

CAA Environmental Statement

Permanent Airspace Change Proposals

Title of airspace change proposal	Aberdeen International Airport
Change sponsor	Aberdeen International Airport Ltd (EGPD)
Project reference	ACP-2019-082
Account Manager	[REDACTED]
<i>Instructions</i> 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 Lead it may be useful that each question is also highlighted accordingly to illustrate what is: resolved YES not resolved PARTIALLY not compliant NO	

1. Introduction

The airspace change proposal (ACP) has been submitted by Aberdeen International Airport Limited. It is a Level 1 airspace change seeking to introduce Required Navigation Performance (RNP) Instrument Approach Procedures (IAP) for runways 16 and 34 at Aberdeen International Airport.

The purpose of the change is to provide resilience for Aberdeen Airport's operations should the current Instrument Landing System (ILS) be unavailable. It is anticipated by the sponsor that 95% of arriving aircraft will continue to use the ILS with a maximum of 5% using the proposed RNP approach procedure for resilience and training purposes only.

The proposal also seeks to reclassify part of the Aberdeen Class D CTA-3 airspace to Class G. This follows analysis by the sponsor which identified a section of the existing controlled airspace (CAS) that is not used by aircraft arriving or departing from Aberdeen Airport and is not required to maintain a high standard of safety.

The current proposal was originally part of the UK Airspace Modernisation Masterplan specifically, the Future Airspace Strategy Implementation

North (FASI North) programme, which sought to modernise the overall airspace structure and route network in Scotland and northern England. Following Stage 2 of the ACP process, it was established that the proposed changes at Aberdeen Airport would not impact other airports in the FASI programme and the sponsor elected to withdraw.

2. Statement of Need		Yes/No
2.1	Does the statement of need include any environmental objectives, issues or opportunities to be addressed? <i>(CAP 1616f paragraph 2.11)</i>	No
	The Statement of Need (October 2023) does not include any environmental factors.	

3. Current-Day Scenario		Yes/No
3.1	Has the change sponsor described the current-day scenario? <i>(CAP 1616f paragraph 2.36)</i>	Yes
	The sponsor has provided a summary description of the current airspace design and operations, including a description of how aircraft currently arrive at Aberdeen Airport using either visual flight rules or the existing ILS. The sponsor has described the holds and missed approach procedures (MAP) at Aberdeen Airport and provided an airspace chart with a description to show the airport's existing CAS. The sponsor has identified four airfields within the existing control zone and several airfields close to, or under the base of, the existing volume of CAS. They identified a high volume of gliding activity on the edges of the CAS and referenced a study published by Airspace4All which identified two areas, 'Aberdeen Coastal Corridor' and the 'Inverness – Aberdeen Coastal Corridor' which have been recognised as being particularly important to VFR operations, i.e. General Aviation (GA). The current-day scenario with respect to the environmental factors and its influence on the baseline scenarios is described in Q4.1 below.	

4. Baseline Scenarios and Traffic Forecasts		Yes/No
4.1	Has the change sponsor developed the baseline scenarios for year 1 and year 10 by taking due consideration of known or anticipated factors that might affect it? <i>(CAP 1616f paragraph 3.12 – 3.13)</i>	Yes

	The sponsor has established the year 1 baseline scenario on the original implementation date of Q1 2026 and the year 10 baseline scenario as 2035. Anticipated factors that might affect the baseline including, forecast growth, fleet mix changes and planned developments have been considered. The sponsor also confirmed that Aberdeen Airport has no planning conditions or Section 106 agreements which would impact the baseline scenarios or traffic forecasts. The sponsor provided LAeq noise contours for the current-day scenario derived from their Noise Action Plan 2018 – 2023. The contours and associated population counts were presented in the sponsor’s Stage 2 documentation. This data was also used to inform the baseline at Stage 2 and was updated at Stage 3 of the ACP process. Additional information included an evaluation of continuous climb/continuous descent performance for the period 2020 – 2022. No other information was presented in respect of CO₂ emissions etc. for the current-day scenario; however, an appropriate baseline analysis was undertaken for the CO₂ emissions calculations at Stage 3. The sponsor also identified that the Aberdeen City Centre Air Quality Management Area (AQMA) is located approximately 2.4 km from the landing threshold of Runway 34. The current-day scenario and baseline description indicated that there are no National Parks or National Scenic Areas within the scope of the proposed changes, with the closest National Park (Cairngorms) only overflowed at altitudes above 7,000 ft. With respect to European Sites, the sponsor identified six sites within the airport’s Zone of Influence. These are: Loch of Skene Ramsar (9.4km), Loch of Skene SPA (9.4km), Red Moss of Netherley SAC (16.8km), River Dee SAC (8.5km), Sands of Forvie SAC (16.4km) and Ythan Estuary, Sands of Forvie and Meikle Loch SPA (7.2 km). Of these sites, only the River Dee SAC was identified as being overflowed below 3,000 ft. by aircraft on the final approach to Runway 34.	
4.2	Has the change sponsor provided traffic forecasts for year 1 and year 10, indicating the traffic growth on the different routes as well as types of aircraft, particularly if a change in fleet mix is anticipated over the period of the forecasts? (CAP 1616i paragraph 3.2 – 3.4)	Yes
	The sponsor provided a high-level traffic forecast in the Initial Options Appraisal (IOA) at Stage 2 of the ACP process in December 2022. The year of implementation was assumed to be Q1 2026, with the forecast period covering a 10-year period to 2035. For the Full Options Appraisal (Full OA), the sponsor used Electronic Flight Progress Strips (EFPS) data from 2022 and Aberdeen Airport’s long term business plan 5-year traffic predictions to apply growth to this data. The 5-year forecast was based on business intelligence and information including, frequency of route operated, new routes, stopping routes, anticipated changes in fleet mix and speed of Covid-19 recovery. Beyond 5 years, anticipated growth was based on an assumed average growth per annum, informed by previous years with no growth assumed for helicopters.	

	Prior to the Stage 4 Final ACP submission in December 2024, the sponsor provided the CAA with information validating the forecast data presented, this confirmed that, based on the 2022 'current day' traffic data, total forecast movements were expected to grow from 74,163 (2022) to 85,505 (2026) and 87,328 (2035). For reference, the latest available data for 2025 showed the total annual aircraft movements for Aberdeen Airport at 65,611 (Source: CAA Annual Airport Data). No traffic forecasts were presented in respect of GA traffic movements as the sponsor assessed that there were no anticipated impacts on such airspace users as a result of the proposed RNP arrival procedures or the reclassification of a volume of Class D CTA-3 airspace to Class G. The proposed changes are also not anticipated to increase the total number of GA movements. The fleet mix associated with the forecast data was adjusted to account for expected airline fleet changes. In particular, adjustments to account for expected transitions from A320-100/200 to A320 Neos, Embraer E195 E2 to B737-700 winglets, Embraer-145 to ATR72 212 A and ATR 42-500 to Jetstream 41 were undertaken. Modal split data was based on the average split over previous 10 years with Runway 16 used 60% and Runway 34 used 40% of the year. Whilst overall traffic is forecast to grow, the sponsor has stated that the ACP does not seek to increase movements at Aberdeen Airport and therefore the traffic forecast applied 'with ACP' was the same as for the 'without ACP' scenario. Fundamental to the environmental impact assessments carried out during the ACP process, is the assumption that the number of arrivals using the proposed RNP arrival procedures would be no more than 5% of total arrivals. This was based on the principle that the proposed RNP arrival procedures would only be used for resilience and training purposes and that 95% of arrivals would continue to use the retained ILS. Resilience data from the previous 5 years was used to inform the c.1 - 5% anticipated usage for the new procedures, and the higher, precautionary estimate of 5% was adopted for the purposes of the environmental impact assessments.
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5. Final Airspace Design		Yes/No
5.1	Has the change sponsor described the final airspace design at year 1 and year 10 by taking into account any additional growth facilitated by the airspace change? (CAP 1616f paragraph 3.18)	Yes
	The final airspace design taken forward was Option 1: vectors to final approach to both Runway 16 and Runway 34. The proposed RNP arrival procedures are intended to be operated alongside the existing ILS approaches at Aberdeen Airport and are required to provide resilience for ILS outages and for training purposes. Evidence, based on historical data, has been provided indicating that there has been one unplanned ILS outage (duration 6 hours) in the past 5 years in addition to planned maintenance where the ILS has been taken out of service for approximately 5 hours per month and up to 14 hours on a 6 monthly basis. It is noted that routine maintenance mostly occurs during the night or when traffic volumes are low. This supports the sponsor's rationale that usage of the proposed RNP arrival	

	procedures will be limited to 1 – 5% of arrivals and that 95% of arrivals will continue to be vectored to the ILS as is currently the case. Aberdeen Airport supports a significant number of helicopter movements. Feedback from helicopter operators, indicates that the proposed RNP arrival procedures would only be used for training purposes and therefore the sponsor has estimated that up to 5% of helicopter flights are likely to use the proposed RNP arrival procedures. The ACP submission explains that arrivals using the RNP arrival procedures would continue to be vectored before final approach, but whereas with the ILS the arrivals have flexibility in where they join final approach from 15km (8nm) and beyond, the RNP arrivals would be vectored to join the final approach at a satellite-based waypoint. To minimise changes to tracks over the ground, the waypoints on the RNP arrivals design options have been positioned within the swathes of the existing vectored arrivals. The sponsor acknowledges that the procedures may result in a ‘small amount’ of concentration around the waypoint which could generate a marginal change in noise impacts however, this impact has been assessed as ‘negligible’. In addition, the proposed RNP arrival procedures are not expected to result in an increase in holding or in the number of missed approaches flown. The RNP MAPs replicate the existing ILS MAPs and, if required, would fly a hold predicated on the existing conventional ground beacon (ADN VOR). The sponsor provided the following operational diagrams using a 1-week sample of Aberdeen Airport’s existing arrivals (shown in yellow). For this option, aircraft would be vectored to join the RNP arrival procedures. The Initial Fix (IF) was positioned so that arrivals would join final approach at approximately 8nm, with the intention of keeping the vectored arrivals within the existing arrival traffic swathes.
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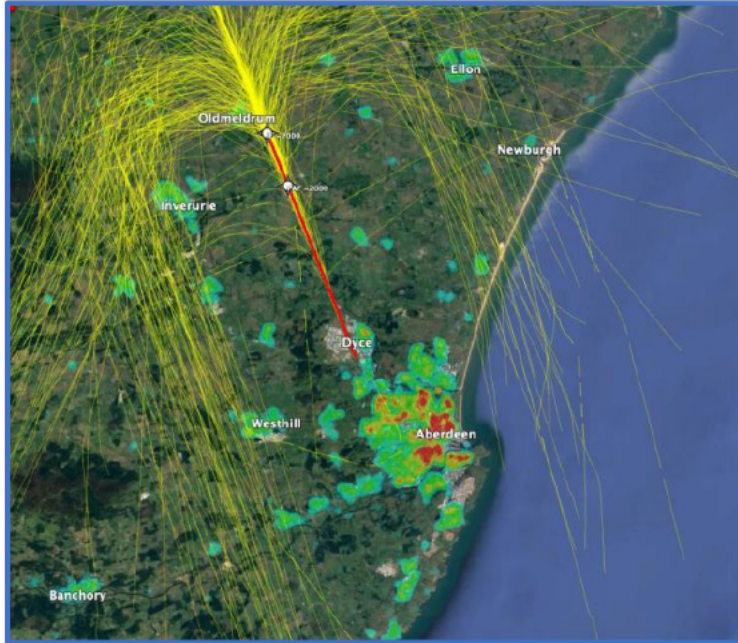


Figure 1 (left): Option 1 vectors (in yellow) to final approach (red) at Runway 16

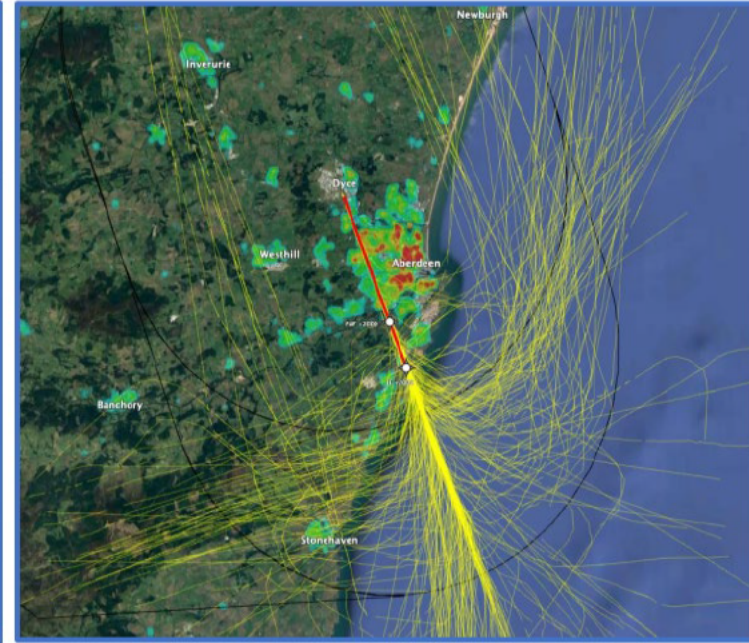


Figure 2 (right): Option 1 vectors (in yellow) to final approach (red) at Runway 34

The final airspace design includes the proposed reclassification of a portion of existing Class D airspace to Class G, where the base level of the southwest portion of CTA-3 would be raised from 3,000 ft. to 4,500 ft. amounting to a volume of 27.8nm³. This proposal was based on data produced by Aberdeen Airport which showed that there were no fixed wing or rotary wing departures and, on average, only 1 fixed wing and 1 rotary wing aircraft arrival a week (0.2% of Aberdeen's arrivals) using the airspace volume concerned. A reclassification of this airspace is stated to benefit other airspace users such as gliders from Deeside Gliding Club at Aboyne and GA traffic transiting the airspace.

5.2	To what extent does the final airspace design achieve any mandatory, discretionary, or bespoke environmental design principles?	Yes
	At the Design Principle Evaluation (DPE) stage, Option 1 for each runway end was assessed against the four environmental design principles, with the following evaluations:	

	• DP3 - Design options should minimise the change to tracks over ground of aircraft arriving and departing from Aberdeen. (MET) Option 1 was expected to result in very minimal changes to tracks over the ground as aircraft would be vectored to a final approach as today. Whilst they would be vectored to a fixed waypoint (IF) rather than a localiser, which is more flexible, the low number of arrivals expected to use the RNP arrival procedures was not expected to result in any concentration of tracks. The IF would be located where most ILS arrivals currently join the localiser. Further analysis of this option at Stage 3 indicated that there would be some concentration of tracks around the IF but that the environmental impacts associated with the change would be minimal. • DP4 - Design options should investigate the feasibility of steeper approaches for PBN arrivals to reduce the noise footprint of Aberdeen Airport's operation. (MET) The current ILS follows the conventional 3.0° approach which would be retained alongside the proposed RNP arrival procedures. The evaluation indicated that Option 1 would, in theory, be able to accommodate a 3.2° approach angle. The principle was assessed further within the IOA and, whilst the environmental and noise benefits of the steeper approach were recognised, based on the small number of aircraft expected to use the RNP arrival procedures verses the retained ILS approaches, any benefits were assessed as negligible compared to the additional costs involved in demonstrating that the steeper approaches would be operationally safe and viable. • DP5 - Arrival route options should enable aircraft to descend continuously and should not inhibit departures from climbing continuously. If both cannot be achieved, there should be a preference to the most environmentally beneficial option. (MET) No impediments to continuous climb and descent operations were identified with Option 1 in respect of either runway. • DP6 - Options should not increase and should aim to reduce the emissions footprint of aircraft operating at Aberdeen by reviewing existing controlled airspace boundaries and usage of flight paths in the NERL network. (PARTIAL) No change in typical track miles for arriving aircraft was anticipated for Option 1 compared to the baseline.	
5.3	Were there any design options other than the final airspace design that might have better met the environmental design principles and/or produced better environmental impacts as assessed in the full options appraisal? If so, is the rationale for rejecting those design options and selecting the final airspace design adequately explained?	No
	The final airspace design (Option 1) MET all the environmental DPs except for DP6: Maintain or reduce emissions footprint for which it was evaluated as PARTIAL. This was on the basis that there was no change in typical track miles compared to the baseline. Option 2 (RWY 16 & RWY 32 inner T-Bar), Option 3 (RWY 34 curved approach from east), Option 4 (RWY 16 curved approach from west) and Option 5 (RWY 16 curved approach from east) were evaluated as MET for DP6, with cumulative track mileage reductions estimated between 2nm and 9nm	

compared to the baseline. For each of these options, whilst there was an estimated reduction in track mileage, there was a corresponding increase in track concentration for Options 2 and 3, and an increase in overflight of areas not routinely overflown for Options 4 and 5. The sponsor ultimately determined that, as the DPE performance for the design options was 'mixed' and the design principles were not prioritised, all design options would be carried forward to the IOA. Based on the outcome of the DPE, there were no design options that better met the environmental design principles than the final airspace design.

The retained options were combined for the Full OA to reflect the airport's overall operating system from all runways and including arrivals and departures. This generated three Stage 3 options:

- 'Vectors to Final Approach' (Option 1 - RWYs 16 & 34)
- 'T-bars' (RWY 16 Option 3 outer T-Bars + RWY 34 Option 2 T-Bars)
- 'T-bars and Curved Approaches' (RWY 16 Option 4 - curved approach from west + RWY 34 Option 3 - curved approach from east)

For the evaluation of noise impacts, the NPV calculations showed that there were noise costs associated with all three options, ranging from -£6,584 (Vectors to Final Approach), -£3,885 (T-bars) and -£6,584 (T-bars and Curved Approaches). However, the sponsor identified that these values were influenced by a limited number of receptors transitioning between 1dB bands in the Department for Transport's Transport Analysis Guidance (TAG) evaluation due to noise variations of less than 0.1dB. Changes of this scale are negligible beyond the accuracy of noise models and resulted in no material changes to the primary noise metric (L_{Aeq}) where contours are based on 3dB band ranges. Similarly, the changes in secondary metrics were evaluated as being minimal.

For fuel burn and greenhouse gas emissions, the 'Vectors to Final Approach' option and the 'T-bars' option showed a very small increase (less than 0.1%) in total emissions compared to the baseline. For the 'T-bars and Curved Approaches' option there was a neutral impact compared to the baseline. Based on these results, it was concluded that there was no material change to fuel burn and greenhouse gas emissions as a result of these options.

Due to the limited use of the proposed RNP arrival procedures for resilience and training purposes only, and the sponsor's intention to replicate existing procedures as closely as practicable, the differences between the three design options in terms of environmental impacts were assessed as negligible when balanced against the outcome of the safety assessment which showed increased level of complication and safety risk for the 'T-bars' and 'T-bars and Curved Approaches' options. For this reason, the sponsor discontinued these two options at Stage 3 (Full OA) and progressed the 'Vectors to Final Approach' as the single preferred option for consultation.

For CAS Option 1, the sponsor qualitatively assessed that there were likely to be benefits to GA stakeholders from the reclassification of CAS from Class D to Class G airspace and both marginal benefits and impacts to noise and greenhouse gas emissions for aircraft arriving at Aberdeen Airport. On this basis, the CAS Option 1 was taken forward to consultation.

6. Final Options Appraisal	Yes/No
6.1	Has the change sponsor conducted an options appraisal of the potential environmental impacts of the final airspace design against the baseline scenarios for the implementation year and across the forecast period (normally 10 years)? <i>(CAP 1616f paragraph 3.20)</i>
	The outcome of the Full and Final Options Appraisal compared the design option(s) in terms of the monetised quantitative assessment, using the Cost Benefit Analysis (CBA) to produce a Net Present Value (NPV) for each option. The monetised costs were based on an 'optimistic' estimate of 5% of aircraft flying the RNP approaches. Prior to submission of the Final Options Appraisal (Final OA) (October 2024), the sponsor submitted evidence to the CAA to support their rationale that it would be disproportionate to re-run the noise and carbon emissions modelling for the Final OA. This was based on confirmation that there was no change to the airport's projected operations or traffic forecasts and no changes made to the final airspace design as an outcome of the consultation. Based on the information provided, the CAA agreed that the environmental assessment provided for the Full OA would be considered valid for the Final OA, with only the TAG workbooks for noise and greenhouse gas emissions needing an update. It is noted that the NPV's for the assessment have therefore changed due to the present value base year being updated from 2010 (Full OA) to 2024 (Final OA). The TAG inputs and quantitative outputs for the final airspace design were unchanged, as was anticipated. In respect of the proposed change to CAS, the sponsor assessed the only shortlisted option (Option 1: raising a portion of CTA-3 to 4,500 ft) against the baseline scenarios for each of the environmental metrics considered. This included identification and analysis of other airfields and aircraft movements close to controlled airspace, or under the base of controlled airspace to inform an evaluation of the consequential impacts of this aspect of the proposed airspace change. Overall, the environmental factors were assessed in line with the requirements of a Level 1 ACP under CAP 1616 version 5, with an appropriate level of scaling applied.
6.2	If a quantified and monetised environmental assessment has not been undertaken, has the change sponsor presented a robust rationale supported with appropriate evidence justifying that undertaking a specific metric or quantitative assessment of a proposed option would result in no environmental impact? <i>(CAP 1616i paragraph 2.17)</i>
6.3	Has the change sponsor considered the environmental impacts resulting from its direct airspace operations as well as any environmental impacts caused due to indirect consequential changes on the flight behaviour

	of other airspace users? (CAP 1616i paragraph 2.18)	
	The sponsor has concluded that the environmental impacts resulting from its direct airspace operations would be negligible as evidenced in the Full and Final Options Appraisals. The indirect consequential environmental impacts due to changes in GA activity as a result of the reclassification of Class D to Class G airspace have not been quantitatively assessed in this ACP, however, based on the sponsor's reasonable evaluation that the proposed changes to CAS will enable existing traffic to remain outside of CAS at a higher altitude, it is accepted that indirect consequential environmental impacts are likely to be negligible.	

7. Noise		Yes/No
7.1	Has the change sponsor considered and assessed the noise impacts resulting from the airspace change proposal as per the Government's environmental objectives and altitude-based priorities given in the Air Navigation Guidance 2017? (CAP 1616i paragraph 2.4)	Yes
	The sponsor has quantitatively assessed that noise impacts associated with the final proposed airspace change are not expected to materially change compared to the baseline scenarios. This conclusion is based on the very low number of aircraft movements anticipated to use the RNP arrival procedures, estimated to be 1 – 5% of fixed wing aircraft and 1% of helicopter arrivals per year. The proposed procedures have been designed to closely align with the tracks already flown by aircraft approaching Runways 16 and 34, minimising the risk of overflight of areas not previously overflown. This ACP is also not anticipated to increase movement numbers, nor result in a change in aircraft types operating at Aberdeen Airport. The sponsor has provided quantitative assessments for the primary noise metric ($L_{Aeq,16h}$ and $L_{Aeq,8h}$ noise exposure contours), secondary noise metric (Number Above (N65, N60)) and overflight contours. The total adverse noise effects on people have been monetised for the final airspace design using the TAG noise workbook – aviation. The sponsor identified that there may be a 'small increase' in concentration of traffic around the waypoint for Runway 16 arrivals evidenced by two marginal differences in the $L_{Aeq,16h}$ contour data. Reference to the quantitative analysis in the Full OA indicates that this change is not reflected in the 3dB L_{Aeq} contour bands but is shown as a cost in the TAG analysis for the final design. This is based on a very small number of receptors (< 30) moving between 1dB bands in the TAG evaluation due to noise variations of less than 0.1dB. The NPV for noise impact over the 10-year appraisal period was calculated as a cost of £6,963 (2024 present value base year). This data supports the sponsor's analysis that the TAG outcome for the final airspace design is not a significant consideration in terms of the overall assessment. For the secondary noise metrics, there were no changes in contour data for the secondary N60 metric and very marginal differences (<100 receptors) for the N65 metric, when the final airspace design is compared to the baseline. For overflight, the assessment showed marginal	

	differences in the lower frequency 5 and 10 per day contours which resulted in improvements to the number of people overflown compared to the baseline however, these improvements were attributed to the sponsor's optimistic estimate of 5% of arriving aircraft flying the final RNP arrival procedures. For CAS Option 1, the sponsor provided a qualitative assessment which concluded that the proposed change would create no changes to tracks over the ground or aircraft profiles and therefore, no material impact on noise from aircraft arriving or departing Aberdeen Airport. The reclassification of 27.8nm³ of Class D controlled airspace to Class G is predicted to enable improved soaring profiles and reduce the risk of CAS infringements in the vicinity of Aboyne gliding site as a result of the increase in the base of part of CTA-3. Overall, the noise assessment for all metrics supports the sponsor's analysis that the final design is not expected to result in any significant or material positive benefits or negative impacts to noise. The CAA agrees that any changes in noise impacts resulting from this ACP are likely to be negligible.	
7.2	Where a quantified and/or monetised assessment for the following noise metrics has been undertaken, does the methodology follow the requirements given in Chapter 5 of CAP 1616i? • LAeq and TAG • Number above • Overflight	Yes
	Noise modelling for the Full and Final OA has been conducted in accordance with the guidance outlined in CAP1616i and the minimum standards for noise modelling mandated in CAP2091. Prior to submission of the Full OA, the sponsor agreed with the CAA that noise modelling would be conducted to meet CAP2091 Category C requirements. The category was subsequently confirmed based on a count of population within the Lowest Observed Adverse Effect Level (LOAEL) contours produced for the Full OA. Similarly, a detailed methodology for modelling helicopter noise was accepted by the CAA, based on a hybrid of Common Noise Assessment Methods in Europe CNOSSOS-EU/ Federal Aviation Administration's (FAA) Aviation Environmental Design Tool (AEDT) version 3e models, with the helicopter flight profiles modelled based on local track keeping data in line with Category C requirements. Aircraft types, numbers of movements, track usage, and temporal distribution of operations used in the model have been derived from the 92-day summer period from 16 June to 15 September inclusive. The 10-year average fixed wing modal split was derived from annual (365 days) modal split data from 2013 to 2022 as the sponsor advised that long-term 92-day summer modal split data was not directly available. However, the sponsor compared the 10-year average modal split against the last three years' 92-day summer average modal split (2021 – 2023) and determined that the difference was less than 1%. Given the very limited nature of the noise impact between design options, and the fact that more long-term data is available for the annual average, it was considered proportionate to use the 10-year annual average modal split for fixed wing noise modelling.	

	Terrain adjustments used the OS Terrain 50 product and meteorological data for the modelling was sourced from historic METAR data for Aberdeen Airport (accessed via the Iowa Environmental Mesonet). Meteorological conditions (temperature, relative humidity, pressure, sea level pressure, and wind speed) were included in the noise calculations as a 10-year average over the 92-day summer period. Aircraft flight profiles were adjusted based on the standard ICAO dataset for the primary noise-dominant aircraft types, covering over 75% of the total noise energy produced at the airport. The identification of the main noise-dominant aircraft types was derived from the quota count (QC) values of the airport fleet for the 92-day summer flight schedule for 2022. The sponsor identified that helicopters are the main contributor to the airport's total QC. For fixed wing aircraft, the top ten contributors accounted for 85% of the total fixed wing QC and therefore exceeded the requirement to cover over 75% of the total noise energy. Thus, flight profiles for the ten fixed wing aircraft, along with all helicopters, have been modified to align with Category C requirements. For overflight, the sponsor calculated all aircraft operations below 7,000 ft. The modelling assumptions and input data used for the overflight contours were consistent with those used for the L_{Aeq} contours including modified flight profiles for the primary noise-dominant aircraft types, lateral dispersion, and terrain adjustments. In accordance with CAP1498, a threshold angle of 48.5° was used, with overflight contours plotted over a 200m x 200m regularly spaced grid.	
7.3	Has the change sponsor used operational diagrams overlaid on high-quality maps that are clearly legible and have sufficient details? (CAP 1616i paragraph 5.37)	Yes
	Operational diagrams have been provided in the Final OA in respect of the baseline and the final design for both fixed wing and helicopter arrivals. The diagrams have been overlaid on maps with sufficient resolution for affected communities to identify their approximate location. The base maps would have benefitted from higher colour contrast to improve clarity but given the low number of arrivals using the proposed RNP arrival procedures, the diagrams as presented are considered acceptable. The sponsor included a useful schematic diagram showing the difference between the proposed RNP arrival procedures and the existing vectored arrivals in terms of the effect of the waypoint on arriving aircraft traffic and used annotated operational diagrams to illustrate the distribution of the 1-5% of aircraft anticipated to use the new procedures. These indicated that the small number of aircraft using the procedures would largely overfly areas already overflown by current-day operations as the proposed RNP arrival procedures remain within the existing arrival traffic swathes. The RNP MAPs replicate the existing ILS MAPs and, if required, would fly a hold predicated on the existing conventional ground beacon (ADN VOR). There are no anticipated changes to the existing Noise Abatement Procedures.	
7.4	Has the change sponsor presented additional analysis on any of the noise impacts using any additional noise metrics? (CAP 1616i paragraph 5.40)	N/A

8. Greenhouse Gas Emissions	Yes/No
8.1	Has the change sponsor considered and demonstrated how the design and operation of the airspace change proposal will impact greenhouse gas emissions? (<i>CAP 1616i paragraph 6.1</i>)
	The sponsor has produced a quantitative assessment of impacts of the final airspace design on CO₂ emissions compared to the baseline and has used TAG to evaluate greenhouse gas impacts over the 10-year appraisal period. The assessment compared the future track length and aircraft descent profiles for aircraft using the RNP arrival procedures and compared it to the baseline 'do-nothing' scenarios. The sponsor also considered fuel burn and CO₂ emissions associated with aircraft flying the existing conventional ground beacon (VOR/DME) procedures when the ILS is unavailable and compared this with the final airspace design. The number of aircraft expected to use the proposed RNP arrival procedures is very low, approximately 1 – 5% of fixed wing aircraft and 1% of helicopter arrivals per year and these new procedures have been designed within the existing arrival traffic swathes, minimising changes in track mileage. The assessment was based on the assumed 5% use of the proposed RNP arrival procedures. This showed a less than 0.1% increase in total emissions between the final airspace design and the baseline scenarios and an improvement in fuel burn and CO₂ emissions when compared to the existing VOR/DME approach currently used when the ILS is unavailable. The change in the mass of carbon dioxide equivalent in tonnes (tCO₂e) emissions over the appraisal period has been calculated as an increase of 185.3t of which 183.5t is traded. The monetised NPV from TAG of CO₂e emissions for the 10-year appraisal period was calculated as a cost of £39,233 for traded and non-traded sectors, based on the 2024 present value base year. The sponsor reiterated that the 5% usage of the RNP arrival procedures is likely to be an overestimate and, therefore, any negative impacts and costs may be less than has been calculated. The CO₂ emissions associated with the reclassification of CAS have been qualitatively assessed with no significant direct or indirect (consequential) impacts identified. Overall, the Final OA concluded that there would not be any significant changes to fuel burn and carbon emissions as a result of implementing the ACP.
8.2	Where a quantified and monetised greenhouse gas emissions assessment has been undertaken, does the methodology follow the requirements given in Chapter 6 of CAP 1616i?

The methodology for quantification and monetisation of CO₂ emissions for this ACP follows the requirements defined in CAP 1616i.

The sponsor demonstrated consideration of continuous descent operations (CDO) by evaluating all design options against 'DP5: Enable aircraft to descend continuously and not inhibit departures from climbing continuously'. This DP was evaluated as MET for the final design and no impediments to continuous climb and descent were identified in respect of either runway.

For fixed wing aircraft, fuel burn was calculated using AEDT version 3e, Base of Aircraft Data (BADA) version 3.15 model and the Senzig-Fleming-Iovinelli (SFI) method. Model inputs, including aircraft types, the numbers of movements, and track usage were derived from the forecasts and aircraft flight profiles sourced from the Aircraft Noise and Performance (ANP) v2.3 database. Aircraft types in the fuel burn modelling were categorised into Aircraft Modelling Categories (MCATs).

Departure and arrival centrelines for the baseline were calculated from Aberdeen Airport's track-keeping data using BridgeNet International's Volans software and to ensure a like for like comparison, the existing and proposed track centrelines used in the CO₂ assessment for the baseline and design scenarios were extended to common endpoints in the network.

For helicopters, the sponsor identified a lack of internationally accepted fuel burn calculation methods and presented their own methodology. Fuel usage data for an S92 helicopter was calculated across the various phases of departure and approach procedures including, take-off, initial climb (up to 450m), climb-out (450-1000m), approach, holding, and landing, along with the duration the helicopter operates in each phase. In total, the fuel burn data covers a duration of 350 seconds for departure operations and 540 seconds for arrival operations. Based on radar data from the 92-day summer period for 2022, these durations were calculated to encompass approximately the first 22.3 km of departure operations and the final 31.4 km of arrival operations. The sponsor proposed that assessing helicopter fuel burn using data from a single helicopter type and the operational modes covered was a proportionate approach for this ACP for the following reasons:

- Beyond these distances, the differences between existing and future tracks are minimal.
- There is no anticipated change in the number of helicopter operations between assessment years
- The total number of helicopters expected to fly the new procedures is small (approximately 1% of helicopter arrivals, resulting in a change in overall helicopter track miles flown of around 0.1%).

The methodology for calculation of helicopter CO₂ emissions was shared with the CAA and agreed before the final submission.

For the TAG calculation, the tCO₂e emitted for the 'with ACP' and 'without ACP' scenarios was calculated by multiplying the mass (in tonnes) of kerosene burned during flight by a factor of 3.18 (tonnes of CO₂e / tonne of fuel). The annual mass of CO₂e was linearly interpolated between the year of implementation (2026) and 10 years after implementation (2035).

9. Local Air Quality		Yes/No
9.1	Is there a possibility of pollutants breaching legal limits and target values following the implementation of the airspace change proposal (or worsening an existing breach of legal limits and target values)? (<i>CAP 1616i paragraph 7.5</i>)	No
	The CAA considers that an assessment of local air quality impacts is only required where there is a risk of breaching legal limits following an airspace change (or worsening an existing breach). Such a risk is only likely where there is a change in aviation emissions (by volume or location) below 1,000 ft, and those emissions occur within or adjacent to a designated Air Quality Management Area (AQMA). In the Full OA the sponsor has explained that aircraft landing at Aberdeen Airport fly a standard 3° angle of approach and descend through 1,000 ft. typically between 5 – 7km before the landing threshold. This is in the last stages of the final approach when aircraft are aligned with the runway centreline. The sponsor has identified that the closest boundary of the Aberdeen City Centre AQMA is 2.4km from the landing threshold of Runway 34 however, it has been established that the final airspace design does not change lateral or vertical flight paths for arrivals to the runway below 1,000 ft. and the ACP is not expected to increase traffic numbers or change the types of aircraft operating at Aberdeen Airport. For these reasons, the sponsor has concluded no impact on this AQMA. The CAA agrees that the proposed airspace change is unlikely to breach the national air quality objectives and air quality standards, including limit and target values in the UK Air Quality Strategy and that no further assessment of air quality impacts is required.	
9.2	Where a quantified and monetised local air quality assessment has been undertaken, does the methodology follow the requirements given in Chapter 7 of CAP 1616i?	N/A

10. Tranquillity		Yes/No
10.1	Has the change sponsor considered and taken account of the impacts on tranquillity by using operational diagrams or overflight contours to identify any tranquillity receptors overflown below 7,000 feet? (<i>CAP 1616i paragraph 8.3</i>)	Yes
	The sponsor has considered the potential impact of the proposed airspace change on tranquillity and provided both a high-level qualitative and quantitative assessment of impacts which is proportionate to the nature and scale of the proposed changes.	

	There are no National Parks or National Scenic Areas within the scope of the assessment as the closest National Park (Cairngorms) is only overflown at altitudes above 7,000 ft. However, the sponsor has identified several Candidate Quiet Areas, country parks, regional parks, gardens and designated landscapes in the vicinity of the airport. The potential impacts on these areas have been assessed by calculating the total number of areas within the L_{Aeq}, N65/N60 and overflight contours below 7,000 ft., as well as the total area (in km^2) intersected by these contours. The assessment indicated that there are no changes in the number or area of locations/spaces that are relevant to the consideration of tranquillity within the L_{Aeq}, N65 and N60 contours. Overflight data shows an increase of 0.90 km^2 for the year of implementation (2026) and 1.20 km^2 at year 10 (2036), for an area of gardens and designated landscapes within the 0-5 flights per day contour. However, these areas are already overflown and there are no new areas overflown. The exact location and details of the gardens and designated landscapes have not been provided in the submission documents. The sponsor has concluded that there are insignificant changes in noise impacts associated with the final airspace design and therefore, no material impacts to tranquillity as a result of implementing the RNP arrival procedures and releasing a portion of CAS. Further, based on the limited usage of the new procedures and the alignment of the new procedures within the existing arrival traffic swathes, any impacts on tranquillity are expected to be minimal.
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11. Biodiversity		Yes/No
11.1	Has the change sponsor used operational diagrams or overflight contours to identify any biodiversity receptors overflown below 7,000 feet? (CAP 1616i paragraph 9.3)	Yes
	The sponsor has considered biodiversity impacts and provided a high-level qualitative assessment of impacts which is proportionate to the nature and scale of the proposed changes. The sponsor has assessed the impacts on biodiversity in line with guidance provided in CAP2527: Airspace Change Masterplan: Habitats Regulations Screening Report. The sponsor identified six European designated sites within the 18km 'Zone of Influence' of each runway end at Aberdeen Airport. Of the six sites, only the River Dee Special Area of Conservation (SAC) was identified as being overflown below 3,000 ft. However, the sponsor assessed that the location of the River Dee SAC is under the final approach to Runway 34 at which point there is no change to lateral tracks attributable to the RNP arrival procedure. On this basis and given that the ACP does not change the number, type, altitude or frequency of aircraft flying the approach procedure, the sponsor has assessed that there will be no impact to biodiversity. Based on the sponsor's assessment, the CAA is satisfied that the proposed airspace change is not likely to have a significant effect on biodiversity, including the identified European designated site, and that an Appropriate Assessment is not required for Habitats Regulations	

	Assessment.	
11.2	Has the change sponsor completed the habitats regulations assessment early screening criteria form and, where relevant, provided any additional assessments for habitats regulations assessment as specified by the CAA? (CAP 1616f paragraph 3.69, 4.18, 5.24)	N/A
11.3	Is the airspace change proposal likely to have a significant effect - either alone or in combination with other plans or projects - on European sites? (CAP 1616i paragraph 2.9)	N/A

12. Linked Airspace Change Proposals		Yes/No
12.1	Is the airspace change proposal linked in any way with another airspace change proposal? (CAP 1616i paragraph 2.20)	N/A
12.2	If yes, have the environmental impacts of the linked proposals been assessed on a combined basis? (CAP 1616i paragraph 2.21)	N/A

13. Secretary of State Call-in Noise Criterion		Yes/No
13.1	Has the change sponsor presented their assessment as to whether the anticipated noise impacts meet the Secretary of State's call-in criterion? (CAP 1616f paragraph 5.55) <i>The criterion, as set out in the Civil Aviation Authority (Air Navigation) Directions 2023, Section 6, paragraph (7), and also present in the Air Navigation Guidance (2017), is that the proposed airspace change could lead to a change in noise distribution resulting in a 10,000 net increase</i>	Yes

	<i>in the number of people subjected to a noise level of at least 54 dB¹ <u>as well as</u> having an identified adverse impact on health and quality of life.</i>	
	The Final Options Appraisal has established that the proposal does not meet the Secretary of State's criterion for call-in on noise impacts. The rationale for this conclusion is based on the noise assessment which indicates no material change to the population exposed to a noise level of at least 54 dB LA_{eq16h}.	
13.2	Should there be a request for a call-in, does the airspace change proposal, as described, meet the call-in criterion for noise impacts? (CAP 1616f paragraph 6.21)	N/A

14. Public Evidence Session		Yes/No
14.1	If a public evidence session has been held, was any new evidence on potential environmental impacts of the airspace change proposal presented by stakeholders? (CAP 1616f paragraph 6.27)	N/A
14.2	If so, was the new evidence reviewed and taken into account by the CAA's assessment of the environmental impacts of the airspace change proposal? (CAP 1616f paragraph 6.29)	N/A

15. Conclusion	
Aberdeen Airport is proposing the implementation of new Required Navigation Performance (RNP) instrument approach procedures (IAPs) to Runways 16 and 34. The procedures are designed to enhance operational resilience during periods when the existing Instrument Landing System (ILS) is unavailable and for limited training purposes. The existing ILS will be retained, and the sponsor has estimated that the new procedures would be used by only 1-5% of arrivals, with 95% of traffic expected to continue using the ILS. This assumption is supported by evidence using historical data for ILS unavailability at Aberdeen Airport, and information from Aberdeen Airport and other airports on patterns of usage of Performance Based Navigation	

¹ LAeq 16h noise exposure.

(PBN) arrival procedures for both fixed wing aircraft and helicopters.

The final RNP arrival option, 'vectors to final approach' has been designed with the waypoints positioned within the existing vectored arrival swathes, as illustrated by the operational diagrams provided. The RNP missed approach procedures (MAP) replicate the existing ILS MAPs and, if required, would fly a hold predicated on the existing conventional ground beacon (ADN VOR). The proposed RNP arrival procedures are not expected to result in an increase in holding or in the number of missed approaches flown.

The proposal also seeks to reclassify part of the Aberdeen Class D CTA-3 airspace to Class G in line with the requirements of the Airspace Modernisation Strategy. This proposal follows an analysis by the sponsor, which identified a section of the existing controlled airspace (CAS) that is used only minimally by aircraft arriving at or departing from Aberdeen Airport. The analysis concluded that this portion of airspace is not required to maintain a high level of safety.

The sponsor has provided quantitative and monetised analysis of the environmental impacts associated with the proposal except in the case of local air quality, tranquillity and biodiversity which were assessed qualitatively in line with the principles of proportionality. The key findings are as follows:

- Noise: No significant or material changes are expected. Any concentration of aircraft around the new RNP approach waypoints is forecast to affect very few receptors and produce negligible changes in noise exposure. This conclusion is predicated on infrequent usage of the RNP arrival procedures and the expectation that most arrival traffic will continue to be vectored to the ILS.
- CO₂ emissions: A small increase in CO₂e emissions was identified (approximately 185 tonnes CO₂e over the 10-year appraisal period). This was assessed as negligible overall because of the anticipated limited use of the proposed RNP arrival procedures and minimal associated track changes.
- Local air quality: No material impacts are anticipated because flight paths below 1,000 ft. remain unchanged in the vicinity of the nearest Air Quality Management Area (AQMA) and aircraft numbers are not expected to increase as a result of the proposal.
- Tranquillity and biodiversity: No significant adverse effects are expected. The proposal is not likely to have a significant effect on designated environmental sites, including the River Dee Special Area of Conservation.
- Controlled airspace reduction: The release of a section of Class D airspace is expected to benefit general aviation (GA) and gliding users, with no material environmental consequences identified.

The sponsor has adequately considered the potential environmental impacts of the proposal within both the consultation and final submission documents and complied with relevant Government guidance and environmental assessment requirements for Level 1 ACPs under CAP 1616 (version 5). No environmental conditions or recommendations are proposed before implementation. A post-implementation monitoring requirement for RNP usage is recommended to validate a key assumption used in the environmental assessment.

The CAA Environmental Assessment supports the view that the proposal would deliver operational resilience benefits while causing no significant

environmental impacts, when compared with the current operations at the airport.

16. Recommendations/Conditions/Post Implementation Review Data Requirements		Yes/No
16.1	Are there any recommendations which the change sponsor <u>should try</u> to address either before or after implementation (if approved)? (CAP 1616f paragraph 6.12) <i>Recommendations are something that the change sponsor should try to address either before or after implementation, if indeed the airspace change proposal is approved. They may relate to an area in which the change sponsor is reliant upon a third party to actually come to an agreement and consequently they do not carry the same 'weight' as a condition.</i>	N/A
16.2	Are there any condition(s) which the change sponsor <u>must fulfil</u> either before or after implementation (if approved)? (CAP 1616f paragraph 6.12) <i>Conditions are something that the change sponsor must fulfil either before or after implementation, if indeed the airspace change proposal is approved. If their proposal is approved, change sponsors must observe any condition(s) contained within the regulatory decision; failure to do so will usually result in the approval being revoked.</i>	N/A
16.3	Are there any specific requirements in terms of the data to be collected by the change sponsor for the post implementation review (if approved)? (CAP 1616f paragraph 8.9) <i>PIR data requirements concern any specific data which the change sponsor should be instructed to collate post-implementation, if indeed the airspace change proposal is approved.</i>	Yes
	The following PIR data is required to validate the usage assumptions underpinning the environmental change impact assessments undertaken as part of this Airspace Change Proposal. - The sponsor must record the number of arrivals using the RNP arrival procedures (including helicopters) compared with the total number of arrivals for each runway (verify numbers). - The sponsor must provide track keeping data for any arrivals using the RNP arrival procedures (including helicopters) compared with all arrivals (verify lateral dispersion).	

Environmental Statement Sign-off	Name	Signature	Date
Environmental assessment completed by Airspace Regulator (Environment)	[REDACTED]	[REDACTED]	06/08/2026
Environmental assessment approved by Principal Airspace Regulator (Environment)	[REDACTED]	[REDACTED]	08/09/2026
Environmental assessment approved by Manager Airspace Regulation (or alternative delegation of authority)	[REDACTED]	[REDACTED]	14/9/2026