

Aberdeen International Airport (AIAL)

FASI-N Airspace Change Proposal

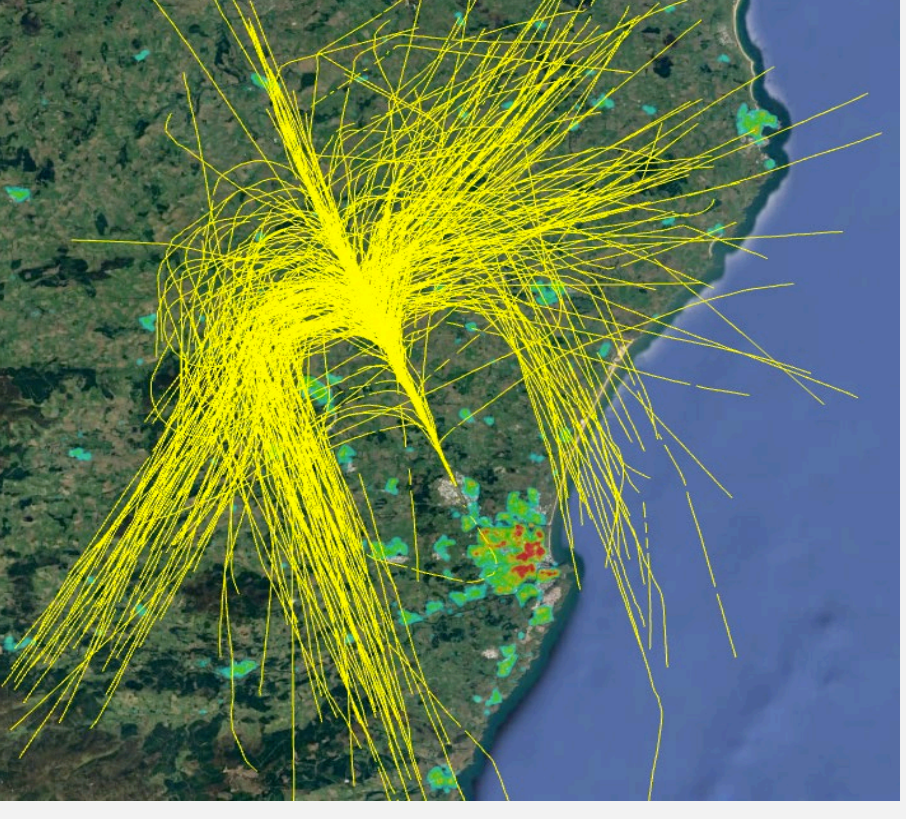
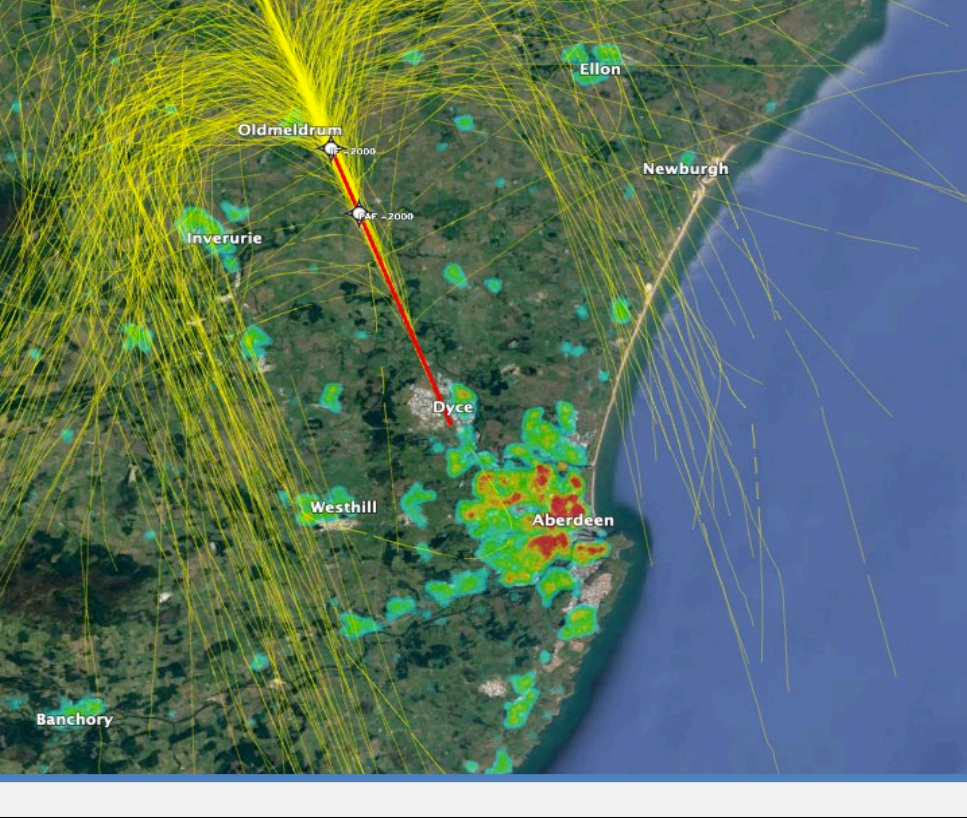
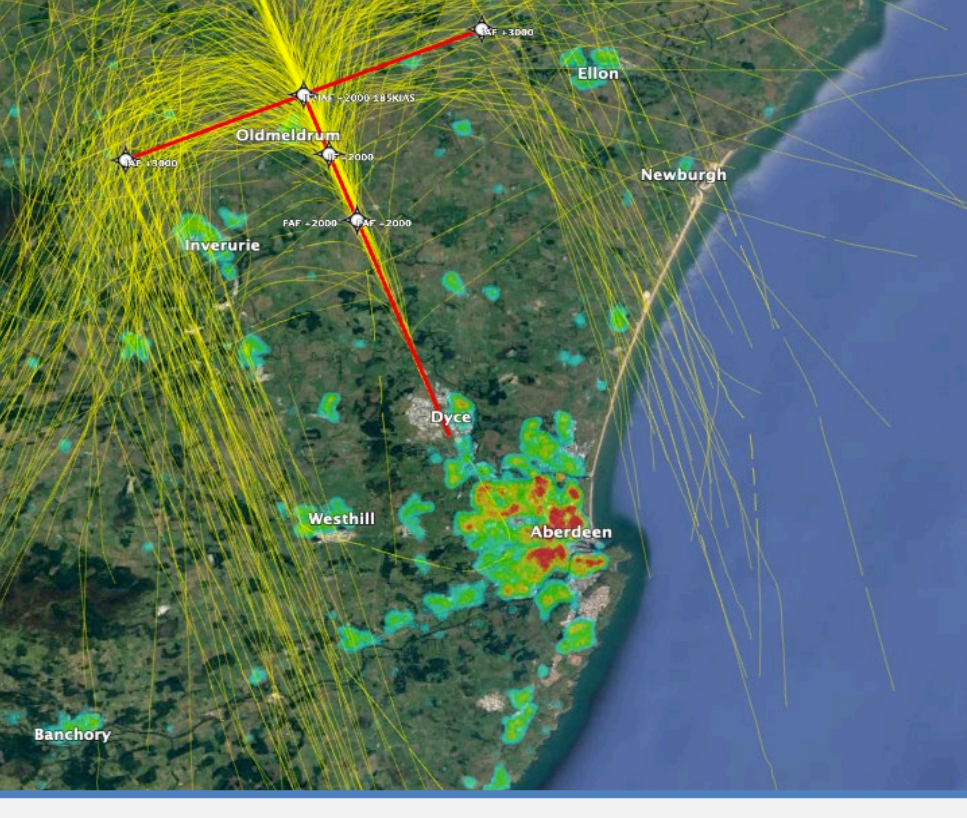
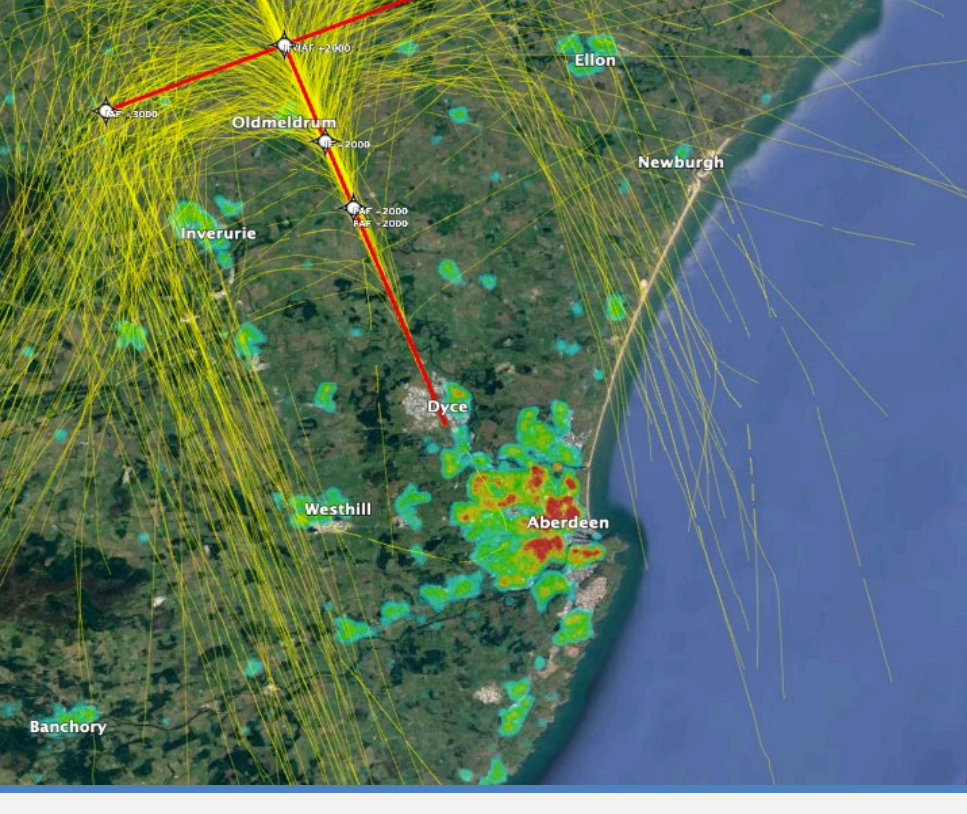
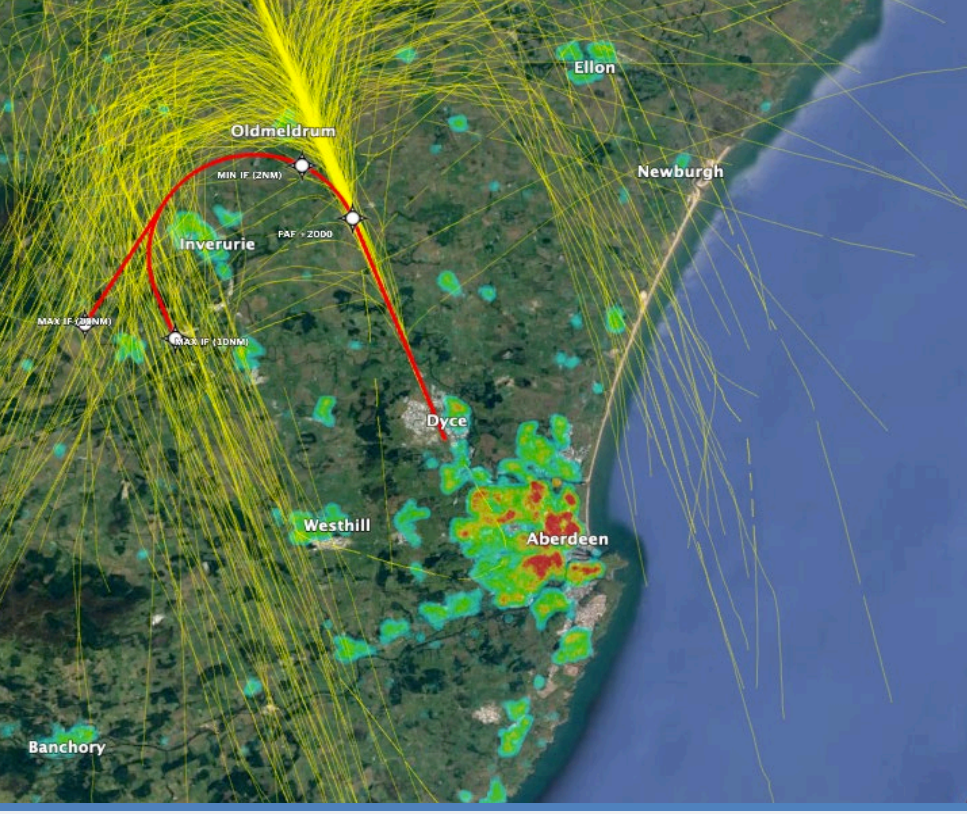
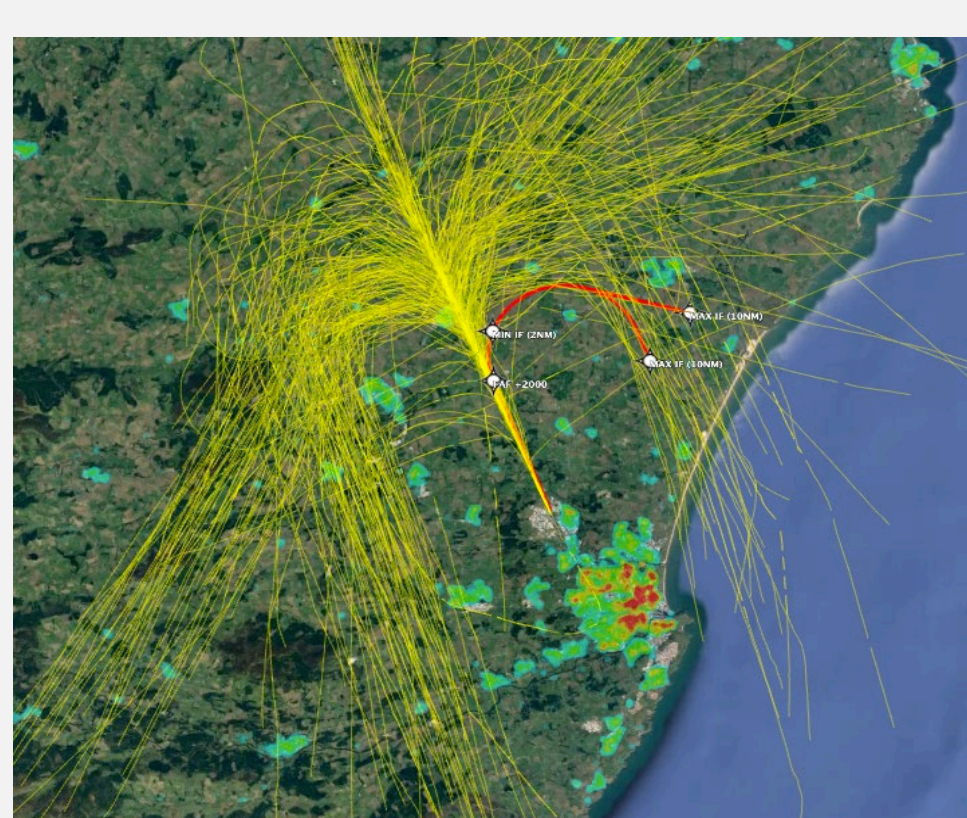
Step 2A


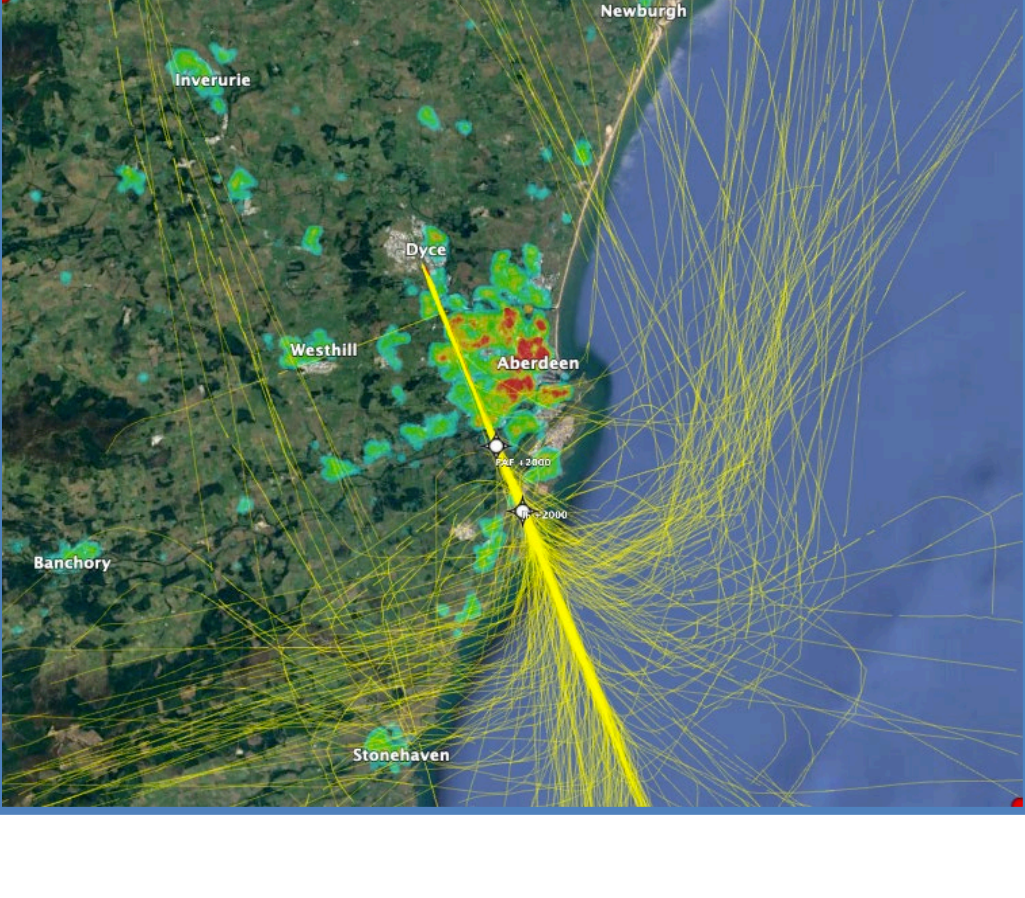
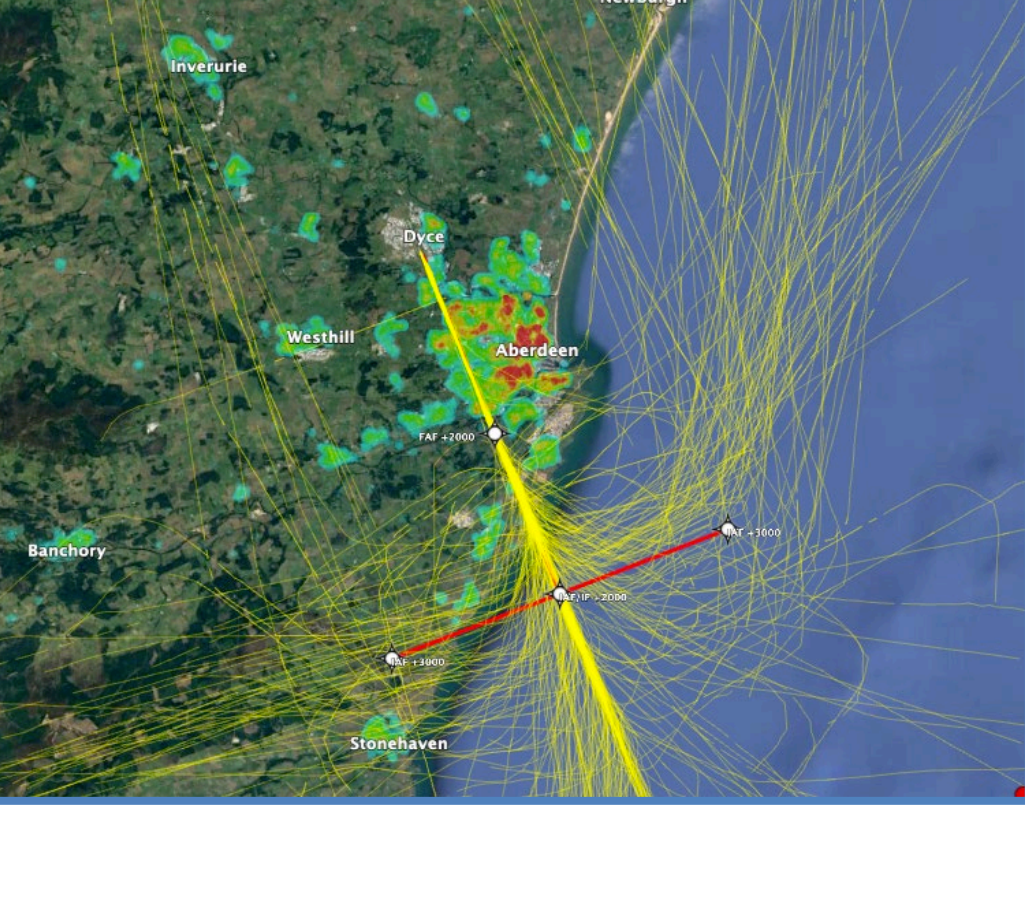
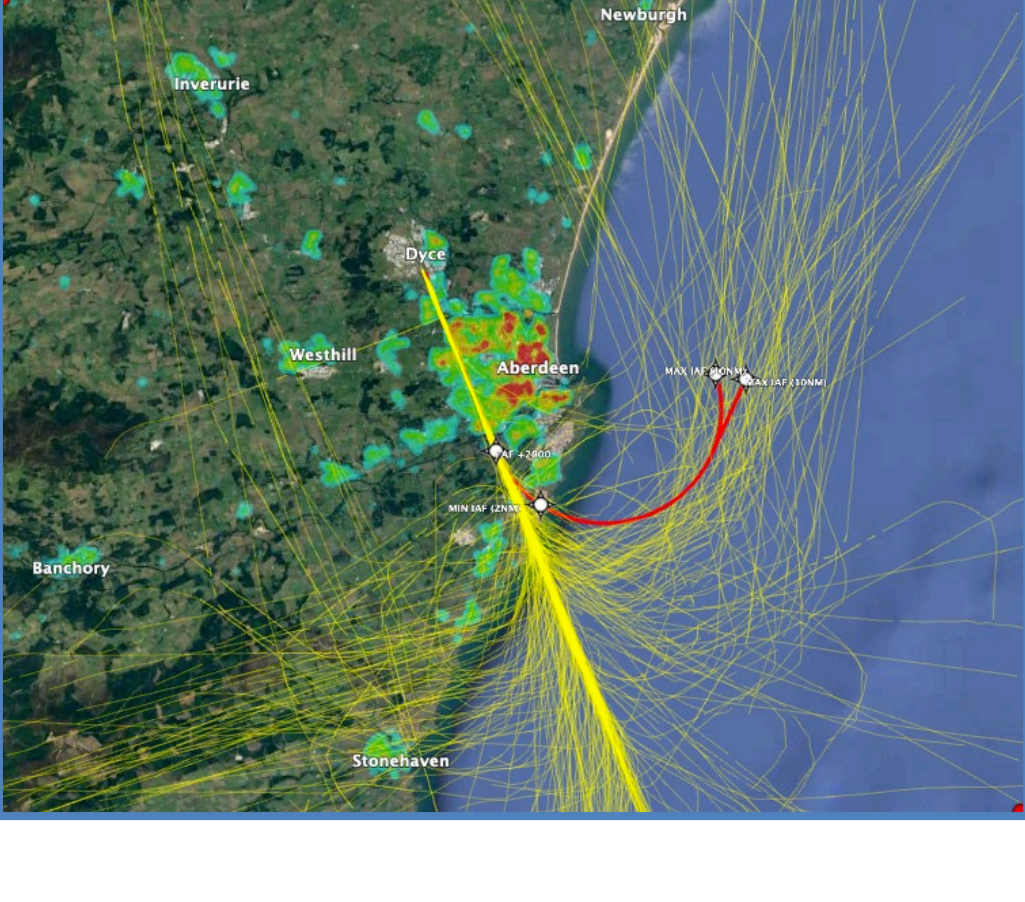
Design Principle Evaluation



Date: November 2022
Document Version: V1.1
Status: Public
Document History: V1.0 Submitted to the CAA November 2022
V1.1 Gateway Action Updates following CAA Feedback

CAA Feedback	Aberdeen Airport Response	Document Updates
<p>DPE: The Sponsor must clarify if the DPE was done in isolation for each option in terms of DPs 7 and 8, given the ‘partial’ evaluations for all options against CAS. It is implicit that every option is independent or could CAS Option1 align with any IAP Option? [CAP 1616 Para 128).</p>	<p>For the purposes of developing the Comprehensive List of Options, Aberdeen has developed an option which proposes to reduce CAS (CAS Option 1) separately to the arrival route options (Runway 16 Options 1–5 and Runway 34 Options 1-3).</p> <p>Each arrival option for Runway 16 and Runway 34 has been assessed in isolation; the assessment of ‘partially met’ for DP7 and DP8 reflects that the options do not offer any opportunity for CAS improvements within the option itself. However, all of the options are compatible with CAS Option 1, which does propose to reduce the volume of CAS.</p> <p>We have therefore updated the wording of the route option assessments for DP7 and DP8 to reflect that CAS Option 1 would be compatible with the options.</p> <p>This update does not affect the ‘partially met’ status of the assessments nor does it affect the outcome of the Design Principle Evaluation.</p>	<p>Clarification text added to DP7 and DP8 Assessments highlighted blue</p>

Option Name	The airspace design and its operation must be as safe or safer than today for all airspace users that are affected by the airspace change	Subject to the overriding design principle of maintaining a high standard of safety, the highest priority principle of this airspace change that cannot be discounted is that it accords with the CAA's published Airspace Modernisation Strategy (CAP 1711) and any current or future plans associated with it.	Design options should minimise the change to tracks over the ground of aircraft arriving and departing from Aberdeen.	Design options should investigate the feasibility of steeper approaches for PBN arrivals to reduce the noise footprint of Aberdeen Airport's operation.	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 preference to the most environmentally beneficial option.	Options should not increase the emissions footprint of aircraft operating at Aberdeen by reviewing existing controlled airspace boundaries and usage of flight paths in the NERL network.	Design the appropriate volume of controlled airspace (CAS) to safely support commercial air transport and release controlled airspace which is not required	Controlled airspace options should ensure there is safe and efficient access for other types of operations, and should explore measures, including classification and flexible use of airspace, where possible and appropriate, to improve access and decrease airspace segregation.	Options shall not reduce and where possible enhance the air traffic movement capacity of Aberdeen Airport.	Ensure the Aberdeen operation is resilient to the withdrawal or failure of navigation aids and systems.	Result
RWY 16 Do Nothing											Option Discontinued
RWY 16 Option 1 Vectors to final approach											Option carried forward to IOA
RWY 16 Option 2 Inner T Bar											Option carried forward to IOA
RWY 16 Option 3 Outer T Bar											Option carried forward to IOA
RWY 16 Option 4 Curved Approach from West											Option carried forward to IOA
RWY 16 Option 5 Curved Approach from East											Option carried forward to IOA
RWY 34 Do Nothing											Option Discontinued
RWY 34 Option 1 Vectors to final approach											Option carried forward to IOA
RWY 34 Option 2 T Bar											Option carried forward to IOA
RWY 34 Curved Approach from East											Option carried forward to IOA
Existing CAS Do Nothing											Option carried forward to IOA
CAS Option 1 Raise portion of CTA 3 to 4500ft											Option carried forward to IOA

Option Image	Option Name	Option Description	Design Principle Evaluation															
			DPI	DP2				DP3	DP4	DP5	DP6	DP7	DP8	DP9	DP10			
		The airspace design and its operation must be as safe or safer than today for all airspace users that are affected by the airspace change		Subject to the overriding design principle of maintaining a high standard of safety, the highest priority principle of this airspace change that cannot be discounted is that it accords with the CAA's published Airspace Modernisation Strategy (AMPS) and any current or future plans associated with it.														
				Maintain and enhance high aviation safety standards	Secure the efficient use of airspace and enable integration	Avoid flight delays by better managing the airspace network	Improve environmental performance by reducing emissions and by better managing noise	Facilitate defence and security objectives										
	RWY 16 Do Nothing	The swatches (yellow) are a week of arrivals to RWY 16. There are no published operations flown, other than on final approach. All arrivals are vectored by ATIS and a closing heading to establish on the localiser. Typically aircraft are joining final approach between 8 - 12nm from touchdown.	The airspace design is expected to be as safe or safer than today with no safety concerns at this time	See methodology - doing nothing would not meet any of the AMS				Option is not expected to result in any changes to tracks over the ground compared to today	Doing nothing means no RNP APCH and therefore no opportunity to investigate PBN arrivals with steeper approaches	There would be no change to the vertical profile or amount of outboard aircraft as a result of this option.	Doing nothing will not change track miles for Aberdeen traffic compared to today	Option is expected to be contained within existing CAS but does not enable a reduction in CAS	Option is not expected to lead to a change in airspace classification or enable flexible use of airspace. PBNs that require a transit of the CT/CTA are always welcome to contact A22 ATC and request a clearance to enter CAS.	Option is not expected to affect the ATM capacity of Aberdeen Airport. We note that any increase enabled by PBN approaches could result in delays and diversions however this is not necessarily a capacity measure.	Option does not provide additional resilience			
	RWY 16 Option 1 Vectors to final approach	This option would continue to see those arrivals wishing to fly an RNP APCH vectored to final approach as they are today. The only difference would be whereas with the ILS, the arrivals have flexibility to where they join final approach from 8nm and beyond, RNP APCH arrivals would be vectored to join final approach in the same location, at the initial fix (IF). This fix has been positioned so those arrivals would join final approach at approximately 8nm, keeping the vectored arrival swatches consistent with the baseline	The airspace design is expected to be as safe or safer than today with no safety concerns at this time subject to satisfactory IP Validation	See DPI	See DP7 and DP8	See DP9 and DP10	See DP3, DP4, DP5, DP6, DP9 and DP10	Option not expected to affect defence and security objectives	Option is expected to result in very minimal changes to tracks over the ground compared to the baseline as aircraft would be vectored to final approach in today. Whilst they will be vectored towards a Fixed Wingpoint (FW) rather than localiser which is more flexible, the low number of arrivals expected to use the PBN Approaches is not expected to result in any concentration of tracks. The IF would be located where the majority of ILS arrivals currently join the LOC	This option would be able to accommodate a 3.2° VPA, however please see the Stage 2A submission document for notes on benefits of steeper VPA versus safety assurances and airline feedback.	This option should enable aircraft to descend continuously and should not inhibit departures from climbing continuity.	This option would not see a change in the typical track miles flown for arriving aircraft compared to the baseline	Option is expected to be contained within existing CAS but the option does not enable a reduction in CAS	Option is not expected to lead to a change in airspace classification or enable flexible use of airspace. PBNs that require a transit of the CT/CTA are always welcome to contact A22 ATC and request a clearance to enter CAS.	The option would be consistent with CAS. Option 1 which appears to show a variation of 3.2° to 3.4°	Option is not expected to affect the ATM capacity of Aberdeen Airport. We note that any increase enabled by PBN approaches helps to reduce delays and diversions however this is not necessarily a capacity measure.	Option provides additional resilience in the event of an ILS, DME or VOR outage	
	RWY 16 Option 2 Inner T Bar	Arrivals wishing to fly an RNP APCH vectored towards an Initial Approach Fix (IAF) positioned on base leg from either side of final approach. The IAFs have been positioned to minimise track miles flown but still aim to be within the most frequently overflown by the existing arrival swatch, consistent with a 3.0nm radius around a point, direct to the Final Approach Fix (FA), overlying the communities of Oldmeldrum and Taverne.	The airspace design is expected to be as safe or safer than today with no safety concerns at this time subject to satisfactory IP Validation	See DPI	See DP7 and DP8	See DP9 and DP10	See DP3, DP4, DP5, DP6, DP9 and DP10	Option not expected to affect defence and security objectives	Option could result in some concentration of tracks but over areas currently routinely overflown by Aberdeen traffic on base leg	This option would be able to accommodate a 3.2° VPA, however please see the Stage 2A submission document for notes on benefits of steeper VPA versus safety assurances and airline feedback.	This option should enable aircraft to descend continuously and should not inhibit departures from climbing continuity.	Taking the typical track miles flown from each of the 2 arrival points that would see this option there would be a cumulative track mile reduction of 2.0nm compared to an arrival from each direction being vectored to an ILS approach in the baseline.	Option is expected to be contained within existing CAS but the option does not enable a reduction in CAS	Option is not expected to lead to a change in airspace classification or enable flexible use of airspace. PBNs that require a transit of the CT/CTA are always welcome to contact A22 ATC and request a clearance to enter CAS.	The option would be consistent with CAS. Option 1 which appears to show a variation of 3.2° to 3.4°	Option is not expected to affect the ATM capacity of Aberdeen Airport. We note that any increase enabled by PBN approaches helps to reduce delays and diversions however this is not necessarily a capacity measure.	Option provides additional resilience in the event of an ILS, DME or VOR outage	
	RWY 16 Option 3 Outer T Bar	Arrivals wishing to fly an RNP APCH vectored towards an Initial Approach Fix (IAF) positioned on base leg from either side of final approach. The IAFs have been positioned to reduce the overflight of the communities of Oldmeldrum and Taverne whilst still being within the existing arrival swatch, consistent with a 3.0nm final.	The airspace design is expected to be as safe or safer than today with no safety concerns at this time subject to satisfactory IP Validation	See DPI	See DP7 and DP8	See DP9 and DP10	See DP3, DP4, DP5, DP6, DP9 and DP10	Option not expected to affect defence and security objectives	Option could result in some concentration of tracks but over areas currently routinely overflown by Aberdeen traffic on base leg	This option would be able to accommodate a 3.2° VPA, however please see the Stage 2A submission document for notes on benefits of steeper VPA versus safety assurances and airline feedback.	This option should enable aircraft to descend continuously and should not inhibit departures from climbing continuity.	Taking the typical track miles flown from each of the 2 arrival points that would see this option there would be a cumulative track mile increase of 0.5nm compared to an arrival from each direction being vectored to an ILS approach in the baseline. Note that this is a net increase of 0.5nm of traffic from just one direction.	Option is expected to be contained within existing CAS but the option does not enable a reduction in CAS	Option is not expected to lead to a change in airspace classification or enable flexible use of airspace. PBNs that require a transit of the CT/CTA are always welcome to contact A22 ATC and request a clearance to enter CAS.	The option would be consistent with CAS. Option 1 which appears to show a variation of 3.2° to 3.4°	Option is not expected to affect the ATM capacity of Aberdeen Airport. We note that any increase enabled by PBN approaches helps to reduce delays and diversions however this is not necessarily a capacity measure.	Option provides additional resilience in the event of an ILS, DME or VOR outage	
	RWY 16 Option 4 Curved Approach from West	Arrivals wishing to fly an RNP APCH that were also equipped with 'Radius to Fix' (RF) functionality vectored towards an Initial Approach Fix (IAF) positioned downwind to the East of final approach. The RF allows aircraft to fly in an arc of fixed radius around a point, direct to the Final Approach Fix (FA), enabling shorter track miles and CO2 reduction. The tracks in the image have been positioned to fly and route between Kintyre, Kintore, Inverurie and Oldmeldrum. Note however that those communities could still be overflown according to the CAA definition of overflight, but the concentration enabled by RF would mean aircraft would very accurately fly around the arc onto final approach. Those communities are currently overflown by arrivals, but the curved path is not within the main arrival swatch on base leg and therefore communities could be expected to experience a change in frequency overflight.	The airspace design is expected to be as safe or safer than today with no safety concerns at this time subject to satisfactory IP Validation	See DPI	See DP7 and DP8	See DP9 and DP10	See DP3, DP4, DP5, DP6, DP9 and DP10	Option not expected to affect defence and security objectives	Option is expected to result in overflight of areas not currently routinely overflown by Aberdeen traffic. In the curved approach would be positioned just east of the existing base leg which is not a usual groundswath area and provide track mile reduction	This option would be able to accommodate a 3.2° VPA, however please see the Stage 2A submission document for notes on benefits of steeper VPA versus safety assurances and airline feedback.	This option should enable aircraft to descend continuously and should not inhibit departures from climbing continuity.	Taking the typical track miles flown from each of the 2 arrival points that would see this option there would be a cumulative track mile reduction of 2.0nm compared to an arrival from the same direction when being vectored to an ILS approach in the baseline.	Option is expected to be contained within existing CAS but the option does not enable a reduction in CAS	Option is not expected to lead to a change in airspace classification or enable flexible use of airspace. PBNs that require a transit of the CT/CTA are always welcome to contact A22 ATC and request a clearance to enter CAS.	The option would be consistent with CAS. Option 1 which appears to show a variation of 3.2° to 3.4°	Option is not expected to affect the ATM capacity of Aberdeen Airport. We note that any increase enabled by PBN approaches helps to reduce delays and diversions however this is not necessarily a capacity measure.	Option provides additional resilience in the event of an ILS, DME or VOR outage	
	RWY 16 Option 5 Curved Approach from East	Arrivals wishing to fly an RNP APCH that were also equipped with 'Radius to Fix' (RF) functionality vectored towards an Initial Approach Fix (IAF) positioned downwind to the East of final approach. The RF allows aircraft to fly in an arc of fixed radius around a point, direct to the Final Approach Fix (FA), enabling shorter track miles and CO2 reduction. The tracks in the image have been positioned to fly and route between Eilo, Pinnacled and Taverne. Note however that those communities could still be overflown according to the CAA definition of overflight, but the concentration enabled by RF would mean aircraft would very accurately fly around the arc onto final approach. Those communities are currently overflown by arrivals, but the curved path is not within the main arrival swatch on base leg and therefore communities could be expected to experience a change in frequency overflight.	The airspace design is expected to be as safe or safer than today with no safety concerns at this time subject to satisfactory IP Validation	See DPI	See DP7 and DP8	See DP9 and DP10	See DP3, DP4, DP5, DP6, DP9 and DP10	Option not expected to affect defence and security objectives	Option is expected to result in overflight of areas not currently routinely overflown by Aberdeen traffic. In the curved approach would be positioned just east of the existing base leg which is not a usual groundswath area and provide track mile reduction	This option would be able to accommodate a 3.2° VPA, however please see the Stage 2A submission document for notes on benefits of steeper VPA versus safety assurances and airline feedback.	This option should enable aircraft to descend continuously and should not inhibit departures from climbing continuity.	Taking the typical track miles flown from each of the 2 arrival points that would see this option there would be a cumulative track mile reduction of 2.0nm compared to an arrival from the same direction when being vectored to an ILS approach in the baseline.	Option is expected to be contained within existing CAS but the option does not enable a reduction in CAS	Option is not expected to lead to a change in airspace classification or enable flexible use of airspace. PBNs that require a transit of the CT/CTA are always welcome to contact A22 ATC and request a clearance to enter CAS.	The option would be consistent with CAS. Option 1 which appears to show a variation of 3.2° to 3.4°	Option is not expected to affect the ATM capacity of Aberdeen Airport. We note that any increase enabled by PBN approaches helps to reduce delays and diversions however this is not necessarily a capacity measure.	Option provides additional resilience in the event of an ILS, DME or VOR outage	

Option Image	Option Name	Option Description	Design Principle Evaluation													
			DP1	DP2		DP3	DP4	DP5	DP6	DP7	DP8	DP9	DP10			
			Subject to the overriding design principle of maintaining a high standard of safety, the highest priority principle of this airspace change that cannot be discounted is that it accords with the CAA's published Airspace Modernisation Strategy (CAP 1711) and any current or future plans associated with it.		Design options should minimise the change to tracks over the ground of aircraft arriving and departing from Aberdeen.		Design options should investigate the feasibility of steeper approaches for PBN arrivals to reduce the noise footprint of Aberdeen Airport's operation.	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 preference to the most environmentally beneficial option.	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.	Design the appropriate volume of controlled airspace (CAS) to safely support commercial air transport and release controlled airspace which is not required	Controlled airspace options should ensure there is safe and efficient access for other types of operations, and should explore measures, including classification and flexible use of airspace, where possible and appropriate, to improve access and decrease airspace segregation.	Options shall not reduce and where possible enhance the air traffic movement capacity of Aberdeen Airport.	Ensure the Aberdeen operation is resilient to the withdrawal or failure of navigation aids and systems.			
			Maintain and enhance high aviation safety standards	Secure the efficient use of airspace and enable integration	Avoid flight delays by better managing the airspace network	Improve environmental performance by reducing emissions and by better managing noise	Facilitate defence and security objectives									
	RWY 34 Do Nothing	The image shows the swaths (yellow) of a week of arrivals to Aberdeen's Westerly runway (34). There are no published centrelines flow other than on final approach and therefore all arrivals are vectored by ATC onto a closing heading to establish on the localiser. Typically, aircraft are joining final approach between 8 and 12nm from touchdown although there are variances to this.	The airspace design is expected to be as safe or safer than today with no safety concerns at this time	See DP1	See DP7 and DP8	See DP9 and DP10	See DP3, DP4, DP5, DP6, DP9 and DP10	Option not expected to affect defence and security objectives	Option is not expected to result in any changes to tracks over the ground compared to today	Doing nothing means no RNP Approaches and therefore no opportunity to investigate PBN arrivals with steeper approaches.	There would be no change to the profiles or inbound of outbound aircraft as a result of this option.	Doing nothing will not change track miles for Aberdeen traffic compared to today.	Option is expected to be contained within existing CAS but does not enable a reduction in CAS.	Option is not expected to lead to a change in airspace classification or enable flexible use of airspace. Pilots that require a transit of the CTN/CTA are always welcome to contact ABZ ATC and request a clearance to enter CAS.	Option is not expected to affect the ATM capacity of Aberdeen Airport. We note that lack of resilience enabled by PBN approaches could result in delays and diversions however this is not necessarily a capacity measure.	Option does not provide additional resilience
	RWY 34 Option 1 Vectors to final approach	Arrivals wishing to fly an RNP APCH vectored to final approach as they are today. The only difference would be whereas with the ILS, the arrivals have flexibility in where they join final approach from 8nm and beyond, RNP APCH arrivals would be vectored to join final approach in the same location, at the Initial Fix (IF). The IF in the image has been positioned to those arrivals would join final approach at approximately 8nm, keeping the vectored arrival swaths consistent with the baseline.	The airspace design is expected to be as safe or safer than today with no safety concerns at this time subject to satisfactory IFP Validation	See DP1	See DP7 and DP8	See DP9 and DP10	See DP3, DP4, DP5, DP6, DP9 and DP10	Option not expected to affect defence and security objectives	Option is expected to result in very minimal changes to tracks over the ground compared to the baseline as aircraft would be vectored to final approach as today. Whilst they will be vectored towards a fixed Waypoint (IF) rather than localiser which is more flexible, the low number of arrivals expected to use the PBN Approaches is not expected to result in any concentration of tracks. The IF would be located where the majority of ILS arrivals currently join the Localiser	This option would be able to accommodate a 3.2° VPA. However please see the Stage 2A submission document for notes on benefits of a steeper VPA versus safety assurances and airline feedback.	This option should enable aircraft to descend continuously and should not inhibit departures from climbing continuously.	This option is not expected to change track mileage compared to the baseline.	Option is expected to be contained within existing CAS but the option does not enable a reduction in CAS. The option would be compatible with CAS Option 1 which proposes to raise a portion of CTA 1 to 4500ft.	Option is not expected to lead to a change in airspace classification or enable flexible use of airspace. Pilots that require a transit of the CTN/CTA are always welcome to contact ABZ ATC and request a clearance to enter CAS. The option would be compatible with CAS Option 1 which proposes to raise a portion of CTA 1 to 4500ft.	Option is not expected to affect the ATM capacity of Aberdeen Airport. We note that increased resilience enabled by PBN approaches helps to reduce delays and diversions however this is not necessarily a capacity measure.	Option provides additional resilience in the event of an ILS, DME, NDB or VOR outage
	RWY 34 Option 2 T Bar	Arrivals wishing to fly an RNP APCH vectored towards an Initial Approach Fix (IAF) positioned on base-leg from either side of final approach. The IAFs in the image have been positioned to minimise track miles flown but still within the most frequently overflown part of the existing arrival swathe, consistent with an 8.9nm final. The T-bar are predominantly over water, but Murchills and Newtonhill would be expected to be overflown to a similar extent as in the baseline.	The airspace design is expected to be as safe or safer than today with no safety concerns at this time subject to satisfactory IFP Validation	See DP1	See DP7 and DP8	See DP9 and DP10	See DP3, DP4, DP5, DP6, DP9 and DP10	Option not expected to affect defence and security objectives	Option could result in some concentration of tracks but over areas currently routinely overflown by Aberdeen traffic on baseleg	This option would be able to accommodate a 3.2° VPA. However please see the Stage 2A submission document for notes on benefits of a steeper VPA versus safety assurances and airline feedback.	This option should enable aircraft to descend continuously and should not inhibit departures from climbing continuously.	Taking the typical track miles flown from each of the 4 arrival points there would be a cumulative track mile reduction of c.2nm compared to an arrival from each direction being vectored to an ILS approach in the baseline.	Option is expected to be contained within existing CAS but the option does not enable a reduction in CAS. The option would be compatible with CAS Option 1 which proposes to raise a portion of CTA 1 to 4500ft.	Option is not expected to lead to a change in airspace classification or enable flexible use of airspace. Pilots that require a transit of the CTN/CTA are always welcome to contact ABZ ATC and request a clearance to enter CAS. The option would be compatible with CAS Option 1 which proposes to raise a portion of CTA 1 to 4500ft.	Option is not expected to affect the ATM capacity of Aberdeen Airport. We note that increased resilience enabled by PBN approaches helps to reduce delays and diversions however this is not necessarily a capacity measure.	Option provides additional resilience in the event of an ILS, DME, NDB or VOR outage
	RWY 34 Option 3 Curved Approach from East	Arrivals wishing to fly an RNP APCH that were also equipped with 'Radius to Fix' (RF) functionality vectored towards an Initial Approach Fix (IAF) positioned downwind to the East of final approach. The RF allows aircraft to fly in an arc of fixed radius around a point, direct to the Final Approach Fix (FAF), enabling shorter track miles and CO2 reduction. The tracks in the image have been positioned to be largely over water and then around Cove Bay. Note however that Cove Bay could still be overflown according to the CAA definition of overflight, but the concentration enabled by RF would mean aircraft would very accurately fly around the arc onto final approach. Those communities are currently overflown by arrivals, but the curved path is not within the main arrival swathe on base leg and therefore communities could be expected to experience a change in frequency overflight.	The airspace design is expected to be as safe or safer than today with no safety concerns at this time subject to satisfactory IFP Validation	See DP1	See DP7 and DP8	See DP9 and DP10	See DP3, DP4, DP5, DP6, DP9 and DP10	Option not expected to affect defence and security objectives	Option is expected to result in overflight of areas not currently routinely overflown by Aberdeen traffic. The majority of the curved approach is over water and therefore has no impact in those areas. However the final part of the arc before joining final approach would result in overflight of some areas not routinely overflown	This option would be able to accommodate a 3.2° VPA. However please see the Stage 2A submission document for notes on benefits of a steeper VPA versus safety assurances and airline feedback.	This option should enable aircraft to descend continuously and should not inhibit departures from climbing continuously.	Taking the typical track miles flown from each of the 2 arrival points that would service this option there would be a cumulative track mile reduction of c.8nm compared to an arrival from the same 2 directions when being vectored to an ILS approach in the baseline. Note however this option would be used by a relatively small number of helicopter arrivals with very few fixed wing arrivals.	Option is expected to be contained within existing CAS but the option does not enable a reduction in CAS. The option would be compatible with CAS Option 1 which proposes to raise a portion of CTA 1 to 4500ft.	Option is not expected to lead to a change in airspace classification or enable flexible use of airspace. Pilots that require a transit of the CTN/CTA are always welcome to contact ABZ ATC and request a clearance to enter CAS. The option would be compatible with CAS Option 1 which proposes to raise a portion of CTA 1 to 4500ft.	Option is not expected to affect the ATM capacity of Aberdeen Airport. We note that increased resilience enabled by PBN approaches helps to reduce delays and diversions however this is not necessarily a capacity measure.	Option provides additional resilience in the event of an ILS, DME, NDB or VOR outage

Design Principle Evaluation																
Option Image	Option Name	Option Description	DP1	DP2	DP3	DP4	DP5	DP6	DP7	DP8	DP9	DP10				
			The airspace design and its operation must be as safe or safer than today for all airspace users that are affected by the airspace change	Subject to the overriding design principle of maintaining a high standard of safety, the highest priority principle of this airspace change that cannot be discounted is that it accords with the CAA's published Airspace Modernisation Strategy (CAP 1711) and any current or future plans associated with it.	Design options should minimise the change to tracks over the ground of aircraft arriving and departing from Aberdeen.	Design options should investigate the feasibility of steeper approaches for PBN arrivals to reduce the noise footprint of Aberdeen Airport's operation.	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 preference to the most environmentally beneficial option.	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.	Design the appropriate volume of controlled airspace (CAS) to safely support commercial air transport and release controlled airspace which is not required	Controlled airspace options should ensure there is safe and efficient access for other types of operations, and should explore measures, including classification and flexible use of airspace, where possible and appropriate, to improve access and decrease airspace segregation.	Options shall not reduce and where possible enhance the air traffic movement capacity of Aberdeen Airport.	Ensure the Aberdeen operation is resilient to the withdrawal or failure of navigation aids and systems.				
				Maintain and enhance high aviation safety standards	Secure the efficient use of airspace and enable integration	Avoid flight delays by better managing the airspace network	Improve environmental performance by reducing emissions and by better	Facilitate defence and security objectives								
	Existing CAS Do Nothing		The airspace design is expected to be as safe or safer than today with no safety concerns at this time	See DP1	See DP7 and DP8	See DP9 and DP10	See DP3, DP4, DP5, DP6, DP9 and DP10	Option not expected to affect defence and security objectives	Option is not expected to result in any changes to tracks over the ground compared to today	N/A	Option is not expected to change CCO or CDO performance compared to today	Option is not expected to change track miles for Aberdeen traffic compared to today	Option is expected to be contained within existing CAS but does not enable a reduction in CAS	Option is not expected to lead to a change in airspace classification or enable flexible use of airspace. Pilots that require a transit of the CTA/CAS are always welcome to contact ABZ ATC and request a clearance to enter CAS.	Option is not expected to affect the ATM capacity of Aberdeen Airport	N/A
	CAS Option 1 Raise portion of CTA 3 to 4500ft	Analysis of surveillance data followed by conversations with Aberdeen ATC identified a section of CTA 3 which was underutilised. It is initially considered that the base of a SW portion of CTA 3 could be raised to 4500ft without any negative impact on the operation. The image illustrates the section of CTA 3 that will be considered for a declassification from Class D to Class G.	Although the airspace design is expected to be as safe or safer than today with no safety concerns at this time, further investigation is required to ensure that the Direct Arrival from Airway P600, ILS/DME RWY 34, LOC/DME RWY 34 and VOR/DME RWY 34 procedures can be contained within the higher base of CAS	See DP1	See DP7 and DP8	See DP9 and DP10	See DP9 and DP10	Option not expected to affect defence and security objectives	Option is not expected to result in any changes to tracks over the ground compared to today as analysis of radar data suggests the profiles or aircraft arriving and departing Aberdeen are currently above this volume.	N/A	Option is not expected to change CCO or CDO performance compared to today	Option is not expected to change track miles for Aberdeen traffic compared to today	Option is expected to enable a reduction in CAS compared to today	Option could enable a change in Classification of airspace to a lower classification	Option is not expected to affect the ATM capacity of Aberdeen Airport	N/A