

LONDON BIGGIN HILL AIRPORT

FASI-South Airspace Change (ACP-2018-69)

Comprehensive List of Options



HOUSEKEEPING

- Please turn off your microphones during the presentation.
- If you have a question, please use the meeting chat and we will go through these at the end of the meeting.
- This meeting will be recorded and by continuing to participate your agreement is inferred.
- Your participation assumes that you are familiar with the Stage 1 Report and Comprehensive Options List delivered with the meeting invite.



Aviation is full of Jargon and Acronyms:

ACOG	-	Airspace Change Organising Group
ACP	-	Airspace Change Process
ATC	-	Air Traffic Control
CAA	-	Civil Aviation Authority
CAP	-	Civil Aviation Publication
DfT	-	Department for Transport
DME	-	Distance Measuring Equipment
GNSS	-	Global Navigation Satellite System
IAP	-	Instrument Approach Procedure
ILS	-	Instrument Landing System
LBHA	-	London Biggin Hill Airport
NATS	-	National Air Traffic Services
PANS OPS	-	Procedures for Air Navigation Services – Aircraft Operations
PBN	-	Performance Based Navigation
RNAV	-	Area Navigation
VOR	-	VHF Omnidirectional Ranging



Background - 1

UK Airspace Modernisation Programme

- UK Airspace has not been changed since the 1950s when it was first developed.
- The DfT and the CAA are working together to modernise the infrastructure of the airspace in the UK, with the aim of modernising the airspace for today's technically advanced aircraft, improving efficiency and traffic flow, whilst also introducing specific environmental benefits.
- Due to the complexity and overlapping scope of individual airspace change proposals, a dedicated team has been created which will provide strategic coordination between all stakeholders on behalf of the DfT and the CAA. This team is known as the Airspace Change Organising Group (ACOG)

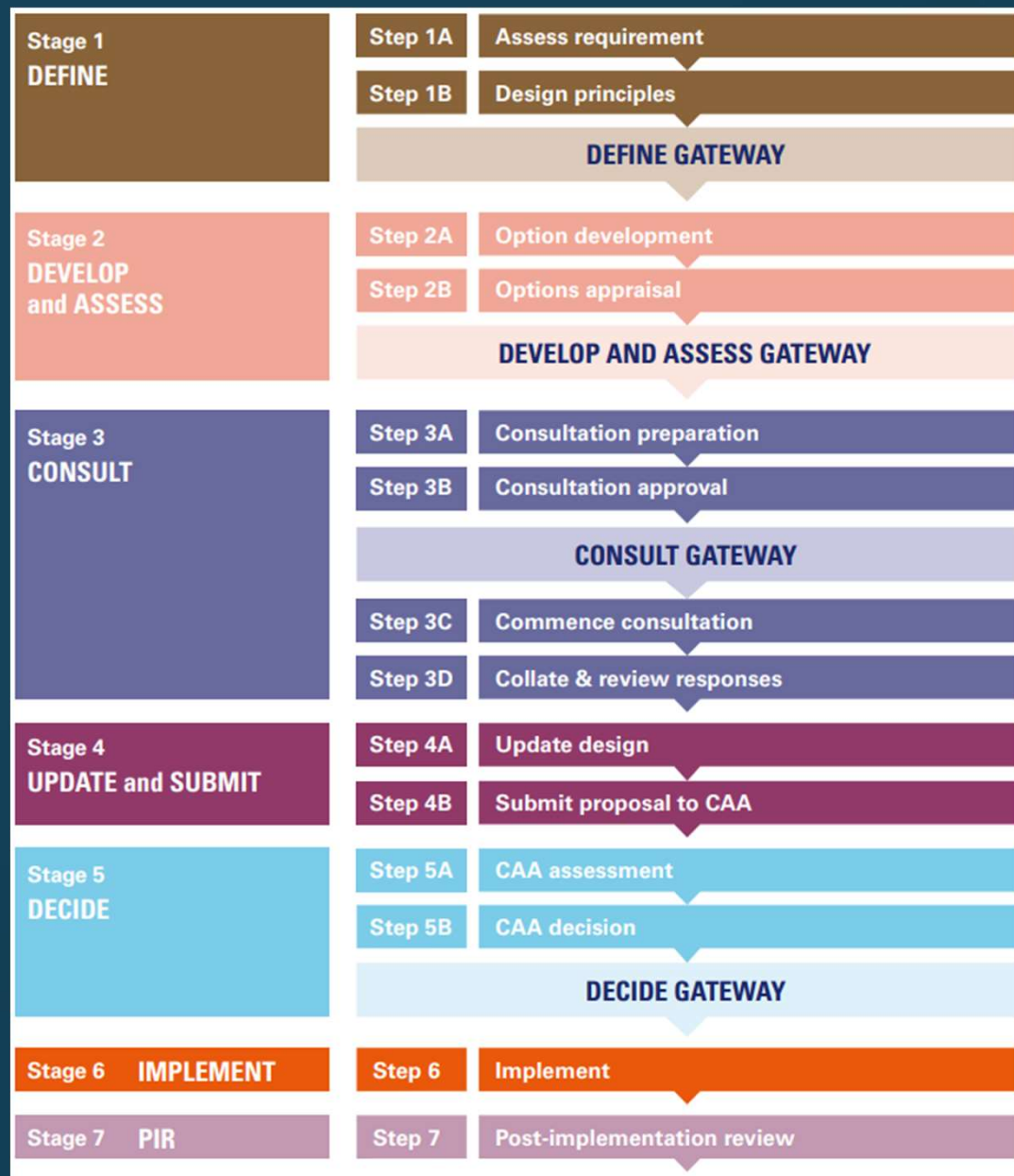


Background - 2

- Biggin Hill Airport is one of the many airports involved in this national airspace change programme, which will modernise the airspace in the UK.
- All Airspace Change Proposals are required to follow the UK Civil Aviation Authority's (CAA) 7 stage process for changing airspace design, known as CAP1616.
- This presentation will summarise actions taken through Stage 1 and provide engagement material which will allow feedback from stakeholders for Stage 2 of this Airspace Change.



Airspace Change Process - CAP 1616



← Completed in August 2019

← We are here

← Consultation date not yet announced



STAGE 1 – DESIGN PRINCIPLES

The following Design Principles were agreed at Stage 1 of this Airspace Change, details of which can be found on the CAA Airspace Portal: <https://airspacechange.caa.co.uk/>

1. **SAFETY** – New routes must be safe for all aircraft types.
2. **COMPLIANCE** – Route should, where possible, be designed to be PANS OPS compliant.
3. **ENVIRONMENTAL CONCERNS** – Arrival and Departure routes should, where possible, be designed to minimise the impact of noise below 7000ft and should avoid the overflight of populations not previously overflown.



STAGE 1 – DESIGN PRINCIPLES

4. **WORKLOAD** – Routes must be designed to introduce capacity to Air Traffic Control workload to facilitate adequate deconfliction in the vicinity.

5. **HARMONISED ROUTES** – Biggin Hill Airport should consider the effect of any changes in its flight routes on the behaviour of other airspace users making use of the airspace around the airport.

6. **EFFICIENT ROUTES** – Arrival and Departure routes should, where possible, be designed to minimise emissions and optimise operational efficiencies.



STAGE 1 – DESIGN PRINCIPLES

7= NAVIGATION STANDARDS – New routes must be designed to the Required Navigation Performance.

7= AONB/Schools - Procedures should, where possible, avoid overflight of sensitive areas, e.g. Hospitals, schools, country parks or AONBs.

9. IMPROVED AIRCRAFT PERFORMANCE – Departure routes should, where possible, aim to take advantage of the high performance climb characteristics of typical Business Jet aircraft types by offering a continuous and uninterrupted climb to 7000ft AMSL.



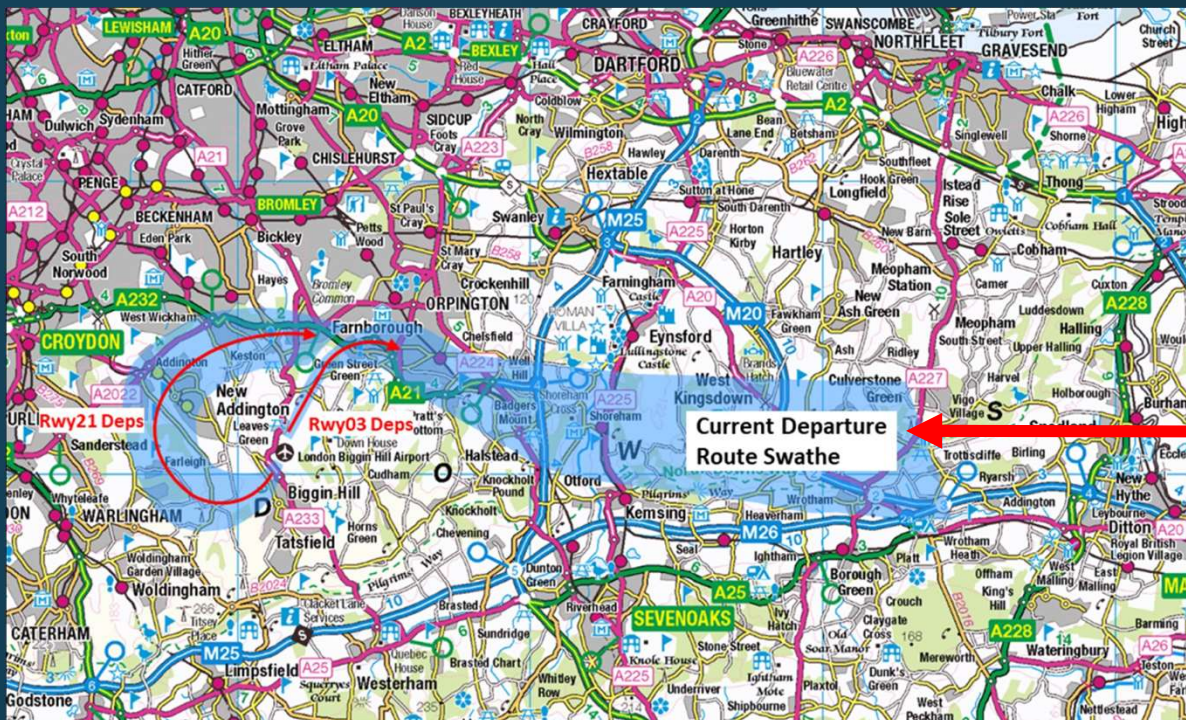
Step 2A- Options Development

- Biggin Hill Airport is in Stage 2 of the CAP1616 Airspace Change Process, which is Options Development.
- Based on the already developed Design Principles, we have developed a comprehensive list of Route Options, in accordance with the requirements established in the Statement of Need.



DEPARTURES – DO NOTHING

The current Departure routes are not appropriate, as they may not meet the requirements or interactions required as the new airspace is developed. Therefore, do nothing is not an option.



Departure route swathe over a 12 month period off both runways



Design Options Development

DEPARTURE OPTIONS

The initial departures for both runways would remain the same as today;

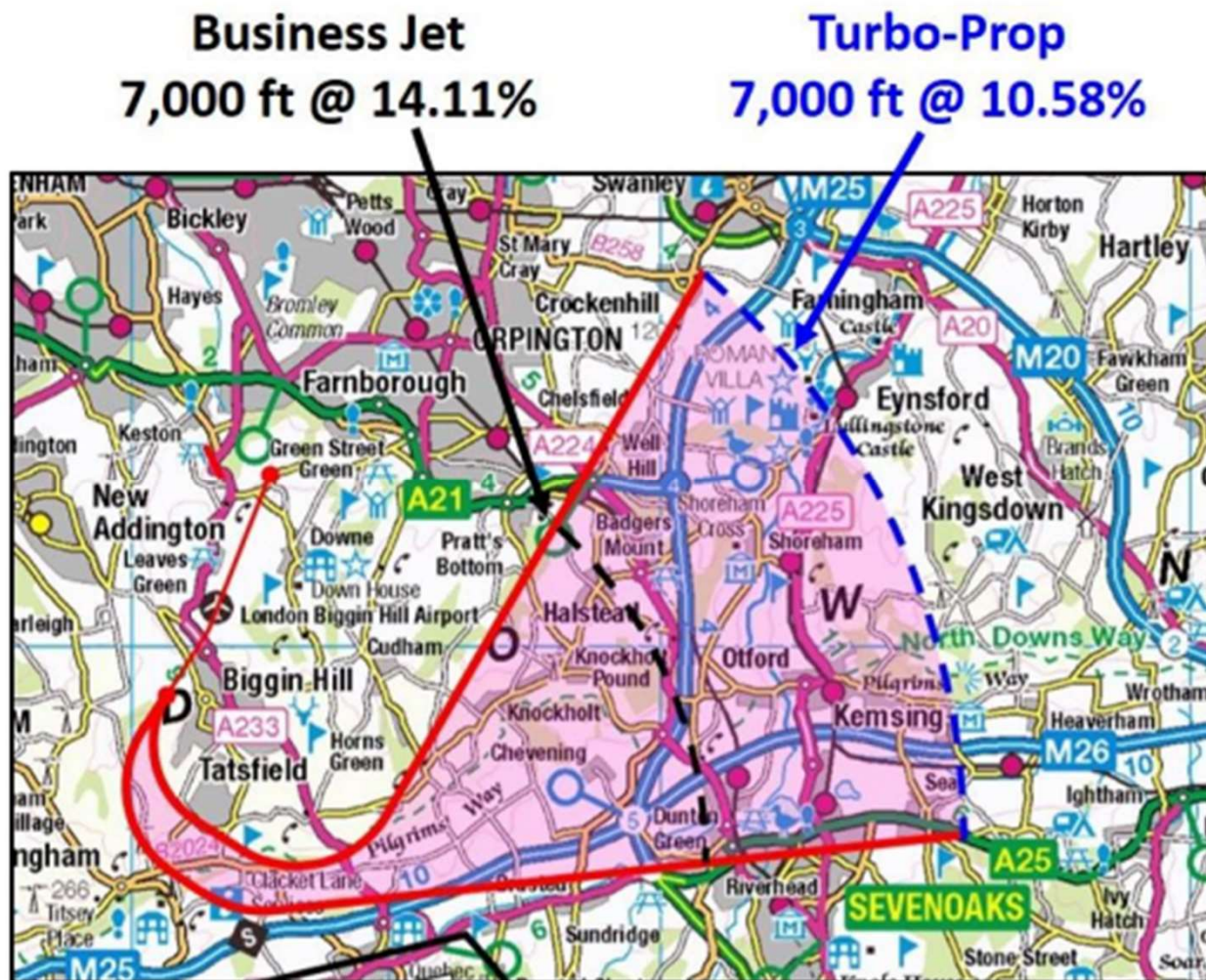


Runway 03 – Aircraft climb straight ahead to 1nm before any turns on a planned route.

Runway 21 – Aircraft to turn right at the aerodrome boundary to track 220 degrees for 1nm before any turn on a planned route.

Indicative Height Boxes

The design options included a representation of the position at which the aircraft were expected to achieve an altitude of 7000ft where the routes will integrate with the UK Airways controlled by NATS.



A Business Jet will achieve 7000ft earlier due to the better climb rate than a Turbo-Prop.



DEPARTURE OPTIONS

Departure routes were designed to achieve optimal routing based on the Design Principles.

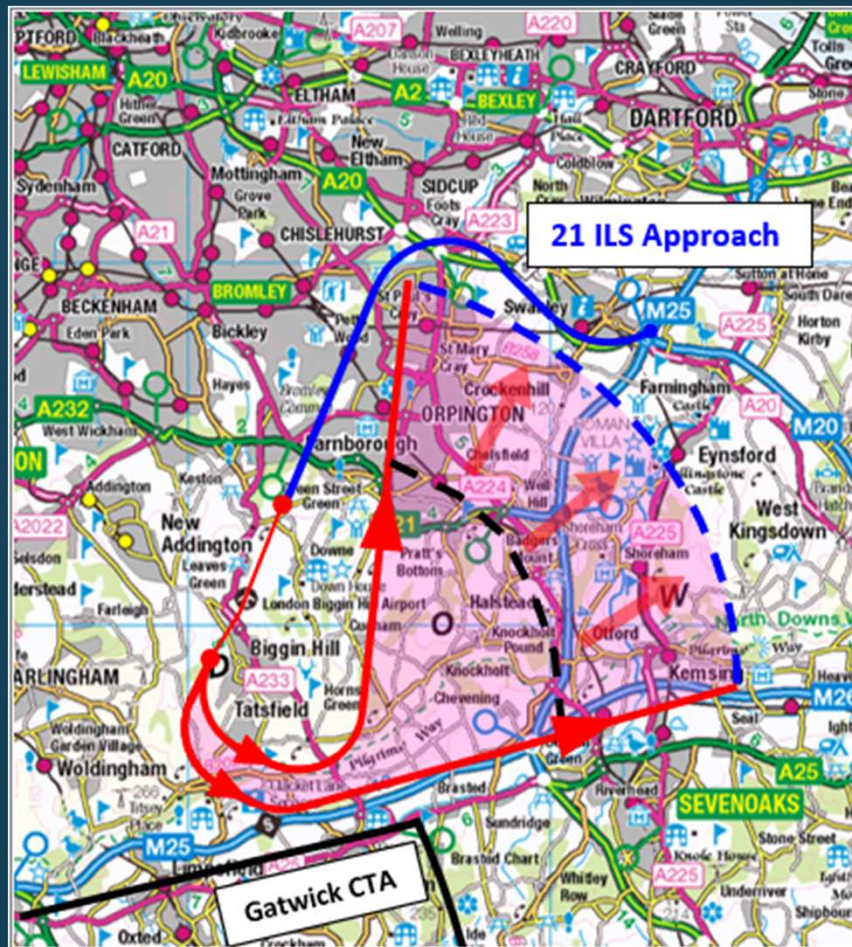
Since the actual point in the sky where interaction with the NATS airway structure has yet to be determined, swathes were developed, within which the final routes will be located and assessed and re-assessed as necessary.

Departure routes were developed on a geographical basis, with due regard to adjacent airspace users which exist today.



Runway 21 – Departure North 1

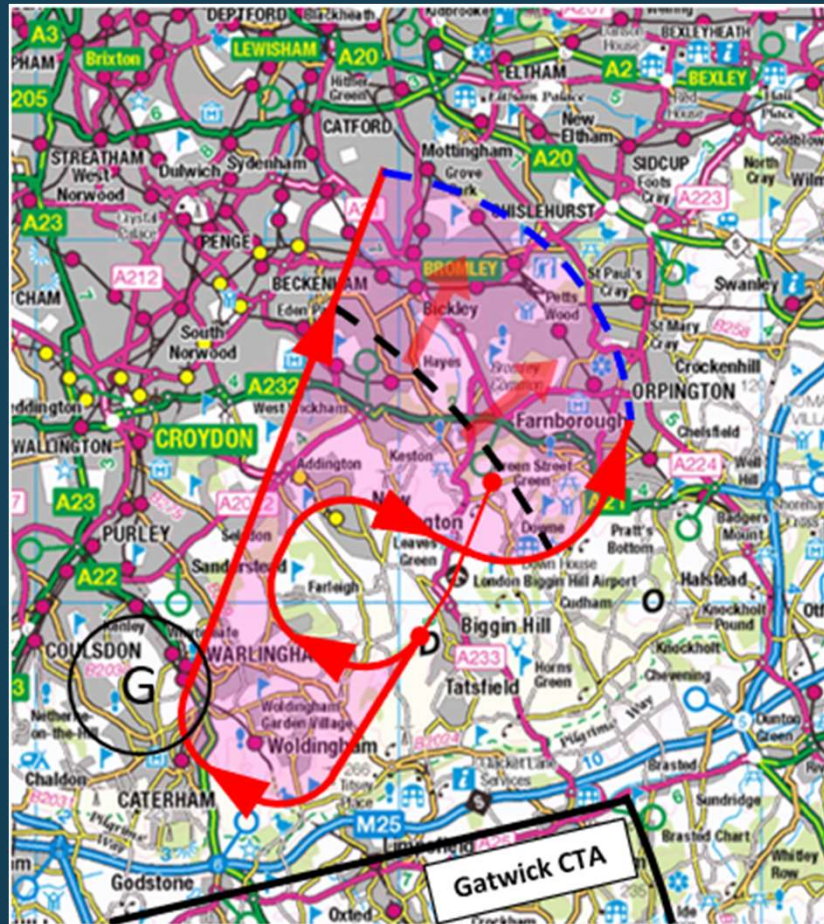
Option D1



Left Turn Out



Runway 21 – Departure North 2



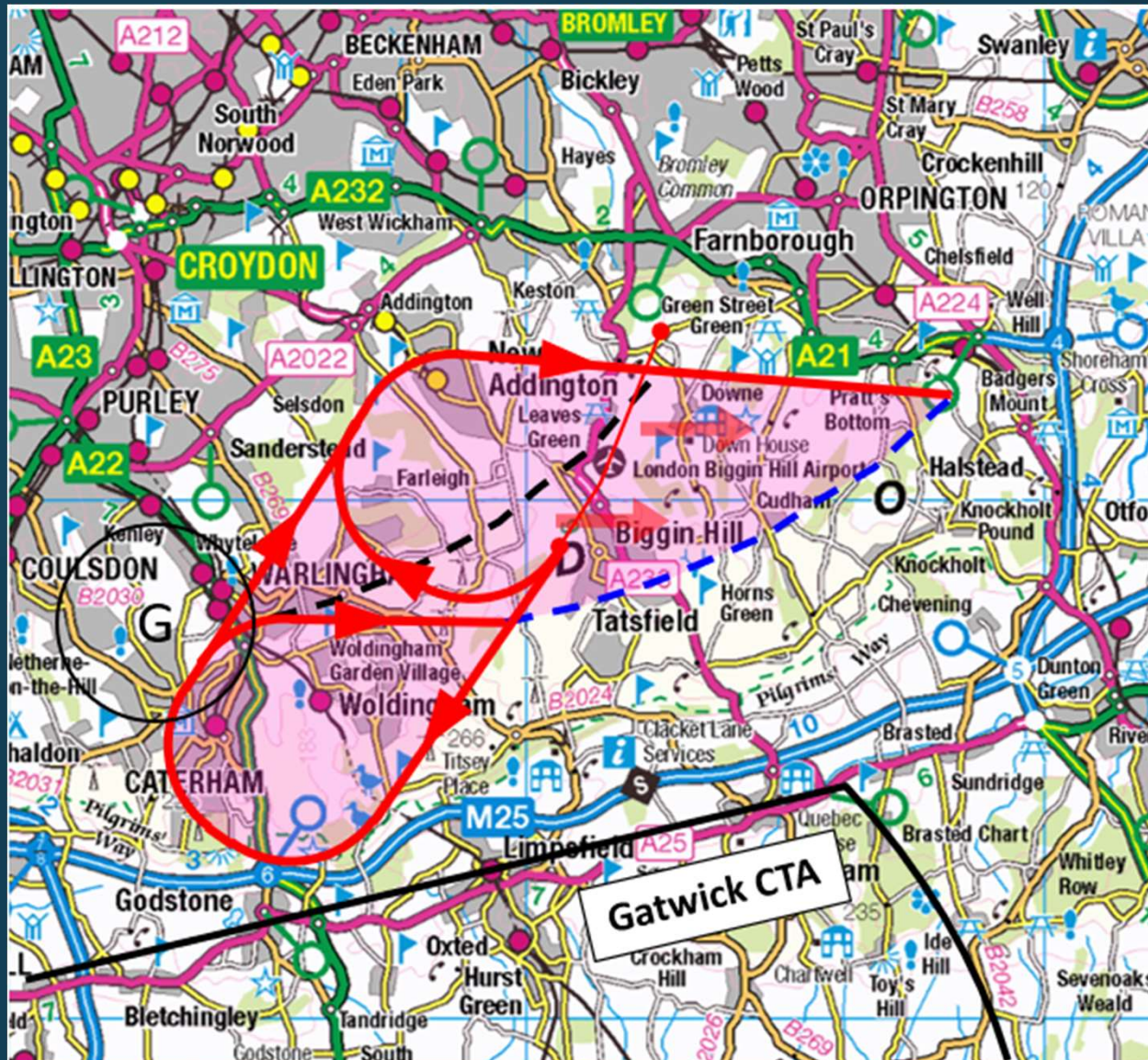
Right Turn Out



Runway 21 – Departure East 1

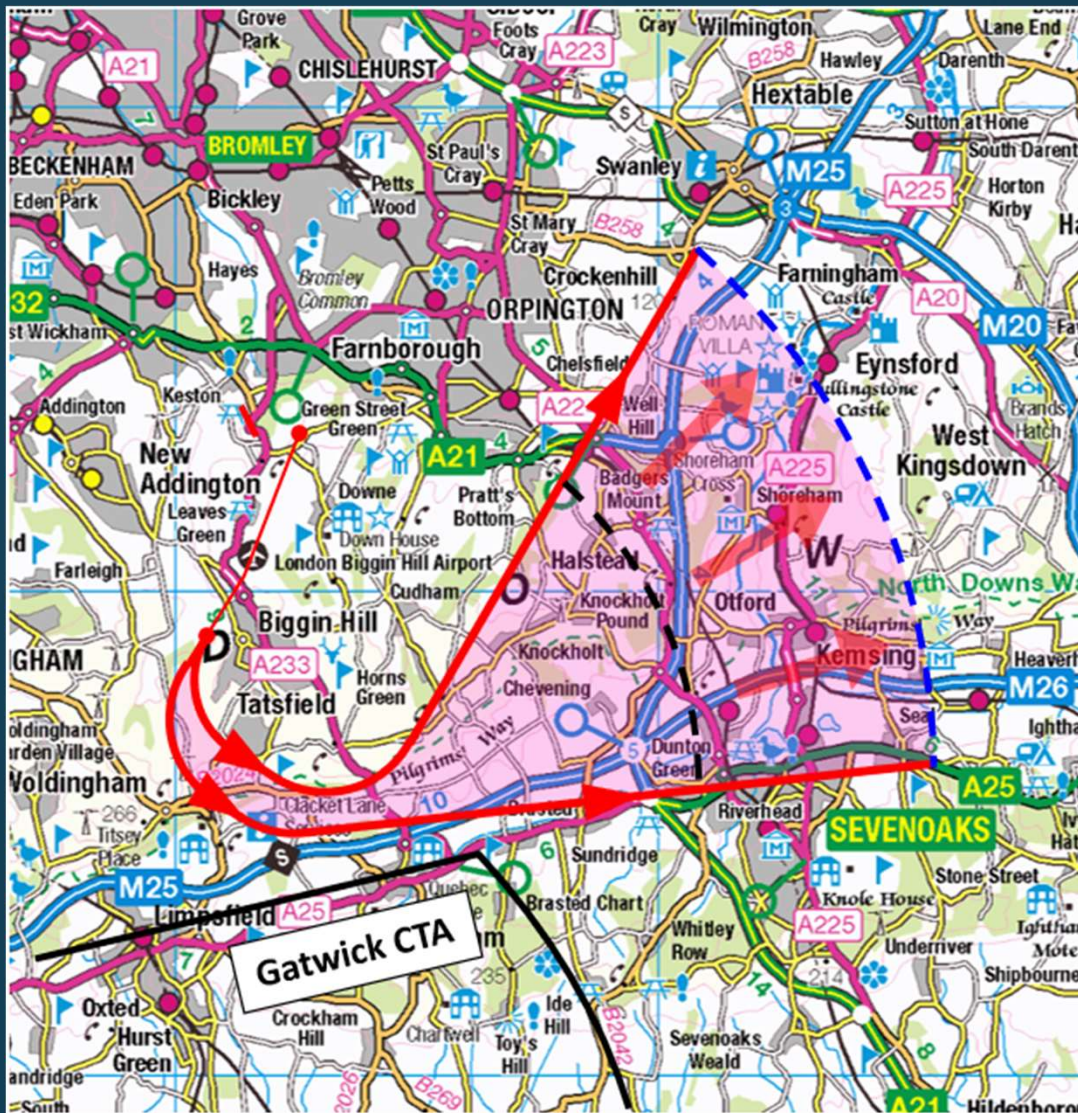
Option D3

Right Turn
Out



Option D4

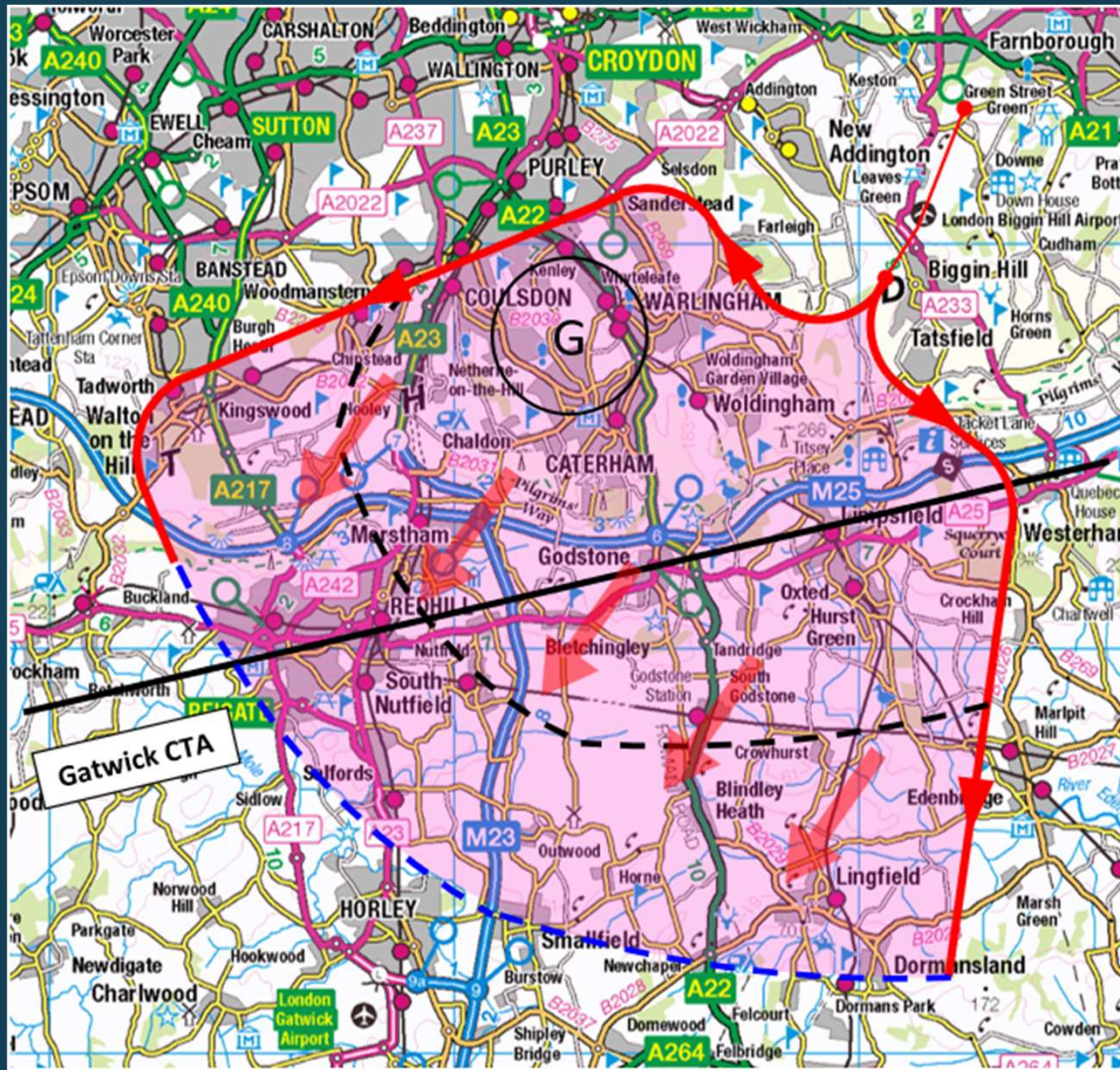
Runway 21 – Departure East 2



Left Turn Out

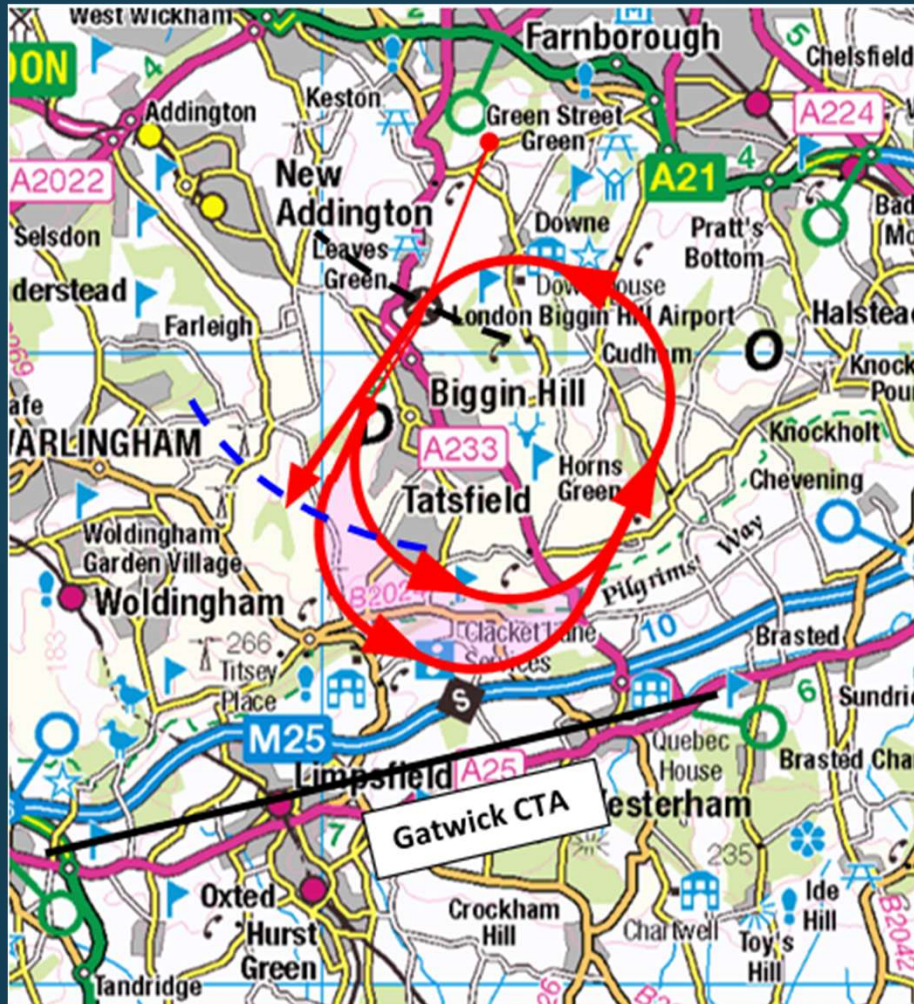


Runway 21 – Departure South 1



Runway 21 – Departure South 2

Option D6

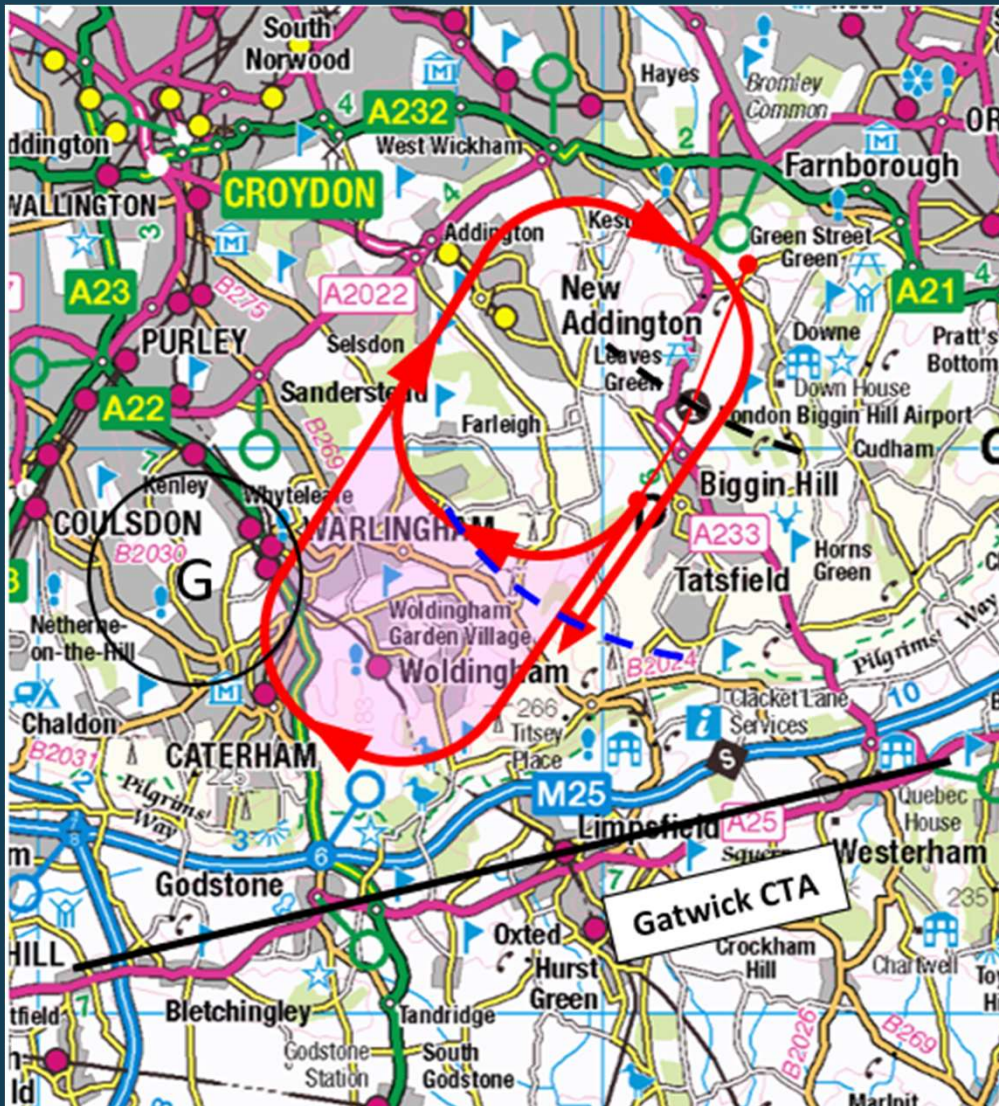


Left Turn back
through the
overhead



Runway 21 – Departure South 3

Option D7

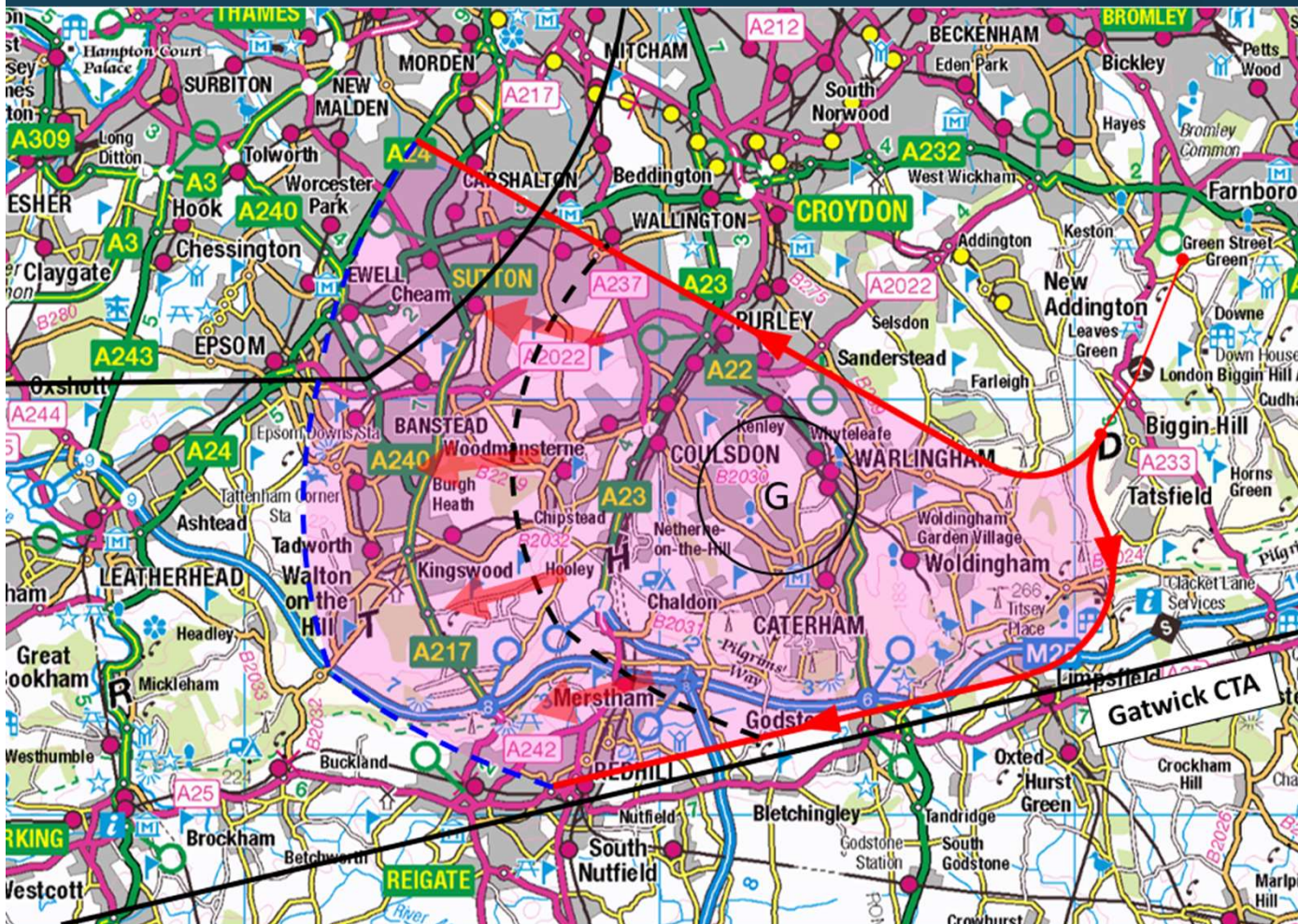


Right Turn back
through the
overhead



Option D8

Runway 21 – Departure West 1



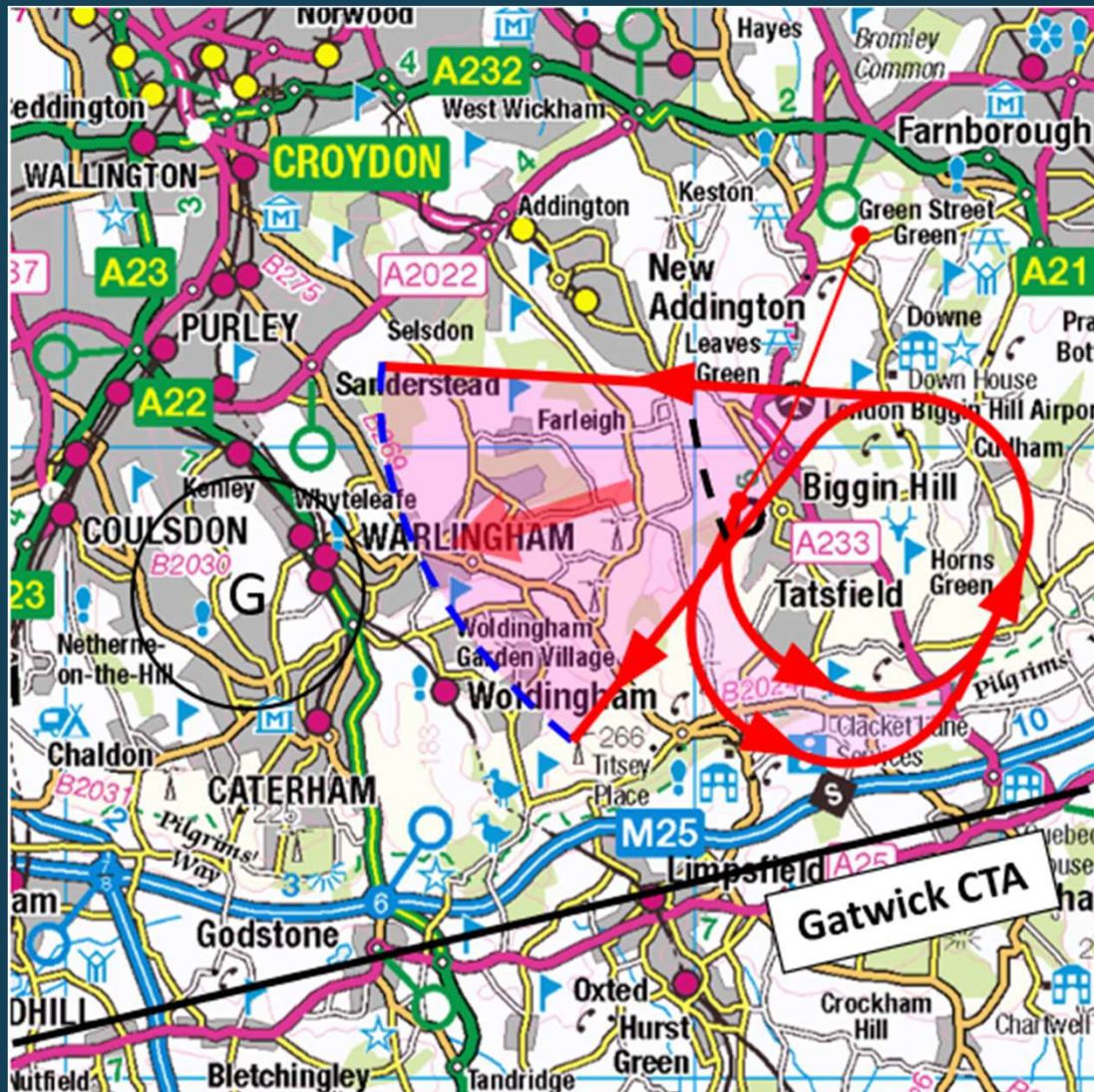
Right Turn



Runway 21 – Departure West 2

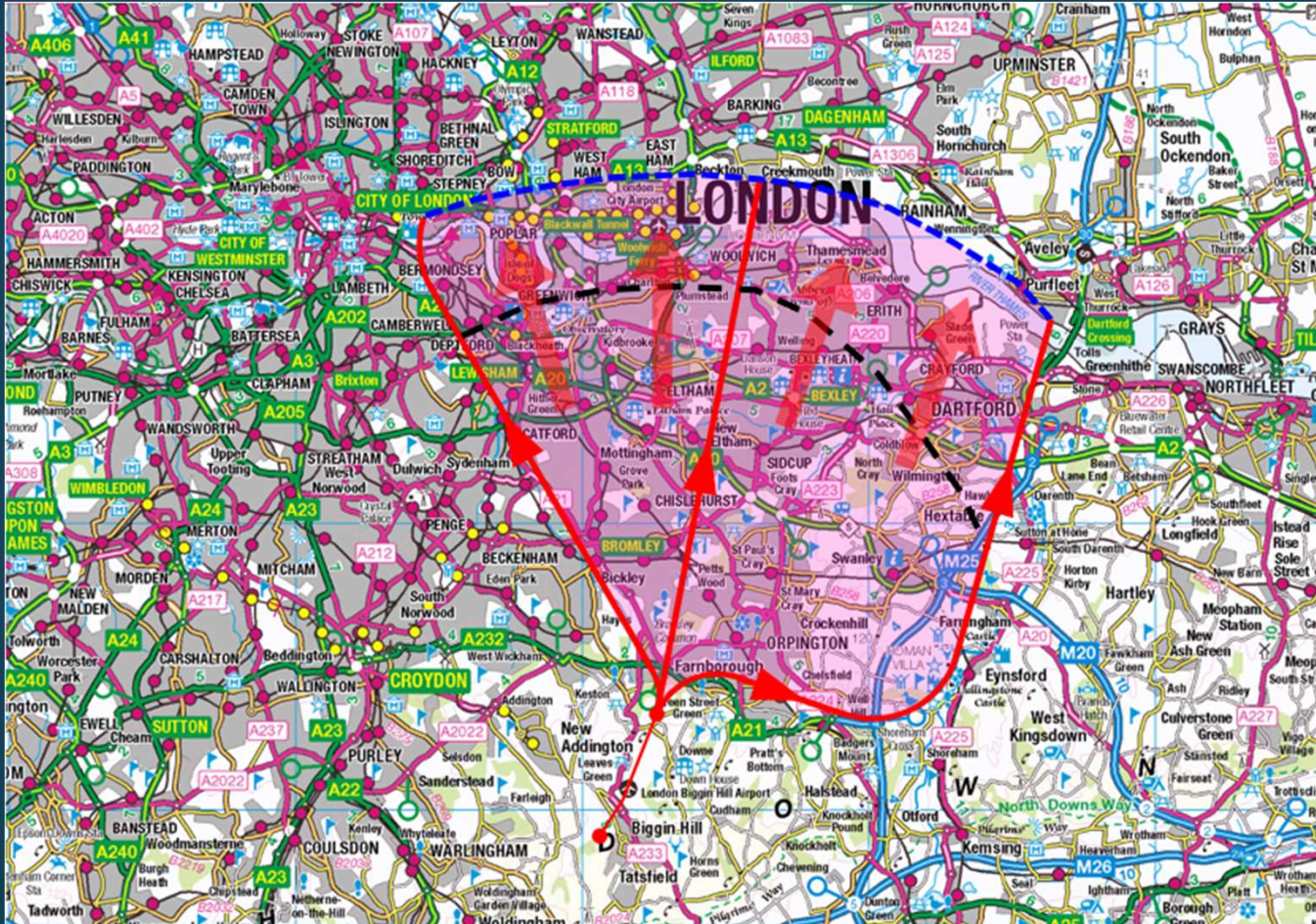
Option D9

Left Turn



Runway 03 – Departure North 1

Option D10



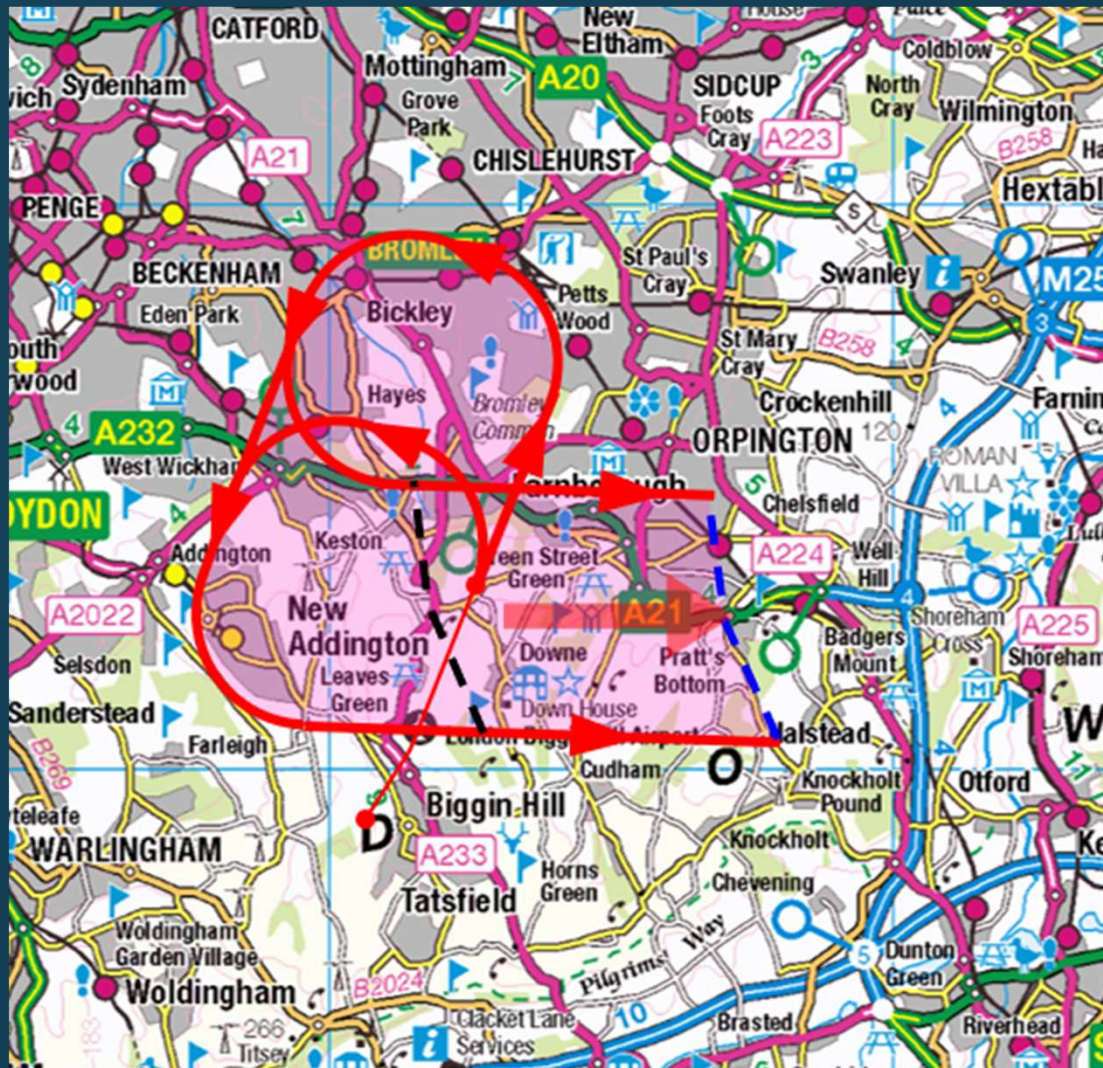
Option D11



Runway 03 – Departure East 2

Option D12

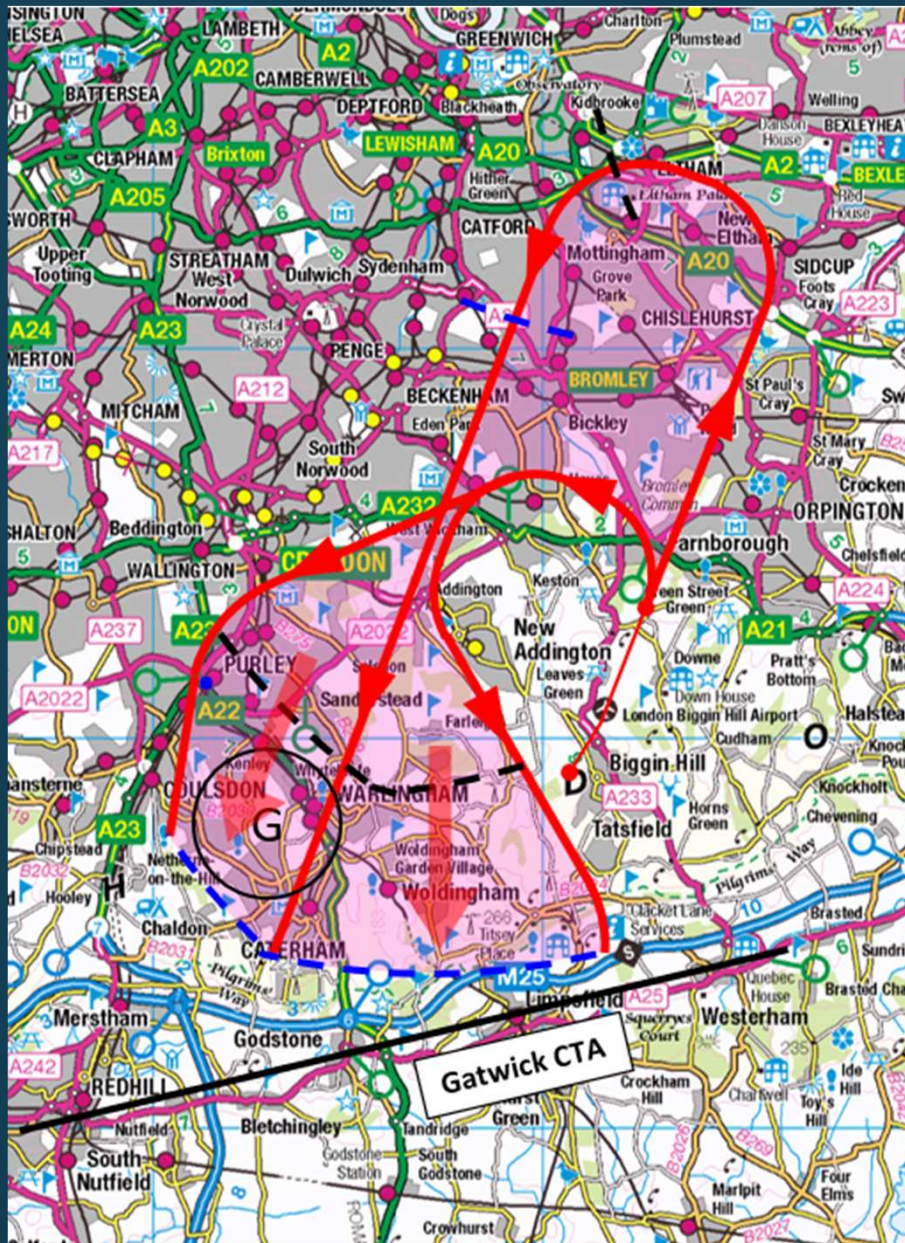
Left Turn



Runway 03 – Departure South 1

Option D13

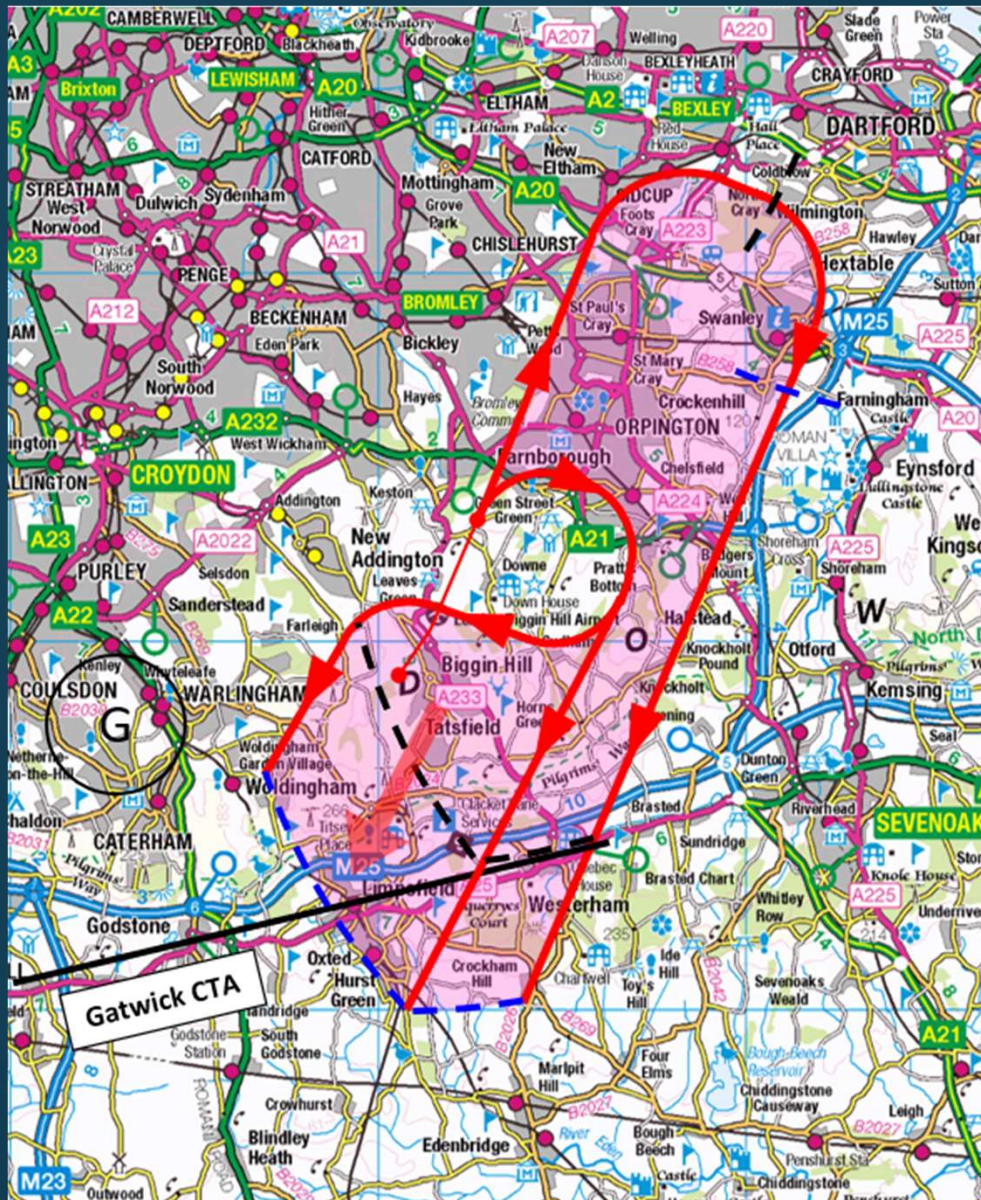
Left Turn



Runway 03 – Departure South 2

Option D14

Right Turn



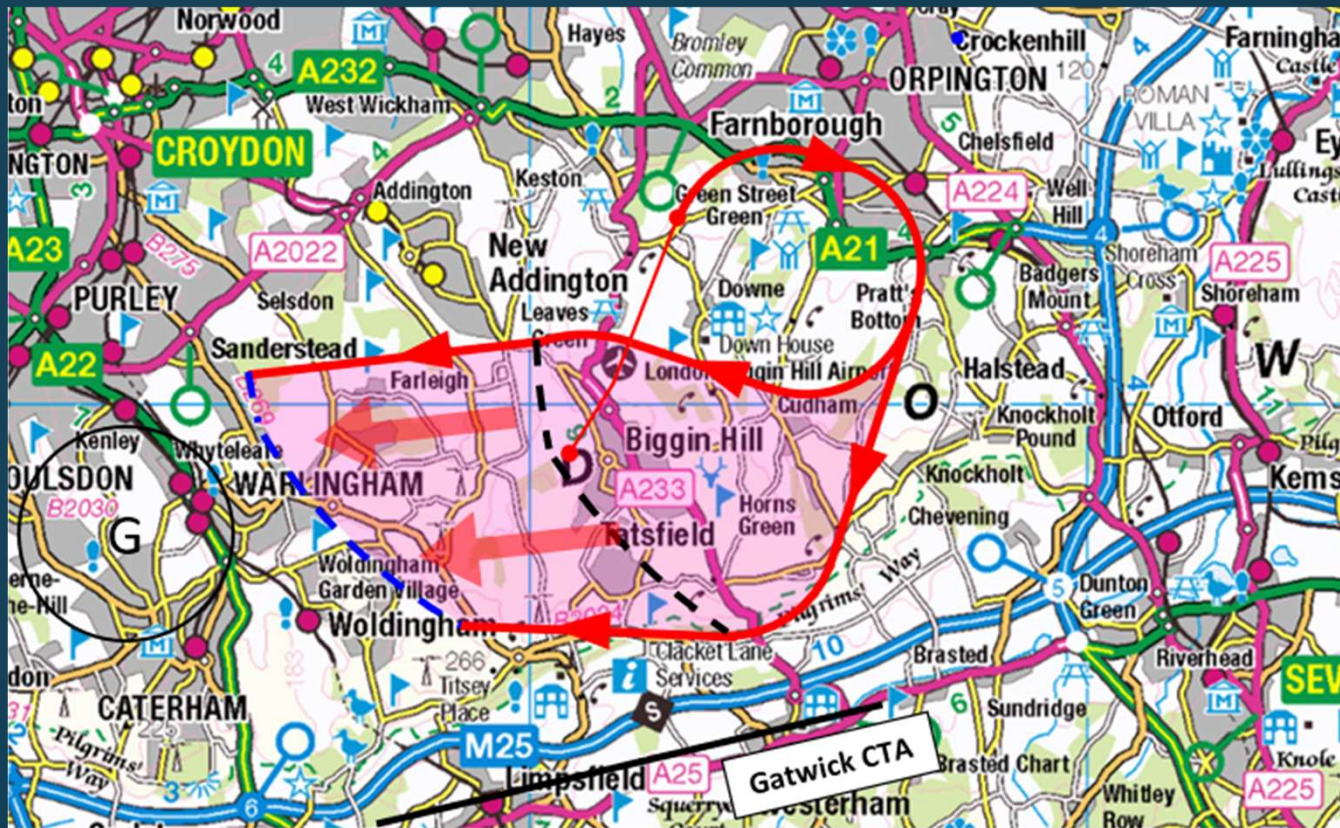
Option D15



Runway 03 – Departure West 2

Option D16

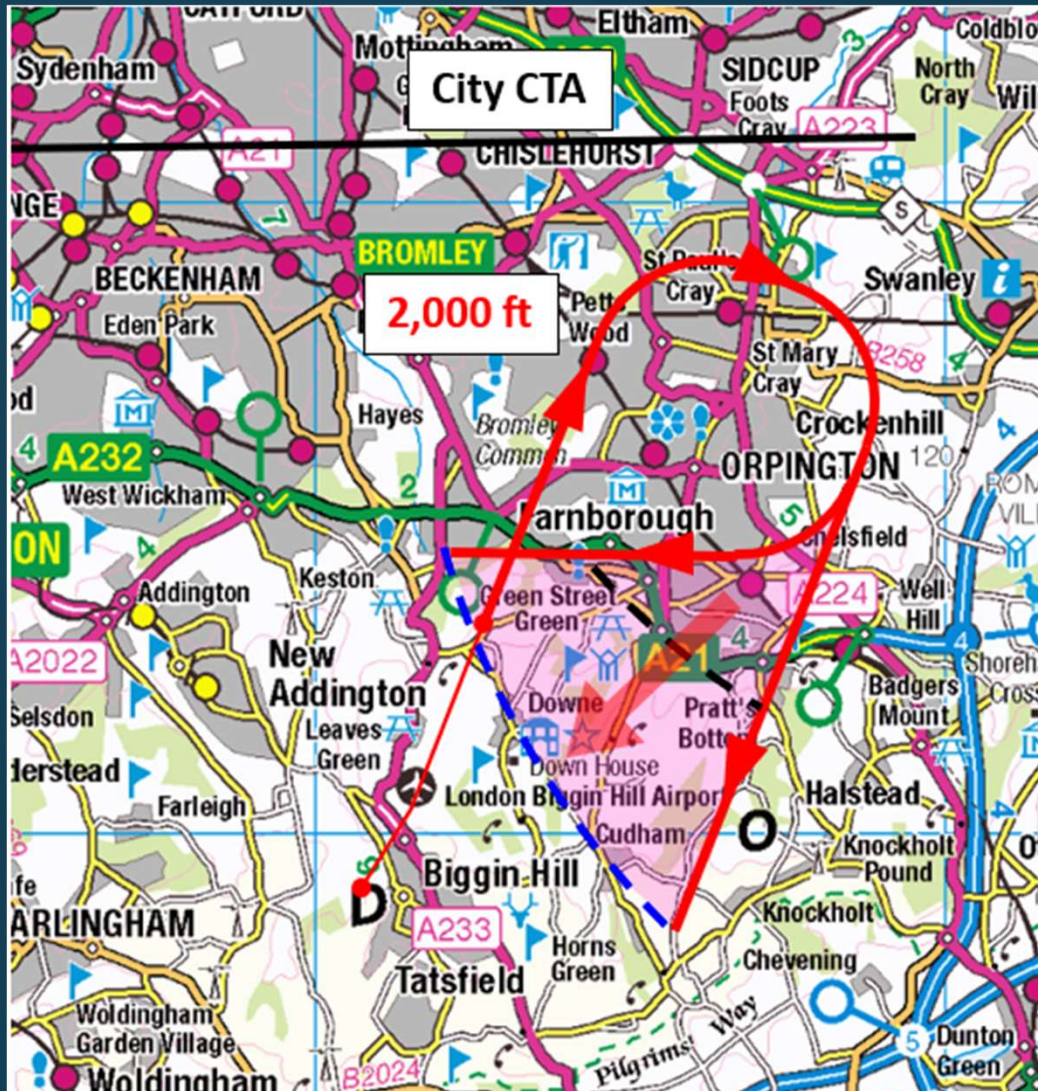
Right Turn



Runway 03 – Departure West 3

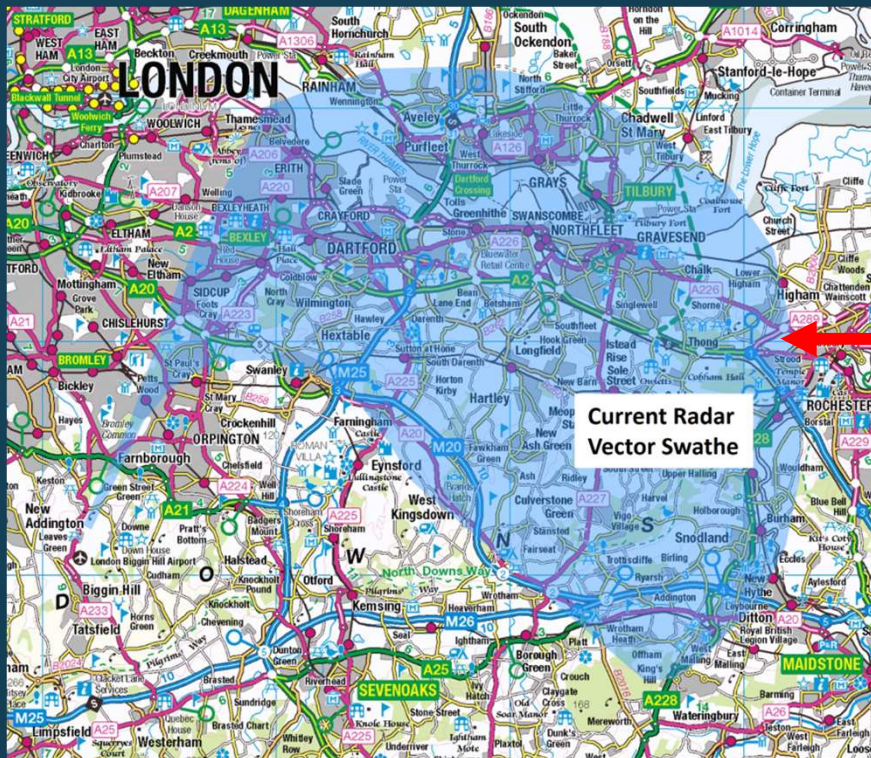
Option D17

Right Turn



ARRIVALS – DO NOTHING

The current Arrival routes do not meet the requirements of the new airspace being developed or the agreed Design Principles.



This swathe contains the tracks of all aircraft (approximately 19,000) receiving radar vectoring from ATC, when making an approach to land at LBHA.

Design Options Development

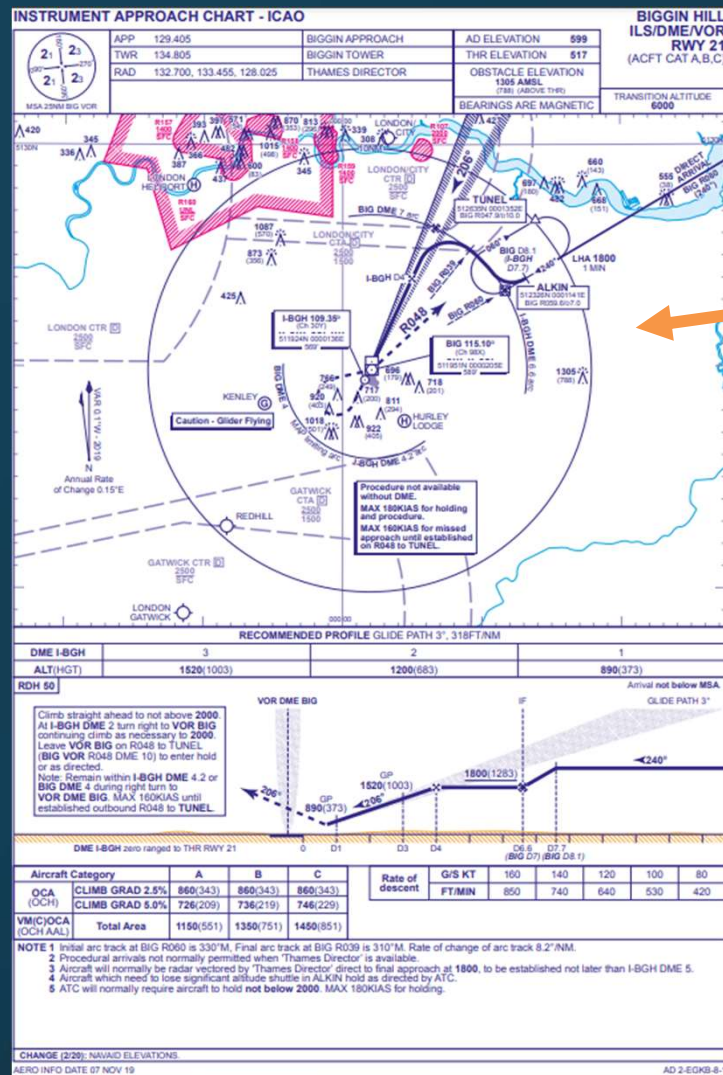
ARRIVAL OPTIONS

All IFR Arrivals route through airspace controlled by NATS from the East, this is called the Transition Arrival.



ARRIVAL OPTIONS

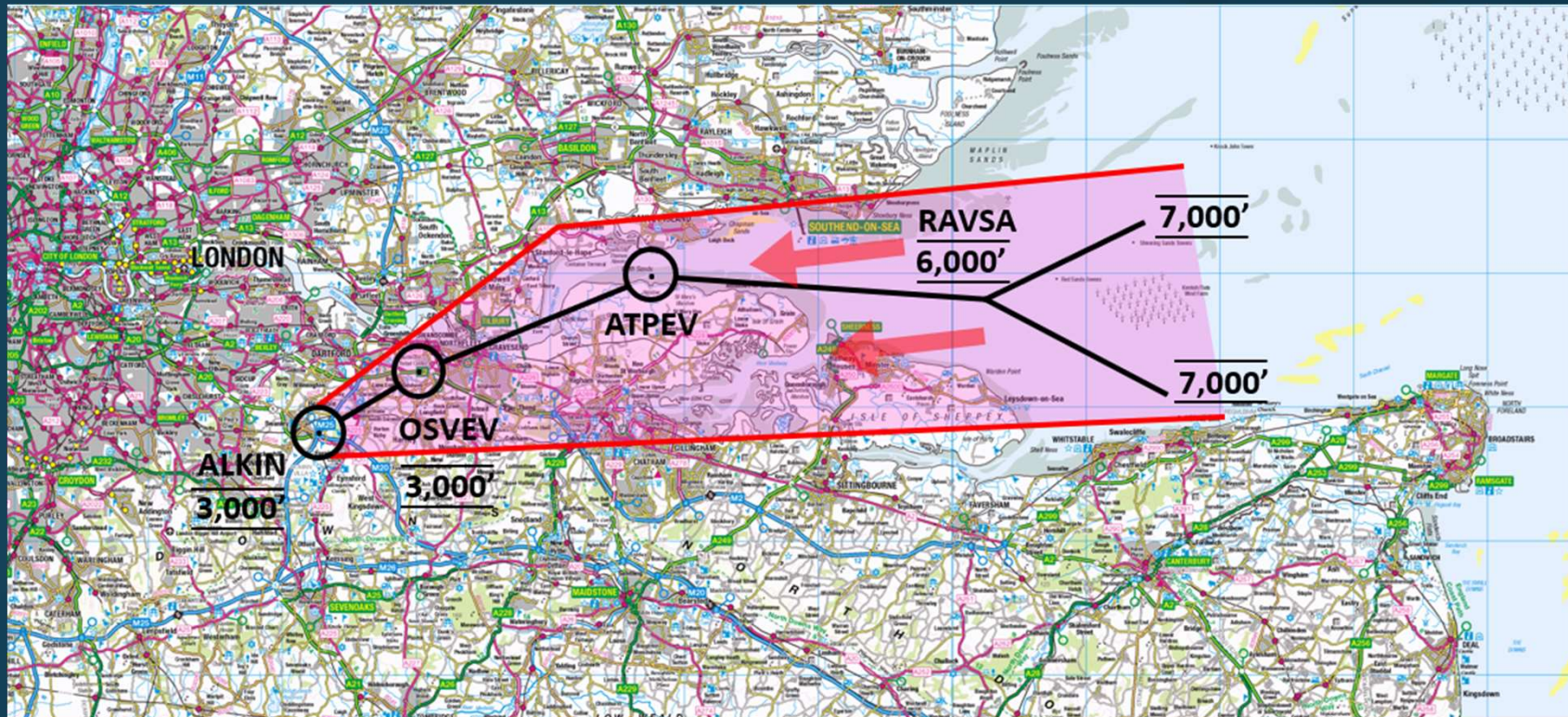
The Arrival Routes will link up with the existing and any future Instrument Approaches which may be developed.



Existing Instrument Approach chart to Runway 21



Transition Arrival – East



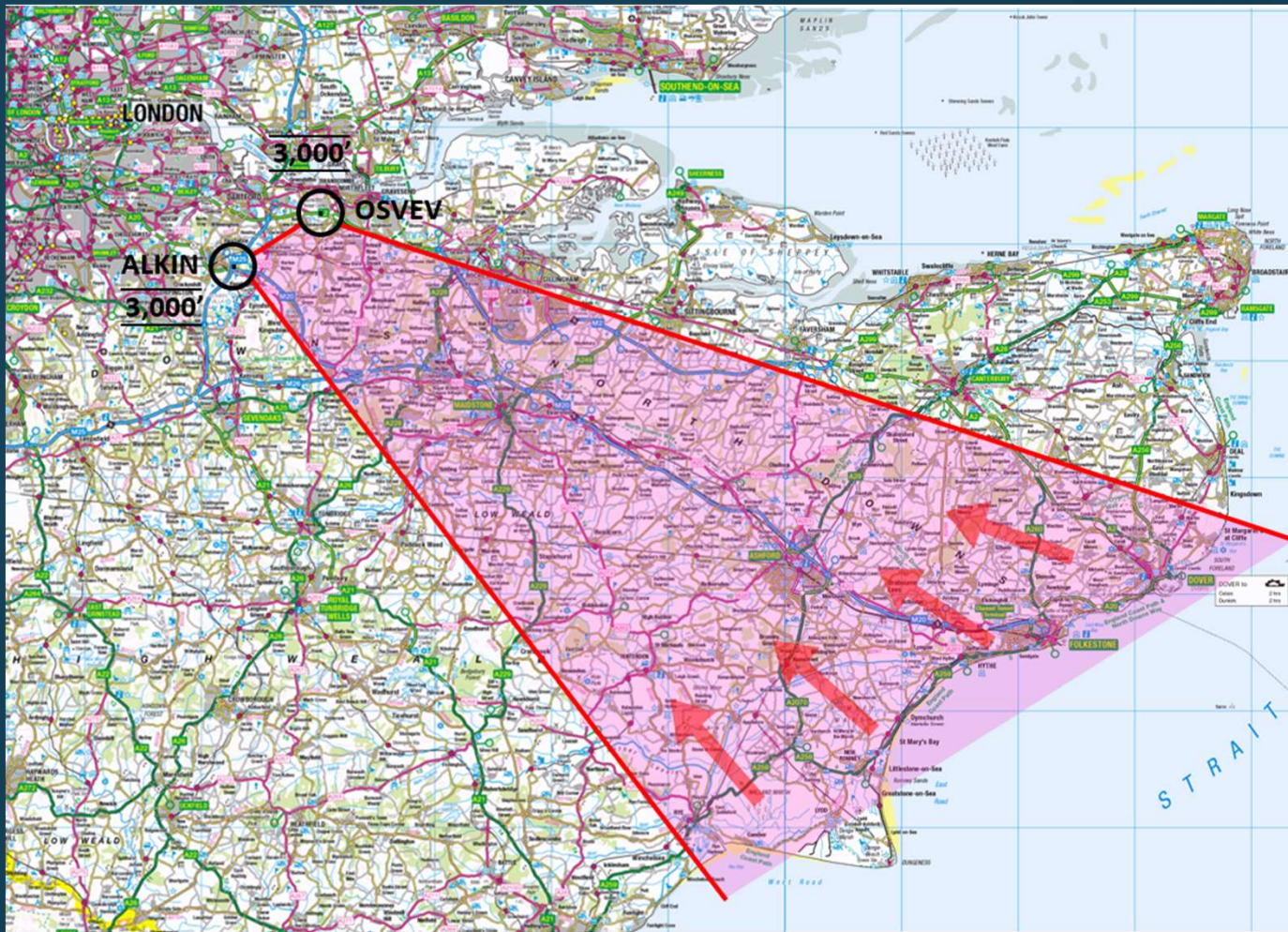
Replicates existing Arrival Route



The introduction of new airspace structure allows LBHA to explore other Arrival options.

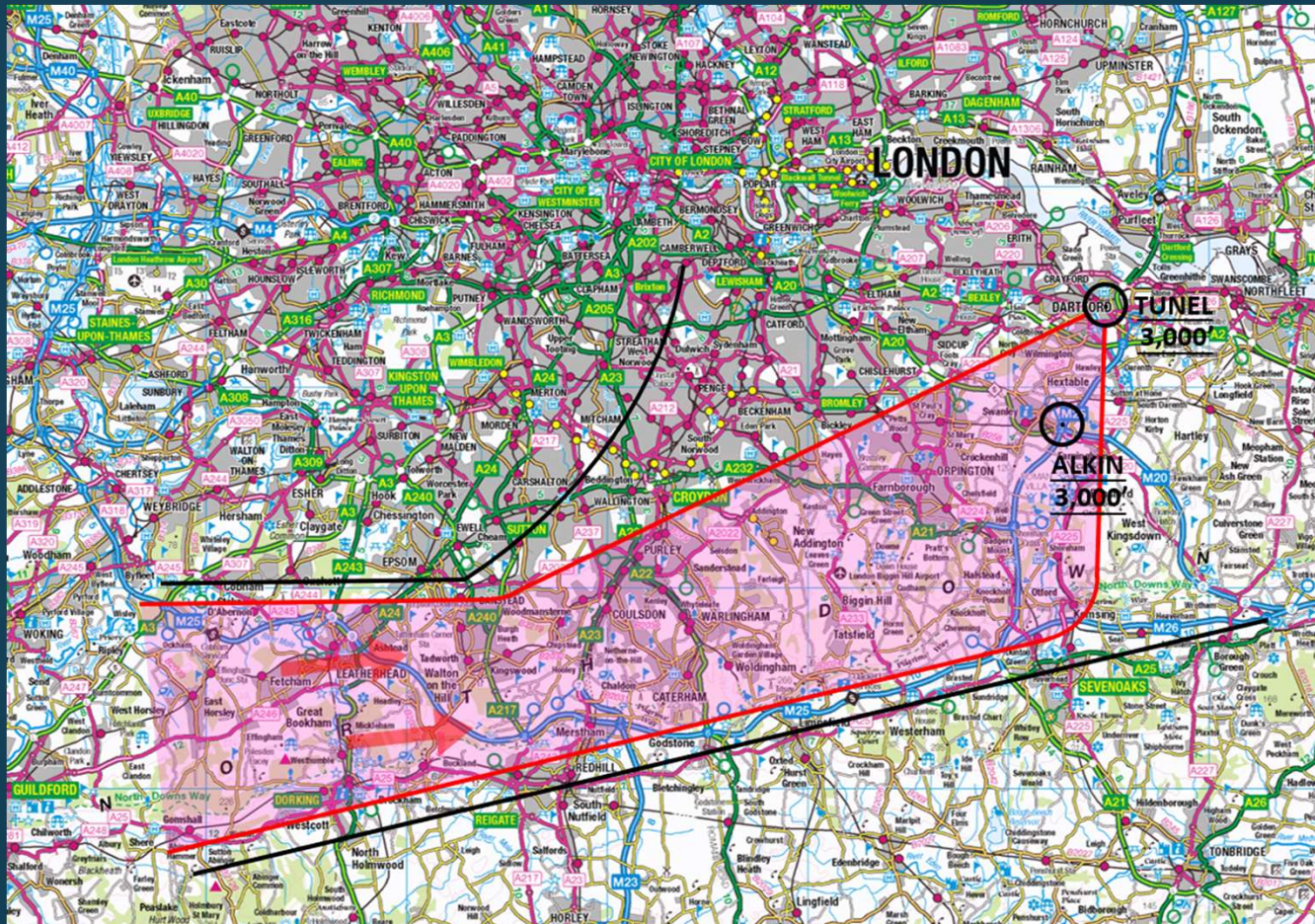
Option A2

Transition Arrival – South



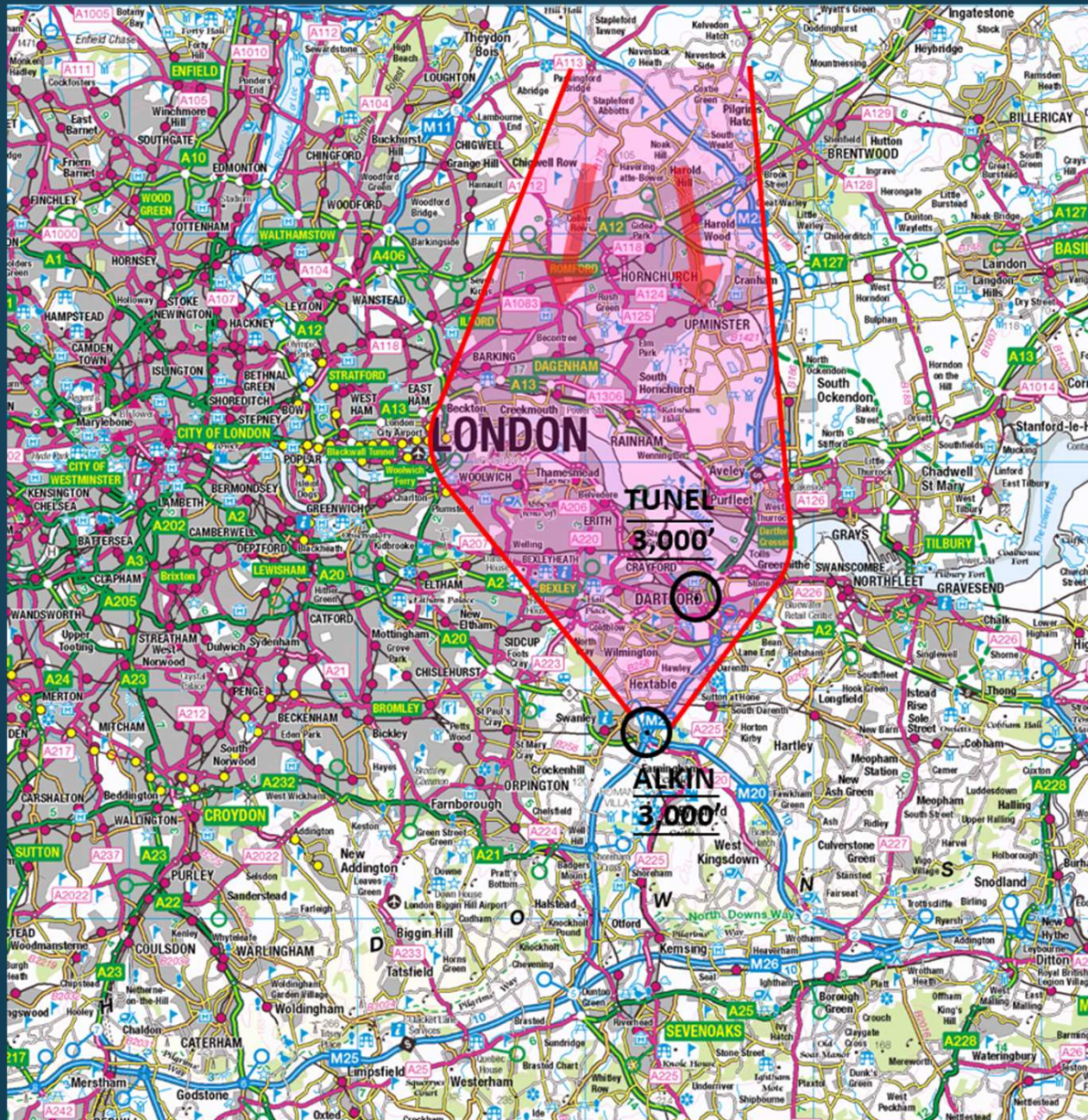
Option A3

Transition Arrival – West



Transition Arrival – North

Option A4



REGULATED AIRSPACE

- New Regulated Airspace will be required to protect any Instrument Approaches and Departures at LBHA. The Instrument Approach at LBHA currently lies outside of Regulated Airspace below 2500ft above mean sea level.
- Regulated Airspace was proposed as a Design Principle (DP) during Stage 1, but has been incorporated into the approved number 1 DP, SAFETY.
- Until the exact route options have been established, which will connect to the arrival and departure routes being developed by NATS, it is not currently possible to determine the Regulated Airspace requirements or dimensions. These exact routes will be determined during Stage 3, Consultation, of this ACP.



Questions for you

We are seeking your feedback on the following;

1. Is this list of options comprehensive and been generated with due consideration for the Design Principles?
2. Are there any other route options we should consider that have not already been introduced?



How to provide feedback

Please provide feedback through the Biggin Hill Airport email address at:

Airspace.Change@bigginhillairport.com

Alternatively, you can respond by mail to;

FASI-SOUTH ACP
LONDON BIGGIN HILL AIRPORT
BIGGIN HILL
BROMLEY
TN16 3BH

Feedback must be received
by 4th November 2022



Need more information?

All of the information is publicly available on the CAA website:

- Airspace Change – CAP1616
- Airspace Change Portal – London Biggin Hill Airport
- Airspace Modernisation

Further information regarding UK Airspace Modernisation can be found at the ACOG website – **One Sky, One Plan.**

(<https://www.oneskyoneplan.uk/>)

There is currently no date for the full consultation, in accordance with Stage 3 of the CAP1616 Airspace Change Process, but once determined will be fully advertised to all stakeholders and the general public.



SUMMARY

- The DfT and the CAA are working together with all major airports, to improve the infrastructure of the airspace in the UK, with the aim of providing airspace modernisation and improving efficiency, whilst also introducing specific environmental benefits.
- All Airspace Change Proposals are required to follow the UK Civil Aviation Authority's (CAA) 7 stage process for changing airspace design, known as CAP1616.
- London Biggin Hill Airport is a part of this National programme of airspace modernisation in the UK, by submitting this airspace change in a co-ordinated manner with other adjacent airports in the South of England.





ANY QUESTIONS?

We will now respond to questions, which should be submitted through the Chat facility.

