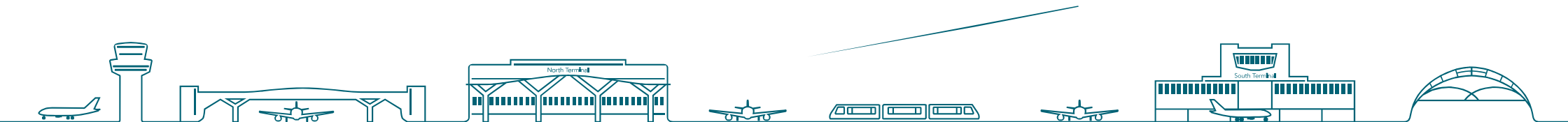


# Gatwick Airport FASI South Airspace Change Proposal

## Parish Council Briefing Session

5<sup>th</sup> and 9<sup>th</sup> December 2022

Version v1.4



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## 1. WELCOME & INTRODUCTIONS

**Thank you for participating in Gatwick's Airspace Change Proposal (ACP) to redesign the airport's arrival and departure routes.**

### **Presenters for today's briefing**

- Goran Jovanovic – Airspace Change Manager, Gatwick Airport Limited
- Chris Barnes – Director, Trax International Limited
- Nikki Shaw – Airspace Design Consultant, Trax International Limited

**The slides will be circulated following the meeting**

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## 1. WELCOME & INTRODUCTIONS

- The slides will be circulated following the meeting along with a record of the key points raised by participants and all questions and answers.
- We will pause regularly during the presentation to take feedback and questions.
- Please raise your hand to ask questions / provide suggestions if you would like to make a contribution.

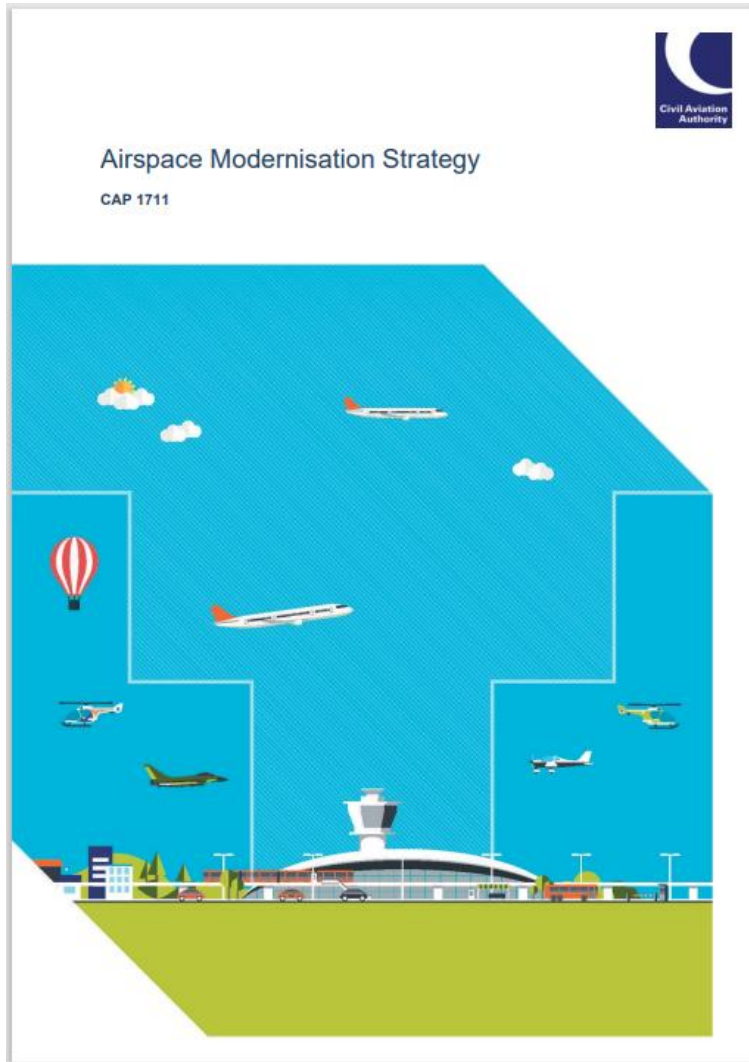
Thank you.

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## AGENDA 2 HOURS

- |   |            |
|---|------------|
| 1. Welcome and introductions                                | 10 minutes |
| 2. Background Concepts:                                     | 30 minutes |
| • <i>UK Airspace Modernisation</i>                          |            |
| • <i>CAP1616 CAA Airspace Change Process</i>                |            |
| 3. Update on Gatwick's FASI-S ACP                           | 60 minutes |
| • <i>ACP timeline</i>                                       |            |
| • <i>Summary of Gatwick's ACP activities to date:</i>       |            |
| ▪ <i>Design Principles</i>                                  |            |
| ▪ <i>Comprehensive List Of Options Methodology Overview</i> |            |
| ▪ <i>Design Principle Evaluation Methodology Overview</i>   |            |
| 4. Questions and Answers, Next Steps & Close                | 20 mins    |

## UK AIRSPACE MODERNISATION



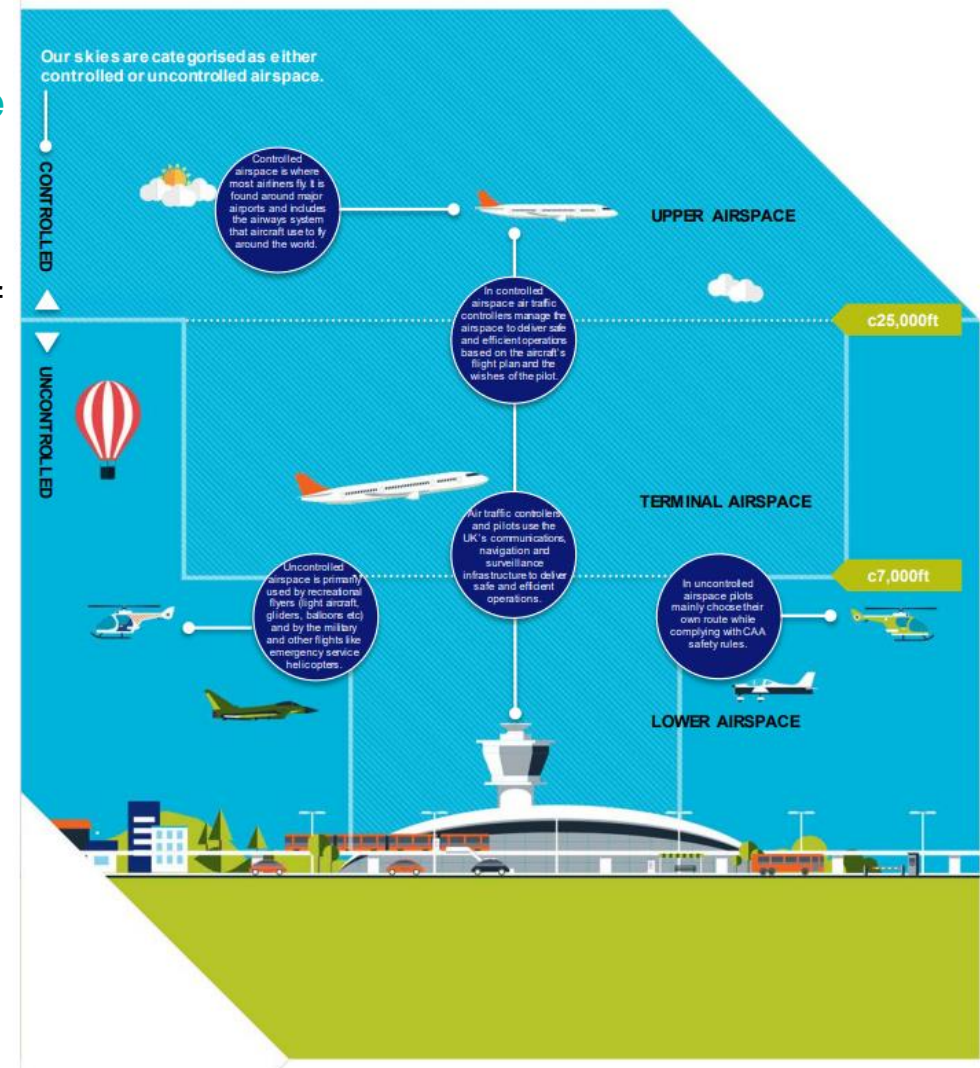
### The Department for Transport (DfT) and the Civil Aviation Authority (CAA) published the UK's Airspace Modernisation Strategy (AMS) in December 2018:

- Airspace above Southern England is reaching capacity and contains design features that restrict the aviation industry's ability to improve its performance.
- Without a fundamental redesign, the industry will increasingly struggle to meet the future demand for air transport in a sustainable and resilient way.

## UK AIRSPACE MODERNISATION

### Redesign of the airspace in Southern England is being delivered as a single coordinated programme known as 'Future Airspace Strategy Implementation – South' (FASI-S)

- The DfT asked all affected airports, and NATS En-route Limited (NERL), to develop Airspace Change Proposals (ACP) as part of the programme.
- The ACPs are separated into local and network airspace components using Flight Level 70 (approximately 7000ft), as the dividing boundary.
- Under these arrangements, NERL is leading the ACPs required to upgrade the airspace structure and route network above c.7000ft.



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## UK AIRSPACE MODERNISATION

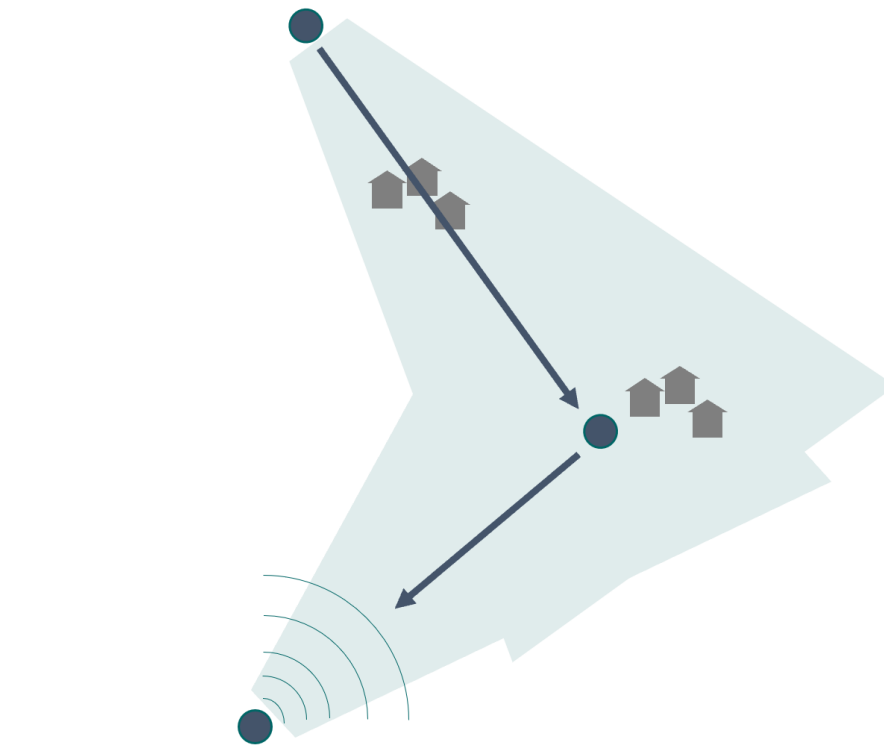
The airports involved (including Gatwick), are leading a set of interdependent ACPs to redesign their respective local arrival and departure routes below c.7000ft.

- **Interdependencies between the ACPs must be carefully coordinated** to ensure that the options developed by the individual proposals can be integrated effectively and optimise the overall airspace.
- **Airspace Change Organising Group (ACOG)** was established by the DfT and the CAA to coordinate the FASI-S Programme and manage the interdependencies through the development of an Airspace Masterplan.
- **High-level draft of the Airspace Masterplan** Iteration1 was developed in 2020, before the programme was paused due to COVID-19. In March 2021, the Government made funding available to restart the programme and help ACOG to produce the next iteration of the Masterplan known as Iteration 2, which was published in May 2022.
- **Gatwick is working with ACOG, NERL and other airport ACP sponsors** to ensure that we are aligned with the wider programme and generating the information required to support the development of future iterations of the Masterplan.

## Understanding Performance Based Navigation

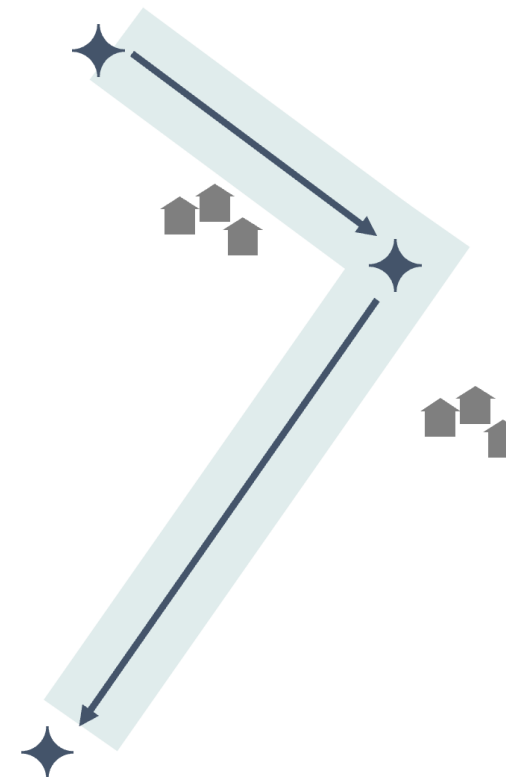
**Performance Based Navigation (PBN)** improves the accuracy of where aircraft fly by moving away from outdated conventional navigation, using ground-based beacons, to modern satellite navigation.

Conventional Navigation



Conventional ground based nav aids constrain flight paths due to limitations with where they can be geographically located

Performance Based Navigation (PBN)

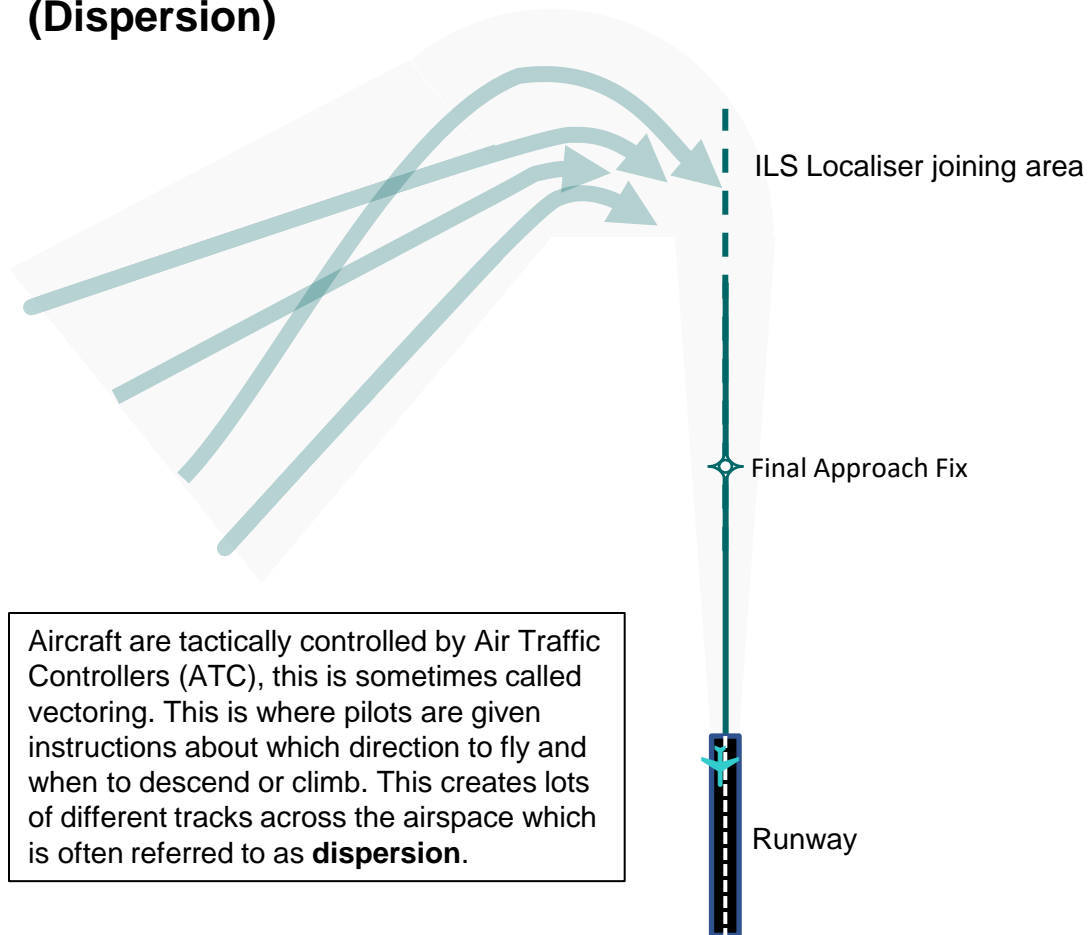


PBN Satellite based waypoints are not constrained in location



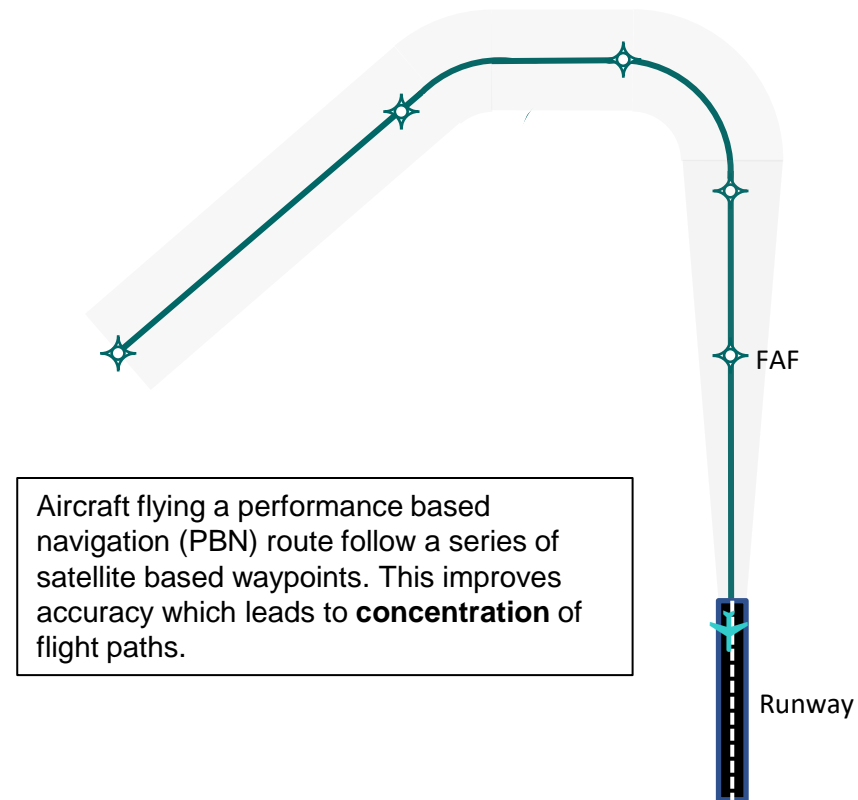
## Understanding Performance Based Navigation

### Vectoring (Dispersion)



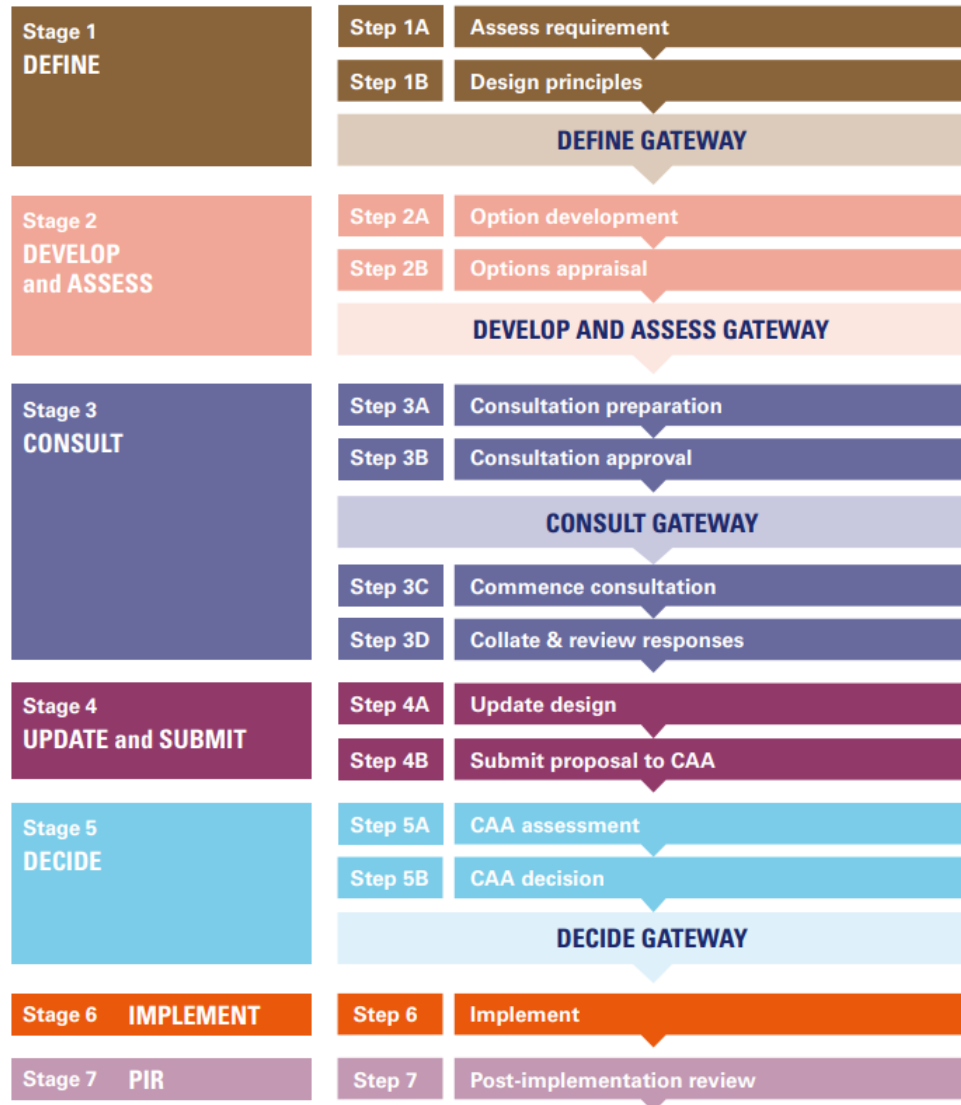
Aircraft are tactically controlled by Air Traffic Controllers (ATC), this is sometimes called vectoring. This is where pilots are given instructions about which direction to fly and when to descend or climb. This creates lots of different tracks across the airspace which is often referred to as **dispersion**.

### Performance Based Navigation (Concentration)



Aircraft flying a performance based navigation (PBN) route follow a series of satellite based waypoints. This improves accuracy which leads to **concentration** of flight paths.

## CAP 1616 CAA AIRSPACE CHANGE PROCESS



- The Civil Aviation Authority (CAA), as the UK’s independent aviation regulator, has responsibility for deciding whether to approve changes proposed to the design of airspace over the UK.
- The CAA’s CAP1616 is guidance on the regulatory process for changing the notified airspace design, the planned and permanent redistribution of air traffic, and on providing airspace information.
- As set out in CAP1616, the Airspace Change Process is undertaken through seven stages with ‘Gateways’ at four points in the process. At each gateway the ACP sponsor must satisfy the CAA that it has followed the process correctly before it can move to the next stage.
- For total transparency, the CAA has made the UK’s Airspace Change Process openly available to the public via its online Airspace Change portal

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## CAP 1616 CAA AIRSPACE CHANGE PROCESS

- **Stage 1 Define:** preparation of a Statement of Need (SoN) setting out what airspace issue or opportunity needs addressing, and the development of relevant Design Principles (DPs).
- **Stage 2 Develop & Assess:** comprehensive list of options is developed, addressing the SoN and aligning with DPs. Followed by 'Initial' appraisal of the impacts of the different options.
- **Stage 3 Consult:** preparation of a consultation strategy and 'Full' appraisal of the Stage 2 options, which is then reviewed by the CAA. Following approval, consultation is launched and responses are collated and reviewed.
- **Stage 4 Update & Submit:** considering responses from Stage 3, the design of the airspace change is updated if required and the 'Final' options appraisal is completed. The change sponsor makes the formal submission of the airspace change proposal to the CAA.
- **Stage 5 Decide:** CAA assesses the ACP along with all documentation and evidence, and holds a Public Evidence Session if necessary, before making its decision whether to approve or reject.
- **Stage 6 Implement:** Following approval, the ACP is implemented
- **Stage 7 Post-Implementation Review:** assessment of the success of the ACP is carried out usually 12 months after implementation

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## CAP 1616 CAA AIRSPACE CHANGE PROCESS – CONSULTATION STRATEGY

### Consultation & Engagement with Stakeholders is a key component of the CAP1616 process

- CAP1616 follows a deliberative approach to ACP development. Stakeholders are engaged as representatives in the early stages of the process, to participate in options development and influence the way the proposal progresses.
- For this process to be effective, the early engagement must be open and transparent. Stakeholders should consider the information shared in the context of the wider process and recognise that the impacts of the options have yet to be fully appraised.
- Replicating options development information selectively and out of context, with an inference that the specific content has been appraised is being proposed for consultation, risks undermining the later stages of the process and may confuse the wider public.

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## CAP 1616 CAA AIRSPACE CHANGE PROCESS – CONSULTATION STRATEGY

### Early Stage Stakeholder Audience Considerations

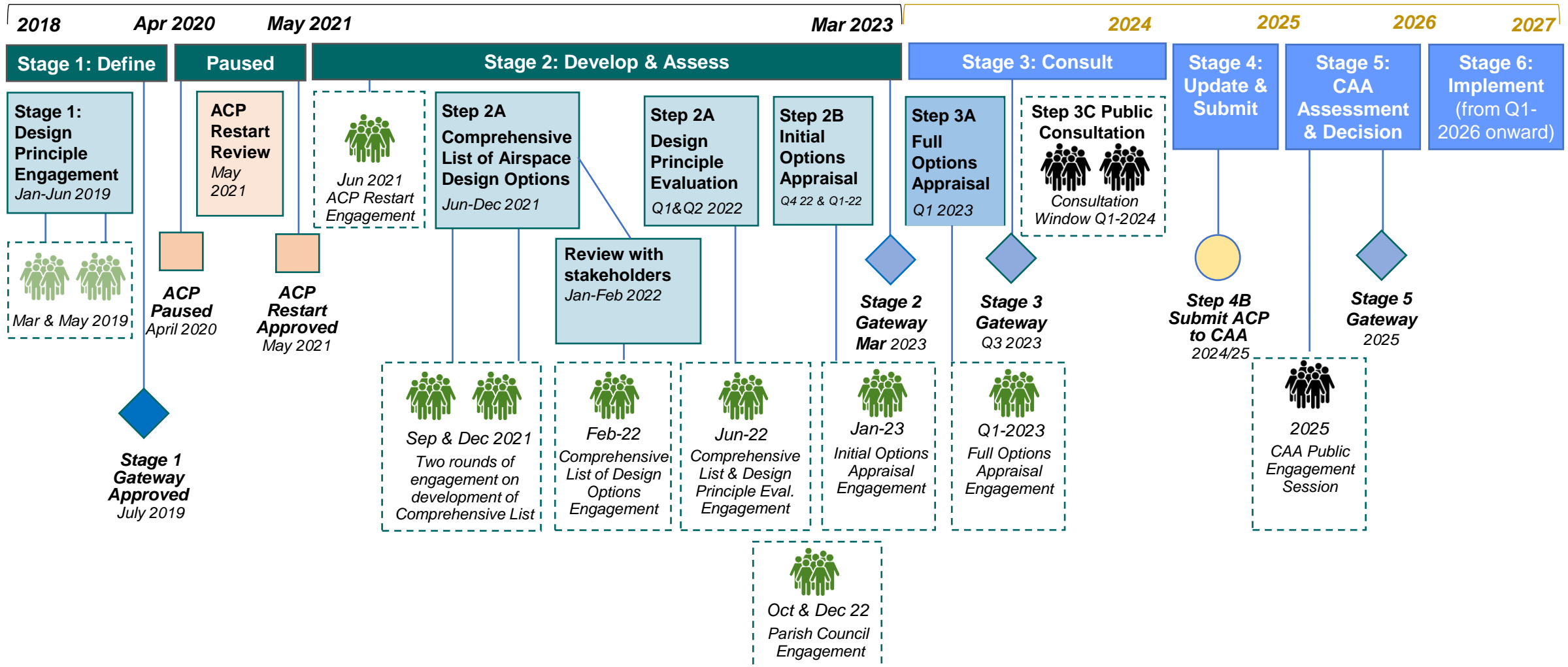
- Early in the CAP1616 process there is less clarity on the precise impacts of a proposed change, making it more challenging to identify potentially affected audiences with whom to engage on the process.
- The early stages can become unmanageable if too many stakeholders participate because there are such a wide range of options under consideration. As the process progresses, the breadth of stakeholders engaged steadily expands as the list of options is refined.
- Accordingly, in these early stages engagement is focussed on stakeholders' representatives, such as: community leaders; local authorities elected representatives; airport consultative committees; representative groups; governmental organisations; and industry groups.
- These stakeholders' representatives will likely be a more informed audience, and will often be people with whom the proposer has an ongoing relationship, helping to contextualise the engagement and developing proposal.
- As the CAP1616 process progresses into Stage 2 and 3, the key impacted audiences can be far more clearly identified and so consultation can be more appropriately expanded into a full and wide ranging public consultation.

## ACP TIMELINE

The following diagram shows the extended Stage 2 timeline within the overall ACP timeline:

*Committed development schedule*

*Indicative development schedule (subject to agreement with other Sponsors & ACOG as part of the Masterplan)*



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## FEEDBACK & QUESTIONS

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## SUMMARY OF GATWICK'S ACP ACTIVITIES TO DATE

**Gatwick has committed to work with NATS and the other airports in the FASI-S programme to deliver airspace modernisation.**

The Gatwick FASI-S ACP identified three outcomes that it is seeking from the airspace change, which are aligned with the modernisation objectives:

1. Develop and implement systemised departure and arrival procedures that improve safety and resilience, increase capacity, and offer improved operational agility in line with the Governments policy on making best use of existing runways and infrastructure.
2. Efficiently integrate with London Airspace Management Programme (LAMP) airspace design and make best use of enhanced network system capabilities.
3. Limit, and seek to reduce environmental impacts on, and provide predictability for, local communities.

Following is an overview of Gatwick's activities to date in-line with the above objectives and CAP1616 process:



## SUMMARY OF GATWICK'S ACP ACTIVITIES TO DATE

### Stage 1 Statement of Need & Design Principles Activity

#### Step 1A Statement of Need - COMPLETED

- Gatwick submitted the Statement of Need to the CAA in October 2018 and held an Assessment Meeting the CAA on January 23, 2019. Following the Assessment Meeting, Gatwick confirmed its Intent to Proceed on January 24, 2019.

#### Step 1B Design Principles - COMPLETED

- Gatwick developed, distributed, and published Outline Design Principles in April 2019 following initial stakeholder engagement sessions held in March 2019.
- The purpose of this outline document was to continue engagement on the development of the design principles, to share a summary of feedback received to date, and solicit further feedback from stakeholders.
- Gatwick produced its final set of 9 Design Principles in June 2019 (see following slide). A complete list of stakeholders engaged in this stage can be found in Annex B of the Airspace Modernisation Design Principles v2 document, published to the CAA's Airspace Change Portal\*.

\* <https://airspacechange.caa.co.uk/PublicProposalArea?pID=54>

#### Stage 1 Gateway - PASSED

- Gatwick passed Stage 1 Gateway on July 3<sup>rd</sup>, 2019.

## 2. BACKGROUND: STAGE 1 AIRSPACE DESIGN PRINCIPLES

Gatwick's 9 Design Principles are shown in the table below:

#	Design Principle*	Description
1	<b>Safety by Design</b>	Must at least maintain, and ideally enhance, aviation safety, by reducing or removing safety risk factors, provided enhancement does not have a detrimental impact on other benefits. (CORE)
2	<b>Enhanced Navigation Standards</b>	Should adopt the most beneficial enhanced navigation standards for new routes. (CORE)
3	<b>Limit Adverse Noise Effects</b>	Shall aim to limit and where possible reduce the adverse impacts of aircraft noise. (CORE)
4	<b>Time Based Arrival Operations</b>	Should be compatible with the adoption of time-based arrival operations.
5	<b>Resilience Built In</b>	Should be materially unaffected by most disruptions, including poor weather and technical failures, through the provision of adequate contingencies.
6	<b>Optimise Use of Aircraft Capabilities</b>	Should enable aircraft operators to optimise the use of their fleet capabilities to improve operational efficiency and environmental performance.
7	<b>Long Term Predictability &amp; Adaptability</b>	Should offer long term predictability of flight paths and respite and offer adaptation for the future airport development scenarios outlined in our draft Masterplan.
8	<b>Deconfliction by Design</b>	Should seek, where possible, to deconflict routes by design below 7000ft, and the prevalence of overflight of a community by flights on different routes and/or by neighbouring airport traffic.
9	<b>Locally Tailored Designs</b>	Should enable decisions which affect how aircraft noise is best distributed to be informed by local circumstances and consideration of different options.

\*More detail on the background and application of the GAL FASI ACP Airspace Design Principles can be found [here](#)

## SUMMARY OF GATWICK'S ACP ACTIVITIES TO DATE

### ACP Project Pause and Restart

#### Project Pause

- The extraordinary impact of the Coronavirus pandemic in early 2020 led to significant uncertainty surrounding its likely effects on the aviation industry. Accordingly, in April 2020 the ACP was paused whilst Gatwick Airport Ltd (GAL), and its stakeholders, adapted their plans accordingly.

#### Project Restart

- Following the announcement in March 2021 by the Department for Transport and the CAA of Government financial support for the FASI programme, GAL requested to restart this ACP at Stage 2A in May 2021. This request was approved in May 2021 by the CAA.
- As part of its request to restart, Gatwick confirmed that there had been no material changes that required updating materials previously produced for the ACP, but that it would be prudent to undertake some re-engagement with stakeholders in preparation for the programme restarting.
- This re-engagement occurred in June 2021 with Gatwick's Noise Management Board (NMB) and the Noise and Track Monitoring Advisory Group.

## SUMMARY OF GATWICK'S ACP ACTIVITIES TO DATE

### Stage 2

### Comprehensive List of Design Options Activity

#### Step 2A Comprehensive List of Design Options

- Following the restart of Gatwick's ACP project in May 2021, the next step involved the creation of a Comprehensive List of Options (CLOO), which has been developed via a six part methodology, aligned to CAP1616 requirements (CLOO methodology and overview in follow slides).

#### CLOO Stakeholder Engagement Activity to Date

- The CLOO is tested with the same targeted group of representatives engaged during Stage 1, to ensure that they have been developed in line with the airspace design principles. Three rounds of engagement have been conducted to date as part of Stage 2, with the first two rounds relating to CLOO activity – see below:

**Round 1: Virtual Workshop Session (2nd / 3rd Sep, 2021) & Briefing (7th / 9th Dec 2021)** conducted to gather feedback on the methodology that Gatwick intend to follow to develop and assess airspace change design options during Stage 2.

**Round 2: Comprehensive List of Options review briefings – Jan to May 2022 –** conducted to gather feedback on the development of the initial Comprehensive List of Options for the ACP – this initial list contained 39 options.

## SUMMARY OF GATWICK'S ACP ACTIVITIES TO DATE

### Stage 2

### Design Principle Evaluation

#### Step 2A Design Principle Evaluation – IN PROGRESS

- This step involved the evaluation of each of the options on the Comprehensive List against each Design Principle, to narrow them down to a shortlist. The outcome of the Design Principle Evaluation (DPE) will be taken forward to the Initial Options Appraisal in Step 2B. DPE methodology and overview in follow slides.

#### Design Principle Evaluation Engagement Sessions

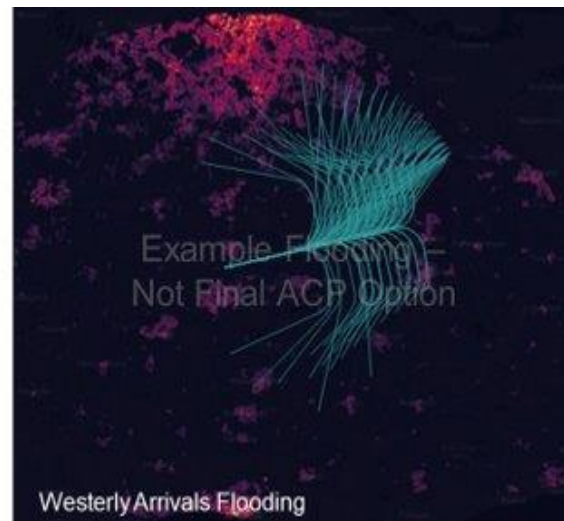
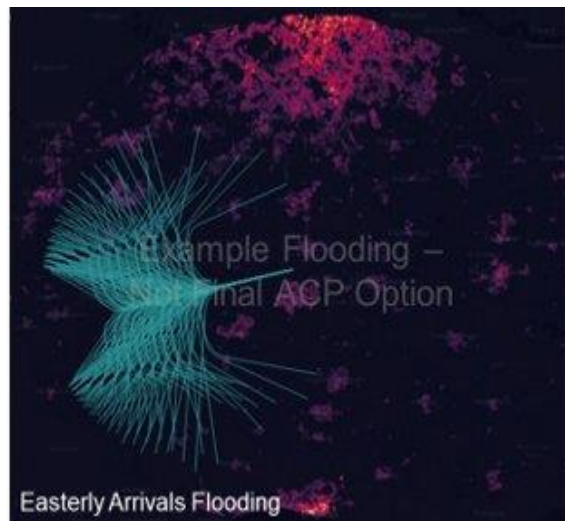
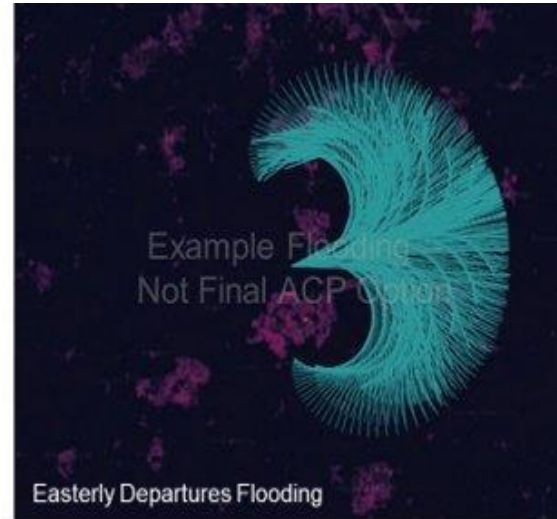
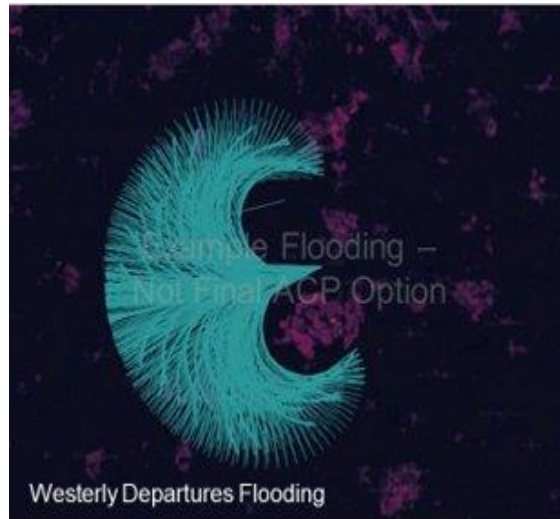
- We note that there is no specific requirement in the CAP1616 process to conduct engage activities with the same representative stakeholders for the DPE. However, Gatwick took the view that it is important that stakeholders understand the approach being followed, and so engagement was conducted for the DPE.
- The third round of engagement related to DPE activity – see below:
  - Round 3: Virtual Briefing Session (23 / 24<sup>th</sup> / 28th Jun 2022)** - conducted to demonstrate how the outputs of rounds 1 and 2 of engagement so far have shaped the options on the comprehensive list, and the outline approach to the Design Principle Evaluation process.

## COMPREHENSIVE LIST OF OPTIONS METHODOLOGY OVERVIEW

CLOO methodology is organised into six parts aligned to the CAP1616 requirements for developing & assessing options

1	Develop an Airspace Design Database	Define sections of airspace where a flight path could conceivably be positioned within the scope of the ACP.
2	Define Do Nothing and Do Minimum Options	Describe the Do-Nothing Scenario as a baseline and a 'Do Minimum' option if the 'Do Nothing' is not viable.
3	Build Comprehensive List of Options	Set out all viable options that address the Design Principles and the scope of ACP in Statement of Need
4	Conduct the Design Principle Evaluation	Examine how well each option aligns with the Design Principles and shortlist the options to progress to the Initial Options Appraisal.
5	Produce the Initial Options Appraisal	Conduct a largely qualitative assessment of the impacts, both positive and negative, of the shortlisted options
6	Set out Full Options Appraisal Method.	Describe the methodology for producing a quantitative appraisal with monetized costs and benefits <b>(Part of Stage 3)</b>

## COMPREHENSIVE LIST OF OPTIONS METHODOLOGY OVERVIEW



### Develop an Airspace Design Database

Our Airspace Design Database collates a core set of information needed to clearly demonstrate how each option has been identified and why the first list is considered sufficiently comprehensive.

- **Sections of Airspace** - The database will cover all geographical sections of airspace where a flight path may conceivably be positioned within the scope of the ACP.
- **Notional Flight Paths** - Gatwick defines the broad range of notional flight paths that are technically possible within each section of airspace (an approach known as flooding).
- **Preliminary Assessment** - A core set of information will be produced through a preliminary assessment of the performance of each individual notional flight path using a variety of noise and overflight measurements.

## 4. APPROACH TO DEVELOPING THE COMPREHENSIVE LIST OF OPTIONS

The preliminary assessment gave us noise data on each of the notional flight paths and using our database we were able to identify the comparatively higher performing paths:

OnTrack LGW Airspace Evaluation Select workflow ▾ Logout Nichola

Stage 2: Options

Select direction, mode and altitude range to populate the table:

Easterly x ▾  
 Departure (A319) x ▾  
 0 - 7000 ft x ▾

Select any table options to update the map.  
 Selected: 23 / 1876 Clear selected

Enter group name...  
 Enter group description...  
 Group selected options

Option Name	Total population overflow	Population newly overflow (> 10)	Population newly overflow (> 20)	Population newly overflow (> 50)	Population within 70 dB SEL	Population within 80 dB SEL	Population within 60 dB LAmx	Population within 65 dB LAmx	Area of AONB overflow
E-D-nom 0952-0-7000	2613	57	1260	1726	62281	2172	18808	2920	39.3
E-D-nom 1831-0-7000	2723	52	1647	2099	58337	2188	19586	3077	39.33
E-D-nom 1832-0-7000	2723	52	1647	2099	58337	2188	19586	3077	39.33
E-D-nom 1833-0-7000	2723	52	1647	2099	58337	2188	19586	3077	39.33
E-D-nom 1834-0-7000	2916	52	1840	2292	57187	2188	19773	3077	39.34
E-D-nom 1835-0-7000	2916	52	1840	2292	57187	2188	19773	3077	39.34
E-D-nom 1836-0-7000	2916	52	1840	2292	57187	2188	19773	3077	39.34
E-D-nom 1804-0-7000	2971	492	1762	2180	55901	2495	20316	4240	39.3
E-D-nom 1805-0-7000	2971	492	1762	2180	55901	2495	20316	4240	39.3
E-D-nom 1807-0-7000	2971	492	1762	2180	55901	2495	20316	4240	39.3

1 / 188



## 5. COMPREHENSIVE LIST OF OPTIONS OVERVIEW

The airspace design database gave us lots of data and information which allowed us to identify the comparatively higher performing paths however in order to develop airspace change options that meet our Design Principles, we needed to combine these paths in systems. At this stage, a system is defined as ‘a workable group of arrival or departure routes from the same runway end’.

When developing the system options, we looked to the Design Principles and combined the aims of these with the outputs of the Airspace Design Database in order to develop our Comprehensive List of Options.

Based on representative stakeholder feedback, we developed options on our Comprehensive list that focused on minimising total population overflown (i.e. taking a blank sheet approach) and options that focus on minimising population newly overflown (i.e. taking into account existing overflight swathes)

Options Development Matrix	Limit Adverse Noise Effects (DP3)	Optimise Use of Aircraft Capabilities (DP6)	Long Term Predictability & Adaptability (DP7)
Minimise total population overflown	Options developed aim to also meet DP1 DP5 and DP8 DP9	Options developed aim to also meet DP1 DP3 DP5 and DP8	Options developed aim to also meet DP1 DP3 DP5 DP8 and DP9
Minimise population newly overflown	Options developed aim to also meet DP1 DP5 and DP8 DP9	Options developed aim to also meet DP1 DP3 DP5 and DP8	Options developed aim to also meet DP1 DP3 DP5 DP8 and DP9

(DP2 is inherent in all options and DP4 is inherent to all arrivals options)

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## FEEDBACK & QUESTIONS

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## COMPREHENSIVE LIST OF OPTIONS METHODOLOGY OVERVIEW

### Engagement on the Comprehensive List of Options

In February and March 2022 we held engagement workshops on our Comprehensive List of Options. As per the CAP1616 process, the same stakeholder representatives who were involved in Stage 1B, and in the previous rounds of Stage 2 engagement were invited to attend the workshops.

The purpose of the engagement was to test the Comprehensive List of Options to ensure it has been developed in line with the Design Principles. It's important to note that this engagement was not to seek feedback on the position of each individual flight path included in the options; that will happen later in the CAP1616 process.

Following the engagement, all feedback was reviewed and where appropriate used to develop further options. The key themes arising from stakeholders' feedback that have influenced the final comprehensive list were:

- Rural areas and Ambient Noise
- Westerly arrivals between 7nm and 10nm
- Arrival respite configurations with two routes
- Balance of total population overflown and newly overflown metrics



## COMPREHENSIVE LIST OF OPTIONS: All Easterly Departure Options

The following image shows all 18 easterly departure options layered on top of one another:



## COMPREHENSIVE LIST OF OPTIONS: All Westerly Arrival Options

The following image shows all 18 westerly arrival options layered on top of one another:



## COMPREHENSIVE LIST OF OPTIONS: All Easterly Arrival Options

The following image shows all 17 easterly arrival options layered on top of one another:



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## DESIGN PRINCIPLE EVALUATION METHODOLOGY OVERVIEW

**The Design Principle Evaluation (DPE)** sets out how each option responds to the design principles.

- The next step in the CAP1616 process is to undertake a Design Principle Evaluation (DPE).
- The DPE includes a high level assessment of each option which outlines whether the design principle is 'not met', 'partially met' or 'met'.
- The DPE is the first opportunity we have in the process to shortlist options. As part of our Stage 2A submission, we are required to clearly set out the criteria used to evaluate the options against the design principles.
- The DPE is a relatively high-level, qualitative exercise, but must clearly set out how each option has performed against each Design Principle and why options have continued or been paused.
- As more information becomes available as we progress through the process, we may revisit some of the options paused as part of the DPE. This will always be documented and communicated with stakeholders.



## DESIGN PRINCIPLE EVALUATION METHODOLOGY OVERVIEW

**The Design Principle Evaluation (DPE) sets out how each option responds to the design principles.**

- The below table shows an indicative example of a DPE methodology and categorisation:

#	Design Principle	Design Principle Description	DPE Methodology	Component	Met	Partially Met	Not Met
1	Safety by Design	Must at least maintain, and ideally enhance, aviation safety, by reducing or removing safety risk factors, provided enhancement does not have a detrimental impact on other benefits. (CORE)	Qualitative Subject Matter Expert (SME) evaluation of whether an option is expected to maintain, enhance or degrade safety. The assessment will consider current regulation, ATC standards, airline requirements, and any feedback received from industry stakeholders.	-	The option is expected to maintain or enhance safety.	The option is expected to maintain safety, however safety mitigations or processes may have to be explored to accommodate the option.	The option is expected to be detrimental to safety.

- Some Design Principles may be broken down into components; for example DP6 Optimise Use of Aircraft Capabilities could be assessed against two areas; track length and Continuous Climb/Continuous Descent operations.
- The outcome of the DPE is a matrix which shows each option's performance against each design principle, alongside an assessment of the overall performance and whether the option will be progressed or paused.

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## DESIGN PRINCIPLE EVALUATION METHODOLOGY OVERVIEW

**The Design Principle Evaluation (DPE) sets out how each option responds to the design principles.**

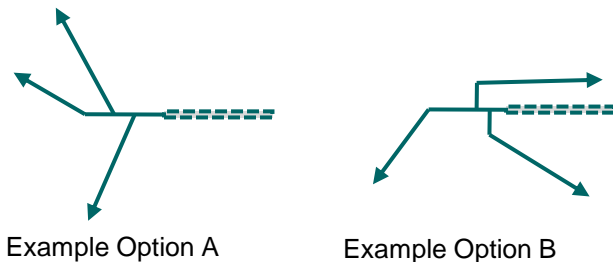
- Our options have been developed in isolation and options will evolve as we progress through the process and more information becomes available about the potential impacts and the interdependencies with other proposals.
- Alongside the shortlisting of some options which will take place once the DPE is complete, we expect that some options will either be refined or combined in order to take the better performing routes and build systems that would work with the interdependencies.
- The outputs of the DPE regarding the alignment of specific routes to the design principles will be used to guide how the higher performing aspects of different system options might be combined in pursuit of optimisation.

## DESIGN PRINCIPLE EVALUATION METHODOLOGY OVERVIEW

**The Design Principle Evaluation (DPE) sets out how each option responds to the design principles.**

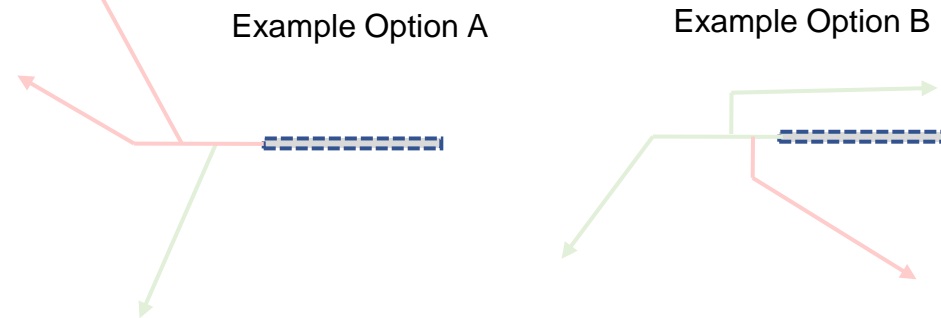
- This example is not based on Gatwick options or the outcomes of the Gatwick DPE, but provides an overview about how we may combine or refine options.

**1. In this example, two options proceed to the DPE**



These options have been developed in isolation and will evolve as further information becomes available from neighbouring airports and the network above 7000ft as well as any information from the DPE.

**2. The DPE finds that certain routes in an option perform better than others**



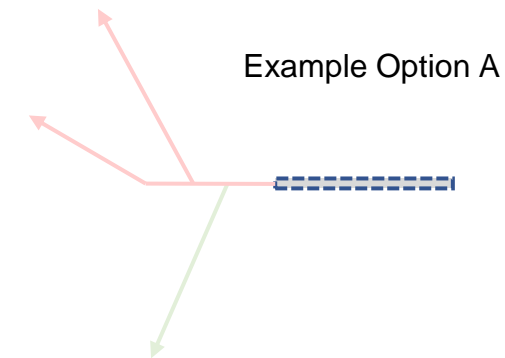
As part of the DPE, a qualitative assessment of the options is undertaken. In some cases, some routes may be more viable than others and these are identified as part of the DPE. In this case, the right turns in option A perform poorly, and the left turn in Option B also performs poorly. The other elements of the option perform well.

## DESIGN PRINCIPLE EVALUATION METHODOLOGY OVERVIEW

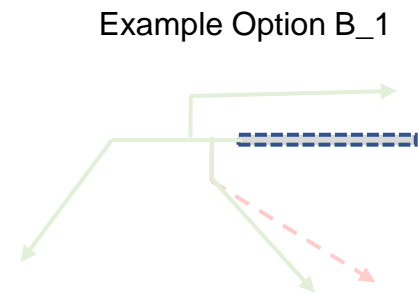
**The Design Principle Evaluation (DPE) sets out how each option responds to the design principles.**

- This example is not based on Gatwick options or the Gatwick DPE, but provides an overview about how we may combine or refine options.

### 3. The outcomes of the DPE are used to refine or develop new options

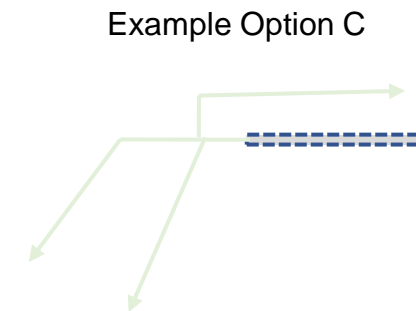


Option A in its entirety is discontinued as overall the impacts of the two right turns outbalance any benefits of the left turn.



The left hand turn in Option B has the potential to be refined using the airspace design database. This option could evolve into Option B\_1

and/or



The higher performing elements of the two options could be combined together to create a new option.

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## FEEDBACK & QUESTIONS

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## NEXT STEPS & CLOSE

### Next Steps

#### Step 2A Completion of the Design Principle Evaluation

**Stakeholder Engagement:** The next round of Stakeholder Engagement, which will combine Gatwick's existing stakeholder representatives with Parish Council groups, will take place in January 2023. This engagement will cover the methodology and outcomes of the Design Principle Evaluation, and provide an overview of the Initial Options Appraisal.

#### Step 2B Initial Options Appraisal

The next step in the process is for Gatwick to conduct an Initial Options Appraisal (IOA) based on the shortlist of options arising from the Design Principle Evaluation. The IOA is the first in a three-phase options appraisal and is a mainly qualitative assessment of the shortlisted options against several standard categories and criteria outlined in CAP1616.

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## NEXT STEPS & CLOSE

### Next Steps

#### 3. Stage 2 Gateway

- Gatwick will submit Stage 2 Documentation to the CAA in March 2023.
- This will be published on the Airspace Change Portal
- The CAA will assess the Stage 2 documentation and determine whether Gatwick can proceed to Stage 3 of the process.

#### 4. Stage 3 Public Consultation

- Following the completion of Stage 2 Develop & Assess Gateway, Gatwick will begin the Stage 3 Consult activities, involving:
  - Completion of Full Options Appraisal
  - Draft consultation strategy and accompanying documents to submit to the CAA
  - Following CAA approval of strategy, engage in full public consultation

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## NEXT STEPS & CLOSE

### **Key opportunities to further influence the ACP process and raise appeals**

- Before the Public Consultation stage, by participating in the stakeholder engagement sessions conducted to support options development and assessment activities (Step 2A, 2B and Step 3A).
- During the Public Consultation by providing feedback on the proposed airspace design option and associated consultation questions. (Step 3B)
- By participating in the Public Evidence Session(s) conducted by the CAA during the proposal decision stage (Stage 5)



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## NEXT STEPS & CLOSE

- Thank you for participating in Gatwick's Airspace Change Proposal (ACP) to redesign the airport's arrival and departure routes.
- If you have any questions or comments, please don't hesitate to contact us via [LGWairspace.FASIS@gatwickairport.com](mailto:LGWairspace.FASIS@gatwickairport.com)