Cardiff Airport
Airspace Change Proposal (ACP)
Stage 2 Update

Introduction

Head of Airfield Operations

Cardiff Airport

Airspace Modernisation and Cardiff Airport's Airspace Change Proposal (ACP)

[redacted]

Airspace Change Specialist

NATS

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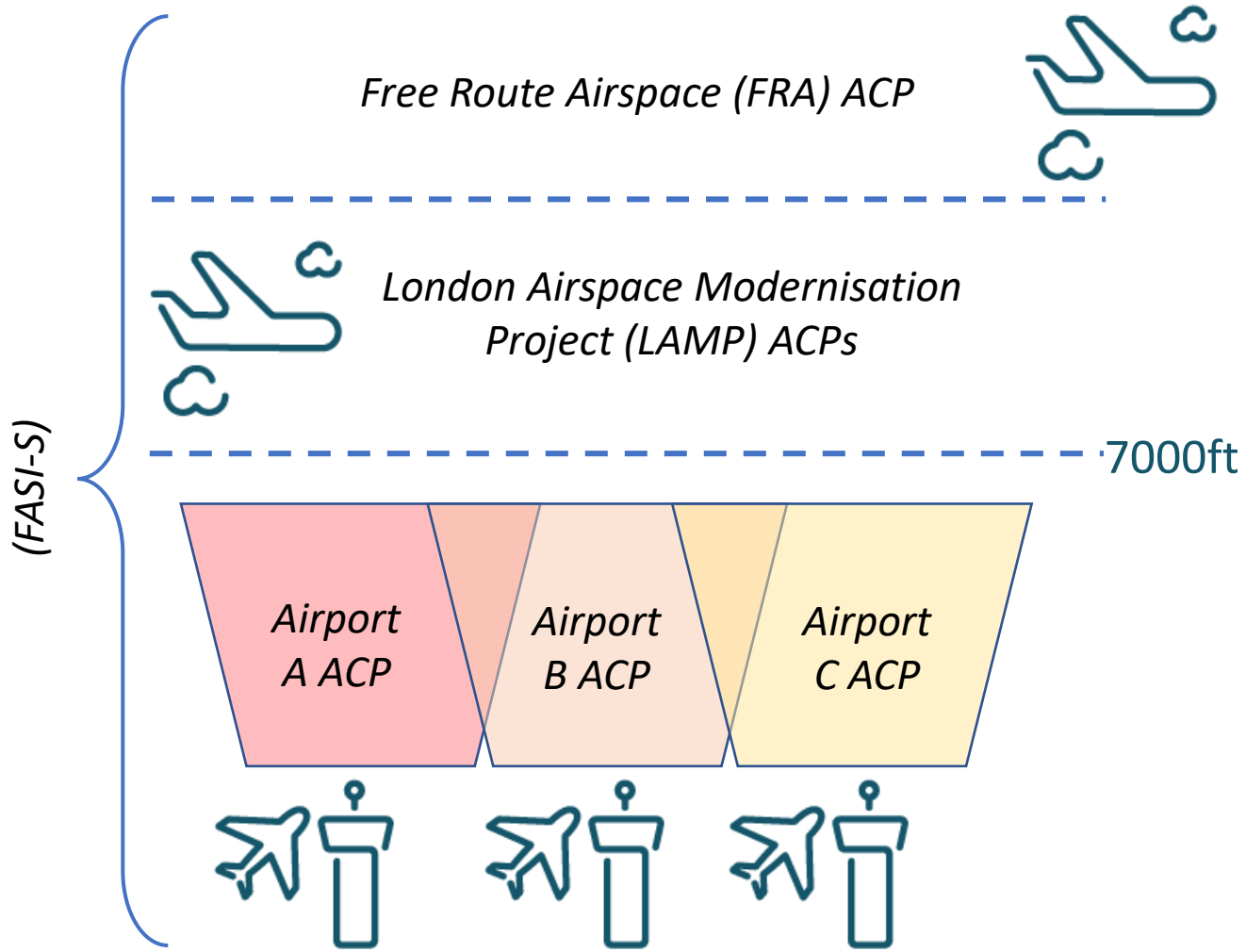
Airspace Modernisation

- DfT Air Navigation Guidance and CAA's Airspace Modernisation Strategy outline the national requirement for airspace modernisation.

- Cardiff Airport's ACP is part of the Future Airspace Strategy Implementation South (FASI-S) alongside:
  - 14 other low-level airport ACPs;
  - High-level network ACPs (NATS)

- These ACPs can achieve collective benefits such as:
  - Reduce the environmental impact of flights;
  - More precise and direct flights;
  - Accommodate other airspace users;
  - Reduce the impact of aviation noise.



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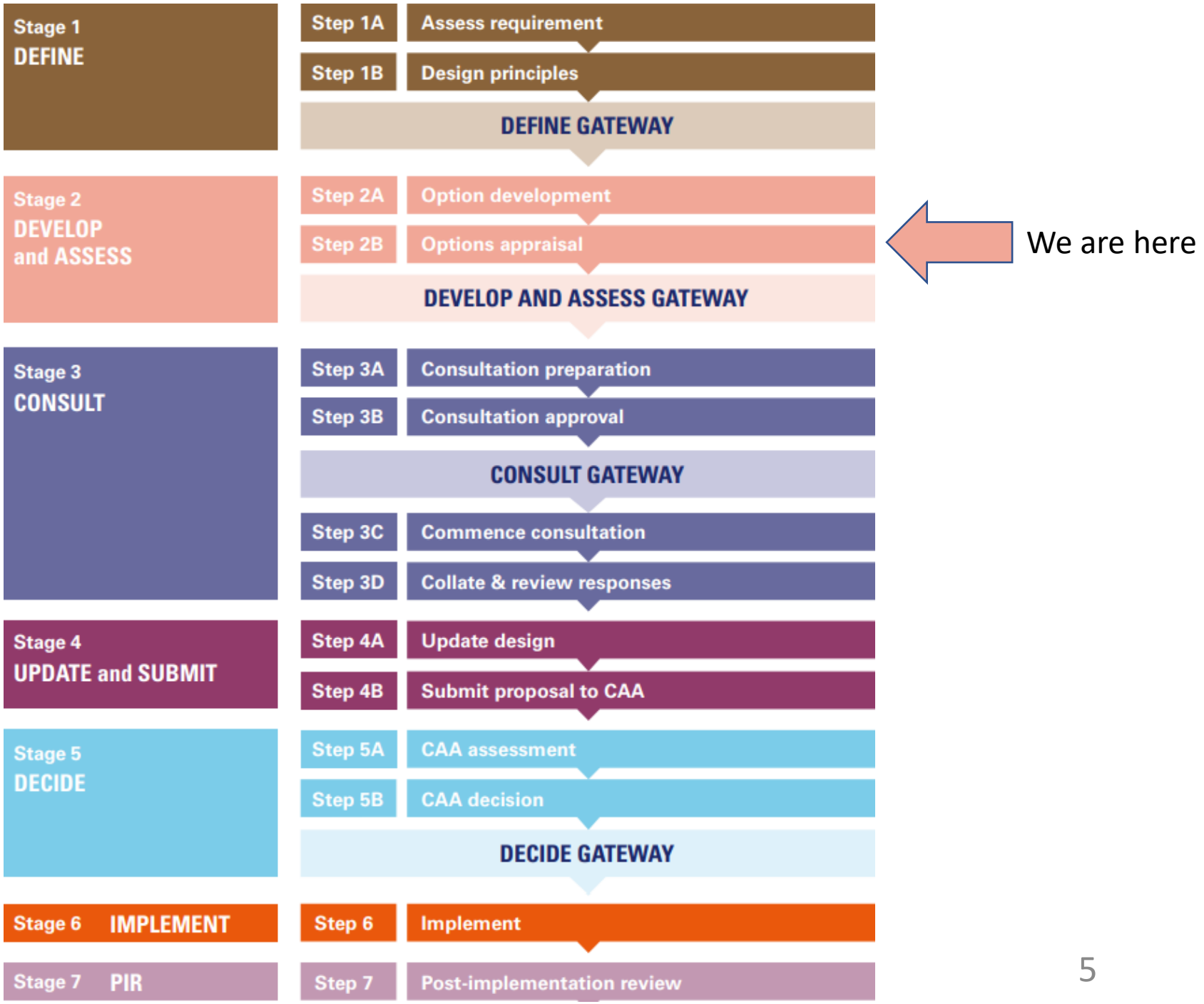
CAP1616 Airspace Change Process



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ACP Progress

Nov 19 – Mar 20

ACP paused (covid)

Jun 21 – Feb 22

2022 onwards

2025

Stage 1 Define
Step 1A: Assessment Requirement
Step 1B: Design Principles

Stage 2 Develop and Assess
Step 2A: Options Development
Step 2B: Options Appraisal

Stage 3 Consult
Step 3A: Consultation Preparation
Step 3B: Consultation Validation
Step 3C: Commence Consultation
Step 3D: Collate and Review Responses

Stage 4 Update and Submit
Step 4A: Update Design
Step 4B: Submit Proposal to CAA

Stage 5 Decide

Stage 6 Implement

Stage 7 PIR

1A: Statement of Need
1A: Assessment Meeting between Cardiff / Civil Aviation Authority (CAA)
1A: CAA determines whether ACP is appropriate
1B: Engagement between Cardiff/ stakeholders
1B: Design Principles
1B: Document summarising how the Design Principles were developed and influenced

2A: Airspace Change Design Options
2A: Further engagement with stakeholders on options
2A: Design Principle evaluation
2B: Initial Options Appraisal

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Cardiff Airport's Statement of Need

Cardiff Airport submitted a formal Statement of Need to the CAA in late 2018. It outlines what Cardiff Airport seeks to achieve from an airspace change including:

- Remove reliance on ground-based navigation aids
- Introduce more efficient, precise and environmentally friendly routes
- Limit environmental and noise impacts of flights in/ out of Cardiff Airport
- Attain predictable access to the national airspace structure
- Achieve an effective and mutually beneficial airspace design for Cardiff Airport and other airspace users

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Cardiff Airport's Design Principles

In late 2019, Cardiff Airport engaged stakeholders on a set of draft Design Principles which outline the objectives of the ACP e.g. safety and environmental.

A number of changes and additions were made, based on feedback receiving during the workshops. Common feedback received included:

- *Safety should be maintained, if not improved*
- *Consideration of other airspace users is very important*
- *Environmental protection is a key issue (locally/ nationally/ globally)*
- *Avoid overflying densely populated areas vs maintenance of tranquillity vs avoid overflying new people*

Design Principles

Theme	Design Principle and Priority
Safety	DP0 Safety: Must maintain or where possible, enhance current levels of safety (Priority: high)
Operational	DP1 Resilience: The proposed airspace must maintain or where possible, enhance operational resilience of the ATC (Air Traffic Control) network and operations (Priority: high)
Operational	DP2 Capacity: The proposed airspace design will yield the maximum capacity benefits from systemisation in line with the CAAs (Civil Aviation Authority) published airspace modernisation programme (Priority: high)
Economic	DP3 Network Performance: The proposed Cardiff FASI-S (Future Airspace Strategy Implementation – South) airspace should facilitate optimised network economic performance (Priority: medium)
Environmental	DP4 Greenhouse Gas Emissions (CO_2): The proposed Cardiff FASI-S airspace should minimise CO_2 emissions per flight (Priority: medium)
Environmental	DP5 Noise impact to stakeholders on the ground: The proposed Cardiff FASI-S airspace should limit, and where practicable reduce, noise impacts to stakeholders on the ground. (Priority: medium)
Technical	DP6 Airspace Access and Integration (MoD Requirements): The Cardiff FASI-S Airspace Change Proposal should minimise impacts on the MoD (Priority: medium)
Technical	DP7 Airspace Access and Integration (GA Impacts): The Cardiff FASI-S Airspace Change Proposal should minimise impacts on GA and other civilian airspace users (Priority: medium)
Technical	DP8 Airspace Access and Integration (Minimise CAS): The volume and classification of controlled airspace required for the Cardiff FASI-S ACP should be the minimum necessary to deliver an efficient airspace design, taking into account the needs of all airspace users (Priority: medium)
Technical	DP9 Use of Advanced Navigation Technology (PBN): The route network linking airport procedures with the enroute phase of flight will be designed to yield maximum safety and efficiency benefits by using an appropriate standard of PBN. (Priority: high)
Policy	DP10 Use of Advanced Navigation Technology: The proposed Cardiff FASI-S airspace design must be compliant with all relevant laws and regulatory requirements. (Priority: high)
Technical	DP11 Airspace Access and Integration (Impact on Adjacent Airfields/ Aerodromes): The proposed airspace should where possible, achieve a mutually beneficial solution to surrounding airfields ensuring equitable access to the airspace 'shared' with Bristol Airport (Priority: high/ medium)

Next Steps

- **January 2022**: submission of *Stage 2 Develop and Assess* material to the CAA

- **March 2022**: presuming approval of Stage 2, we will commence *Stage 3 Consult*

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Airspace Design Options Update

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Cardiff ACP Airspace Design Lead

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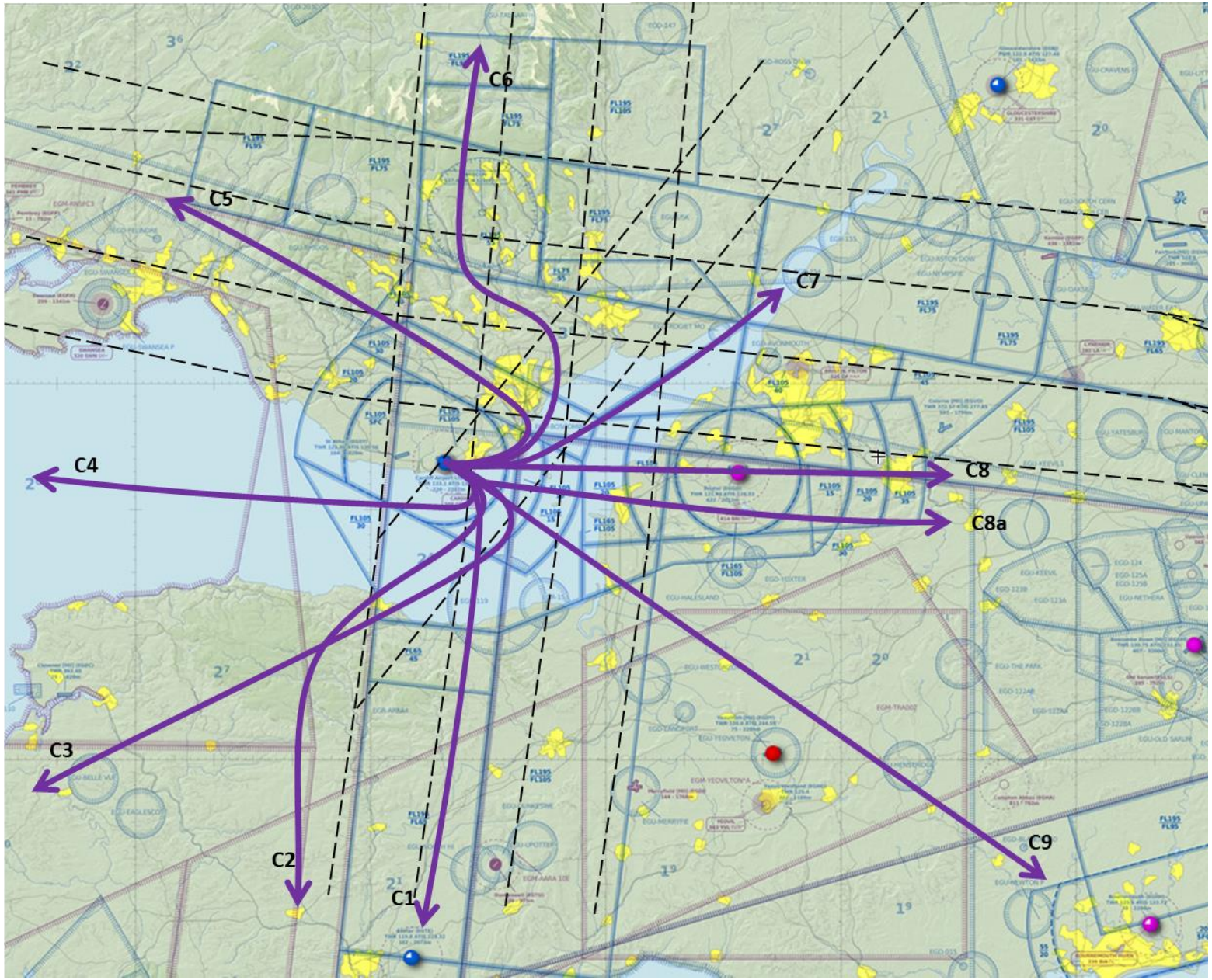
Runway 12 SIDs



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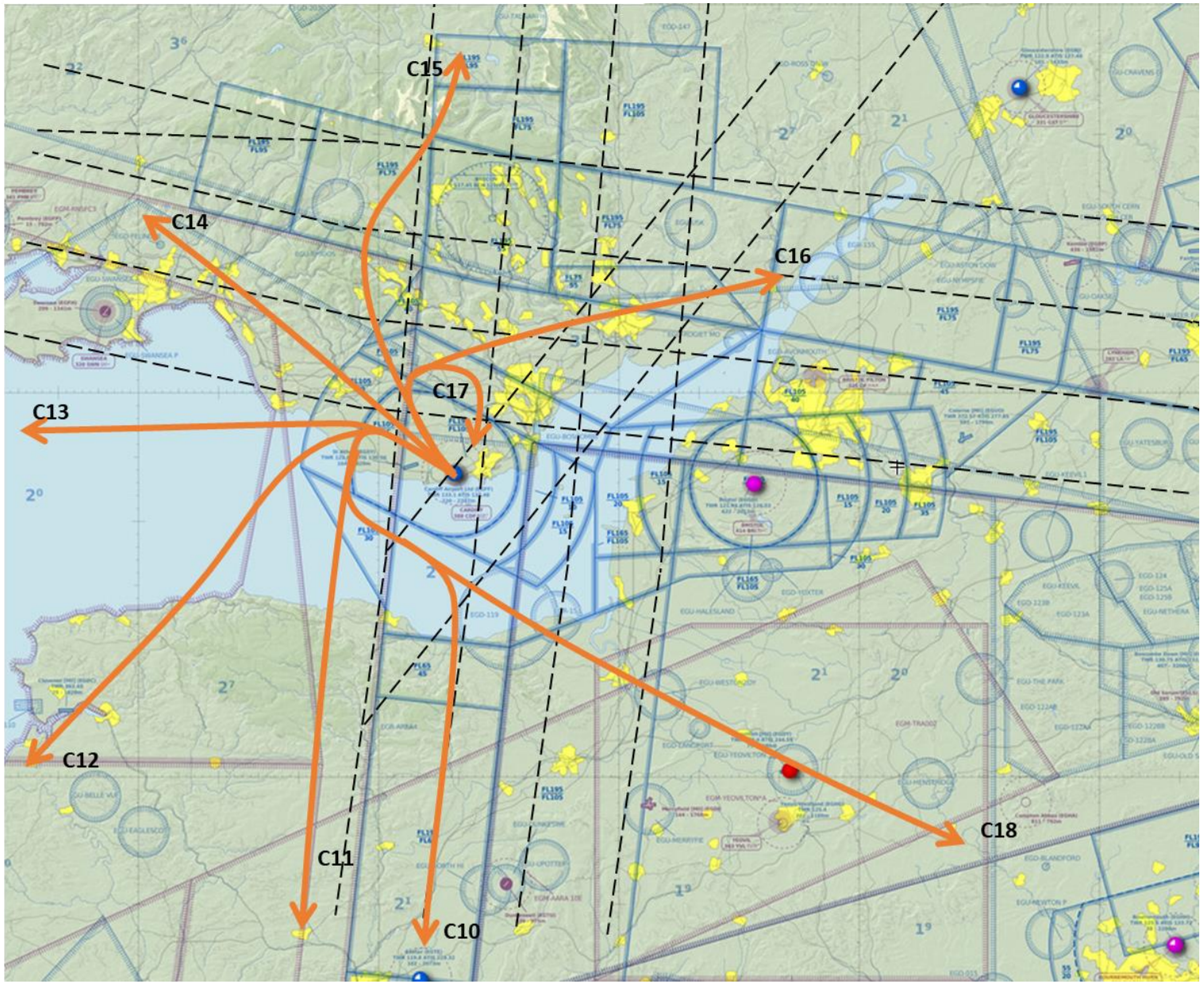
Runway 30 SIDs



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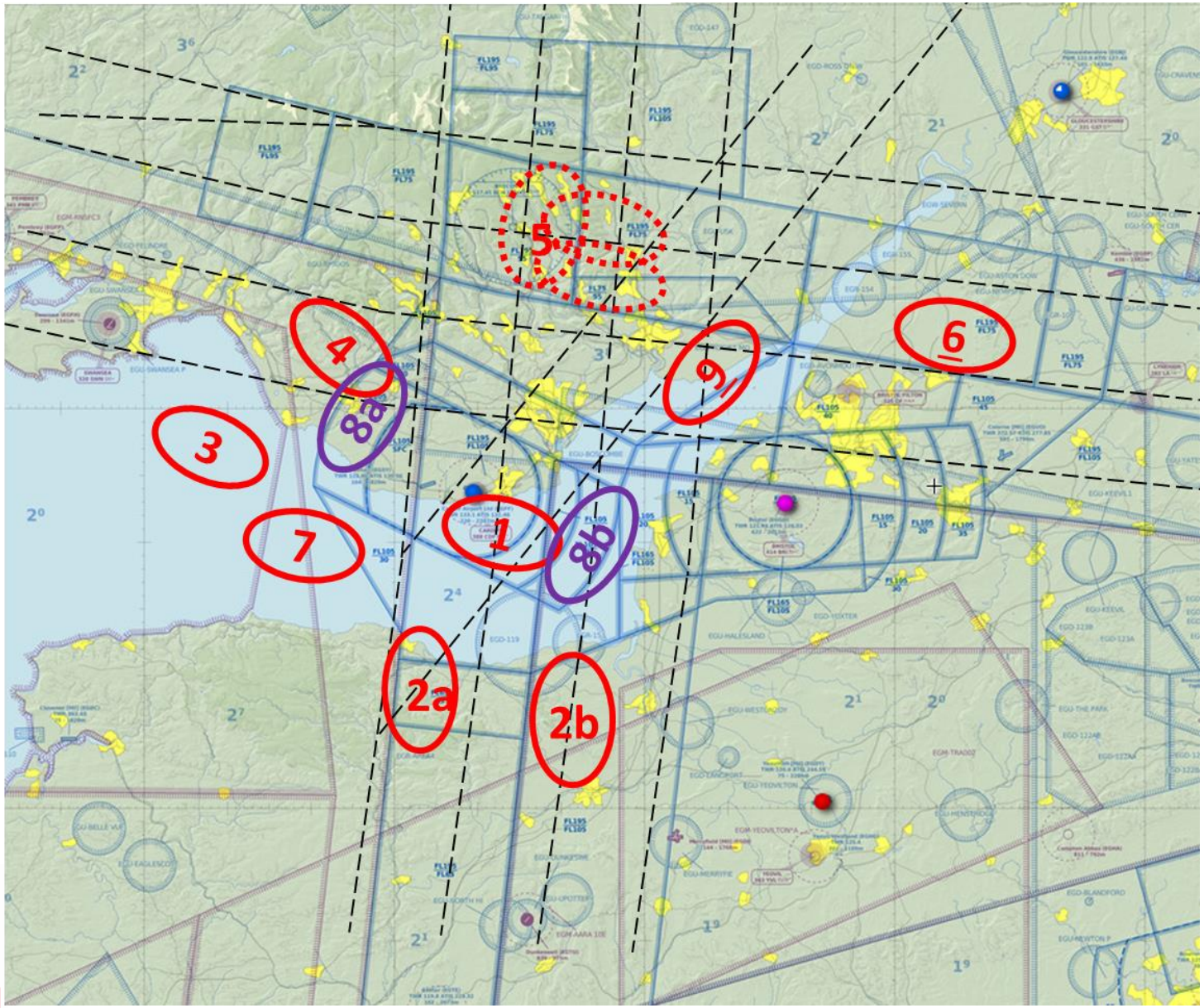
Hold options



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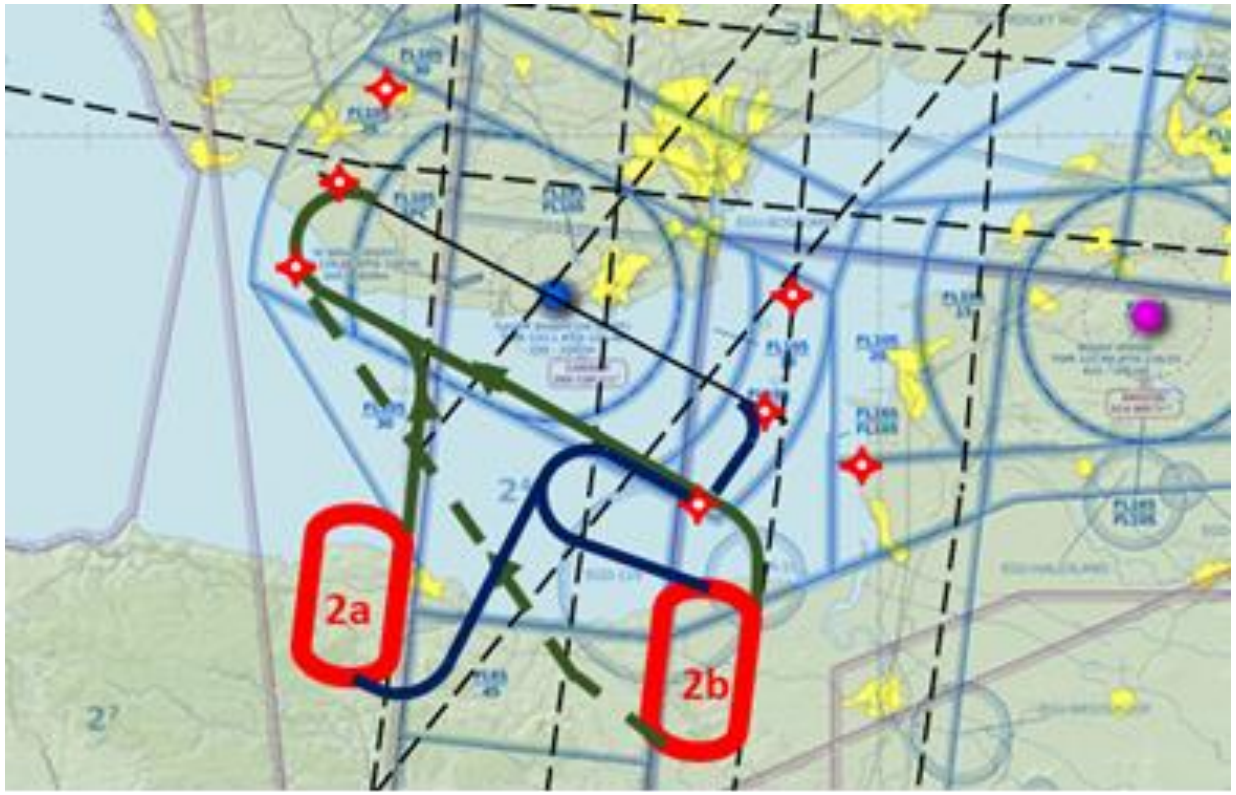
Hold options 2a and 2b including transitions



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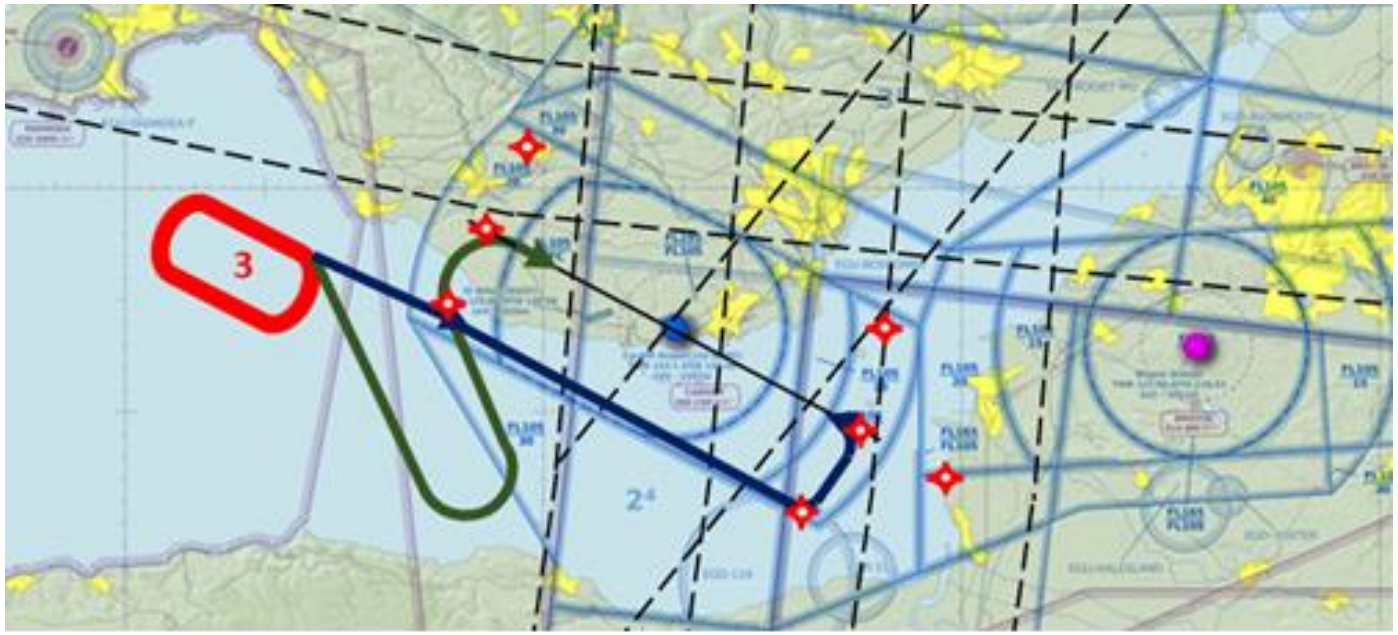
Hold option 3 including transitions



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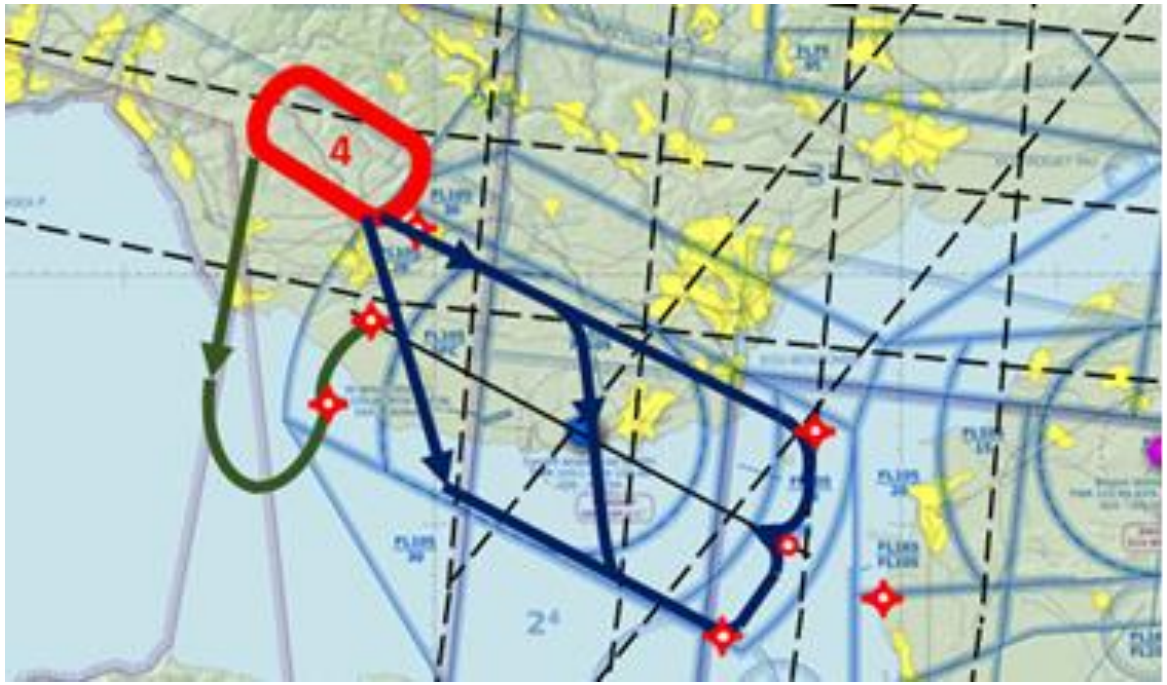
Hold option 4 including transitions



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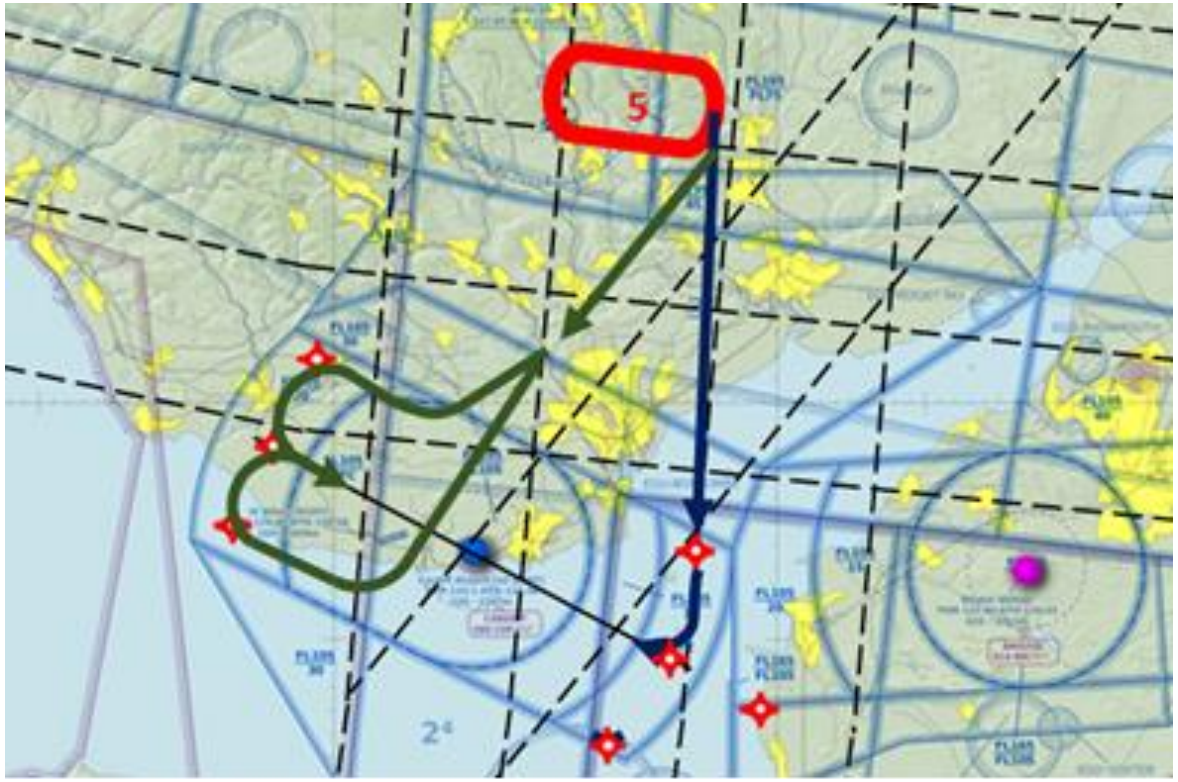
Hold option 5 including transitions



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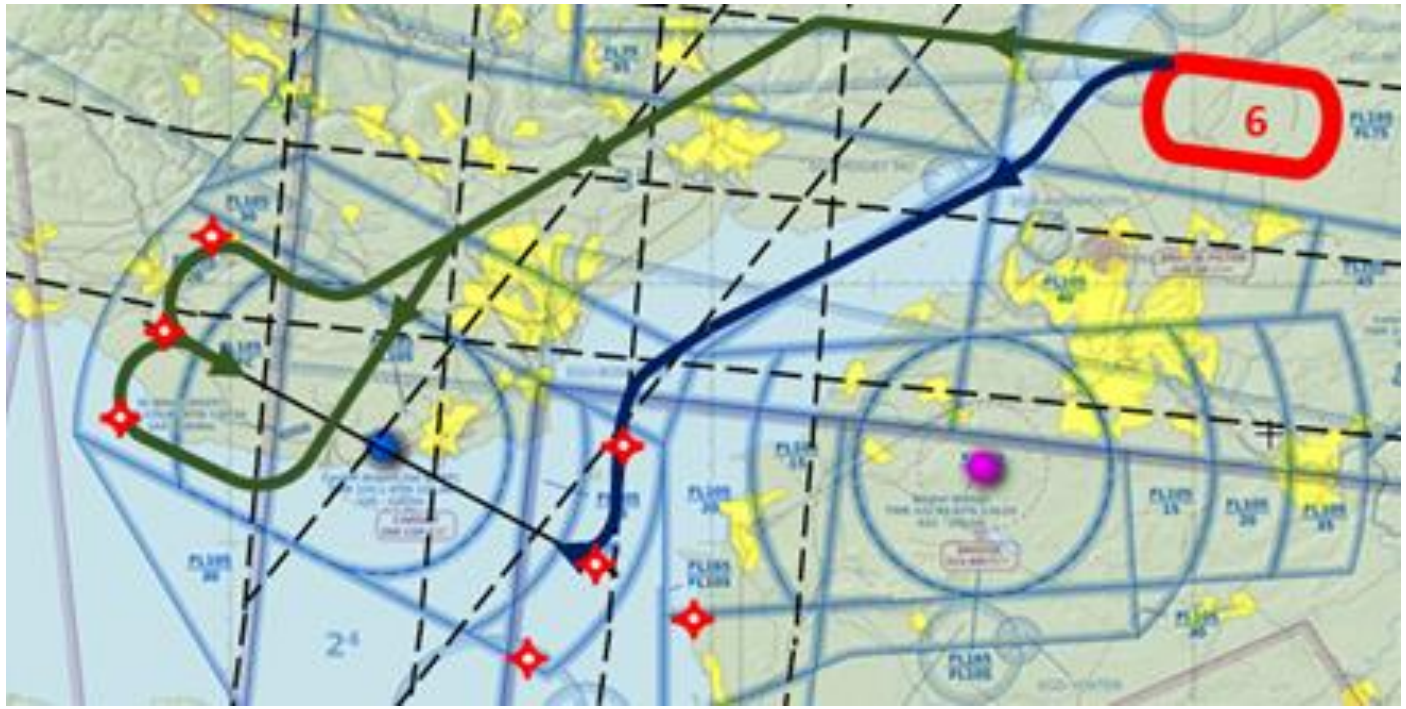
Hold option 6 including transitions



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Hold option 7 including transitions

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Hold options 8a / 8b including transitions

Hold option 9 including transitions