

# Farnborough Airport OCK VOR RNAV Substitution

## Assessment Meeting

April 2023

# Agenda

- Introduction – CAA
- Background – NATS
- Statement of Need (discussion & review) – All
- Options identified from Impact Assessment – Change Sponsor
- Recommendation – Hybrid RNav Substitution with Administrative Update to AIP – Change Sponsor
- Issues or opportunities arising from proposed change – Change Sponsor
- Options to exploit opportunities or address issues identified – Change Sponsor
- Provisional indication of the level and process requirements – CAA
- Provisional process timescales – All
- Next steps – All
- AOB – All

# Background

- NERL are withdrawing numerous legacy assets across the country as part of the DVOR rationalisation programme. This includes the Ockham (OCK) VOR which is due to be decommissioned on 31st December 2023, impacting Farnborough Airport
- Multiple meetings have been held with the CAA during February and March 2023 where options were shared following extensive work by NATS to identify possible solutions
- Guidance on mitigating this removal by utilising CAP1781 as an interim measure until implementation of the Farnborough Airports FASI(S) ACP was explored
- An Impact Assessment was conducted to consider the impact of the Ockham DVOR withdrawal and the mitigation options available, including use of CAP1781
- This Impact Assessment was submitted to the CAA and approval to proceed was granted
- A Statement of Need was submitted on 29th March 2023 to progress formal process

## Statement of Need (review)

NATS Enroute Limited (NERL) are withdrawing numerous legacy navigation assets across the country as part of the DVOR rationalisation programme. The DVOR identified in the withdrawal plan which will affect the Farnborough operation is the Ockham (OCK) DVOR; this asset is scheduled to be decommissioned on 31st December 2023.

An 'Impact Assessment' has been conducted to investigate the impact of the OCK DVOR withdrawal and the mitigation options available. It concluded with the recommendation of a preferred solution to resolve the impact of the withdrawal through use of CAP1781 RNAV Substitution guidance.

This is required for the following OCK dependent RT Failure procedures (also referred to as Initial Approach Procedures or IAPs) at Farnborough

- LOC/DME Y RWY 24
- LOC/DME Z RWY 24
- SRA Y RWY 24
- ILS/DME RWY 06
- LOC/DME RWY 06
- SRA RWY 06
- ILS/DME Y RWY 24
- ILS/DME Z RWY 24
- SRA Z RWY 24

## Statement of Need (review)

In addition, the following missed approach procedures should also be included in the same process. This will be achieved through an interim measure of aircraft FMS coding and RNAV substitution prior to a planned redesign of the airspace through the proposed FASI airspace change.

- ILS/DME & LOC/DME Y RWY 24

This proposal will allow airlines to continue to utilise the existing procedures without the ground-based asset. By using RNAV substitution the current profiles and procedures are replicated in the FMS meaning there is no change to any track over the ground or flight profile flown.

# Options identified from Impact Assessment

- Do Nothing
- Conduct a full ACP (CAP1616 Level 1)
- Replication of Initial Approach Procedures using New RNAV coding
- Negotiate an agreement/contract with NERL to keep the OCK DVOR in service until completion of the Farnborough FASI South ACP
- Utilise an existing VOR in place of OCK DVOR
- Administrative update to the AIP
- RNAV Substitution of Initial Approach Procedures
- Redesign of Initial Approach Procedures using NDBs
- Hybrid RNAV Substitution with Administrative Update to AIP - *Recommended by Impact Assessment*

## Recommendation – Hybrid RNav Substitution with Administrative Update to AIP

Achieves resolution for OCK DVOR removal. Option is a combination of the administrative AIP update and CAP1781 processes to provide RNav substitution to enable OCK DVOR to be removed from all the IAPs at Farnborough.

Feedback from Lead Operators Technical Group (LOTG) that coding of both a “solid lined” initial approach procedure for Farnborough and missed approaches (to address the ILS/DME and LOC/DME Y RWY 24 dependency) is **technically possible and also delivers significant crew workload benefits when dealing with RT failure scenarios in such complicated airspace.**

LOTG noted that when considering navigational performance, it was more critical to ensure RNav capability on the routes promulgated, there was unlikely to be a perceivable difference from an ATC perspective on routes equipped to RNav5 or RNav1 standards.

The fallback position to promulgate guidance to RNav5 aircraft that RT failure requires them to divert elsewhere. This would also apply to textual instructions in EGLF 2.22 Para 1 a vi.

To address the conventional VEXUB hold and reliance on the OCK DVOR, Farnborough requests the promulgation of the current RNav1 VEXUB hold as an RNav1/5 hold to be a change delivered within the CAP1616 level 2C process.

# Issues or opportunities arising from proposed change

- 5 Year IFP review requirement – IFP review in action, critical path timeline
- Simplifying local AIP entry, splitting plates to enable FMS coding of procedure – Drafted, requires closure
- RNav 5 requirement due to Farnborough procedures, not currently recognised in CAP 1781 – requires formal endorsement from Regulator
- 12 month conformance reporting requirement – requires formal endorsement from Regulator
- Level of ACP – requires formal endorsement from Regulator



# Options to exploit opportunities or address issues identified

## Rnav 5 inclusion

- Feedback from LOTG, this should be included within the RNAV substitution process, on the undertaking that aircraft flying it are required to be Radar monitored
- Other traffic proactively deviated to avoid any lateral non-conformance from RNAV5 traffic
- Other airports in the vicinity are informed of the RT fail aircraft displaying SSR 7600
- Extension to RNAV5 standards would not generate additional ATC monitoring requirements or workload and given the fact RNAV5 aircraft are normally vectored, this amendment results in no change across the ground for RNAV5 aircraft

## Conformance monitoring

- Farnborough is not a noise monitored airport therefore noise monitors are not in regular use
- Procedure is for emergency use only and therefore is unlikely to be used (no recorded instances in past 10 years)
- Agreement that NATS can report any instances of usage via existing safety reporting & STAR process.
- Final 12 month summary document to be produced to report on use of procedures

# Provisional indication of the level and process requirements

- Feedback from Regulator on proposal

# Provisional process timescales

- Stretch Target 2 November (AIRAC 11/2023)
- Target 30 November (AIRAC 12/2023)
- Contingency 28 December (AIRAC 13/2023)

AIRAC NUMBER	SPONSOR CHANGE REQUEST CUT OFF	AMDT PUBLISHED	AIRAC EFFECTIVE DATE
11/2023	Friday 4 August 23	Thursday 21 September 23	Thursday 2 November 23
12/2023	Friday 1 September 23	Thursday 16 November 23	Thursday 30 November 23
13/2023	Friday 29 September 23	Thursday 19 October 23	Thursday 28 December 23

## Next steps

1. Engage with SMEs/Regulator to develop safety argument for Rnav5 procedure inclusion
2. Continue user engagement communications
3. Complete 5 year IFP review for Farnborough
4. Amend AIP documentation by migrating Initial Approach Procedures within the approach plates to standalone 'solid line' procedures
5. Conduct a 1781 RNav substitution of the required procedures to ensure removal of dependency from the OCK VOR and update any required textual information
6. Submission of material for Friday 4 August deadline

# AOB

- Open Forum

# Appendix 1 – Affected Publications & Procedures

The withdrawal of the Ockham DVOR affects the following Farnborough Airport Instrument flight procedures:

- EGLF 5-1 : ATC SMAC
- EGLF 8-1 : ILS/DME RWY 06
- EGLF 8-2 : LOCDME RWY 06
- EGLF 8-3 : SRA RWY 06
- EGLF 8-4 : ILS/DME Y RWY 24
- EGLF 8-5 : ILS/DME Z RWY 24
- EGLF 8-6 : LOC/DME Y RWY 24
- EGLF 8-7 : LOC/DME Z RWY 24
- EGLF 8-8 : SRA Y RWY 24
- EGLF 8-9 : SRA Z RWY 24

The withdrawal of the Ockham DVOR affects the following Farnborough Airport and En-route AIP Publications:

- EGLF 4-2 : Control Zone and Control Area Chart
- EGLF 2.19 : Radio navigation Aids
- EGLF 2.22 : Flight procedures
- ENR 6-83 : Farnborough CTR & CTA Chart