

AERONAUTICAL INFORMATION CIRCULAR Y 180/2025

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PROMULGATION IN THE UK AIP OF RNAV SUBSTITUTION TO CONVENTIONAL PROCEDURES DEPENDENT ON GROUND BASED NAVIGATION AIDS TARGETED FOR REMOVAL - REPLACES AIC Y 152/2025 AS OF 11 DEC 2025

1 Introduction

In 2008, NATS En-Route Plc (NERL), which serves as the main Air Navigation Service Provider for the UK, announced plans to reduce the number of en-route DVORs and NDBs, which are traditional ground navigation aids. This decision reflects a broader move towards Performance-Based Navigation (PBN) and the adoption of advanced technologies like satellite-based navigation systems and modern aircraft onboard systems. By 2022, NATS had successfully transitioned all Standard Arrivals (STARs) to PBN, effectively removing their reliance on ground-based navigation aids. However, many airports still maintain the use of these conventional navigation aids for procedures below 7000 FT. To mitigate the loss of access to conventional ground navigation aids identified for rationalisation, and as a temporary measure, RNAV substitution may offer an acceptable solution, subject to eligibility and regulatory approval in accordance with CAP 1781 and CAP 1616.

UK guidance for the use of RNAV substitution can be found in CAP 1926.

2 Purpose

This AIC aims to provide information to airspace users regarding the promulgation of RNAV substitution for eligible conventional instrument flight procedures and lists the conventional navigation aids removed after CAA approval.

Note: The CAA will update the information in this AIC periodically.

3 Scope

This AIC provides an up-to-date list of instrument flight procedures for which the use of RNAV substitution has been approved by the CAA. It also describes how aeronautical information about instrument flight procedures for which the use of RNAV substitution has been approved by the CAA, and associated conventional ground-based navigation aids, are published in the following sections of the UK AIP:

- GEN 2.5
- ENR 3.2
- ENR 4.1
- AD 2.19
- AD 2.21
- AD 2.22
- AD 2.24
- ENR 6

and on VFR charts.

4 List of approved Instrument Flight Procedures for RNAV Substitution

The table published below lists all instrument flight procedures published in the UK AIP for which the use of RNAV substitution has been approved by the CAA.

Nav Aid Name	Nav Aid ID	Type of Nav Aid	Aerodrome Affected	Aerodrome Name	Chart #	Name of affected Procedure
Brecon	BCN	VOR	EGFF	Cardiff International Airport	AD 2-EGFF-6-2 AD 2-EGFF-6-2	SID BCN 1A SID BCN 1B
			EGGD	Bristol Airport	AD 2-EGGD-6-1 AD 2-EGGD-6-1 AD 2-EGGD-6-3 AD 2-EGGD-6-3	SID BCN 1X SID BCN 1Z SID EXMOR 1X SID EXMOR 1Z
Ockham	OCK	VOR/DME	EGLF	Farnborough Airport	AD 2-EGLF-7-9 AD 2-EGLF-7-10	IAP ILS/DME, LOC/DME, RWY 06 (via PEPIS) IAP ILS/DME, LOC/DME, RWY 24 (via PEPIS)
			EGKK	London Gatwick	AD 2-EGKK-6-6 AD 2-EGKK-6-6	SID BOGNA 1M SID BOGNA 1V
			EGLL	London Heathrow	AD 2-EGLL-6-1 AD 2-EGLL-6-1 AD 2-EGLL-6-1 AD 2-EGLL-6-1 AD 2-EGLL-6-2 AD 2-EGLL-6-2 AD 2-EGLL-6-2 AD 2-EGLL-6-2 AD 2-EGLL-6-2 AD 2-EGLL-6-3 AD 2-EGLL-6-3 AD 2-EGLL-6-3 AD 2-EGLL-6-3 AD 2-EGLL-6-4 AD 2-EGLL-6-4 AD 2-EGLL-6-4 AD 2-EGLL-6-4 AD 2-EGLL-6-5 AD 2-EGLL-6-5 AD 2-EGLL-6-5 AD 2-EGLL-6-5 AD 2-EGLL-6-6 AD 2-EGLL-6-6 AD 2-EGLL-6-6 AD 2-EGLL-6-6 AD 2-EGLL-7-20 AD 2-EGLL-7-23 AD 2-EGLL-7-25 AD 2-EGLL-7-26	COMPTON 3F COMPTON 3G COMPTON 5J COMPTON 4K MAXIT 1F MAXIT 1G MODMI 1J MODMI 1K BROOKMANS PARK 7F BROOKMANS PARK 7G BROOKMANS PARK 6J BROOKMANS PARK 5K UMLAT 1F UMLAT 1G ULTIB 1J ULTIB 1K DET 2F DET 2G DET 1J DET 1K SID GOGSI 2F SID GOGSI 2G SID GAGSU 2J SID GAGSU 2K IAP ILS RWY 09L/R (via BIG and OCK) IAP ILS RWY 27L/R (via OCK) IAP ILS RWY 09L/R (via CHT and EPM) IAP ILS RWY 27L/R (via CHT and EPM)
Gamston	GAM	VOR	EGNM	Leeds Bradford	AD 2-EGNM-6-2 AD 2-EGNM-6-2 AD 2-EGNM-6-2 AD 2-EGNM-6-2	SID DOPEK 3W SID DOPEK 3X SID LAMIX 3W SID LAMIX 3X
Whitegate	WHI	NDB	EGGP	Liverpool Airport	AD 2-EGGP-6-5	SID NANTI 2V
Daventry	DTY	VOR	EGNX	East Midlands International Airport	AD 2-EGNX-6-1 AD 2-EGNX-7-10 AD 2-EGNX-7-11	SID SAPCO IAP ILS/DME 09 (via PIGOT) IAP ILS/DME 27 (via PIGOT)
Trent	TNT	VOR	EGNX	East Midlands International Airport	AD 2-EGNX-6-2 AD 2-EGNX-7-10 AD 2-EGNX-7-11	SID TRENT IAP ILS/DME 09 (via ROKUP) IAP ILS/DME 27 (via ROKUP)

Table 1: List of IFPs for which RNAV Substitution has been approved.

5 Aeronautical Information Publication

The removal of conventional navigation aids used in conventional instrument flight procedures, and introduction of RNAV substitution needs to be supported by a clear and consistent publication of changes in AIS products.

This section provides clarification on how the UK AIP will be updated to support the use of RNAV substitution for eligible instrument flight procedures.

Sponsors are responsible for submitting the relevant changes to NATS AIS via the portal www.aurora.nats.co.uk once they are approved by the CAA.

Spectrum management: Frequencies used by conventional ground-based navigation aids withdrawn from service, are supporting the use of RNAV substitution for eligible instrument flight procedures and must remain published in the AIP. These frequencies must remain published for the lifespan of RNAV substitution, and their de-notification must be approved by the CAA.

5.1 GEN 2.5 List of radio Navigation Aids

In support of the use of RNAV substitution and the associated coded overlay by operators, the publication of the conventional ground-based navaids in GEN 2.5 is unaffected.

5.2 ENR 3.2 Area Navigation Routes

Conventional navigation aids subject to rationalisation will continue to be referenced by their 3 Letter Code Designator (3LNC).

5.3 ENR 4.1 Radio Navigation Aids - En-Route

All UK standard arrivals (STARs) transitioned toward PBN in 2022 and VOR dependencies were thus removed from the UK ATS En-Route structure. After CAA approval of RNAV substitution, references to VORs are removed from ENR 4.1.

In that context, when a VOR is associated with a DME, the text **"No associated VOR. See current AIC regarding RNAV Substitution"**, is published in column remark/usage.

When a VOR is not associated with a DME, the text **"RNAV Substitution Only. See current AIC regarding RNAV Substitution"**, is published in column remark/usage.

5.4 ENR 6 En-Route Charts

All charts in which the depiction of conventional ground navigation aids such as ENR 6.68 "Lower ATS Route (South Sheet)", ENR 6.69 "Lower ATS Route (North Sheet)" and ENR 6.70 "Upper airspace control area, free route airspace (FRA) and upper ATS routes" remain unchanged.

5.5 AD 2 Aerodromes

5.5.1 AD 2.19 Radio navigation and landing aids

To support the use of RNAV substitution and the associated coded overlay by operators, when approved for eligible conventional instrument flight procedures, the publication of the conventional ground-based navaids on AD 2.19 will be annotated as **"RNAV Substitution Only. See current AIC regarding RNAV Substitution"**, is published in column remark/usage.

5.5.2 AD 2.21 Noise Abatement Procedures

The description of the Noise Abatement Procedures (NAP) or Noise Preferential Routes (NPR) can be affected by the removal of the conventional ground-based navigation aids. NAPs or NPRs development and description is the responsibility of airports and should be coordinated with their local planning authorities. The designation of the NPRs or NAPs at the designated airports must be coordinated with the Department for Transport (DfT).

Designated airports: The description of the NAPs and NPRs can use Latitude/Longitude coordinates and altitudes.

Non designated airports: The description of the NAPs and NPRs is an airport's responsibility which should be agreed with their planning authorities. However, in the event airports decide to not change the description of their NAPs or NPRs and continue to use references to conventional ground-based navigation aids, the annotation **"VOR XXX and/or DME XXX NOT AVAILABLE. Reference used to support RNAV Substitution only. See current AIC regarding RNAV Substitution"** should be considered.

5.5.3 AD 2.22 Flight Procedures

References to conventional ground-based navigation aids in the textual description, will continue including those removed in support of RNAV substitution. Information identifying these navigation aids is available in table 1 of this AIC.

5.5.4 AD 2.24 Charts related to an aerodrome

5.5.4.1 Air Traffic Control Surveillance Minimum Altitude Charts (ATCSMAC)

ATCSMAC must be reviewed during the process for the implementation of RNAV substitution and the depiction of the ground-based conventional navaids in scope of the rationalisation must be removed following CAA approval. However, if deemed relevant for the design of the chart and the symbol remains, a note **"VOR XXX and/or DME XXX NOT AVAILABLE. Reference used to support RNAV Substitution only. See current AIC regarding RNAV Substitution"** should be added in general information.

5.5.4.2 Instrument Flight Procedure Charts

The statement "RNAV Substitution only" is added to title of the instrument flight procedures chart when RNAV substitution has been approved by the CAA for the procedures published in the chart. When RNAV substitution has only been approved for a specific procedure, the statement "RNAV Substitution" only for **"name of the procedure"** should appear. Example **"RNAV Substitution only for GAGSU 1L"**.

INITIAL APPROACH PROCEDURE ILS/DME LOC/DME RWY 06 via PEPIS (RNAV SUBSTITUTION ONLY)
AD 2.EGLF-7-9
INITIAL APPROACH PROCEDURE ILS/DME LOC/DME RWY 24 via PEPIS (RNAV SUBSTITUTION ONLY)
AD 2.EGLF-7-10

Figure 1 - Example of AD 2.24 publication (does not reflect the current AIP).

The statement "RNAV Substitution only" is added in the top right corner under the name of the instrument flight procedure for which the use of RNAV substitution has been approved by the CAA.

**INITIAL APPROACH PROCEDURE
ILS/DME LOC/DME RWY 06**

DISTANCES IN NAUTICAL MILES
TRACKS ARE MAGNETIC
ALTITUDES AND ELEVATIONS IN FEET

**FARNBOROUGH
via PEPIS
(RNAV SUBSTITUTION ONLY)**

Figure 2 - Example of IFP chart publication (does not reflect the current AIP).

A warning box mentioning "RNAV Substitution only due to VOR/DME xxx N/A" is added on the chart and the morse code is removed.



Figure 3 - Example of IFP chart publication (does not reflect the current AIP).



Figure 4 - Example of IFP chart publication (does not reflect the current AIP).

5.5.5 VFR Charts

After CAA approval of RNAV substitution for eligible instrument flight procedures and approval of the removal of the conventional ground-based navigation aids, VFR charts must be amended and reference to the navaids in scope, removed. The request to update the VFR charts should be submitted by the Sponsor to AIS at the same time the relevant changes to the UK AIP (within the same Change Request in the AIS Portal). New editions of VFR charts are published in accordance with the Chart Publication Schedule: <https://nats-uk.ead-it.com/cms-nats/opencms/en/Charts/Chart-Schedule/>. Any changes to the charts introduced between the chart publication dates are provided through the Chart Amendment Service: <https://nats-uk.ead-it.com/cms-nats/opencms/en/Charts/vfr-charts/>.

