

DVOR Rationalisation
Removal of Enroute Dependencies
Perth (PTH) Deployment

DVOR PTH Holds and STARs CAP1616 Stage 2 Gateway

V1.1

NATS Unclassified

Action	Position	Date
Produced	Airspace Change Specialist NATS Airspace & Future Operations	April 2021
Approved	ATC Lead – Airspace NATS Swanwick ATM Development	April 2021
Approved	Project Manager L6213 DVOR Operations and Airspace Programme Delivery	April 2021

Publication history

Issue	Month/Year	Change Requests in this issue
1.0	April 2021	Submitted to the CAA
1.1	April 2021	Following CAA Queries the following have been updated: - Section 3 Option 1 DP Evaluation: - DP3 assessment updated to be consistent with Option 0 - DP4 assessment updated to be consistent with Option 0 - Section 3 Option 2 DP Evaluation: - DP1 assessment updated to be consistent with Option 1 - DP4 assessment updated to be consistent with Options 0 and 1 - Section 3 Option 3 DP Evaluation: - DP3 assessment expanded to explain the RNAV5 PTH 1G STAR would be removed under this option - Para 5.1: "improving network connectivity" has been updated to "maintaining network connectivity." - Annex C and D Impact Assessment tables, "How" column updated to read "STAR Truncation..." as opposed to "STAR Extension..."

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1. Introduction

This document continues the CAP1616 process started with the Statement of Need (DAP1916) submitted in September 2020 ([Ref 3](#)). The intent of this document is to summarise and satisfy the requirements of CAP1616 Stage 2. The CAA reference is ACP-2020-079, the link to the CAA progress page is [here](#).

This proposal is limited to removing the references of enroute instrument flight procedures (IFPs) in the UK AIP to the Perth (PTH) DVOR. Hence this proposal is focused on the RNAV5 PTH 1G Standard Terminal Arrival Route (STAR) and UK ATS routes¹ P600 and UP600 which references the PTH DVOR as a waypoint in the enroute environment, where NATS is the primary Air Navigation Service Provider (ANSP). There are no changes to Holds as part of this proposal.

This proposal contains the relevant changes to remove the PTH references from these STARs and ATS routes. Design Principles have been developed ([Ref 4](#)) which are focused on best removing the enroute DVOR references whilst ensuring the changes are safe and do not result in changes to flight behaviour. This document will identify:

- option concepts for amending current connectivity relevant to PTH with RNAV procedures;
- an evaluation of those option concepts against the Design Principles;
- a full list of the specific changes.

¹ UP600 is planned to be removed and FINDO will be added to P600 as part of FRA Deployment 1 ([ACP-2018-11](#)), due to be implemented AIRAC 12/2021. This ACP will remove PTH from UP600 and add FINDO to P600 if FRA D1 is not implemented as planned.

2. Stage 2 Develop and Assess

Step 2A Options Development

2.1 CAA's [PBN STAR Replication Policy \(V2\)](#) was published in Mar 2018 and was used as the basis for this proposal. It defines PBN STAR Replication as a PBN redesign of an existing conventional STAR from the commencement of the STAR in the ATS enroute network to the termination point with the intention of retaining the existing route and track over the ground (para 5.4). Para 5.5 of the same policy makes assumptions that replication ensures procedures follow the same path over the ground as the existing conventional procedure, as closely as possible. This means that there would be no change to pilot or controller behaviour (apart from technical designation changes), and no change to lateral traffic position.

2.2 Airspace change design options

The design options considered to remove the enroute references to the PTH DVOR, were limited to the following:

Option 0 – Do nothing. Retain all the STARs, holds and ATS Routes unchanged from today's AIP definition.

Option 1 – Using the CAA policies, replicate all relevant STARs and Holds using RNAV, exactly as defined in the AIP without considering any practicalities.

Option 2 – Examine the use of existing STARs, Holds and ATS Routes from a practical point of view, re-evaluate how they are used and how the network may be improved by rationalising/truncating/replicating them in a considered manner.

Option 3 – Remove all existing STARs, Holds and ATS Routes that refer to or use the PTH DVOR.

On-going engagement throughout the DVOR project - with relevant airfields and ATC procedure teams at the Scottish Area Control Centre at Prestwick- has determined that NATS would replicate conventional STARs and Holds as closely as possible using PBN design criteria (using the RNAV5 specification). As these procedures are replications of current RNAV procedures and there is no requirement for ensuring separation from other ATS Routes/STARs. RNAV5 is the preferred specification in order to ensure greatest accessibility to routes, rather than limiting to those aircraft with RNAV1 equipage.

In support of the eventual removal of the PTH DVOR, this proposal will truncate the RNAV5 PTH 1G STAR serving Glasgow and Edinburgh airports. This will remove the reference to the PTH DVOR from the STAR and facilitate the removal of the PTH DVOR from ATS routes P600 and UP600¹. Network connectivity will be maintained for Glasgow departures flying the PTH SID by the addition of a DTC PTH- ASNUD to the Standard Route Document (SRD).

The above proposed changes are detailed fully in Annexes C-E.

Edinburgh and Glasgow Airports have been engaged with regarding this proposal and the changes to the relevant Hold and STARs (evidence of engagement with the airports is detailed in Annex G). The proposed changes are supported by the airports.

2.3 Stakeholder Engagement

As part of Stage 2, CAP1616 requires change sponsors to develop a comprehensive list of Design Options, which are tested with the same group of stakeholders who were engaged with during Stage 1. However, as covered in the Stage 1B Design Principles document ([Ref 4](#)), the Design Principles for this submission were constructed around how best to remove the enroute references to the PTH DVOR, alongside ensuring the changes are safe and do not result in any changes to flight behaviour. NATS had previously taken part in a (CAA-led) consultation with the National Air Traffic Management Advisory Committee (NATMAC) on DVOR rationalisation; prior to the introduction of CAP1616 and the requirement to seek feedback on Design Principles.

Alongside the Design Principles, the Design Options have been developed to provide different methods in which the en-route references to the DVOR can be removed, whilst ensuring no changes to flight behaviours. The Design Options have been used consistently across the numerous DVOR submissions as they achieve the same outcome; although they are always reviewed to ensure relevance. We therefore conclude that there is no need to re-consult with the NATMAC members, nor any additional stakeholders, as there will not be any impact upon them.

However, as part of this Airspace Change Proposal and as per previous submissions, NATS has been in contact with relevant airfields which use the affected procedures, specifically Edinburgh and Glasgow Airports. The aerodrome sections of the AIP for the affected airfields will need to be updated which this engagement has allowed us to inform them of. The proposed changes have been designed to be invisible from an airport's perspective so there are no other impacts anticipated. Annex G provides a summary of the engagement activity for these procedures.

Previous DVOR removal proposals have proposed three Design Options: in summary, to do nothing; to replicate all procedures; and lastly, to examine all procedures and improve where appropriate (rationalise/ truncate/ replicate). These Design Options were accepted by the CAA. NATS was later requested to add an additional option to all future submissions, whereby all procedures with a dependency are removed; thus, removing the DVOR dependency. The CAA acknowledged that this Design Option would not meet the Design Principles however; it is included for completeness.

The Design Options have therefore been developed so they can be applied to each of the individual DVOR submissions and have evolved following guidance from the CAA. As mentioned above, appropriate engagement has previously been completed with NATMAC members and the relevant airports; and airports will be fully briefed when their AIP pages are required to be updated.

3. Step 2A Options Development: Design Principle Evaluation

This section evaluates the performance of all 4 Design Options with respect to each of the five Design Principles. The Design Principles developed during Stage 1B ([Ref.4](#)) are included in Annex A for reference. As covered fully in the Stage 1B document, the Design Principles for this PTH DVOR submission have been developed to ensure that they are still relevant; as a consistent set has been used throughout the DVOR Programme.

The below assessment criteria have been used to determine whether each Design Option has met; partially met; or not meet each of the seven Design Principles.

Design Principle	Description	Assessment Criteria		
		Does not meet	Partially meets	Met
DP1 Safety	The proposed airspace change must maintain or enhance the current level of safety	Unlikely to pass a safety case due to major safety issues from proposed changes	Issues identified that would require a robust safety case e.g. workload, IFP (flyability), new hazards	No significant safety issues identified
DP2 No change to flight behaviour	None of the proposed technical changes to definitions of STARs/ Holds would result in a change to actual flight behaviours – laterally, vertically or in dispersal	Proposed change(s) would result in a change to flight behaviour	N/A – either met or not met	None of the proposed changes would result in a change to flight behaviour
DP3 PBN Specification	The proposed airspace change will yield maximum safety and efficiency benefits by using an appropriate standard of PBN	No RNAV replications are made as part of the proposal; or, adequate justification is not provided for the proposed changes	N/A – either met or not met	Conventional procedures are replaced with RNAV versions. Proposed changes fully consider and justify the chosen PBN specification
DP4 Remove DVOR Dependencies	Remove enroute dependencies on the PTH DVOR through appropriate design changes; including removing unnecessary references to the PTH DVOR which are not material to the procedure and rationalising rarely used STARs.	Not all enroute dependencies on the PTH are removed	N/A – either met or not met	All enroute dependencies on the PTH DVOR are removed
DP5 Airspace Optimisation	Where appropriate, the proposed airspace will facilitate an optimised airspace design. Including: - Use PBN Replication – replacing conventional STARs/ Holds with RNAV STARs/ Holds; - Using CAA STAR Truncation Policy, when applied logically to STARs with many common segments, can result in the withdrawal of unnecessary duplicate STARs. - Minor changes to a STAR which currently cannot be flown as it is formally define for legacy reasons – these changes reflect what would actually happen in practice. - Extend or split a current STAR to allow important Descent Planning levels to be formally incorporated in the STAR description	Procedures are not individually evaluated for potential application of this DP; therefore, no technical changes are made	Procedures are individually evaluated for potential application of this DP, but no appropriate technical changes are made	Procedures are individually evaluated for potential application of this DP, and minor changes are made, with justification provided

3.1 Option 0 – Do nothing. Retain all the STARs and Holds unchanged from today's AIP definition.

See the submitted Stage 1 Assessment Meeting slide pack ([Ref 1](#)) for further details on the procedures which reference the PTH DVOR on their charts and which would remain as they are, for this option. The table below presents an evaluation of this option against the five Design Principles:

Option 0	REJECT		
Description of option			
This is the current scenario. No change to existing AIP definitions of STARs or Holds.			
Design Principle 1: Maintain or enhance the current level of safety			MET
Summary of qualitative assessment No change from today; the level of safety is maintained. Therefore, this Design Principle would be satisfied.			
Design Principle 2: No change to flight behaviours			MET
Summary of qualitative assessment No change to lateral/vertical track patterns. Therefore, this Design Principle would be satisfied.			
Design Principle 3: PBN specification			MET
Summary of qualitative assessment All procedures and routes referencing the PTH DVOR already have a RNAV5 specification.			
Design Principle 4: Remove DVOR dependencies	NOT MET		
Summary of qualitative assessment Procedures are not individually evaluated and therefore all existing enroute references to the PTH DVOR would remain and this Design Principle would not be satisfied.			
Design Principle 5: Airspace optimisation	NOT MET		
Summary of qualitative assessment Procedures are not individually evaluated for potential application of this DP. Therefore, no proposed changes to optimise the airspace would take place under this Design Option and this Design Principle would not be satisfied.			

3.2 Option 1 - Using the CAA policies, replicate STARs/ Holds using RNAV, exactly as defined in the AIP without considering any practicalities.

This option would replace all dependant procedures identified in the Assessment Meeting slide_pack [\(Ref 1\)](#) as RNAV procedures. This table evaluates this option against the five Design Principles:

Option 1	REJECT		
Description of option			
All IFPs would be replicated exactly as defined in the current AIP. No account would be taken of actual usage, route segment duplication, or other factors.			
Design Principle 1: Maintain or enhance the current level of safety			MET
Summary of qualitative assessment			
The PTH 1G STAR is already a RNAV5 procedure therefore the level of safety will be maintained. No potential safety issues identified. Therefore, this Design Principle would be satisfied.			
Design Principle 2: No change to flight behaviours			MET
Summary of qualitative assessment			
No practical change to connectivity therefore, no change to lateral/vertical track patterns. Therefore, this Design Principle would be satisfied.			
Design Principle 3: PBN specification			MET
Summary of qualitative assessment			
All procedures and routes referencing the PTH DVOR already have a RNAV5 specification. Therefore, this Design Principle would be satisfied.			
Design Principle 4: Remove DVOR dependencies	NOT MET		
Summary of qualitative assessment			
Procedures are not individually evaluated and therefore all existing enroute references to the PTH DVOR would remain and this Design Principle would not be satisfied.			
Design Principle 5: Airspace optimisation	NOT MET		
Summary of qualitative assessment			
Asides from replicating conventional procedures as they are currently defined under this Design Option, procedures are not evaluated for potential further airspace optimisation opportunities. Therefore, this Design Principle would not be satisfied.			

Option 2 - Examine the use of existing STARS and Holds from a practical point of view, re-evaluate how they are used and how the network may be improved by rationalising/truncating/replicating them in a considered manner.

This option evaluates the usage of each procedure individually and creates opportunity bespoke to specific procedures. See Annexes C-E below for the detailed proposed change for each of the procedures under this option. This table evaluates this option against the five Design Principles:

Option 2	ACCEPT and PROGRESS		
Description of option			
Examine the use of existing IFPs from a practical point of view, re-evaluate how they are used and how the network may be improved by rationalising/truncating/replicating them in a considered manner.			
Design Principle 1: Maintain or enhance the current level of safety			MET
Summary of qualitative assessment The PTH 1G STAR is already a RNAV5 procedure therefore the level of safety will be maintained. No potential safety issues identified. Therefore, this Design Principle would be satisfied.			
Design Principle 2: No change to flight behaviours			MET
Summary of qualitative assessment No practical change to connectivity therefore, no change to lateral/vertical track patterns. Therefore, this Design Principle would be satisfied.			
Design Principle 3: PBN specification			MET
Summary of qualitative assessment This Design Option would evaluate current IFPs and propose RNAV replication where relevant, including an appropriate specification. Therefore, this Design Principle would be satisfied.			
Design Principle 4: Remove DVOR dependencies			MET
Summary of qualitative assessment This Design Option would evaluate current IFPs and propose that procedures referencing the PTH DVOR are amended; thus, removing any enroute references to the PTH DVOR. Therefore, this Design Principle would be satisfied.			
Design Principle 5: Airspace optimisation			MET
Summary of qualitative assessment This Design Option would evaluate current IFPs and where appropriate, propose changes which would facilitate an optimised airspace design. Therefore, this Design Principle would be satisfied.			

3.3 Option 3 – Remove all existing STARs and holds that refer to or use the PTH DVOR.

This option removes any enroute IFP that refers to the PTH DVOR. This table evaluates this option against the five Design Principles:

Option 3		REJECT	
Description of option			
Remove all existing IFPs for which the PTH DVOR is materially important.			
Design Principle 1: Maintain or enhance the current level of safety	NOT MET		
Summary of qualitative assessment			
The removal of these procedures would create a gap in the network. This would require all aircraft currently using the existing IFPs to be channelled into other, potentially busy flows/ sectors, which could greatly increase controller workload in those areas. This could create significant safety issues from such substantial changes. Therefore, this Design Principle would not be satisfied.			
Design Principle 2: No change to flight behaviours	NOT MET		
Summary of qualitative assessment			
Aircraft would not be able to use the current procedures, causing a significant change in flight behaviours to work around this. Therefore, this Design Principle would not be satisfied.			
Design Principle 3: PBN specification	NOT MET		
Summary of qualitative assessment			
Procedures are not individually evaluated for potential application of this DP. Although the extant PTH 1G is a RNAV 5 procedure, this would be removed as it refers to the PTH DVOR. No further RNAV replications would take place under this Design Option and therefore this Design Principle would not be satisfied.			
Design Principle 4: Remove DVOR dependencies			MET
Summary of qualitative assessment			
All en-route procedures which reference the PTH DVOR would be removed; therefore satisfying this Design Principle.			
Design Principle 5: Airspace optimisation	NOT MET		
Summary of qualitative assessment			
Procedures are not individually evaluated for potential application of this DP. Therefore, no proposed changes to optimise the airspace would take place under this Design Option and this Design Principle would not be satisfied.			

3.4 Summary – Options Development

Using the five Design Principles, we have evaluated the four concept Design Options, as summarised above.

3.5 *Option 0: Do Nothing – Retain all the STARS and Holds unchanged from today's AIP definition.* This does not achieve the removal of the enroute references to the PTH DVOR. **Rejected.**

3.6 *Option 1: Using the CAA policies, replicate STARS/ Holds using RNAV, exactly as defined in the AIP without considering any practicalities* – As the PTH 1G already exists as an RNAV5 procedure, there would be no change to existing AIP definitions of STARS or HOLDS. Glasgow airport has remaining dependencies on the PTH DVOR which prevents PTH being exchanged for a new 5LNC. Thus, enroute references to the PTH DVOR would remain. This option does not allow additional network optimisations to be proposed improving network connectivity. **Rejected.**

3.7 *Option 2: Examine the use of existing STARS and Holds from a practical point of view, re-evaluate how they are used and how the network may be improved by rationalising/truncating/replicating them in a considered manner.* This achieves the removal of references to the PTH DVOR; alongside providing the opportunity to improve upon the current airspace and procedures such as introducing an important descent planning levels. **Accepted and progressed.**

3.8 *Option 3: Remove all existing STAR and Holds that refer to or use the PTH DVOR.* This would technically remove the references to the PTH DVOR; however, it removes a STAR which is in use and needed by aircraft today and going forward. This option also does not remove references of the PTH DVOR in the UK ATS route network. **Rejected**

Conclusion: Design Option 2 concept best meets all five of the Design Principles. The shortlist comprises the Option 2 concept only. The other three design option concepts are therefore not progressed.

End of Step 2A

4. Step 2B Options Appraisal

4.1 The baseline (do nothing) option does not achieve the removal of references to the PTH DVOR. The ratings for the baseline option against each of the Design Principles shows that whilst it maintains safety levels, creates no change to flight behaviours and retains a RNAV5 specified STAR, it does not meet the remaining three Design Principles.

4.2 Following the Design Principle evaluation, we conclude that the following Design Option 2 could be used to remove the PTH DVOR from the enroute environment in accordance with the Design Principles:

Examine the use of existing STARS and Holds from a practical point of view, re-evaluate how they are used and how the network may be improved by rationalising/truncating/replicating them in a considered manner.

4.3 There would be no change in fuel/ CO₂/ greenhouse gas emissions due to this proposal because there would be no change to lateral or vertical tracks. Fuel uplift changes are unlikely to occur. There are no costs or benefits which could be reasonably monetised due to this enroute proposal.

4.4 **Safety Assessment:** The Option 2 concept would take full account of existing usage and connectivity needs. It would ensure all IFPs are designed by an APD, as regulated by CAA SARG. There would be no improvement or degradation in safety as the same navigation specifications as currently used will be maintained.

5. PTH Option 2 Cost/ Benefit Analysis

The CAP1616 Appendix E cost/ benefit analysis is given below.

Group	Impact	Level of Analysis	Evidence
Communities	Noise impact on health and quality of life	N/A	As there are no proposed changes to lateral or vertical tracks there will be no impact on noise or quality of life.
Communities	Air quality	N/A	No changes below 1,000ft.
Wider society	Greenhouse gas impact	Monetise and quantify	No proposed changes to lateral or vertical tracks so no impact
Wider society	Capacity/ resilience	Qualitative	No changes
General Aviation	Access	N/A	No changes
General Aviation/ commercial airlines	Economic impact from increased effective capacity	Quantify	No changes
General Aviation/ commercial airlines	Fuel burn	Monetise	No proposed changes to lateral or vertical tracks so no impact.
Commercial airlines	Training cost	N/A	N/A – there is not expected to be any airline training or associated cost.
Commercial airlines	Other costs	N/A	Updates to FMS and flight planning systems will be completed via the routine AIRAC updates. There are no other known costs which would be imposed on commercial aviation.
Airport/ Air navigation service provider	Infrastructure costs/benefit	Qualitative and quantitative	The cost of implementation of the change, adaptation of systems is estimated to be £65,000. Removal of the en-route dependency enables decommissioning of the DVOR (once airfields have removed their dependencies i.e. SIDs). This will yield an annual cost saving of circa £10,000 per DVOR (PTH).
Airport/ Air navigation service provider	Operational costs	N/A	N/A – this proposal would not lead to changes in operational costs.
Airport/ Air navigation service provider	Deployment costs	Qualitative and quantitative	N/A – this change would be introduced via briefings and bulletins for staff, with no additional training or simulation training/costs required.

5.1 Conclusion: There would be no impact on safety whilst also maintaining network connectivity.

End of Step 2B

6. Summary

6.1 This document details the STAR where the PTH DVOR is material to the instrument flight procedure. It describes the current connectivity; the method used to progress the change; and the proposed connectivity.

6.2 This proposal will truncate and predesignate the extant RNAV PTH 1G STAR removing the reference to the PTH DVOR.

6.3 This submission also includes a number of technical amendments: the single PTH 1G STAR serving two airports will be truncated to an existing waypoint, FINDO², in order to remove the reference to the PTH DVOR. The STAR will be renamed, FINDO 1G. PTH will be removed from ATS routes P600 and UP600, and FINDO will be added to P600. Network connectivity will be maintained for Glasgow departures flying the PTH SID by the addition of a DTC PTH- ASNUD to the SRD.

6.4 The proposed connectivity remains entirely unchanged due to this proposal:

- routes are unchanged
- connectivity is unchanged
- hence flight behaviours and traffic patterns over the ground are unchanged.

6.5 Annexes C-E below detail the IFP changes we are proposing to make in support of removing the PTH DVOR enroute references and rationalisation of the network, as summarised in Table 1 below:

Ref	Airport	Type	Procedure	PTH DVOR	Proposed Changes
1	Glasgow	STAR	PTH1G	Not Dependent on PTH	Truncate to existing waypoint FINDO Rename FINDO 1G
2	Edinburgh	STAR	PTH1G	Not Dependent on PTH	Truncate to existing waypoint FINDO Rename FINDO 1E
3	N/a	ATS Route	P600	References PTH	Add FINDO to ATS route ² Remove PTH from ATS route Introduce a DCT PTH- ASNUD for Glasgow departures into the SRD
4	N/a	ATS Route	UP600	References PTH	Remove PTH from ATS route ¹

Table 1: Summary of proposed changes

² FINDO is planned to be added to P600 as part of FRA Deployment 1 ([ACP-2018-11](#)), due to be implemented AIRAC 12/2021. This ACP will add FINDO to P600 if FRA D1 is not implemented as planned.

7. Conclusion

7.1 We have assessed that there are no foreseen adverse impacts of making the proposed changes described in the tables below (Annexes C - E) and conclude that making these technical changes to the procedures would not alter traffic patterns.

8. Annex A: Design Principles

Design Principle	Description
<i>DP1 Safety</i>	The proposed airspace change must maintain or enhance the current level of safety
<i>DP2 No change to flight behaviour</i>	None of the proposed technical changes to definitions of STARS/ Holds would result in a change to actual flight behaviours – laterally, vertically or in dispersal
<i>DP3 PBN Specification</i>	The proposed airspace change will yield maximum safety and efficiency benefits by using an appropriate standard of PBN
<i>DP4 Remove DVOR Dependencies</i>	Remove enroute dependencies on the PTH DVOR through appropriate design changes; including removing unnecessary references to the PTH DVOR which are not material to the procedure, and rationalising rarely used STARS
<i>DP5 Airspace Optimisation</i>	Where appropriate, the proposed airspace will facilitate an optimised airspace design. Including: - Use PBN Replication – replacing conventional STARS/ Holds with RNAV STARS/ Holds; - Using CAA STAR Truncation Policy, when applied logically to STARS with many common segments, can result in the withdrawal of unnecessary duplicate STARS. - Minor changes to a STAR which currently cannot be flown as it is formally define for legacy reasons – these changes reflect what would actually happen in practice. - Extend or split a current STAR to allow important Descent Planning levels to be formally incorporated in the STAR description

Glasgow and Edinburg – PTH 1G STAR

COORDINATES

Pth	502502.00N	5025296.00W
GRICE	501445.00N	5034477.00W
STIRLING	503800.00N	5025500.00W

Annual Rate of Change 0.17%

STIRLING

STIRLING (MAIN)

GRICE

Pth

43

31

WARNING
Do not proceed beyond STIRLING without ATC clearance



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10. Annex C: Impact Assessment – Glasgow Procedures

For charts and technical notes, see the Assessment Meeting slide pack [\(Ref 1\)](#) for the current IFPs.

Current IFP	Current route connectivity/ STAR	Design Principle	How	Proposed route Connectivity/ STAR	Impact of proposed change on connectivity and flight behaviour
PTH 1G	P600: <i>PTH– GRICE – STIRA</i>	Satisfies all 5 DPs	STAR Truncation and re-designation	(U)P600: <i>FINDO– GRICE – STIRA</i> Re-named as FINDO 1G	Truncating the STAR to <i>FINDO</i> will maintain connectivity to UK ATS route network. STAR to be re-named based on its new starting waypoint <i>FINDO</i> and the 'G' designator used to denote the destination airport (Glasgow).

11. Annex D: Impact Assessment – Edinburgh Procedures

For charts and technical notes, see the Assessment Meeting slide pack [\(Ref 1\)](#) for the current IFPs.

Current IFP	Current route connectivity/ STAR	Design Principle	How	Proposed route Connectivity/ STAR	Impact of proposed change on connectivity and flight behaviour
PTH 1G	P600: <i>PTH– GRICE – STIRA</i>	Satisfies all 5 DPs	STAR Truncation and re-designation	(U)P600: <i>FINDO– GRICE – STIRA</i> Re-named as FINDO 1E	Truncating the STAR to <i>FINDO</i> will maintain connectivity to UK ATS route network. STAR to be re-named based on its new starting waypoint <i>FINDO</i> and the 'G' designator used to denote one of the destination airports (Glasgow).

12. Annex E: Impact Assessment – ATS Route Network¹

For charts and technical notes, see the Assessment Meeting slide pack ([Ref 1](#)) for the current IFPs.

Current Route Name	Current route	Proposed Route Name	Proposed Route	Notes	Impact of proposed change on connectivity and flight behaviour
P600	ROTEV -GOTNA - BLACA -TUNSO - GIRVA -TRN - FENIK -GOSAM - GRICE -ENUKU - EDONU - PTH - ASNUD -GANKI - GLESK -NAXIL - ADN -OSLEL - LESNI -BUDON - OVDAN	Same – P600	ROTEV -GOTNA - BLACA -TUNSO - GIRVA -TRN -FENIK -GOSAM -GRICE - ENUKU -EDONU - FINDO -ASNUD - GANKI -GLESK - NAXIL -ADN -OSLEL -LESNI -BUDON - OVDAN	PTH removed from route FINDO Added to route	No impact to connectivity. No predicted change to flight behaviour.
UP600	TRN - GOW – PTH - FINDO -ADN - LESNI -BUDON - OVDAN -FORTY - KLONN	Same - UP600	TRN – GOW - FINDO -ADN -LESNI -BUDON -OVDAN - FORTY -KLONN	PTH removed from route	No impact to connectivity. No predicted change to flight behaviour.

11. Annex F: List of references

Reference	Name	Hyperlink
1	<i>PTH DVOR CAP1616 Stage 1 Assessment Meeting Slide pack</i>	Link
2	<i>PTH DVOR Assessment Meeting minutes (redacted)</i>	Link
3	<i>PTH DVOR Statement of Need</i>	Link
4	<i>PTH DVOR Stage 1B Design Principles</i>	Link
5	<i>PTH DVOR Removal Engagement Evidence (redacted) V1.0</i>	Link

12. Annex G: Engagement Evidence

This section summarises the engagement activities in support of this ACP.

Stakeholder	Type of engagement	Date	Notes
Glasgow Airport	Email	March 2021	Email outlining proposed Changes to PTH 1G STAR as part of the DVOR Rationalisation programme: seeking feedback and approval.
Edinburgh Airport	Email	March 2021	Email outlining proposed Changes to PTH 1G STAR as part of the DVOR Rationalisation programme: seeking feedback and approval.

End of document