Cumbernauld Airport Airspace Change

Reintroduction of an Instrument Approach Procedure to Runway 25



CAP1616 Stage 1 Define

Step 1B Design Principles

Reference	Description						
Document Title	Design Principles						
	Cumbernauld Airport ACP Stage 1 Define						
Document Ref ACP-2019-42							
Issue	Issue 2						
Date	20 th March 2020						
Client Name	Cormack Aircraft Services Limited						
Classification	Commercial in Confidence unless redacted						

Issue	Amendment	Date				
Issue 1	First formal issue	15 th March 2020				
Issue 2	Revised following initial CAA feedback to show stakeholder	20 th March 2020				
	influence and decision making rationale.					

Approval Level	Authority	Name					
Allthor	Merlin Aerospace Consulting Ltd						
Reviewer							

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Background

1. Cumbernauld Airport is a small General Aviation aerodrome located on the outskirts of the town of Cumbernauld approximately halfway between the cities of Glasgow and Edinburgh. It opened in 1966; a paved 820m runway was laid in 1988. It sits within a standard surface-to-2338' Air Traffic Zone (ATZ) surrounded by Class G airspace. Immediately above is the Glasgow CTA with a base of 3000'. To the east, the CTA base rises to 3500' and 4 miles to the west lies the Glasgow CTR rising from the surface to 6000'. This, combined with the Edinburgh CTR 10 miles to the east, has traditionally funnelled VFR traffic routing north to south in the vicinity,

Introduction

- 2. From the early 1990s, the airport enjoyed the use of an NDB/DME non-precision instrument approach procedure to runway 25 until a storm destroyed the ground-based navigation equipment in 2013. Since then, Britten Norman Islander aircraft which fly to remote Scottish Islands and are maintained at Cumbernauld have been hampered in meeting the standards of continuity, regularity and capacity due to inclement weather disrupting maintenance-flight arrivals.
- 3. There is an opportunity to reintroduce a Performance Based Navigation (PBN) instrument approach to runway 25 utilising RNAV(GNSS) IAPs. Through European funding, the subject aircraft were equipped with suitable receiver equipment and it is now essential that Cumbernauld Airport satisfies the need to provide their client operators and others with an approach to be used when currently delay or diversion results from poor weather. No new controlled airspace is required to enable this.
- 4. The scale of the change is very small and throughout this process evidence will be presented showing that of the six thousand annual aircraft movements currently recorded,



around 1% may actually use the approach. As a movement is counted as a take-off or a landing (and generally are evenly balanced) a figure of 3000 approaches has been used. In other words, around 0.75 aircraft per week on average will utilise the system. Subject to permission other operators might be given access to the approaches.

Objectives

- 5. Cumbernauld Airport's objective in commencing an Airspace Change Proposal is detailed in the Statement of Need which can be found on the CAA website; https://airspacechange.caa.co.uk/PublicProposalArea?pID=210
- 6. A key building block of this proposal is the development of Design Principles which can be agreed with Stakeholders. This document sets out how, as part of Stage 1 Define, the CS has followed Step 1B Design Principles Appendix D and produced them as detailed below together with an explanation of how the final results were influenced through the engagement process. The document and attachments demonstrate that the Change Sponsor (CS) has followed CAP1616 Stage 1 Define, Step 1B Design Principles to create a list of Design Principles (DPs) with an explanation of how these were influenced through the engagement process. The final Design Principles are in para 26. See Appendix C also.

Step 1A Assessment

7. After the Statement of Need had been filed, an Assessment meeting was held at the offices of the CAA on 15th January 2020. Having been advised that the CAA were satisfied with the outcome of the meeting the minutes and a Timeline were published on the portal. This permitted a start be made on Step 1B with an agreed Gateway target of Friday 27th March 2020. In order to meet this Gateway, CAA has to have sight of material 2 weeks prior meaning all responses had to be received from Stakeholders by Thursday 12th March 2020.

Stakeholders

- 8. Using CAP1616 Appendix D Airspace Design Principles, the CS considered who would be best placed to help form such a list. Due to an historic lack of engagement with the Change Sponsor by both North Lanarkshire and Falkirk local authorities, Scottish Government's Transport Scotland and Members of the Scottish Parliament these bodies were not included. Along with all lowland authorities they are being consulted by Glasgow and Edinburgh Airports and the National Air Traffic Airspace Team about major changes to Commercial Air Transports flights above them in numbers which far outweigh this proposal.
- 9. A group consisting of Air Stakeholders formed largely from a longstanding CAA body called NATMAC the National Air Traffic Management Advisory Committee and based aircraft and helicopter operators together with Glasgow and Edinburgh Airports and National Air Traffic Services were identified as the target audience. See Appendix B for the full list.
- 10. In assembling the list of Stakeholders, it quickly became clear that Edinburgh and Glasgow Airports, along with their Air Traffic Service Providers, had already started major airspace change proposals promoted under the Future Airspace Strategy Implementation (North) project [FASI(N)] which meant they were very keen to engage and cognisant of the process Cumbernauld had just embarked upon. This helped greatly and resulted in good feedback.
- 11. On Wednesday 4th March the CS and Project Manager attended an Airspace Change workshop at Glasgow Airport hosted by the Airport's Airspace Change Consultants. In conversations before and after the meeting which was well attended and included Air



Stakeholders for Cumbernauld, it was clear the willingness of many to engage and support for the proposal.

Timeline

- 12. As this change is of a very minor scale, has been in gestation since 2014, is now subject to support from the UK Department for Transport and facilitation from the CAA, a short window of engagement was chosen in order to meet the Stage 1 Define gateway scheduled for the 27th March 2020. Consequently, an email communication was sent to the stakeholders on Wednesday 18th February asking for a response by Thursday 12th March. No requests to extend the deadline was received.
- 13. Due to a sparse response after 2 weeks, a reminder e-mail was sent out on Sunday 8th March 2020 to the thirty-five that hadn't replied up to date. By Friday 13th March 2020 sufficient numbers had replied to enable this report to be written and submitted to CAA.

Draft Design Principles

- 14. Using a combination of professional judgement and knowledge gained from similar aerodromes that had already passed through this stage, nine draft Design Principles were drawn up and attached to the letter. These were: -
 - 1. The design must be ICAO Doc 8168 PANS OPS compliant, validated and flyable by aircraft types in speed category A and B.
 - 2. The Design must reduce the scattering effect of aircraft arrival tracks resulting from pilot visual navigation and regularise approach paths onto a predetermined, published route to the existing final approach bringing certainty to local residents and other airspace users.
 - 3. The new procedures should not increase the number of people overflown by aircraft participating in the approach.
 - 4. The design should achieve a reduction in visual intrusion.
 - 5. The design should respect existing noise abatement/sensitive areas.
 - 6. The design must accommodate PBN traffic in line with CAA's CAP1711 Airspace Modernisation Strategy.
 - 7. The design should benefit from collaboration with other Scottish airports and NATS to ensure it is compatible with the wider programme of lower altitude and network airspace changes being coordinated by the FASI North programme.¹

Engagement and feedback

15. The letter from the CS setting out the purpose of the engagement with an invitation to participate was issued on the 18th February with an end date of Thursday 12th March. This would allow one day to submit the findings to the CAA. See Appendix A

¹ Note; DP 7 was taken d rect y from both G asgow and Ed nburgh A rport's ACPs.



- 16. As the aim of this ACP is to re-establish a previous instrument approach procedure the draft design principle offered focussed on issues which, in the opinion of the CS, were possibly of interest to the Stakeholders. See Appendix A Table 1.
- 17. Some forty-one organisations were written to with nine replying within a few days. As the majority needed prompting for a response a reminder was issued with one week to go to the Thursday 12th March deadline. A determined effort to contact recipients of the original email garnered a further twenty responses by the original deadline leaving sixteen unaccounted for. See Fig 1
- 18. It was notable that two national representative bodies, the Light Aircraft Association (LAA) and British Microlight Aircraft Association (BMAA) replied immediately with their own pre-prepared national Design Principles which could be checked against individual drafts. No conflicts were found. In a further email from an LAA local representative who had also attended the Glasgow Airport event, further suggestions were made. The British Gliding Association (BGA) also replied promptly adding a new stand-alone DP for inclusion with no objections to the list of draft DPs.
- 19. A reminder was sent out 8th March because so few Stakeholders had replied. Just as the deadline approached a number of responses arrived. None objected to either the proposal or any particular DP. Two key replies arrived from NATS Airspace Team and Glasgow Airport. Each supported the project, didn't object to any particular DP and went on to offer suggested wording to add to the DPs. Both suggested reordering priority unsurprisingly to elevate their proposed DPs to the higher order.
- 20. Due to the delayed response from Stakeholders a 48-hour extension was granted by the CAA to allow for further analysis of the responses and evolution of the final list. See Appendix C Table 2.
- 21. The outturn was that of the twenty-nine responders in total there were 8 "no comment", 12 made specific comments about the draft DPs or offered new ones to add to the list. Three replied that, although members of NATMAC, they didn't comment on individual ACPs and three gave holding replies but never followed up.

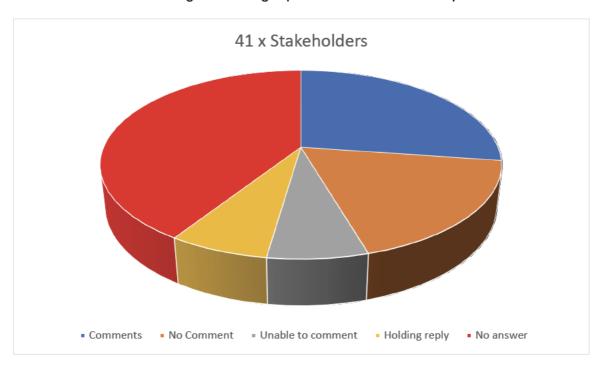




Fig 1 Chart showing proportion of responses.

22. By the end of the deadline 16 organisations had made no reply despite being reminded. See Appendix D for a record of the responses.

Evolution of the Design Principles

22. Appendix D asks for inter alia -

"an explanation of the issues raised during the engagement process and of how stakeholder feedback influenced the final set of principles."

- 23. There were no issues raised by any Stakeholders during the process and all correspondence arrived by email. Just over half of the emails (14) required nothing more than filing. The balance (12) offered new wording for DPs and/or suggested priorities. The CS and PM had no objections to any of the proposals and so the task became one of refinement. This was achieved by amalgamating two of the DPs or by adding a few extra words to existing DPs to reflect views of Stakeholders.
- 24. Table 2 comprises twelve DPs some of which matched in part other suggested wording. Using input from all responses and professional judgement it shows how the PM created amalgamated DPs to reflect several similar suggestions. Furthermore, it was decided to remove draft DPs 3 & 4 as they would be unlikely to be met whatever the final defined routes may be.

Conclusion

- 25. As a result of the excellent quality of many of the suggestions received a new set of Design Principles have been written. Where a new DP came with a suggested rank this was applied without bias. For example, DP1 was suggested by NATS Airspace Team and the CS completely agrees it should be given the highest priority. On the other hand, DP9 is a given as the CAA IFP Regulator will not approve a design that isn't within this principle hence it can be relegated to the bottom. Note: Speed Category B was dropped due to runway length.
- 26. The final DPs are as follows -
 - 1. The design must maintain and, where possible, enhance current levels of safety.
 - 2. The design must not require the introduction of new controlled airspace in order to be implemented.
 - 3. The design must reduce the scattering effect of aircraft arrival tracks resulting from pilot visual navigation and regularise approach paths onto a predetermined, published route to the existing final approach bringing certainty to local residents and other airspace users.
 - 4. The design shall benefit from collaboration with other Scottish airports and NATS to ensure it is compatible with the wider programme of lower altitude and network airspace changes being coordinated by the FASI North programme with adjacent aerodromes.



- 5. The design should minimise the impact on General Aviation including sporting and recreational aviation activity and not deny continued rights of access to existing airspace nor place restrictions on non-participating traffic.
- 6. The design should respect Cumbernauld Airport's existing noise abatement/sensitive areas.
- 7. The design shall not adversely affect designs being developed by Glasgow and Edinburgh Airports in the course of their ACPs.
- 8. The design must accommodate Performance Based Navigation traffic in line with CAA's CAP1711 Airspace Modernisation Strategy.
- 9. The design must be ICAO Doc 8168 PANS OPS compliant, validated and flyable by aircraft types in speed category A.
- 27. The Change Sponsor believes that Stage 1 Define has been completed to the best of abilities and is content with the outcome of the engagement. The final Design Principles are acceptable and will be used to inform the design of the Instrument Approach Procedure.
- 28. The CS is clear that stakeholders will remain as such throughout the ACP process and that they will have further opportunity to comment at subsequent stages including the consultation.

Ends



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Appendix A NATMAC letter

To all NATMAC Members

18th February 2020

Classification: Public

Dear Sirs/Ma'ams,

Cumbernauld Airport PBN Instrument Approach Procedures: ACP-2019-42

On behalf of Mr Composition (Composition), Cumbernauld Airport's Owner and Operator, I'm writing to all NATMAC Group Members to invite you to engage in this CAP1616 Step 1b Airspace Change Proposal process and consider our Design Principles for a new instrument approach procedure. No application to establish Controlled Airspace is planned nor required; the combination of Class G and the existing ATZ will suffice.

Please refer to the CAA Airspace Change Portal for further details: https://airspacechange.caa.co.uk/PublicProposalArea?pID=210

Our proposal is born out of the loss of the longstanding NDB/DME let down which had to be withdrawn due to gale damage affecting the transmitter equipment. Since then, the lack of an approach aid has hampered operations notably the maintenance and support of BN-2 Islander aircraft which serve the Scottish Islands. The Statement of Need explains the background in more detail. Our goal is to establish a PBN approach to runway 25 only and for it to consist of either one straight leg or a compact design using RF turns.

In order to help ensure the needs of the businesses at the Airport are met, balanced against other local aviation stakeholders' concerns, a set of draft Design Principles has been created. These will provide the framework with which we will produce design options for subsequent appraisal at Stage 2.

As I'm sure you're aware, this a very early phase of the whole process and I recognise engaging you on this narrow aspect of the ACP may well raise questions about what any final designs might be. In line with the process Cumbernauld is following, you will be afforded further opportunities to comment during development and then participate in the stakeholder consultation phase later this year.

We would like to hear your thoughts on four aspects of the attached list of draft Design Principles:

- 1) Whether you agree or disagree with any of the Principles
- 2) Any comment against each Principle
- 3) Your priority for each Principle, and
- 4) If you have any additional Principles with your rationale.

Following the Secretary of State for Transport's Direction to the CAA concerning those aerodromes which commenced their application many years ago under CAP1122, we are working with the CAA to seek an accelerated journey through the approvals process using scalability built into the latest version of CAP1616. Therefore, if you would be kind enough to reply by close of play Thursday 12th March 2020, I would be much obliged; to save reminders being sent out please send a no comment response if that's your position.

Should roles within your organisation have changed, please forward to the current NATMAC member.

Please feel free to contact me if you would like to discuss our ACP further.

Project Manager Cumbernauld Airport ACP



Appendix B

List of Stakeholders

Airlines UK

Airspace4All

Airport Operators Association (AOA)

Airfield Operators Group (AOG)

Aircraft Owners and Pilots Association (AOPA)

Airspace Change Organising Group (ACOG)

Association of Remotely Piloted Aircraft Systems UK (ARPAS-UK)

Aviation Environment Federation (AEF)

British Airways (BA)

BAe Systems

British Airline Pilots Association (BALPA)

British Balloon and Airship Club

British Business and General Aviation Association (BBGA)

British Gliding Association (BGA)

British Helicopter Association (BHA)

British Hang Gliding and Paragliding Association (BHPA)

British Microlight Aircraft Association (BMAA) / General Aviation Safety Council (GASCo)

British Model Flying Association (BMFA)

British Skydiving

Drone Major

Edinburgh Airport

General Aviation Alliance (GAA)

Glasgow Airport

Guild of Air Traffic Control Officers (GATCO)

Heavy Airlines

Heliair - Cumbernauld

Helicopter Club of Great Britain (HCGB)

Honourable Company of Air Pilots (HCAP)

Iprosurv

Isle of Man CAA

Light Aircraft Association (LAA)

Low Fare Airlines

Military Aviation Authority (MAA)

Ministry of Defence - Defence Airspace and Air Traffic Management (MoD DAATM)

NATS

Navy Command HQ

PDG Helicopters

Phoenix Flight Training

PPL/IR (Europe)

PPL/IR (Europe)

UK Airprox Board (UKAB)

UK Flight Safety Committee (UKFSC)

United States Air Force Europe

(3rd Air Force-Directorate of Flying (USAFE (3rd AF-DOF))



Appendix C

Design Principles evolution

Table 1	showing original draft principles as circulated on 18 th February 2020
Rank	Design Principle
1	The design must be ICAO Doc 8168 PANS OPS compliant, validated and flyable by aircraft types in speed category A and B.
2	The design must reduce the scattering effect of aircraft arrival tracks resulting from pilot visual navigation and regularise approach paths onto a predetermined, published route to the existing final approach bringing certainty to local residents and other airspace users.
3	The new procedures should not increase the number of people overflown by aircraft participating in the approach.
4	The design should achieve a reduction in visual intrusion.
5	The design should respect existing noise abatement/sensitive areas.
6	The design must accommodate PBN traffic in line with CAA's CAP1711 Airspace Modernisation Strategy.
7	The design should benefit from collaboration with other Scottish airports and NATS to ensure it is compatible with the wider programme of lower altitude and network airspace changes being coordinated by the FASI North programme.



		Cumbernauld Airport CAP1616 Step 1B
Table 2	showing a	amended existing principles post stakeholder feedback
Rank	Previous	Design Principle
7	1	The design must be ICAO Doc 8168 PANS OPS compliant, validated and flyable by aircraft types in speed category A.
3	2	The design must reduce the scattering effect of aircraft arrival tracks resulting from pilot visual navigation and regularise approach paths onto a predetermined, published route to the existing final approach bringing certainty to local residents and other airspace users.
1	3	deleted
1	4	deleted
6	5	The design should respect existing noise abatement/sensitive areas.
10	6	The design must accommodate PBN traffic in line with CAA's CAP1711 Airspace Modernisation Strategy.
4	7	The design shall benefit from collaboration with other Scottish airports and NATS to ensure it is compatible with the wider programme of lower altitude and network airspace changes being coordinated by the FASI North programme.
8	New	The design shall not adversely affect designs for the wider network or local designs being developed by Glasgow and Edinburgh Airports in the course of their ACPs.
9	New	The design must be compatible with the FASI(N) route network and be coordinated with adjacent aerodromes.
5	New	The design must minimise the impact on GA including sporting and recreational aviation activity and not deny continued rights of access to existing airspace.
2	New	The design must not require the introduction of new controlled airspace in order to be implemented.
1	New	The design must maintain and where possible enhance current levels of safety.



		Cumbernauld Airport CAP1616 Step 1B - Final
Table 3	Final prin	ciples in priority order.
D1	D	Desire Diagram
Rank	Previous	Design Principle
1	New	The design must maintain and, where possible, enhance current levels of safety.
2	New	The design must not require the introduction of new controlled airspace in order to be implemented.
3	2	The design must reduce the scattering effect of aircraft arrival tracks resulting from pilot visual navigation and regularise approach paths onto a predetermined, published route to the existing final approach bringing certainty to local residents and other airspace users.
4	7	The design shall benefit from collaboration with other Scottish airports and NATS to ensure it is compatible with the wider programme of lower altitude and network airspace changes being coordinated by the FASI North programme with adjacent aerodromes.
5	New	The design should minimise the impact on General Aviation including sporting and recreational aviation activity and not deny continued rights of access to existing airspace nor place restrictions on non-participating traffic.
6	5	The design should respect Cumbernauld Airport's existing noise abatement/sensitive areas.
7	New	The design shall not adversely affect designs being developed by Glasgow and Edinburgh Airports in the course of their ACPs.
8	6	The design must accommodate Performance Based Navigation traffic in line with CAA's CAP1711 Airspace Modernisation Strategy.
9	1	The design must be ICAO Doc 8168 PANS OPS compliant, validated and flyable by aircraft types in speed category A.

Note: the colours highlight how DPs moved from Table 2 to Table 3.



Appendix D

Engagement Record

Cumbernauld Airport CAP1616 Step 1E	Engagement record sheet																
				04 5 1 0000			1.0000										
		nsider a ist of drsft Design Principles he st															
Due to the poor level of response this dea	dine was extended to Sunday 5th Ma	rch 2020 and individual contacts made to try	to garner a wider response	Datesof reminders a	and responses alo	ng with sa ient a	spects of any reply are set	out below									
Organisation		Representative e mail conta	ct	Date of reply	Date of remin	d Date of reply	Comments										
Airlines UK		at jet2.com		NI	08/03/2020	09/03/2020	I have asked the question	on to the Airlines UK member	ership if anybody has any o	bjections or com	ments to make	on the proposed de	esign principals fo	or this airspace chang	е		
Airspace4A1		at airspace4a	ill.org	NI	08/03/2020	3/03/2020	We have no objections to	o the proposal									
Airport Operators Association (AOA)		at Itn.aero		NI	08/03/2020		Nil										
Airport Operators Association (AOA)		at humberair	co uk	NI	08/03/2020	09/03/2020	I am no longer the AOA's	s smaller Aerodromes mem	ber on NA MAC								
Airfield Operators Group (AOG)		at oldbuck co	m	NI	08/03/2020	08/03/2020		e in your previous and hop		ns							
Aircraft Owners and Pilots Association (AC	OPA)	at aopa co uk		NI	08/03/2020	/03/2020	Nil										
Airspace Change Organising Group (ACC	(G)	at acog aero		8/02/2020	Not req'd		Owing to our position as	an independent and impart	ial organisation with regard	to ACPs it would	not be approp	riate for ACOG to re	espond at this po	int			
Association of Remotely Piloted Aircraft Sy	stems UK (ARPAS UK)	at arpas uk		NI	08/03/2020		Nil										
Aviation Environment Federation (AEF)		at aef org uk		NI	08/03/2020		Nil										
British Airways (BA)		at ba com		NI	08/03/2020		Nil										
BAe Systems		at baesystem	ns com	NI	08/03/2020		Nil										
British Air ine Pilots Association (BALPA)		at balpa org		NI	08/03/2020		Nil										
British Air ine Pilots Association (BALPA)		at balpa org		NI	08/03/2020	0/03/2020		comment spec fically on th	is airspace change engage	ment but is suppo	ortive of the de:	sign principles					
British Ba loon and Airship Club		at btinternet o	om	NI	08/03/2020		Nil										
British Business and General Avia ion Ass	ociation (BBGA)	at bbga aero		NI	08/03/2020	08/03/2020	Nil										
British Gliding Association (BGA)		at giding co u		04/03/2020	Not req'd			to minimise impact on GA i									
British Helicopter Association (BHA)			opterassociation org	8/02/2020	08/03/2020	3/03/2020											I and I expected them to give
British Hang G iding and Paragliding Assoc		at bhpa co uk		NI	08/03/2020	3/03/2020		CP sponsors should plan G				ng and recreational	aviation and to e	nsure their continued	right of access to he	airspace	
British Microlight Aircraft Association (BMA	A) / General Aviation Safety Council (9/02/2020	Not reg'd			response which sets out h	e BMAA's position for ACP	design Principles							
British Model Flying Association (BMFA)		at bmfa org		NI	08/03/2020		Nil										
British Skydiving		at britishskyd		NI	08/03/2020		Nil										
Drone Major		at dronemajo		9/02/2020	Not reg'd		Nil										
Edinburgh Airport		at edinburgh		NI	08/03/2020	3/03/2020				ightforward As th	e new approac	ch procedure will re	main outside cor	tro led airspace and b	e infrequently used	have no objection	his is an appropriate solution
General Aviation Aliance (GAA)		at yahoo co u		NI	08/03/2020	09/03/2020		C I support the comments									
Glasgow Airport		at glasgowai	rport.com	NI	08/03/2020	0/03/2020		edback on the Cumbernaul									
Guld of Air raffic Control Officers (GA C	(0)	at gatco org		NI	08/03/2020	3/03/2020		response from Vice Presid									
Heavy Airlines		at fly virgin co	om	20/02/2020	Not req'd			ACP has no impact on or fo	r commercial air transport	operations at Gla	sgow Intl Airpor	rt then on behaf of	the NA MAC H	eavy Airlines" I have	no comment		
Heliair Cumbernauld		at heliar.com		NI	08/03/2020		Nil										
Helicopter Club of Great Brtain (HCGB)		at ryelands n	et	NI	08/03/2020	08/03/2020		ent approach in Class G ai									
Honourable Company of Air Plots (HCAP)		at airp lots or	1	NI	08/03/2020	/03/2020		al for comment w thin the Ai	r Pilots none came back to	me with commer	nts so you sho	uld assume that we	have none at this	s time			
Iprosurv		limited@gma	l com	NI	08/03/2020		Nil										
Isle of Man CAA		at gov im		NI	08/03/2020		Nil										
Light Aircraft Association (LAA)		at laa uk com		8/02/2020	Not req'd			raft submission for the Curr	bernauld ACP as requeste	d							
Low Fare Air ines		at easyJet co		NI	08/03/2020		Nil										
Military Aviation Authority (MAA)		at @mod gov		NI	08/03/2020		Nil										
Ministry of Defence Defence Airspace ar NA S	nd Air rattic Management (MoD DAA	M) at mod gov u	k	NI	08/03/2020	3/03/2020		ent on your design principle									
NA S		at nats co uk		NI	08/03/2020	3/03/2020	NA S supports and agre	ees with all seven draft Des	ign Principles asides from	n DP7 covered b	elow and do	not have any comm	nents or suggeste	d changes to them			
				NI	08/03/2020												
Navy Command HQ		at mod gov u		NI	08/03/2020		Nil										
PDG Helicopters		at pdghelicop		NI	08/03/2020		Nil										
Phoenix Fight raining		at hotmail.co	im	NI	08/03/2020		Nil										
PPL/IR (Europe)		at pp ir org		NI	08/03/2020	5/03/2020		e to estab ish GNSS IAPs a	t EGPG								
PPL/IR (Europe)		at tdn email		NI	08/03/2020		Nil										
UK Airprox Board (UKAB)		at airproxboa		8/02/2020	08/03/2020	09/03/2020		IA MAC my close affliation									
UK Flight Safety Committee (UKFSC)		at ukfsc co u	k	9/02/2020	Not reg'd			ew on prior ties the draft De				h to base the PBN p	procedure and I	note in particular the i	ntention to collaborat	with the FASI(N) w	ork
United States Air Force Europe	E (3rd AF DOF))	atus af mil		NI	08/03/2020	0/03/2020	As such please accept t	his email as a USAFE UK'	No Comment' response to	your CAP 6 6 St	ep b						



Appendix E

Typical Britain Norman Islander aircraft which are maintained at Cumbernauld.

