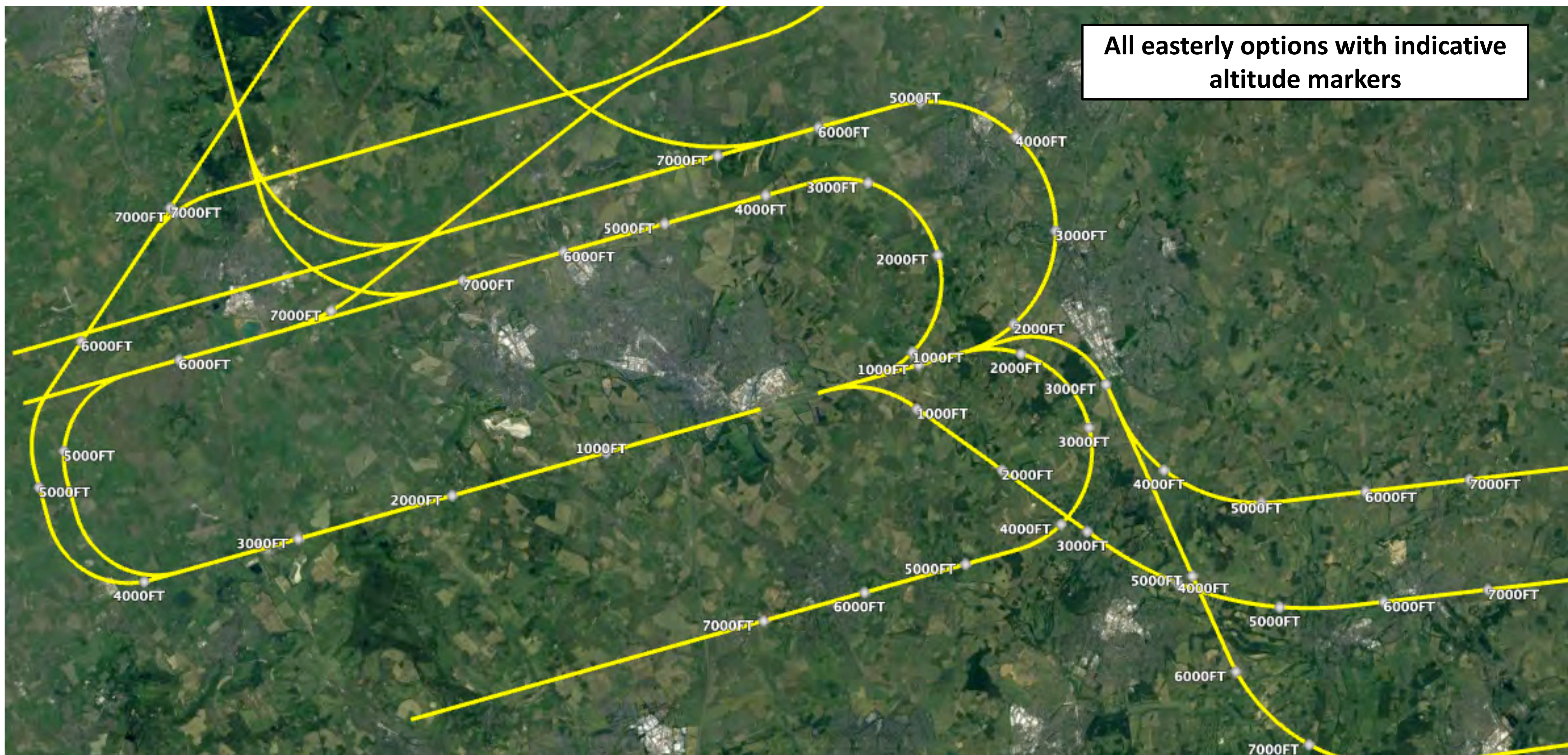
All westerly options with indicative altitude markers



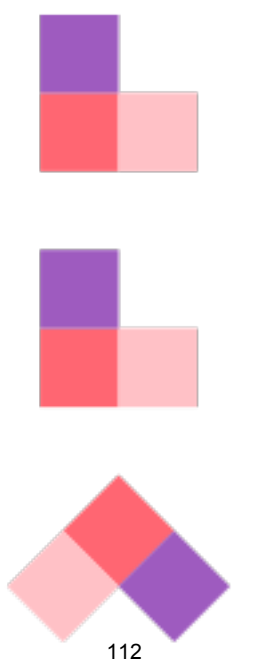
1,000ft altitude markers based on 8% climb gradient or 3° (5.24%) descent gradient.
For departures, this assumes the aircraft starts climb from the very end of the runway. However, aircraft start climb approximately 2/3 down the runway so the altitudes shown here can be considered pessimistic.



All easterly options with indicative altitude markers



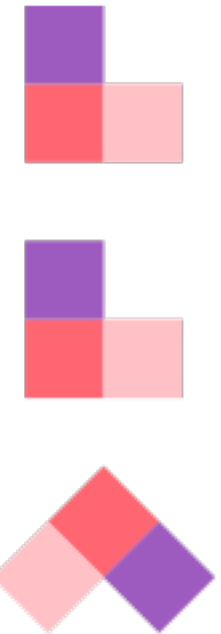
1,000ft altitude markers based on 8% climb gradient or 3° (5.24%) descent gradient. For departures, this assumes the aircraft starts climb from the very end of the runway. However, aircraft start climb approximately 2/3 down the runway so the altitudes shown here can be considered pessimistic.





All easterly 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.



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.

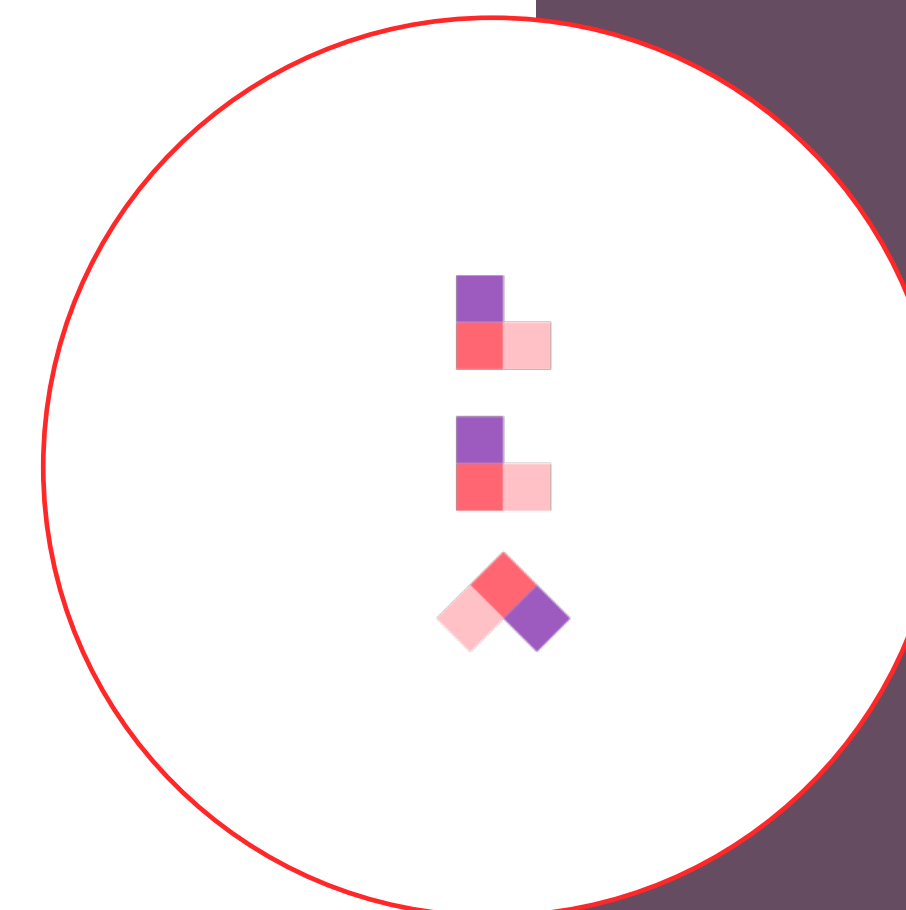
This includes working with adjacent airports (Heathrow, Northolt, London City, Stansted) to understand interactions with their designs.

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.



LUTON AIRPORT - FASI-S ACP - STAGE 2 REQUEST FOR FEEDBACK

[REDACTED]
Fri 23/07/2021 12:27

Bcc: [REDACTED]
[REDACTED]
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 1 attachments (13 MB)
Luton_FASI-S_Init_Comp_List_July_2021-compressed.pdf;

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As you are aware, circumstances changed in March-April 2020 and the ACP was paused. We are now able to re-start our ACP and would like to continue our Stage 2 engagement with you.

Please find attached the updated presentation, which was provided to our community stakeholders on 18th February 2020, during our Airspace Engagement Day. The purpose of this presentation is to demonstrate a number of potential different configurations of new arrival and departure routes and to what extent they could 'equitably distribute' the overflight and/or avoid overflying the same communities with multiple routes.

As a member of NATMAC, we would now welcome your feedback on these slides. The purpose of this engagement is not to seek feedback on individual route options by examining the detailed specific geographical positions of the options, but for you to explore and test our approach to developing the options and their broad concepts. We will then combine your feedback with the comments we have already received from our local and community stakeholders, and we will then be generating an updated set of options to take into a Design Principle evaluation.

Please provide feedback to the initial list of options to airspacemodernisation@ltn.aero **COP Monday 23 August 2021**.

We will re-engage with you on our refined designs when they are ready. We hope this will be in October 2021. May we also draw your attention to the letters between London Luton Airport and CAA regarding Airspace Modernisation which are available on the CAA Airspace Change Portal, [here](#) under 'Documents for this proposal'.

Kind Regards,

LUTON AIRPORT - FASI-S ACP - STAGE 2 REQUEST FOR FEEDBACK

[Redacted]

Fri 23/07/2021 12:21

Bcc: [Redacted]
[Redacted]
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[REDACTED]
Fri 23/07/2021 13:04

Bcc: [REDACTED]
[REDACTED]

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Kind Regards,



London Luton Airport
Percival House,
Percival Way,
Luton, LU2 9NU

[REDACTED]
w london-luton.co.uk

Re: LUTON AIRPORT - FASI-S ACP - STAGE 2 REQUEST FOR FEEDBACK

[REDACTED]
Fri 23/07/2021 12:12

Bcc: [REDACTED]
[REDACTED]
[REDACTED]

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Luton, LU2 9NU

📞 [REDACTED]
🌐 london-luton.co.uk

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[REDACTED]
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[REDACTED]
w london-luton.co.uk

LUTON AIRPORT - FASI-S ACP - STAGE 2 REQUEST FOR FEEDBACK

Tue 27/07/2021 11:31

Bcc: [REDACTED]

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Percival House,
Percival Way,
Luton, LU2 9NU

E [REDACTED]
W london-luton.co.uk

LUTON AIRPORT - FASI-S ACP - STAGE 2 REQUEST FOR FEEDBACK

Tue 27/07/2021 11:29

Bcc: [REDACTED]

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[w london-luton.co.uk](http://london-luton.co.uk)

LUTON AIRPORT - FASI-S ACP - STAGE 2 REQUEST FOR FEEDBACK

Airspace Modernisation <AirspaceModernisation@ltn.aero>

Fri 23/07/2021 14:53

To: [REDACTED]

📎 1 attachments (13 MB)

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