


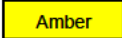

Safety and Airspace Regulation Group

Title of Airspace Change Proposal	Sherburn-in-Elmet Instrument Approach Procedures
Change Sponsor	Sherburn Aero Club Ltd.
SARG Project Leader	[REDACTED]
Case Study commencement date	27/09/21
File Reference	ACP-2015-04

Instructions

In providing a response for each question, please ensure that the 'Status' column is completed using the following options:

- **Yes**
- **No**
- **Partially**
- **N/A**

To aid the SARG Project Leader's efficient Project Management it may be useful that each question is also highlighted accordingly to illustrate what is: **resolved**  **not resolved**  **not compliant**  as part of the AR Project Leader's efficient project management.

1.	Introduction
<p>The sponsor, Sherburn Aeroclub (SAC), has submitted an airspace change proposal (ACP) to introduce Global Navigation Satellite System (GNSS) Instrument Approach Procedures (IAPs) to Runways 10 and 28 at Sherburn-in-Elmet Aerodrome. These GNSS IAPs will be used in conjunction with the existing visual approaches currently in use at the aerodrome. The main objective of this ACP is to increase safety and operational resilience during periods of poor weather through the implementation of GNSS IAPs and to provide training opportunities for pilots to fly IAPs in Visual Flight Rules (VFR) under the supervision of an approved instructor.</p> <p>Section 70(2) of the Transport Act 2000 requires the Civil Aviation Authority (CAA) to take account of any guidance on environmental objectives given to it by the Secretary of State. This guidance on environmental objectives is contained within the Department for Transport's (DfT) Guidance to the CAA on Environmental Objectives Relating to the Exercise of its Air Navigation Functions 2014. This 2014 Air Navigation Guidance sets out a framework for the environmental objectives that the CAA must consider when assessing changes to airspace. In addition to these objectives, there may be other legitimate operational objectives, such as the overriding need to maintain an acceptable level of air safety, the desire for sustainable development or to enhance the overall efficiency of the UK airspace network, which need to be considered alongside these environmental objectives. The Government looks to the CAA to determine the most appropriate balance between these competing factors.</p> <p>In addition, the CAA has its own CAP725 Guidance on the regulatory process for changing the notified airspace design and on providing airspace information. CAP725 provides a framework for the stages and activities ordinarily involved in ACPs, from the conception of the need for an airspace change through to regulatory decision and, finally, if appropriate, implementation. It also sets out the requirements for the completion of consultation, operational and environmental reports.</p> <p>In October 2019 the Secretary of State issued the CAA with updated Directions which amended the Civil Aviation Authority (Air Navigation) Direction 2017 to strengthen how airspace is managed. As part of these updated Directions and in accordance with section 70(2)(d) of the Transport Act 2000, the Secretary of State provided additional Air Navigation Guidance outlining that the environmental objectives set out in the Air Navigation Guidance 2014 are not to apply to decisions concerning proposals for permanent changes to airspace design which seek to implement GNSS approaches Without Approach Control (WAC). Although exempted, the Secretary of State still expects Sponsors of exempted proposals to consider the environmental consequences. Therefore, for the assessment of environmental impacts for ACPs related to establishing RNP IAPs WAC services, the CAA expects change sponsors to set out the change that is anticipated from the introduction of the proposed IAPs, along with any supporting evidence. This should include the anticipated change in the number of aircraft using the aerodrome, the change in the type of aircraft using the aerodrome, changes to the altitude of aircraft using the procedure and the change to areas overflown by the introduction of the IAPs. No further environmental assessment will be required if the sponsor meets all three requirements of the following screening criteria:</p>	

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- The change sponsor can reasonably demonstrate that the introduction of the RNP IAP is not expected to increase the total number of aircraft movements at the aerodrome in the first two years after introduction, by 10% or more (by at least a minimum of 3,650 movements per year).

SAC provided the following traffic forecast:

Date range	Notes	Total movements PA	VFR Movements PA	Forecast Actual RNP PA	Forecast VFR Training PA	Total Movements RNP	% Additional RNP Movements per day	Average RNP per Day
2021	*1	29000	29000					
2022	*2	34000		108	576	684	1.4	1.9
2023								
2023	*3	35000		150	576	726	1.5	2.0
2024								
*1	2021 movements were curtailed due Covid restrictions, we would have expected 34,400 movements							
*2	RNP Approval assumed half way through 2022							
*3	Growth at sherburn will be limited due to existing saturation of resources, size of fleet, weather conditions, & anticipated economic conditions							
*4	The increase in movements does not include an existing 200 annual IMC Training Movements that currently take place under VFR, since these would operate regardless of the introduction of the RNP							
NOTES	An RNP Movement is an approach using one of the IAP's 20% of days are RNP active days (cloud base below 1200ft) Average RNP movements on RNP days 1.5 Average RNP movements on VFR days 2.0							

This traffic forecast assumes that the RNP approach will be approved half-way through 2022. For the baseline year (2021) the sponsor caveats that the 29,000 traffic movements were curtailed due to Covid restrictions; however, the sponsor has noted that traffic movements were anticipated to have been 34,400 if Covid-19 had not prevailed. It is stated that due to “existing saturation of resources, size of fleet, weather conditions & anticipated economic conditions” growth at Sherburn is limited to 35,000 movements, which is reached by 2023-2024. Of the 35,000 movements approximately 2.1% are anticipated to make use of the proposed GNSS procedures by 2024. As the impacts of the Covid-19 pandemic were

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	<p>outside of the sponsor’s control, the CAA deems it proportionate to utilise the sponsor’s expected forecast for 2021, 34,400 movements, as a baseline against which to benchmark any increase in traffic against. Therefore, taking account of the 35,000 traffic movement limit SAC anticipate to reach by 2023/2024 it is anticipated that the total number of aircraft movements at the aerodrome would not have increased by 10% or more (by at least a minimum of 3,650 movements per year) within the first two years of implementation of this ACP had the Covid-19 pandemic not prevailed.</p> <ul style="list-style-type: none"> • The proposal does not change the final approach path of aircraft to the runway within 1nm from the runway end. The sponsor states that the proposed option <i>“is aligned with the existing approach track used in visual conditions”</i> and has <i>“an approach path angle of 3.5°”</i> which is <i>“similar to that used under visual conditions”</i> and therefore <i>“the IAP does not change the final approach track within 1 NM of the runways”</i>. • The proposal will not change the environmental impact of aircraft utilising other aerodromes. This ACP is unlikely to change the environmental impact of aircraft utilising other aerodromes as no new controlled airspace nor amendments to legacy procedures are being proposed. The sponsor has engaged with, and established letters of agreement (LoA), with certain aviation stakeholders to ensure traffic movements are coordinated and deconflicted where concerned. Due to the proximity of SAC’s RNP IAPs with those at Leeds East Airport (LEA), a LoA has also been established. The use of IAPs will be managed through a time-based slot system to be shared with LEA with Prior Permission Required (PPR). The slot system will operate during the notified operating hours of both aerodromes with the total number of RNP approaches for both airports estimated to be between 8 and 12 per day, with no more than 1 slot per hour available for use. <p>It is therefore considered that the sponsor has provided evidence that it meets all three requirements of the environmental screening criteria meaning no further environmental assessments are required.</p>
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2.	Guidance to the CAA	Status
2.1	Is the proposal consistent with Government policy and/or guidance from Government to the CAA?	Yes
	For ACPs seeking to establish RNP IAPs without an approach control service, the change sponsor should set out the change that is anticipated from the introduction of the proposed IAPs along with any supporting evidence. This should include the anticipated change in the number of aircraft using the aerodrome, the change in the type of aircraft using the aerodrome, changes to the altitude of aircraft using the procedure and the change to areas overflowed by the introduction of the IAPs.	

Anticipated change in the number of aircraft using the aerodrome

If the impacts of the Covid-19 pandemic had not prevailed, it is anticipated that the total number of aircraft movements at the aerodrome would not have increased by 10% or more (by at least a minimum of 3,650 movements per year) within the first two years of implementation of this ACP. Of the 35,000 movements forecast to operate at SAC by 2024, approximately 2.1% are anticipated to make use of the proposed GNSS procedures.

The change in the type of aircraft using the aerodrome

The sponsor states that *“it is not the intention of SAC to change the core (VFR) flying activities currently taking place”*. The IAPs will be limited to Category A & B approach speeds with a maximum runway threshold speed of 120 knots; therefore, a change in the types of aircraft using the aerodrome is not anticipated as a result of this ACP.

Changes to the altitude of aircraft using the procedure

The sponsor states that the proposed option will have an *“approach path angle of 3.5°”* which is *“similar to that used under visual conditions”* and therefore the ACP *“does not change the final approach track within 1 NM of the runways”*.

The change to areas overflown by the introduction of the IAPs

The sponsor states that the proposed option *“is aligned with the existing approach track used in visual conditions”* and therefore the ACP *“does not change the final approach track within 1 NM of the runways”*. It should be noted that the introduction of this ACP, if approved, would increase the predictability of aircraft around the IAPs. However, as the total number of RNP approaches for both SAC and LEA is estimated to be between 8 and 12 per day, with no more than 1 slot per hour available for use, it is unlikely that there will be any adverse impacts upon the environment. Notwithstanding the slot system capacity, SAC forecast use of the RNP procedures to be around two operations per day, or 2% of SAC’s total traffic. Thus the proposal is not likely to materially change areas overflown or the number times existing areas are overflown.

3.	Rationale for the Proposed Change	Status
3.1	Does the rationale for the ACP include environmental reasons?	No

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The rationale for the ACP does not include any environmental reasons. This ACP concerns the introduction of RNP IAPs to increase safety and operational resilience during periods of poor weather and to provide training opportunities for pilots to fly IAPs in Visual Flight Rules (VFR) under the supervision of an approved instructor.

4.	Nature of the Proposed Change	Status
4.1	Is it clear how the proposed change will operate, and therefore what the likely environmental impacts will be?	Yes
	<p>The proposed IAPs, to be established in Class G airspace, will be standard RNP procedures with 2-dimensional Lateral Area Navigation (LNAV) minima. The use of IAPs will be managed through a time-based slot system to be shared with LEA with Prior Permission Required (PPR). The slot system will operate during the notified operating hours of both aerodromes with the total number of RNP approaches for both airports estimated to be between 8 and 12 per day, with no more than 1 slot per hour available for use. Notwithstanding the slot system capacity, SAC forecast use of the RNP procedures to be around two operations per day, or 2% of SAC's total traffic. Any VFR training flights will also require an allocated slot time. The approach will be limited to Category A & B approach speeds, resulting in a maximum runway threshold speed of 120 knots. The approach path angle will be 3.5° for both Runway 10 and 28, resulting in a descent profile of 360 feet per mile. SAC state that in the event of weather conditions preventing a successful landing, aircraft will prefer to divert to another aerodrome with more extensive facilities, rather than attempt multiple approaches into Sherburn. There are no holding procedures present at this aerodrome.</p>	

As illustrated in Figure 1 below, aircraft conducting an RNP approach for Runway 10 will either join the northern (EMBIT) Initial Approach Fix (IAF) at an altitude of 2,900 ft or above, or the southern (ULPUG) IAF at an altitude of 2,000 ft in order to remain below the Leeds Bradford Airport Control Area (CTA) 1. Aircraft will then fly along the inbound leg for 3.5 NM to the Intermediate Fix (IF), down to an altitude of 1,900 ft, before establishing on the 7 NM final approach track where aircraft will cross the Final Approach Fix (FAF) at an altitude of 1,500 ft. The Missed Approach Procedure (MAP) will take aircraft back to the IAF, EMBIT.

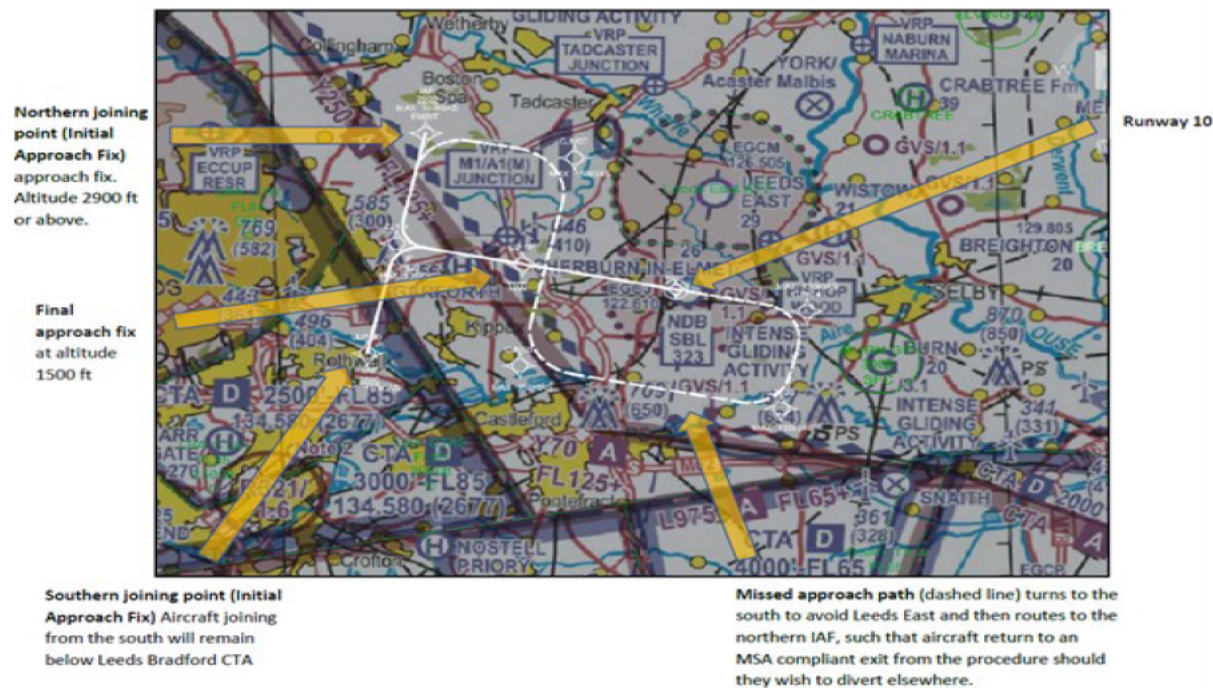


Figure 1: Runway 10 Approach

Figure 2 illustrates that aircraft conducting an RNP approach for Runway 28 will either join the northern (IAWP1) IAF at an altitude of 3,000 ft or above, or the southern (IAWP2) IAF at an altitude of 1,900 ft or above. Aircraft will then fly to the IF at 1,900 ft before establishing on the 9.5 NM final approach track where aircraft will cross the FAF at 1,900 ft. The MAP will return aircraft to 1,900 ft at IAWP2.

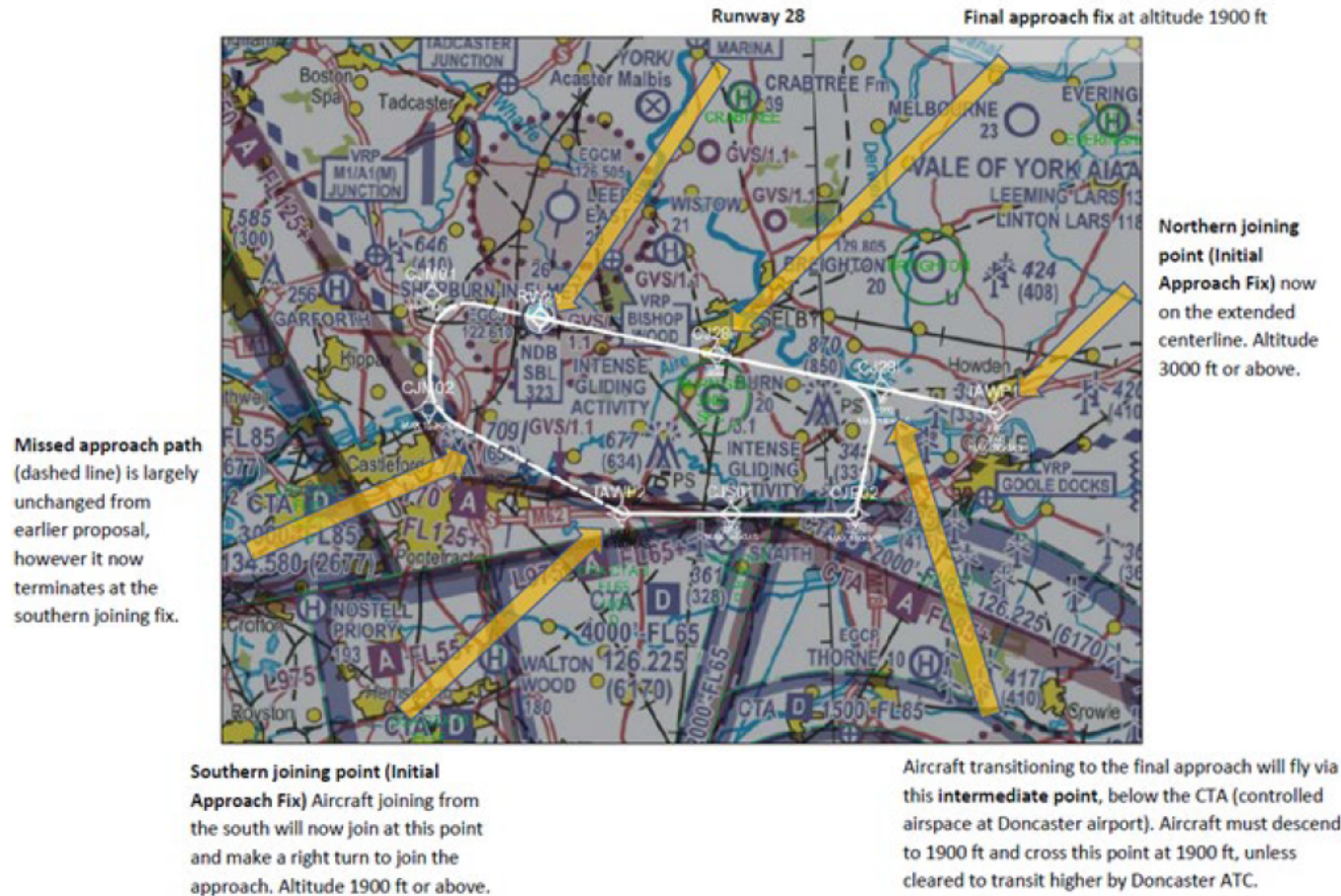


Figure 2: Runway 28 Approach

The change sponsor has demonstrated that this ACP meets the CAA's environmental screening criteria, therefore, no further environmental assessment was necessary. It is therefore unlikely that any adverse impacts upon the environment will arise as a result of this ACP. *(The figures shown are illustrative only and show the designs with the extant Doncaster Sheffield Airport airspace).*

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4.2	Have alternative options been considered, and have the environmental impact of each alternative been assessed?	N/A
	This ACP is being progressed under CAP725 where no Options Appraisal is required.	
5.	Noise	Status
5.1	Has the noise impact been adequately assessed?	N/A
	The sponsor provided evidence that it met the screening criteria, therefore, no further environmental assessment is necessary beyond an indication of the anticipated change in the number of aircraft using the aerodrome, the change in the type of aircraft using the aerodrome, changes to the altitude of aircraft using the procedure and the change to areas overflown by the introduction of the IAPs.	
5.2	Has the noise impact been adequately presented in the consultation and the submitted proposal?	N/A
	The sponsor has met the environmental screening criteria; therefore, no further environmental assessment is necessary.	
6.	Emissions	Status
6.1	Has the impact on CO₂ emissions been adequately assessed?	N/A
	The sponsor provided evidence that it met the screening criteria, therefore, no further environmental assessment is necessary beyond an indication of the anticipated change in the number of aircraft using the aerodrome, the change in the type of aircraft using the aerodrome, changes to the altitude of aircraft using the procedure and the change to areas overflown by the introduction of the IAPs.	
6.2	Has the impact on CO₂ emissions impact been adequately presented in the consultation and the submitted proposal?	N/A
	The sponsor has met the environmental screening criteria; therefore, no further environmental assessment is necessary.	
7.	Local Air Quality	Status
7.1	Has the impact on Local Air Quality been adequately assessed?	N/A

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	The sponsor provided evidence that it met the screening criteria, therefore, no further environmental assessment is necessary beyond an indication of the anticipated change in the number of aircraft using the aerodrome, the change in the type of aircraft using the aerodrome, changes to the altitude of aircraft using the procedure and the change to areas overflowed by the introduction of the IAPs.
7.2	Has the impact on Local Air Quality been adequately presented in the consultation and the submitted proposal? N/A
	The sponsor has met the environmental screening criteria; therefore, no further environmental assessment is necessary.

8.	Tranquillity and Visual Intrusion [with specific reference to Areas of Outstanding Natural Beauty and National Parks]	Status
8.1	Has the impact on tranquillity and visual intrusion been adequately considered?	N/A
	The sponsor provided evidence that it met the screening criteria, therefore, no further environmental assessment is necessary beyond an indication of the anticipated change in the number of aircraft using the aerodrome, the change in the type of aircraft using the aerodrome, changes to the altitude of aircraft using the procedure and the change to areas overflowed by the introduction of the IAPs.	
8.2	Has the impact on tranquillity and visual intrusion been adequately presented in the consultation and the submitted proposal?	N/A
	The sponsor has met the environmental screening criteria; therefore, no further environmental assessment is necessary.	

10.	Biodiversity	Status
10.1	Has the impact upon biodiversity been adequately considered?	N/A
	The sponsor provided evidence that it met the screening criteria, therefore, no further environmental assessment is necessary beyond an indication of the anticipated change in the number of aircraft using the aerodrome, the change in the type of aircraft using the aerodrome, changes to the altitude of aircraft using the procedure and the change to areas overflowed by the introduction of the IAPs.	
10.2	Has the impact upon biodiversity been adequately presented in the consultation and the submitted proposal?	N/A
	The sponsor has met the environmental screening criteria; therefore, no further environmental assessment is necessary.	

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11.	Continuous Descent Approaches	Status
11.1	Has the implementation of, or greater use of, Continuous Descent Approaches been considered?	N/A
<p>As directed by the amended Civil Aviation Authority (Air Navigation) Direction 2017 in 2019, the environmental objectives set out in the Air Navigation Guidance 2014 are not to apply to decisions whether to approve proposals for permanent changes to airspace design which seek to implement GNSS approaches Without Approach Control (WAC). Therefore, the consideration of either the implementation, or greater use of Continuous Descent Approaches (CDAs) does not apply to this ACP.</p>		

13.	Traffic Forecasts	Status
13.1	Have traffic forecasts been provided, are they reasonable, and have these been used to reflect the future impact of the proposal?	Yes
<p>In October 2019 the Secretary of State issued the CAA with updated Directions which amended the Civil Aviation Authority (Air Navigation) Direction 2017 to strengthen how airspace is managed. As part of these updated Directions and in accordance with section 70(2)(d) of the Transport Act 2000, the Secretary of State provided additional Air Navigation Guidance, that the environmental objectives set out in the Air Navigation Guidance 2014 are not to apply to decisions concerning proposals for permanent changes to airspace design which seek to implement GNSS approaches Without Approach Control (WAC).</p> <p>Therefore, for the assessment of environmental impacts for ACPs related to establishing Required Navigation Performance (RNP) IAPs WAC services, the CAA expects change sponsor to set out the change that is anticipated from the introduction of the proposed IAPs along with any supporting evidence. This should include the anticipated change in the number of aircraft using the aerodrome, the change in the type of aircraft using the aerodrome, changes to the altitude of aircraft using the procedure and the change to areas overflown by the introduction of the IAPs. No further environmental assessment will be required if the sponsor meets all three scoping requirements (detailed in section 1 above); one of which concerns traffic forecasts:</p> <ul style="list-style-type: none"> • The change sponsor can reasonably demonstrate that the introduction of the RNP IAP is not expected to increase the total number of aircraft movements at the aerodrome in the first two years after introduction, by 10% or more (by at least a minimum of 3,650 movements per year). <p>SAC provided the following traffic forecast:</p>		

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Date range	Notes	Total movements PA	VFR Movements PA	Forecast Actual RNP PA	Forecast VFR Training PA	Total Movements RNP	% Additional RNP Movements per day	Average RNP per Day
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*1	2021 movements were curtailed due Covid restrictions, we would have expected 34,400 movements							
*2	RNP Approval assumed half way through 2022							
*3	Growth at sherburn will be limited due to existing saturation of resources, size of fleet, weather conditions, & anticipated economic conditions							
*4	The increase in movements does not include an existing 200 annual IMC Training Movements that currently take place under VFR, since these would operate regardless of the introduction of the RNP							
NOTES	An RNP Movement is an approach using one of the IAP's 20% of days are RNP active days (cloud base below 1200ft) Average RNP movements on RNP days 1.5 Average RNP movements on VFR days 2.0							

This traffic forecast assumes that the RNP approach will be approved half-way through 2022. For the baseline year (2021) the sponsor caveats that the 29,000 traffic movements were curtailed due to Covid restrictions; however, the sponsor has noted that traffic movements were anticipated to have been 34,400 if Covid-19 had not prevailed. It is stated that due to “existing saturation of resources, size of fleet, weather conditions & anticipated economic conditions” growth at Sherburn is limited to 35,000 movements, which is reached by 2023-2024. Of the 35,000 movements approximately 2.1% are anticipated to make use of the proposed GNSS procedures by 2024. As the impacts of the Covid-19 pandemic were outside of the sponsor’s control, the CAA deems it proportionate to utilise the sponsor’s expected forecast for 2021, 34,400 movements, as a baseline against which to benchmark any increase in traffic against. Therefore, taking account of the 35,000 traffic movement limit SAC anticipate to reach by 2023/2024 it is anticipated that the total number of aircraft movements at the aerodrome would not have increased by 10% or more (by at least a minimum of 3,650 movements per year) within the first two years of implementation of this ACP had the Covid-19 pandemic not prevailed.

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14.	Consultation	Status
14.1	<p>If undertaken, has evidence of non-aviation stakeholder consultation been provided?</p> <p>Due to the nature of this ACP, the sponsor undertook targeted engagement primarily with Aviation Stakeholders. The sponsor did undertake limited engagement with select non-aviation stakeholders by meeting with representatives of local authorities from the airport's community liaison group. The presentation was forwarded onto those unable to attend the meeting.</p>	Yes
14.2	<p>Has account been taken of the results of the environmental factors raised by consultees or has evidence been provided to indicate why this has not been possible?</p> <p>SAC only engaged with local authorities from the airport's community liaison group as part of this ACP. It is not apparent that any environmental factors were raised as a result of this engagement.</p>	N/A
15.	Compliance with CAP 725	Status
15.1	<p>Have all environmental assessment requirements specified in CAP 725 been met, where applicable?</p> <p>The sponsor has satisfied the relevant environmental guidance set out in CAP725 for proposals of this nature. As directed by the amended Civil Aviation Authority (Air Navigation) Direction 2017 in 2019, the environmental objectives set out in the Air Navigation Guidance 2014 are not to apply to decisions regarding proposals for permanent changes to airspace design which seek to implement GNSS approaches Without Approach Control (WAC) and therefore there is no further relevant policy and/or guidance for such proposals.</p>	Yes
16.	Other Aspects	Status
16.1	<p>Are there any other aspects of the ACP, that have not already been addressed in this report, that may have a bearing on the environmental impact?</p> <p>There are no other aspects of the airspace change proposal, that have not already been addressed in this report, which may have a bearing on the environmental impact.</p>	No

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17.	Recommendations / Conditions / PIR Data Requirements	
17.1	Are there any Recommendations which the change sponsor <u>should try</u> to address either before or after implementation (if approved)? If yes, please list them below.	No
	There are no environmental recommendations for the sponsor to address either before or after implementation.	
17.2	Are there any Condition(s) which the change sponsor <u>must fulfil</u> either before or after implementation (if approved)? If yes, please list them below.	No
	There are no environmental conditions for the sponsor to address either before or after implementation.	
17.3	Are there any specific requirements in terms of the data to be collected by the change sponsor for the Post Implementation Review (if approved)? If yes, please list them below.	Yes
	<p>For this ACP it is recommended that the sponsor starts to collect the following information from the date of implementation for the Post Implementation Review:</p> <ul style="list-style-type: none"> • Monitor and record the number/type of aircraft utilising the RNP GNSS approaches. • Monitor and record any change in flight behaviour between VFR and RNP approaches within 1 NM of the runway. • Monitor and record the number of any RNP GNSS missed approaches. 	

18.	Government Approval	Status
18.1	Is the approval of the Secretary of State for Transport required in respect of the environmental impact of the airspace change proposal?	No
	The approval of the Secretary of State for Transport is not required in respect of the environmental impact of this ACP.	

19.	Conclusions	
19.1	Can an overall environmental benefit be demonstrated (or justified/supported)?	N/A
	This ACP concerns the introduction of Required Navigation Performance (RNP) Instrument Approach Procedures (IAPs) to Runways 10 and 28 at Sherburn-in-Elmet Aerodrome to increase safety and operational resilience during periods of poor weather and to provide training opportunities for pilots to fly IAPs in Visual Flight Rules (VFR) under the supervision of an approved instructor. The ACP is not	

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anticipated to provide any environmental benefit since the objectives are to increase safety and operational resilience in poor weather. The sponsor has, however, satisfied the CAA's environmental scoping criteria and therefore it is unlikely that this ACP will result in any adverse impacts upon the environment.

The CAA is managing the future of Doncaster Sheffield Airport (DSA) airspace, since its closure, under ACP2022-082. As a result of this, Sherburn-in-Elmet were asked to consider the impacts of the de-notification of the DSA airspace on their proposed IAPs, under this ACP. The CAA had considered a dispensation to PANS OPS, prior to the closure in order for the design to remain clear of Doncaster Sheffield Airport (DSA) airspace; however, with DSA airspace currently de-notified, the proposed design has been amended to negate the need for a dispensation. The amended design increases the height of aircraft during approach to runway 28. This will not have any adverse environmental impact and thus it does not change the assessment. Should the extant DSA airspace be re-notified, the IAPs, if approved, will be suspended, subject to a safety review.

Environmental Assessment Sign-off/Approval	Name	Signature	Date
Environmental Assessment completed by:	██████████ Environmental Regulator	██████████	20/05/22
Environmental Assessment approved by:	██████████ -Chief Technical Noise Advisor	██████████	02/03/2023
Programme Head - Environment Comments:			