Edinburgh Airport
Where Scotland meets the world

Edinburgh Airport Airspace Change Programme 2019

Step 1B Design Principles – Appendices D – R

V2

Contents

Appendix D – Written question S5W-26030, Scottish Parliament

Question S5W-26030: Rachael Hamilton, Ettrick, Roxburgh and Berwickshire, Scottish Conservative and Unionist Party, Date Lodged: 29/10/2019 R

To ask the Scottish Government how it is encouraging more long-haul flights from Scottish airports.

Answered by Michael Matheson (07/11/2019):

The Scottish Government adopts a Scotland-wide approach to route development. This cross Government partnership involving Transport Scotland, Scottish Development International and VisitScotland, works closely with Scotland's airports to provide support to airlines in a way which can be instrumental in securing new routes or expanding an existing service.

The Scottish Government provides support in the form of attractive cooperative marketing packages and market intelligence and data on the potential of the Scottish market. Additional support can be considered for airlines which wish to base aircraft in Scotland considering the economic benefits, including job creation, that comes with such a development.

Improving Scotland's air connectivity is one of this Government's top priorities, with a focus on routes that are important for business and inbound tourism. In recent years, our partnership with Scotland's airports has helped secure new links between Scotland and Doha, Dubai, Boston, Chicago, Washington, New York, Philadelphia, Beijing and a number of European cities.

Now, more than ever, we need to make it easy for Scotland to do business with the rest of the world and improving air connectivity is key to that. The Scottish Government will continue to promote Scotland as a destination which can sustain more direct international air services and better global hub connectivity and will continue to work with all Scotland's airports to achieve these objectives.

Current Status: Answered by Michael Matheson on 07/11/2019

Source:
https://www.parliament.scot/parliamentarybusiness/28877.aspx?SearchType=AdvanceandReferenceNumbers=S5W-26030andResultsPerPage=10

Appendix E – DAP1916/ Statement of Need

DAP 1916 - Statement of Need: Intended Change to Notified Airspace

This form may be used to provide information to the CAA about an intended change. Once this form is completed, then please submit it by clicking the button at the end of this form.

1. Change Title

Please enter a title for this intended change, (max 80 characters): *

Edinburgh Airport Airspace Change Programme

2. Change Sponsor Details

Please select the appropriate category and complete. *

- (•) A Company
- ( ) An Unincorporated Association or other body
- ( ) Individual (including sole traders and partnerships)

2a. A Company

Registered Company name (in full) *
Edinburgh Airport Limited

Registered Company Number
SC0966223

Country of Company Registration

Registered Office Address
Edinburgh Airport, Edinburgh

Postcode
EH12 9DN

E-mail
communications@edinburghairport.com

Trading name (if applicable)

Trading Address (primary site)

Country
Scotland

Postcode
EH12 9DN

Website address
www.edinburghairport.com

Primary Point of Contact Name *
[redacted]

Telephone *
[redacted]

E-mail *
[redacted]

Secondary Point of Contact Name
[redacted]

Telephone
[redacted]

E-mail
[redacted]

3. Independent Aviation/Airspace Consultancy

☐ Is an Independent Aviation/Airspace Consultancy involved in this proposal?

4. Summary of Intended Change

Please use the check boxes below to indicate the nature of the intended change(s): *

☐ Flight Information Region (ENR 2.1)	☐ Upper Information Region (ENR 2.1)	☐ Terminal Control Area (ENR 2.1)
☐ Other Regulated Airspace (ENR 2.2)	☑ Lower ATS Routes (ENR 3.1)	☐ Upper ATS Routes (ENR 3.2)
☑ Area Navigation Routes (ENR 3.3)	☐ Helicopter Routes (ENR 3.4)	☑ Other Routes (ENR 3.5)
☑ En-Route Holding (ENR 3.6)	☑ Name-Code Designators (ENR 4.4)	☐ Prohibited/Restricted/Danger Areas (ENR5.1)
☐ Military Exercise/ Training Areas (ENR 5.2)	☐ Other Danger/ Hazard (ENR 5.3)	☐ Aerial/Sporting/Recreational Activities (ENR 5.5)
☐ Bird Migration/Sensitive Fauna (ENR 5.6)	☐ ATS Airspace (AD-EGXX-2.17)	☑ Flight Procedures (AD-EGXX-2.22)
☐ ATCSMAC (AD-EGXX-5)	☑ Standard Instrument Departure (AD-EGXX-6)	☑ Standard Arrival Route (AD-EGXX-7)
☑ Instrument Approach Procedure (AD-EGXX-8)	☐ Visual Reference Point -	☐ Release of Controlled Airspace -

Please use the check box below to indicate whether this is an administrative change:

☐ Does your proposal represent an administrative change to the Aeronautical Information Publication (AIP)?

5. Statement of Need

Please provide a brief 'Statement of Need' expressing explicitly what airspace issue or opportunity you are seeking to address. Your Statement of Need should clearly articulate the current situation, the issue (and the cause of it) to be resolved or the opportunity to be addressed along with any other factors or requirements. *

The existing situation:

Edinburgh Airport is in West Edinburgh close to the Firth of Forth. It has several communities close to Edinburgh at each end of the runway. It has a single runway (06/24) with six conventional SID routes and three STARs:

- SID: GOSAM1C departure 24 for jet aircraft only;
- SID: GOSAM1D departure 06 for jet aircraft only;
- SID: TALLA6C departure 24 for jet and non-jet aircraft;
- SID: TALLA6D departure 06 for jet and non-jet aircraft;
- SID: GRICE3C departure 24 for jet and non-jet aircraft;
- SID: GRICE4D departure 06 for jet and non-jet aircraft;
- STAR: STIRA1A;
- STAR: TWEED2B / 2C / 2D / EDN2E; and
- STAR B-RNAV: TWEED 3A / EDN 3A.

Aircraft departing to the north of Edinburgh occasionally fly a non-SID route via PIPAR / airway N864.

The pattern of traffic on any day depends on the direction of the wind, since this determines which direction of the runway is used. The prevailing wind is from the south west, in 2018 runway 24 was used, 69% of the time and runway 06 was used 31% of the time.

Edinburgh Airport is Scotland's capital city airport. The strong demand for services makes it Scotland's busiest airport flying to more destinations that any other Scottish airport.

The issue or opportunity to be addressed:

Edinburgh Airport is growing fast. In 2016 our independent economic impact study showed the 11.2m passengers we had then equated to £1bn GVA and 23,000 jobs across Scotland – that's 2,000 jobs and £90m GVA for every million passengers. Since that study, we've added 3.1m passengers, handling 14.3m in 2018. And that suggests we've generated an additional 6,000 jobs and another £270m GVA across Scotland.

Our long-haul connectivity is increasing with the Middle East and China the recent additions to our services – our long-haul growth rates are one of the quickest in the UK, from one long haul service in 2012 to 14 in 2018. Our growth targets continue to be ambitious, with more long-haul routes to new destinations as well as increased short haul and European services on our short-term and long-term plans. Our masterplan projects passenger growth to 20 million by 2035.

The benefits of this network to Scotland's position in world markets and therefore to our economy are substantial. That growth is itself reflective of Scotland's economic performance and our attractiveness as a destination for visitors from the four corners of the world. And it is because of this attractiveness and our global reputation that we believe that this growth will continue.

The growth, in the main, is driven by visitors to Scotland. The appetite for people from across the globe to visit our country remains undiminished. This growth, assisted by progressive Scottish Government policies including the halving of Air Passenger Duty, will mean that aviation and Edinburgh Airport will continue to be one of the main drivers of the Scottish economy.

With this growth comes the need to maximise the frequency at which aircraft can depart in succession. The frequency at which aircraft can depart in succession is determined by wake vortex (or flow of air behind aircraft) and by the route design. Currently due to the design of the departure routes, the standard departure interval between successive departures is two minutes, but can be up to five minutes, depending on aircraft performance, which is impacted by a number of factors including type, age, weight, and passenger load. These departure intervals often result in delays at busy times, especially during the first wave of departures in the morning usually between 0600-0700. Hence the initial portion of the departure routes is a bottle-neck which limits the runway capacity and causes delays. The current declared runway capacity is a maximum of 42 movements per hour.

The proposal:

We propose to introduce a number of RNAV1 Standard Instrument Departures (SIDs), RNAV1 Arrival Transitions and RNAV5 STARs in order to meet technical requirements and improve airspace efficiency and capacity. Our target runway capacity is 50 movements per hour.

These new routes will take advantage of improved navigational capability, which will allow better planning and increase the capacity of the airspace and the runway, particularly in peak times. This may also minimise the environmental impacts of flights in terms of the total number of people overflown, as well as when and how often they are overflown – while also cutting average CO2 emissions.

We believe an improved airspace with the right flight paths and technology for Edinburgh Airport will ensure our airport can meet existing and future demand by increasing the capacity of its runways and allow flights to depart with fewer delays and environmental impacts.

The airspace change will follow the regulatory process for changing airspace design, including community engagement requirements, set out by the CAA in CAP1616.

We will ensure that our proposal complies with Resolution 36/23 ratified by the 36th International Civil Aviation Authority Organisation (ICAO) General Assembly, and with the UK Government's Future Airspace Strategy (FAS), by introducing routes and procedures compliant with Performance Based Navigation (PBN) criteria. We understand that airports are required to make these changes by 2024. We will also ensure that our designs are safe and meet ICAO design and CAA requirements and that they work within the broader aviation framework in Scotland and North England. Due the location of the airport, we will work with environmental agencies to ensure future designs take into consideration Scotland's natural landscape.

Please specify the altitudes (where applicable) affected by your Statement of Need:

- [x] Surface to below 4,000 feet
- [x] 4,000 feet to below 7,000 feet
- [ ] 7,000 feet to below 20,000 feet
- [ ] 20,000 feet and above

6. Proposed Dates

Please provide your proposed date for the submission of your change proposal to the CAA. This should be the date on which you are expecting to submit your formal airspace change proposal to the CAA. Please note that your formal airspace change proposal must be submitted alongside all of the supporting documentation required by the CAA to complete our regulatory assessment of the Proposal; consequently the date on which you place in this field should represent the point at which you will have the formal airspace change proposal **and all** of the supporting documentation ready to submit to the CAA. This date is required to assist us with the allocation of the required CAA-resource to your proposal and therefore it is a key date in our planning process. Whilst we will try to accommodate your specified timescales, there may be occassions where it is not possible for us to do so given the large number of projects that are already 'in process' You should also note that any changes to the above date may impact our ability to process your airspace change proposal within your preferred timescales. It should also be noted that from September 2018 any amendments submitted by a Data Originator or ANSP for onward promulgation in the UK IAIP will be subject to the Aeronautical Data Quality Requirements. See Commission Regulation (EU) No 73/2010 (updated by 1029/2014) and CAP 1054: Aeronautical Information Management guidance material for further information. These requirements will be discussed in greater detail during the course of your initial meeting with the CAA.

- [x] Confirmation of Understanding *

Please provide your proposed date for the submission of your change proposal to the CAA. *

09 Mar 2020

Please provide your proposed AIRAC effective date *

AIRAC 03/2021

If this change forms a part of a modular airspace change proposal please provide the relevant title and further information below (Note we will require individual submissions for each module) . *

No

If this change requires the implementation of a Five-Letter Name Code (5LNC) please specify your requirements below: *

This will be determined when first draft designs are completed.

Appendix F – Assessment meeting agenda

Agenda

Date: Monday, 17 June 2019

Meeting title/subject: EAL Airspace Change Assessment Meeting

Meeting location: Aviation House, 2nd Floor, ISP Large Meeting Room

1. Introductions
2. Statement of Need discussion and review
3. Issues and/or opportunities arising from proposed change – including FASI (N)
4. Provisional indication of the level and process requirements
5. Proposed approach and timeline
6. Next steps
7. AOB

Appendix G – Assessment meeting minutes

**MINUTES OF EDINBURGH AIRPORT ASSESSMENT MEETING
HELD AT AVIATION HOUSE, GATWICK AIRPORT
ON MONDAY, 17 JUNE 2019**

Distributed to CAA and published on the CAA Portal.

CAA = Civil Aviation Authority
EAL = Edinburgh Airport Limited

Present	Appointment	Representing
[redacted]	Airspace Regulator (Technical)	CAA
	Principal Airspace Regulator	CAA
	Airspace Regulator (Engagement & Consultation)	CAA
	Airspace Regulator (Engagement & Consultation)	CAA
	Airspace Regulator (Environment)	CAA
	Principal Airspace Regulator (via conference call)	CAA
	Airspace Regulator (Economist) (via conference call)	CAA
	Airspace Change Sponsor	EAL
	Engagement & Consultation workstream lead	EAL
	Project Manager	EAL

CAA Assessment Meeting Opening Statement

CAA noted that the Statement of Need and Meeting Agenda were received in advance of the Assessment Meeting and confirmed that these documents would be published together with the presentation material and minutes of the meeting on the CAA website. CAA explained the purpose of the meeting and confirmed that the meeting was an Assessment Meeting and not a Gateway. The CAA reinforced that the Sponsor was required to provide a broad description of their proposed approach to meeting the CAA's CAP 1616 requirements, but the CAA was not deciding whether the proposed approach met the detailed requirements of the CAA's process at this stage. The purpose of the Assessment Meeting (set out in detail in CAP 1616) was broadly:

- for the Sponsor to present and discuss their Statement of Need,
- to enable the CAA to consider whether the proposal concerned falls within the scope of the formal airspace change process,
- to enable the CAA to consider the appropriate provisional Level to assign to the change proposal.

Additionally, the Sponsor was required to provide information on how it intended to proceed to fulfil the requirements of the airspace change process and to provide information on timescales. Lastly, the sponsor was required to provide information on how it intended to meet the engagement requirements of the various stages of the airspace change process.

	ACTION
Item 1 – Introduction • The CAA team introduced themselves and their specialty areas for the CAP1616 process. • The EAL team introduced themselves and the role they play for Edinburgh Airport's Airspace Change Programme.	No action required.

Version 1.1 January 2018 Assessment Meeting Minutes CAP1616: Airspace Design

Item 2 – Statement of Need (discussion and review) The EAL team ran through the published statement of need (SON), their presentation (attached) covered: The existing situation at EAL: - Single runway (06/24) with 6 conventional SID routes and 3 STARs (non-SID route PIPAR) - In 2018, runway 24 was used 69% of the time and runway 06 used 31% of the time - Departure interval delays at busy times (peak 06:00 – 07:00) - Declared runway capacity is a max of 42 movements per hour - Edinburgh Airport masterplan figures project growth over the next 20 years, with delays to movements in peak expected to increase in 2021. The CAA queried a statement within the SON referencing growth "assisted by progressive Scottish policies including halving Air Passenger Duty" after the Scottish Government announced they won't be delivering this reduction in policy. EAL advised that since the SON has been lodged, Scottish Government announced they would not be fulfilling this election promise, but EAL's work with tourism organisations still predict tourism growth over coming years even without the assistance from Scottish Government. The CAA asked the airport to amend this statement within the SON. EAL proposed to modernise the airspace by following the CAP1616 process and introduce RNAV1 SIDs, RNAV1 Arrival Transitions and RNAV5 STARs. EAL advised they need to increase capacity to minimise delays during peak times and indicated a target runway capacity of 50 movements per hour. The CAA mentioned that the SON referred to the Future Airspace Strategy (FAS). It was highlighted that this has been replaced by the Airspace Modernisation Strategy (AMS) and, although still referred to by industry as FAS, this is incorrect and also required amendment within the SON. The CAA asked the airport to amend the SON as described above and to publish on the CAA Airspace Change Portal as V2.	
Item 3 – Issues or opportunities arising from proposed change EAL advised of an issue to be addressed will be the accommodation of adjacent airspace structures including those utilised by the MOD and BGA. For the last year, EAL has been working with FASI-N to push the use of the airspace around EAL's dedicated space and have agreed in principle with FASI-N to investigate an opportunity that may allow this. The CAA asked the airport to consider whether its ACP had a dependency upon the FASI-N programme. EAL advised that at this point in time it was an opportunity for investigation and there was currently no dependency on FASI-N.	

Item 4 – Options to exploit opportunities or address issues identified EAL advised the FASI-N opportunity is at an ideas stage and requires further investigative work to develop a concept for testing. EAL will work with FASI-N to ensure the programmes run in parallel.	
Item 5 – Provisional indication of the scale level and process requirements The CAA confirmed that EAL's Airspace Change Programme falls within scope of the CAP 1616 process and is provisionally considered as a Level 1 ACP. The CAA clarified that engagement with key stakeholders is expected in the early stages of the CAP 1616 process; the Consultation Strategy will be required later in the process for submission at the Stage 3 CONSULT Gateway. The CAA also highlighted that Citizen Space would be used during the Stage 3 CONSULT phase. In addition, it was emphasised that clear audit trails / threads are required throughout each stage of the process and that evidence which validates the statements within the summary document submissions will also be required. The CAA provided clarification for Stage 2B in which initial options appraisal needs to be carried out by the sponsor. The CAA expects to see the initial options appraisal applied to all viable options; this should include qualitative and / or quantitative assessment in accordance with CAP1616, the WebTAG guidance and The Green Book. The CAA confirmed that the requirements of the full set of environmental assessment mechanisms, as set out in CAP1616, would need to be used. However, it was also stated that a case could be made for the use, or lack of use, of a particular metric and also for the use of a viable alternative metric should the sponsor require; alternative methods available to the sponsor should not be discounted without engagement with the CAA.	
Item 6 – Provisional process timescales EAL ran through the projected timescales for the programme in line with CAP1616 allowing for paper submissions to the CAA two weeks ahead of each gateway assessment. The CAA advised they require the EAL submissions at least four weeks prior to the agreed gateway meetings – EAL requested the opportunity to review the timescales based on this advice. EAL submitted a revised timeline proposal: • S1 Define - 25/10/19 • S2 Develop & Assess - 28/02/20 • S3 Consult (pre-public consultation) - 29/05/20 • S4 submit proposal - 25/01/21 • S5 - Decide (by CAA) – 26/01/21 – 09/06/21 • ATC training – 30/07/21 to 27/01/22 • Implement - 02/12/21 – 27/01/22 The CAA reviewed the revised timetable and advised that is has been approved by the CAA.	

Item 7 – Next steps Once the CAA reviewed the minutes, they (and any related materials) are to be published on the portal no later than two weeks after this meeting. EAL advised their approach for engagement throughout the process, was to work with focus groups representing community, aviation and representative agencies to develop and test thinking throughout the CAP1616 process. EAL advised that through their lessons learned on previous engagement, that town hall meetings where many attend but only few have a voice, were not constructive so would not be holding this but would instead work with drop in sessions, social media and traditional communication methods to engage stakeholders throughout the programme. The CAA asked to be made aware of when community sessions were being held as they may like to observe if timings allowed. The CAA also encouraged EAL to consider using the engagement and consultation material collected during its previous airspace change proposal to influence an example or draft set of Design Principles to support its Stage 1B engagement activities.	
Item 8 – Any other business n/a.	

ACTIONS ARISING FROM EDINBURGH AIRPORT'S AIRSPACE CHANGE PROGRAMME ASSESSMENT MEETING

Subject	Name	Action	Deadline

Appendix H – DAP1916/ Statement of Need v2

DAP 1916 - Statement of Need: Intended Change to Notified Airspace

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Please select the appropriate category and complete. *

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- ( ) An Unincorporated Association or other body
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2a. A Company

Registered Company name (in full) *
Edinburgh Airport Limited

Registered Company Number
SC0966223

Country of Company Registration

Registered Office Address
Edinburgh Airport, Edinburgh

Postcode
EH12 9DN

E-mail
communications@edinburghairport.com

Trading name (if applicable)

Trading Address (primary site)

Country
Scotland

Postcode
EH12 9DN

Website address
www.edinburghairport.com

Primary Point of Contact Name *
[redacted]

Telephone *
[redacted]

E-mail *
[redacted]

Secondary Point of Contact Name
[redacted]

Telephone
[redacted]

E-mail
[redacted]

3. Independent Aviation/Airspace Consultancy

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☑ Instrument Approach Procedure (AD-EGXX-8)	☐ Visual Reference Point .	☐ Release of Controlled Airspace .

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The proposal:

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We believe an improved airspace with the right flight paths and technology for Edinburgh Airport will ensure our airport can meet existing and future demand by increasing the capacity of its runways and allow flights to depart with fewer delays and environmental impacts.

The airspace change will follow the regulatory process for changing airspace design, including community engagement requirements, set out by the CAA in CAP1616.

We will ensure that our proposal complies with Resolution 36/23 ratified by the 36th International Civil Aviation AuthorityOrganisation (ICAO) General Assembly, and with the UK Government's Airspace Modernisation Strategy by introducing routes andprocedures compliant with Performance Based Navigation (PBN) criteria. We understand that airports are required to make thesechanges by 2024. We will also ensure that our designs are safe and meet ICAO design and CAA requirements and that they workwithin the broader aviation framework in Scotland and North England. Due the location of the airport, we will work with environmentalagendes to ensure future designs take into consideration Scotland's natural landscape.

Please specify the altitudes (where applicable) affected by your Statement of Need:

- [x] Surface to below 4,000 feet
- [x] 4,000 feet to below 7,000 feet
- [ ] 7,000 feet to below 20,000 feet
- [ ] 20,000 feet and above

6. Proposed Dates

Please provide your proposed date for the submission of your change proposal to the CAA. This should be the date on which you are expecting to submit your formal airspace change proposal to the CAA. Please note that your formal airspace change proposal must be submitted alongside all of the supporting documentation required by the CAA to complete our regulatory assessment of the Proposal; consequently the date on which you place in this field should represent the point at which you will have the formal airspace change proposal **and all** of the supporting documentation ready to submit to the CAA. This date is required to assist us with the allocation of the required CAA-resource to your proposal and therefore it is a key date in our planning process. Whilst we will try to accommodate your specified timescales, there may be occassions where it is not possible for us to do so given the large number of projects that are already 'in process' You should also note that any changes to the above date may impact our ability to process your airspace change proposal within your preferred timescales. It should also be noted that from September 2018 any amendments submitted by a Data Originator or ANSP for onward promulgation in the UK IAIP will be subject to the Aeronautical Data Quality Requirements. See Commission Regulation (EU) No 73/2010 (updated by 1029/2014) and CAP 1054: Aeronautical Information Management guidance material for further information. These requirements will be discussed in greater detail during the course of your initial meeting with the CAA.

- [x] Confirmation of Understanding *

Please provide your proposed date for the submission of your change proposal to the CAA. *

25 January 2021

Please provide your proposed AIRAC effective date *

AIRAC 01/2022

If this change forms a part of a modular airspace change proposal please provide the relevant title and further information below (Note we will require individual submissions for each module) . *

No, at this point in time we do not believe there is any dependency on any other airspace change proposals.

If this change requires the implementation of a Five-Letter Name Code (5LNC) please specify your requirements below: *

This will be determined when first draft designs are completed.

Appendix I – Step 1a Pass

From: [redacted]
Sent: 01 July 2019 15:08
To: [redacted]
Cc: [redacted]
Subject: 20190701 ACP-2019-32 Edinburgh Airport Airspace Change Programme

Afternoon [redacted]

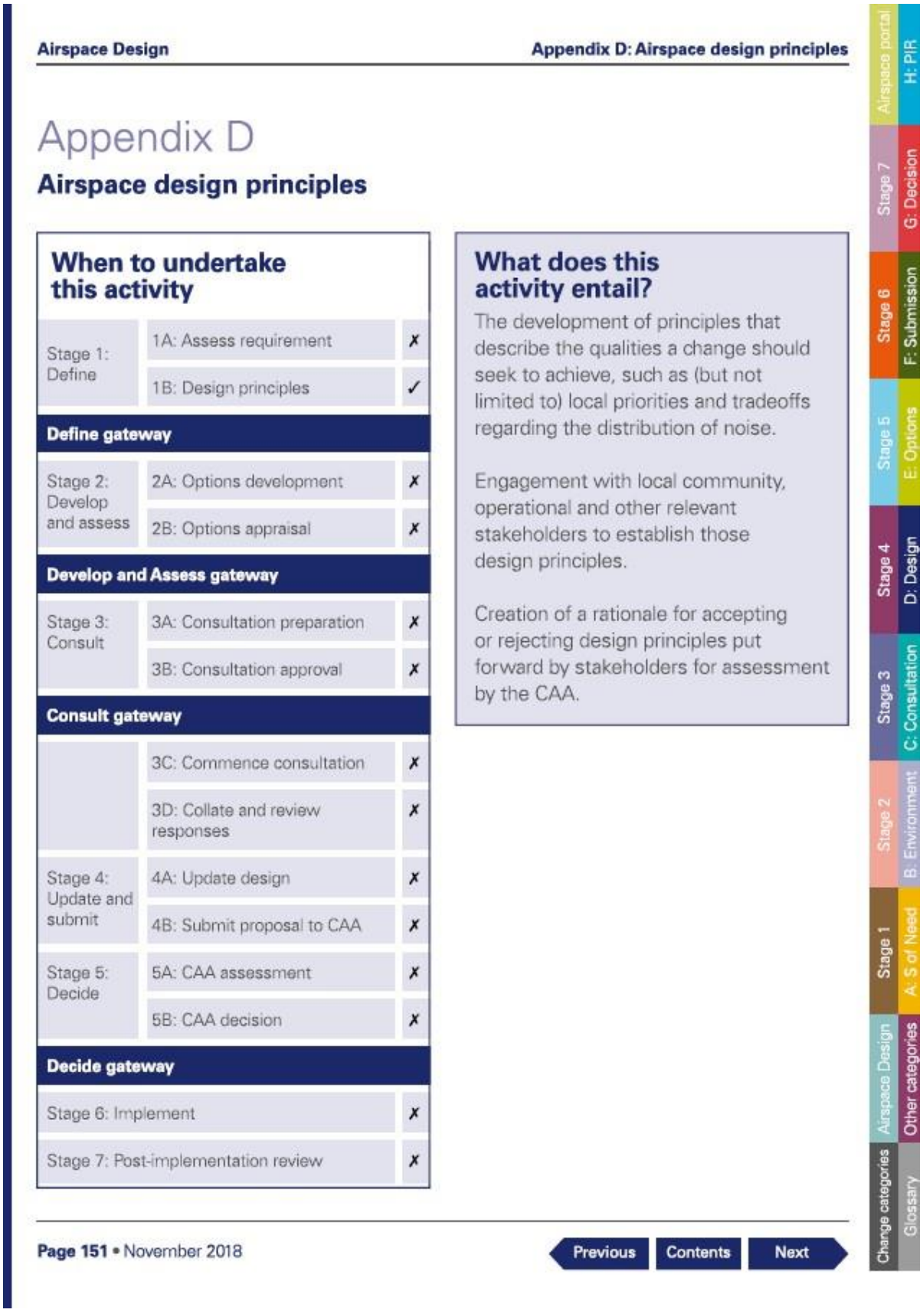
Perfect, thank you very much.

I can formally confirm that, following the publication to the Portal of the documents that you have provided, that is Stage 1a complete. I am told that you are able to progress the Portal to step 1b; please do so but let me know if this isn't the case and I will chase it from this end.

Kind regards,

[redacted]

Appendix J – CAP1616: Appendix D



Appendix D

Airspace design principles

When to undertake this activity

Stage 1: Define	1A: Assess requirement	✗
	1B: Design principles	✓
Define gateway		
Stage 2: Develop and assess	2A: Options development	✗
	2B: Options appraisal	✗
Develop and Assess gateway		
Stage 3: Consult	3A: Consultation preparation	✗
	3B: Consultation approval	✗
Consult gateway		
	3C: Commence consultation	✗
	3D: Collate and review responses	✗
Stage 4: Update and submit	4A: Update design	✗
	4B: Submit proposal to CAA	✗
Stage 5: Decide	5A: CAA assessment	✗
	5B: CAA decision	✗
Decide gateway		
Stage 6: Implement		✗
Stage 7: Post-implementation review		✗

What does this activity entail?

The development of principles that describe the qualities a change should seek to achieve, such as (but not limited to) local priorities and tradeoffs regarding the distribution of noise.

Engagement with local community, operational and other relevant stakeholders to establish those design principles.

Creation of a rationale for accepting or rejecting design principles put forward by stakeholders for assessment by the CAA.

Appendix D

Airspace design principles

Why is this activity included in the process?

D1. Different local areas will have different geographies, population distribution, environmental considerations, economic considerations, and so on. To apply a local context to changes, including the preferences and expectations of different stakeholders, a local conversation is needed to establish a qualitative framework for the design of the change.

Key terms to check in our glossary		
Consultation	Design principles	Engagement
Elected representatives	Feedback	Inform
Local authorities	Non-governmental organisation	Representative group
Respite	Sponsor	Stakeholder

How to undertake this activity

D2. The design principles are an opportunity to combine local context with technical considerations. There are contextual tradeoffs that the change sponsor must consider upfront with stakeholders, in particular with the communities that could be impacted by the change.

D3. The questions a change sponsor might ask stakeholders to inform the development of the principles could include the following (these are offered as an example and this is by no means an exhaustive list):

- are there noise-sensitive buildings that should be avoided, and if so what and where (i.e. hospitals, care homes, schools, higher education establishments, and so on)?
- how should the minimisation of overflight, or of night noise, or the difference between multiple respite routes and concentrated routes be traded off against one another?
- if multiple routes are considered in order to provide respite, what might constitute a sufficient period of respite?
- how should the needs of passengers be considered alongside the needs of communities at different times of day?
- are there areas in which efficiency from a whole airspace perspective or expeditious routeing (shorter or faster routes) take precedence and areas in which other factors should take precedence?

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Appendix D

Airspace design principles

D4. In having this two-way conversation with relevant stakeholders, the change sponsor must be clear about the technical considerations that will inform the development of the designs, including:

- the operational aim of the proposal
- safety constraints or opportunities
- operational constraints or opportunities
- technical constraints or opportunities
- economic constraints or opportunities
- the policy and regulatory framework with which the proposal must comply.

D5. Other than the principle of improving or maintaining safety, these factors are in no way immutable and, as a part of the process for the establishment of the airspace design principles, should be challenged as part of the ongoing dialogue with stakeholders.

Outcome

D6. The outcome of this work will be a shortlist of principles to inform the development of airspace design options and against which they can be qualitatively evaluated. Some of the principles may contradict one another and some may be prioritised over others: this will be an iterative process and a qualitative one rather than a purely numerical exercise with binary answers.

D7. The outcome will also record other design principles that were suggested by stakeholders but not shortlisted for the final set of principles, with reasoning as to why this was the case.

D8. The CAA would therefore expect to receive the following output from this activity:

- a list of those stakeholders engaged
- an explanation of the engagement methods employed
- a chronology of the engagement activity
- the issues raised during the engagement process and evidence of a two-way conversation, i.e. evidence that sponsors considered the principles proposed by stakeholders, that these informed the change sponsor's final set of principles, and that when principles were not included in the final shortlist this was explained to the stakeholder proposing them (see Appendix C for details about the two-way conversation)
- the design principles chosen
- the rationale behind the decision to adopt those principles including evidence as to why any stakeholder group's view has been discounted for these purposes.

Technical design principles

D9. The design of airspace structures and instrument flight procedures that falls subject to the airspace change process must conform to various national and international standards and recommended practices. That said, within that framework, there are many design techniques available to airspace designers. A change sponsor must therefore be able to justify the techniques being applied, especially where those techniques have a direct impact on local communities.

Environmental design principles

D10. The CAA is required to follow the Secretary of State's Air Navigation Guidance 2017. Within that guidance, there is a strong emphasis on taking into consideration local circumstances, especially when considering such matters as the potential value of respite routes. It is vital that the change sponsor takes into consideration the views of local communities when establishing airspace design principles, as set out above.

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Appendix K - Edinburgh Airport engagement strategy

Edinburgh Airport
Where Scotland meets the world

Airspace Change Programme: Engagement strategy

Version 1
August 2019

Contents

A. Introduction

The national government has issued a strategy on airspace usage – *CAP1711 Airspace Modernisation Strategy*. Along with a number of national strategic policies, CAP1711 includes a compulsory element of change for UK airports to redesign new arrival and departure routes using satellite-based navigation standards. CAP1711 also references working with aviation and government partners on wider airspace changes outside of Edinburgh Airport's controlled airspace.

This move is driven by the modernisation of UK-wide air traffic control technology which will help aircraft fly flight paths in a more precise manner – this can result in a more concentrated flight path than the currently flown wider or dispersed flight path.

The position of flight paths has not changed at Edinburgh Airport since the 1970s. The use over the years has changed due to technology advancements in the aircraft, the development of Edinburgh Airport and the destinations Edinburgh Airport serves. This means that some residents in Edinburgh, the Lothians and Fife already receive aircraft overhead and have for a number of years. This Airspace Change Programme is looking at the current location of flight paths and based on the outcome of the consultation and on technical and operational developments, may propose to change the location of flight paths. Therefore, some residents who currently are not overflown, may be overflown if those proposed changes to flight paths are approved by the CAA.

Because of the change in technology, the flying of flight paths currently being dispersed will change to be a more concentrated flight path – this means that even though replicating the existing flight paths with new technology might give the same flight paths, the use of them would create a different impact for those under the flight paths.

As we need to review our flight paths as part of CAP1711, Edinburgh Airport has considered our operations and is taking the opportunity provided by the need to modernise flight paths, to review flight path position and use to maximise our operations and reduce congestion in peak times.

Our development and growth are the result of customer demand – Edinburgh Airport is growing fast, in 2018 we helped 14.3 million passengers which was 1 million more than 2017, and over a five-year period shows 63% growth. Our long-haul connectivity is increasing with the Middle East and China the recent additions to our services. Edinburgh Airport plays an important part in the tourism in Scotland with 50% of our passengers arriving to this country providing the growing market with a steady stream of tourist. Our business growth is good for Scotland – our operations account for 24,000 jobs throughout Scotland and our contribution to the national economic is over £1bn per year.

The frequency at which aircraft can depart in succession is determined by wake vortex (or flow of air behind aircraft) and by the route design. Currently due to the design of the departure routes and CAA safety requirements, the standard departure interval between successive departures is normally two minutes, but can be up to five minutes, depending on aircraft performance classifications. These departure intervals often result in delays at busy times, especially during the first wave of departures in the morning usually between 0600 and0700.

The initial portion of the departure routes is a bottle-neck which limits the runway capacity and causes delays. The current declared runway capacity is a maximum of 42 movements per hour.

We understand that changes to our flight paths will impact people and communities different. Changes may mean that some communities may receive a benefit whilst others might not. While we modernise and grow through this programme, we will do so with a commitment to our communities to lessen community and environmental impact where possible.

B. Background

We ran our initial Airspace Change Programme from 2016-2018. This programme of work included three public consultations with the initial consultation focusing on general areas that flight paths could be located, and the further two public consultations focusing on proposed flight paths options.

These consultation results provided an enormous amount of information from local community groups and stakeholders and informed technical and operational flight path development leading to a submission of an Application for Airspace Change (under previous legislation CAP725) to the CAA in July 2018 with the optimal proposal. The CAA subsequently rejected this application in November 2018.

We restart our Airspace Change Programme in 2019 looking again at the need to change our existing flight paths based on a need to modernise navigation technology and our need to provide an improved airspace design to facilitate future growth and reduce congestion and delays at peak times.

While this new Airspace Change Programme will be conducted under the new guidance CAP1616, we will be using insight and lessons learned from the previous programme and consultations. We will retest our thinking and identify new and emerging issues.

C. Programme team

Sponsor	[redacted]
Programme Working Group	
Expert support (wider teams at each company – key contact listed)	
Additional EAL team as required	

D. Strategy goal

The goal of this engagement strategy is to advise the need to change Edinburgh Airport's flight paths, and to facilitate communication with stakeholders and communities to maximise their involvement and insights in the development of the optimal flight path options for Edinburgh Airport so that they can participate in the Airspace Change Programme.

Our objectives are to ensure:

- we identify the relevant and potentially impacted stakeholders and understand their situation relating to airspace
- our stakeholders have access to information they need to make informed decisions and provide informed inputs
- people who want to ask questions or give insights regarding the Airspace Change Programme have the opportunity to be heard
- people actively participate in the public consultation whether its positive or negative
- CAP1616 stages are followed with each gateway approved.

E. Engagement approach

Due to the staged process of CAP1616 and the development of the programme over a period of time based on previous dependencies, we'll review this engagement strategy so that it is dynamic and reflects the changes throughout the programme, and we'll develop detailed engagement plans for each stage of CAP1616 when beginning that stage in conjunction with relevant and potentially impacted stakeholders.

We'll conduct sentiment analysis by conducting:

- opinion research before our programme begins and conduct it throughout our programme to measure potential changes in attitudes.
- social listening throughout our programme to determine sentiment and hear the conversations from those other audiences who are seldom heard.

We will create a Stakeholder Reference Group (SRG) to further support our engagement through CAP1616 especially Stage 3: Consult. The SRG is a time limited group which will coincide with the CAP1616 process, established to contribute to and comment on the EAL's Airspace Change Programme and how it proceeds through CAP1616.

The SRG will form part of the Consultation Institute's Quality Assurance service. This is an independent, arms-length approach to provide a robust additional level of assurance and scrutiny to enhancing EAL's confidence regarding its approach.

Across all our stakeholders, our approach to engagement will be to:

- develop communication channels that are both open and accessible as well as welcoming two-way communication. We need to talk to our stakeholders and find out how they want to receive communication and what they want to know about.
- make sure our communication is written in plain language, free from jargon and is straight to the point – we want it to be engaging, but it needs to be understood. And we need to make sure the communication is displayed in a way that the message is clear, readable and contributes to strengthening our brand.
- be transparent – delivering the good and bad news in a way that is easily understood.
- regularly monitor communications channels and information and gauge how it's received. Communication channels are valuable tools in engagement and must be used in the right way to add value.
- ensure it informs and brings insight to the ACP.
- provide feedback to our stakeholders to demonstrate how we've applied the inputs they have shared with us.
- make sure our brand is delivered consistently across all stakeholders.

F. Valuing diversity and promoting inclusion

All our engagement activity will be based on our principles of valuing diversity and promoting inclusion. This includes:

- being aware that all our stakeholder groups will include people from diverse backgrounds and with different needs regarding access, language and communication methods so part of engagement is ensuring we hear about these needs and respond with appropriate adjustments
- ensuring plain language, jargon free communication as a standard and providing easy read versions of key communications where possible
- recognising that in promoting inclusion and engagement the opportunities to collaborate with key stakeholders will be maximised
- recognising that where there is respect and understanding about the diversity then there will be a positive effect on engagement and performance.

G. Stakeholders

The key stakeholders are listed below. Though at any one time, an individual can be part of more than one of these groups. Before the Airspace Change Programme begins, we will conduct a stakeholder mapping exercise to understand each relevant and potentially impacted stakeholder.

- Local residents

Edinburgh Airport has around 130,000 aircraft movements a year and our closest residents and neighbours will have a key interest in our review of the location of flight paths and any change in usage.

- Communities under existing flight paths

Edinburgh Airport has a number of flight paths that have been flown since the 1970s. Therefore, some residents in Edinburgh, the Lothians and Fife already receive aircraft overhead and have for a number of years.

- Communities not currently overflown

Edinburgh Airport's current flight paths have been in place since the 1970s. This Airspace Change Programme is looking at the current location of flight paths and based on the outcome of the consultation or on technical and operational developments, may propose to change the location of flight paths. Therefore, some residents who currently are not overflown, may be overflown if proposed changes are approved.

- Community representative groups

There are a number of representative and accountable groups within the community including Community Councils, local authorities, Edinburgh Airport's Noise Advisory Board.

- Diversity representative groups

There are a number of representative groups within communities that represent groups that reflect the nine protected characteristics within the Equality Act. To ensure that our conversation is as inclusive as possible, we recognise these representative groups as a key stakeholder.

- Airlines

We have over 40 airlines that operate at Edinburgh Airport and our airline partners are a key stakeholder in this programme that will review the flight paths they use regularly.

- Aviation industry

There are a number of aviation stakeholders who will have an interest in this Airspace Change Programme including other Scottish airports, RAF, Gliding Clubs and Air Navigation Solutions LTD, provider of air traffic control services at Edinburgh Airport, NATS Prestwick Centre (Scottish Airspace ATC).

- Politicians, the UK and Scottish Government

There are a number of representative and accountable groups within the community including MPs and MSPs, and Scottish Government who have a vested interest in Edinburgh Airport's further, growth and sustainability as well as representing communities who may be impacted.

- Edinburgh Airport people

Edinburgh Airport employs approximately 700 people and works with another 6,000 on campus from a further 100 companies to deliver our operations. Our people have a vested interest in our operations.

- Passengers

With 14.3 million passengers passing through Edinburgh Airport in 2018, passengers are our largest stakeholder group with an interest in where we fly, and our operations involved in these flights.

- Other

Aviation is a key industry in Scotland, and Edinburgh Airport is a key economic contributor and employer in Edinburgh. There may be other stakeholders identified throughout the process who may be relevant and potentially impacted at different stages.

H. Strategy key deliverables

Throughout the Airspace Change Programme, we'll:

- Identify currently overflown communities and surrounding areas
- Identify stakeholders to determine our approach
- Develop a series of communications and events to increase stakeholders' understanding of the CAA requirement for change and proposal to change our flight paths
- Hold design principles engagement activity with key stakeholders taking onboard feedback to develop design options
- Hold options development and options approvals engagement activity with key stakeholders taking onboard feedback to develop proposed flight path options for consultation
- Run pre-consultation engagement activity with key stakeholders taking onboard feedback to develop consultation
- Run a minimum 12-week consultation to hear the community and stakeholder feedback regarding our proposed plans
- Ensure that all our consultation activities are underpinned by inclusion principles ensuring all access needs are met
- Ensure key groups such as the Edinburgh Airport Consultative Committee and Edinburgh Airport Noise Advisory Board are informed throughout the Airspace Change Programme
- Understand all Scottish Government, CAA and DfT requirements around airspace change and obligations are met.

I. Issues

These main issues have been identified that may affect this Engagement Strategy, they are:

- Backlash from stakeholders

Engagement is a two-way relationship which we use to deliver messages, gauge reaction and hear the voice of stakeholders. Sometimes, no matter the strength of the engagement, the message might not be what the audience wants to hear.

Strategy: Ensure messages delivered in an appropriate way to the appropriate audience and that methods are in place to allow and encourage audiences to make their views known.

- Competing stakeholder opinions

Flight paths need to go somewhere, and it means that somewhere people will be overflown. We will encounter many opinions from different stakeholders including those who think their opinion is more important than other stakeholders. It is important to hear them all not just the loudest.

Strategy: Determine strong design principles that are tested with relevant and a wide range of stakeholders to ensure diverse opinion is captured and then to focus priorities.

- Consultation fatigue

Edinburgh Airport has already run three consultations as part of our Airspace Change Programme – in 2016, 2017 and 2018. Even though this is a new Airspace Change Programme, it will be seen as a fourth consultation on the same topic – this may not land well in communities that have been asked their opinion over a number of years.

Strategy: Explain the reasons for the second Airspace Change Programme and create more interesting visuals and ensure that all communication is written in a clear and plain English way that is easy to understand.

- Political influence

The community voice and pressure on local representatives and politicians to lobby the airport and influence the process. This is at times a very strong voice and has previously gathered media attention.

Strategy: Ensure pre-consultation with key stakeholders and communicate our strategy and explain the CAP1616 process. Also explain our approach early to allow engagement and where there is the ability to influence the process.

J. Governance

There are a number of Governance levels to this Engagement Strategy, this is outlined below.

Sponsor	[redacted]
Quality assurance	
Legal	
Executive	
Sub Board Committee	
Board	
CAA	

K. Implementation and evaluation

The Programme Working Group will deliver this strategy working with a number of industry experts. At each stage, there will be a "kick off" meeting to discuss the approach and agree deliverables and responsibilities of the programme. At the end of the stage, there will be a review meeting and lesson's learned session to document any learnings.

L. Risks

We will consider if there are any specific risks at each stage of the programme. These will be addressed in the individual stage engagement plans.

M. Branding

As the CAA's portal is hard to find, we will create a landing page at www.edinbughairport.com/airspace_change. This will be the launch page for the CAA portal which links directly to the Citizen Space website for the consultation. This also allows people to access material from previous consultations if interested.

Our privacy policy will cover information gathered in person, by post or through the CAA Portal/Citizen Space.

N. What's next?

For each stage of the CAP1616 programme, EAL will develop a further appendix with a detailed engagement plan for that stage or step. This document will be updated throughout the programme.

See:

- Appendix 1: 1A Statement of Need
- Appendix 2: 1B Design principles engagement plan

Edinburgh Airport
Where Scotland meets the world

Appendix 1: Step 1A Statement of Need

y be used to provide information to the CAA about an intended change. Once this form is
en please submit it by clicking the button at the end of this form.

1. Change Title

Please enter a title for this intended change, (max 80 characters): *

Edinburgh Airport Airspace Change Programme

2. Change Sponsor Details

Please select the appropriate category and complete. *

- (•) A Company
- ( ) An Unincorporated Association or other body
- ( ) Individual (including sole traders and partnerships)

2a. A Company

Registered Company name (in full) *
Edinburgh Airport Limited

Registered Company Number
SC0966223

Country of Company Registration

Registered Office Address
Edinburgh Airport, Edinburgh

Postcode
EH12 9DN

E-mail
communications@edinburghairport.com

Trading name (if applicable)

Trading Address (primary site)

Country
Scotland

Postcode
EH12 9DN

Website address
www.edinburghairport.com

Primary Point of Contact Name *
[redacted]

Telephone *
[redacted]

E-mail *
[redacted]

Secondary Point of Contact Name
[redacted]

Telephone
[redacted]

E-mail
[redacted]

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4. Summary of Intended Change

Please use the check boxes below to indicate the nature of the intended change(s): *

☐ Flight Information Region (ENR 2.1)	☐ Upper Information Region (ENR 2.1)	☐ Terminal Control Area (ENR 2.1)
☐ Other Regulated Airspace (ENR 2.2)	☑ Lower ATS Routes (ENR 3.1)	☐ Upper ATS Routes (ENR 3.2)
☑ Area Navigation Routes (ENR 3.3)	☐ Helicopter Routes (ENR 3.4)	☑ Other Routes (ENR 3.5)
☑ En-Route Holding (ENR 3.6)	☑ Name-Code Designators (ENR 4.4)	☐ Prohibited/Restricted/Danger Areas (ENR5.1)
☐ Military Exercise/ Training Areas (ENR 5.2)	☐ Other Danger/ Hazard (ENR 5.3)	☐ Aerial/Sporting/Recreational Activities (ENR 5.5)
☐ Bird Migration/Sensitive Fauna (ENR 5.6)	☐ ATS Airspace (AD-EGXX-2.17)	☑ Flight Procedures (AD-EGXX-2.22)
☐ ATCSMAC (AD-EGXX-5)	☑ Standard Instrument Departure (AD-EGXX-6)	☑ Standard Arrival Route (AD-EGXX-7)
☑ Instrument Approach Procedure (AD-EGXX-8)	☐ Visual Reference Point	☐ Release of Controlled Airspace

Please use the check box below to indicate whether this is an administrative change:

☐ Does your proposal represent an administrative change to the Aeronautical Information Publication (AIP)?

5. Statement of Need

Please provide a brief 'Statement of Need' expressing explicitly what airspace issue or opportunity you are seeking to address. Your Statement of Need should clearly articulate the current situation, the issue (and the cause of it) to be resolved or the opportunity to be addressed along with any other factors or requirements. *

The existing situation:

Edinburgh Airport is in West Edinburgh close to the Firth of Forth. It has several communities close to Edinburgh at each end of the runway. It has a single runway (06/24) with six conventional SID routes and three STARs:
- SID: GOSAM1C departure 24 for jet aircraft only;
- SID: GOSAM1D departure 06 for jet aircraft only;
- SID: TALLA6C departure 24 for jet and non-jet aircraft;
- SID: TALLA6D departure 06 for jet and non-jet aircraft;
- SID: GRICE3C departure 24 for jet and non-jet aircraft;
- SID: GRICE4D departure 06 for jet and non-jet aircraft;
- STAR: STIRA1A;
- STAR: TWEED2B / 2C / 2D / EDN2E; and
- STAR B-RNAV: TWEED 3A / EDN 3A.

Aircraft departing to the north of Edinburgh occasionally fly a non-SID route via PIPAR / airway N864.

The pattern of traffic on any day depends on the direction of the wind, since this determines which direction of the runway is used. The prevailing wind is from the south west, in 2018 runway 24 was used, 69% of the time and runway 06 was used 31% of the time.

Edinburgh Airport is Scotland's capital city airport. The strong demand for services makes it Scotland's busiest airport flying to more destinations that any other Scottish airport.

The issue or opportunity to be addressed:

Edinburgh Airport is growing fast. In 2016 our independent economic impact study showed the 11.2m passengers we had then equated to £1bn GVA and 23,000 jobs across Scotland – that's 2,000 jobs and £90m GVA for every million passengers. Since that study, we've added 3.1m passengers, handling 14.3m in 2018. And that suggests we've generated an additional 6,000 jobs and another £270m GVA across Scotland.

Our long-haul connectivity is increasing with the Middle East and China the recent additions to our services – our long-haul growth rates are one of the quickest in the UK, from one long haul service in 2012 to 14 in 2018. Our growth targets continue to be ambitious, with more long-haul routes to new destinations as well as increased short haul and European services on our short-term and long-term plans. Our masterplan projects passenger growth to 20 million by 2035.

The benefits of this network to Scotland's position in world markets and therefore to our economy are substantial. That growth is itself reflective of Scotland's economic performance and our attractiveness as a destination for visitors from the four corners of the world. And it is because of this attractiveness and our global reputation that we believe that this growth will continue.

The growth, in the main, is driven by visitors to Scotland. The appetite for people from across the globe to visit our country remains undiminished. This growth will mean that aviation and Edinburgh Airport will continue to be one of the main drivers of the Scottish economy.

With this growth comes the need to maximise the frequency at which aircraft can depart in succession. The frequency at which aircraft can depart in succession is determined by wake vortex (or flow of air behind aircraft) and by the route design. Currently due to the design of the departure routes, the standard departure interval between successive departures is two minutes, but can be up to five minutes, depending on aircraft performance, which is impacted by a number of factors including type, age, weight, and passenger load. These departure intervals often result in delays at busy times, especially during the first wave of departures in the morning usually between 0600-0700. Hence the initial portion of the departure routes is a bottle-neck which limits the runway capacity and causes delays. The current declared runway capacity is a maximum of 42 movements per hour.

The proposal:

We propose to modernise Edinburgh Airport's flight paths to meet technical requirements and improve airspace efficiency and capacity.

These new routes will take advantage of improved navigational capability, which will allow better planning and increase the capacity of the airspace and the runway, particularly in peak times. This may also minimise the environmental impacts of flights in terms of the total number of people overflown, as well as when and how often they are overflown – while also cutting average CO2 emissions.

existing and future demand by increasing the capacity of its runways and allow flights to depart with fewer delays and environmental impacts.

The airspace change will follow the regulatory process for changing airspace design, including community engagement requirements, set out by the CAA in CAP1616.

We will ensure that our proposal complies with Resolution 36/23 ratified by the 36th International Civil Aviation AuthorityOrganisation (ICAO) General Assembly, and with the UK Government's Airspace Modernisation Strategy by introducing routes andprocedures compliant with Performance Based Navigation (PBN) criteria. We understand that airports are required to make thesechanges by 2024. We will also ensure that our designs are safe and meet ICAO design and CAA requirements and that they workwithin the broader aviation framework in Scotland and North England. Due the location of the airport, we will work with environmentalagencies to ensure future designs take into consideration Scotland's natural landscape.

Please specify the altitudes (where applicable) affected by your Statement of Need:

- [x] Surface to below 4,000 feet
- [x] 4,000 feet to below 7,000 feet
- [ ] 7,000 feet to below 20,000 feet
- [ ] 20,000 feet and above

6. Proposed Dates

Please provide your proposed date for the submission of your change proposal to the CAA. This should be the date on which you are expecting to submit your formal airspace change proposal to the CAA. Please note that your formal airspace change proposal must be submitted alongside all of the supporting documentation required by the CAA to complete our regulatory assessment of the Proposal; consequently the date on which you place in this field should represent the point at which you will have the formal airspace change proposal **and all** of the supporting documentation ready to submit to the CAA. This date is required to assist us with the allocation of the required CAA-resource to your proposal and therefore it is a key date in our planning process. Whilst we will try to accommodate your specified timescales, there may be occassions where it is not possible for us to do so given the large number of projects that are already 'in process' You should also note that any changes to the above date may impact our ability to process your airspace change proposal within your preferred timescales. It should also be noted that from September 2018 any amendments submitted by a Data Originator or ANSP for onward promulgation in the UK IAIP will be subject to the Aeronautical Data Quality Requirements. See Commission Regulation (EU) No 73/2010 (updated by 1029/2014) and CAP 1054: Aeronautical Information Management guidance material for further information. These requirements will be discussed in greater detail during the course of your initial meeting with the CAA.

- [x] Confirmation of Understanding *

Please provide your proposed date for the submission of your change proposal to the CAA. *

25 January 2021

Please provide your proposed AIRAC effective date *

AIRAC 01/2022

If this change forms a part of a modular airspace change proposal please provide the relevant title and further information below (Note we will require individual submissions for each module) . *

No, at this point in time we do not believe there is any dependency on any other airspace change proposals.

If this change requires the implementation of a Five-Letter Name Code (5LNC) please specify your requirements below: *

This will be determined when first draft designs are completed.

Appendix 2: Step 1B Design principles engagement plan

Introduction
Edinburgh Airport is reviewing our flight paths within our controlled airspace (0ft-7,000ft). The UK Government's Future of Aviation Strategy asks all UK airports to modernise the technology used in air traffic control moving to area technology (known as RNAV technology).

The location of flight paths has not changed at Edinburgh Airport since the 1970s. The use over the years has changed due to technology advancements in the aircraft, the development of Edinburgh Airport and the destinations Edinburgh Airport serves. This means that some residents in Edinburgh, the Lothians and Fife already receive aircraft overhead and have for a number of years. This Airspace Change Programme is looking at the current location of flight paths and based on the outcome of the consultation or on technical and operational developments, may propose to change the location of flight paths. Therefore, some residents who currently are not overflown, may be overflown if proposed changes are approved.

Statement of Need
We submitted our Statement of Need with the CAA on 14 April 2019, held our Assessment meeting with the CAA on 19 June 2019 where they asked us to update our Statement of Need. We gained approval of Step 1A: Assess requirements from the CAA on 1 July 2019. Appendix 1 is our Statement of Need v2 as published on the CAA portal.

CAA requirements for engagement at Stage 1B
The CAA have developed CAP1616: Airspace Design – Guidance on the regulatory process for changing airspace design including community engagement requirements. This guidance details a seven-stage approach to applying for airspace change.

Each stage involves stakeholder engagement and must be documented with decisions evidenced. At key points throughout the process, the CAA must assess and evaluate the work to date and approve the programme to move to the next level.

Their Appendix D: Airspace design principles provides more information on why it is included, how to undertake the activity and guidance on the outcome of the activity – below is the CAP1616 Appendix D.


Airspace Design — Appendix D: Airspace design principles

Appendix D

Airspace design principles

When to undertake this activity

What does this activity entail?

The development of principles that describe the qualities a change should seek to achieve, such as (but not limited to) local priorities and tradeoffs regarding the distribution of noise.

Engagement with local community, operational and other relevant stakeholders to establish those design principles.

Creation of a rationale for accepting or rejecting design principles put forward by stakeholders for assessment by the CAA.

Define gateway

Develop and Assess gateway

Consult gateway

Decide gateway

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Appendix D

Airspace design principles

Why is this activity included in the process?

D1. Different local areas will have different geographies, population distribution, environmental considerations, economic considerations, and so on. To apply a local context to changes, including the preferences and expectations of different stakeholders, a local conversation is needed to establish a qualitative framework for the design of the change.

Key terms to check in our glossary

Consultation	Design principles	Engagement
Elected representatives	Feedback	Inform
Local authorities	Non-governmental organisation	Representative group
Respite	Sponsor	Stakeholder

How to undertake this activity

D2. The design principles are an opportunity to combine local context with technical considerations. There are contextual tradeoffs that the change sponsor must consider upfront with stakeholders, in particular with the communities that could be impacted by the change.

D3. The questions a change sponsor might ask stakeholders to inform the development of the principles could include the following (these are offered as an example and this is by no means an exhaustive list):

- are there noise-sensitive buildings that should be avoided, and if so what and where (i.e. hospitals, care homes, schools, higher education establishments, and so on)?
- how should the minimisation of overflight, or of night noise, or the difference between multiple respite routes and concentrated routes be traded off against one another?
- if multiple routes are considered in order to provide respite, what might constitute a sufficient period of respite?
- how should the needs of passengers be considered alongside the needs of communities at different times of day?
- are there areas in which efficiency from a whole airspace perspective or expeditious routeing (shorter or faster routes) take precedence and areas in which other factors should take precedence?

Appendix D

Airspace design principles

D4. In having this two-way conversation with relevant stakeholders, the change sponsor must be clear about the technical considerations that will inform the development of the designs, including:

- the operational aim of the proposal
- safety constraints or opportunities
- operational constraints or opportunities
- technical constraints or opportunities
- economic constraints or opportunities
- the policy and regulatory framework with which the proposal must comply.

D5. Other than the principle of improving or maintaining safety, these factors are in no way immutable and, as a part of the process for the establishment of the airspace design principles, should be challenged as part of the ongoing dialogue with stakeholders.

Outcome

D6. The outcome of this work will be a shortlist of principles to inform the development of airspace design options and against which they can be qualitatively evaluated. Some of the principles may contradict one another and some may be prioritised over others: this will be an iterative process and a qualitative one rather than a purely numerical exercise with binary answers.

D7. The outcome will also record other design principles that were suggested by stakeholders but not shortlisted for the final set of principles, with reasoning as to why this was the case.

D8. The CAA would therefore expect to receive the following output from this activity:

- a list of those stakeholders engaged
- an explanation of the engagement methods employed
- a chronology of the engagement activity
- the issues raised during the engagement process and evidence of a two-way conversation, i.e. evidence that sponsors considered the principles proposed by stakeholders, that these informed the change sponsor's final set of principles, and that when principles were not included in the final shortlist this was explained to the stakeholder proposing them (see Appendix C for details about the two-way conversation)
- the design principles chosen
- the rationale behind the decision to adopt those principles including evidence as to why any stakeholder group's view has been discounted for these purposes.

Technical design principles

D9. The design of airspace structures and instrument flight procedures that falls subject to the airspace change process must conform to various national and international standards and recommended practices. That said, within that framework, there are many design techniques available to airspace designers. A change sponsor must therefore be able to justify the techniques being applied, especially where those techniques have a direct impact on local communities.

Environmental design principles

D10. The CAA is required to follow the Secretary of State's Air Navigation Guidance 2017. Within that guidance, there is a strong emphasis on taking into consideration local circumstances, especially when considering such matters as the potential value of respite routes. It is vital that the change sponsor takes into consideration the views of local communities when establishing airspace design principles, as set out above.

Objectives
The objectives of this Stage 1B Engagement plan are to ensure:

1. a fair representation of stakeholders is involved in the design principle development
2. we receive a broad representation of views
3. we can combine local context with technical considerations
4. our design principles are influenced by stakeholders meeting the CAP1616 guidance.

Engagement team
There is a large project team involved in the Airspace Change Programme see the full list in the Engagement strategy.

The role of the Programme Working Group is to successfully deliver the Airspace Change Programme. To help them deliver this, we have appointed a number of expert consultants to support the environment, technical and communication work streams.

The team during Step 1B are:

Communication workstream	[redacted]
Consultation and engagement advisors/ quality assurers	
Market research suppliers	
Supported by experts	

Confirming roles
It is the role of EAL to set the strategy for each stage of the CAP1616 process. We will do this with the support of the relevant experts and in consultation with The Consultation Institute. EAL has the final sign off on all communication and approach to the programme.

It is expected that each expert involved in the process is knowledgeable in CAP1616 and understands the detailed requirements at each stage.

It is expected that each supplier provides a project plan detailing milestones and deliverables for their part of the programme to the Project Manager to allow them to be scheduled within the bigger project plan.

Approach to engagement
We anticipate the output of this programme of work to be our design principles. These will consist of core principles of safety, environment and technical standards as set by CAP1616 and related legislative, regulatory and statutory requirements, and desired design principles developed through this engagement programme.

Principles of engagement
It is important we have an inclusive approach to Step 1B, including:

- equality representation: Getting the right people with an equality perspective to attend the workshops by using learning from previous consultation about equality impacts and invite organisations relevant to these aspects e.g. Autism Scotland
- Seldom heard voices: Ensuring that quiet voices are heard in the consultation (people who may not feel confident / empowered / able to participate for a range of reasons)
- future proofing those we engage with to ensure that from the beginning we have conducted a wide stakeholder identification to ensure a fair representation of those impacted and those not
- ensure regular and clear communication with our audiences.

Stakeholder identification
We have conducted a stakeholder identification exercise to determine the relevant and potentially impacted stakeholders for the design principles – these will also help determine the audiences of our focus groups.

Stakeholders will be identified by applying tCI methodology looking at those who may be directly; indirectly; or potentially affected.

Aviation representation	Example agency
Scottish Airspace collective organisation	NATS PC
Scottish Airspace above 7,000ft	NERL
EAL airport navigation service provider	ANS
Neighbouring airspace	Military – MOD, Glasgow/Newcastle/Dundee airports
Gliders	Scottish Glider Centre
Pilots	Flight Operations Committee (FLOPSC)
Local airline representative	Edinburgh Airport Airline Operators Committee (AOC)
National airport representatives	Airport Operators Association (AOA)
Cargo operator	TNT, Royal Mail

Stakeholder representatives	Example agency
Airport representative bodies	EACC, EANAB
Economic growth and business representation	Chambers of Commerce, RBS, Amazon etc
Education representation	Parent bodies, Education departments, parent teacher associations
Environmental representation	SEPA, RSPB, SNH, Friends of the Earth
Equality representation (age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex, sexual orientation)	Edinburgh and the Lothians Regional Equality Network (ELREQ)
Health and disability representation	Health Protection Scotland, RNIB, Autism Scotland, Disability Scotland
Interest in aviation	Sustainable Aviation, Edinburgh Airport Watch
Local Authorities and Community Councils	Representative of all areas
Local Council planning departments	West Lothian Planning team (example but could be all local council), Environmental health departments
Scottish Government	Transport Scotland, officials
Tourism and recreation representation	VisitScotland, Edinburgh Tourism Action Group

Community

To ensure there is a fair representation of communities impacted or potentially impacted by flight paths, we will include engagement with people from:

- communities currently flown over within noise contours (map below shows the average noise level for daytime [0700-2259], and uses data from 16 June – 16 September 2016)
- communities currently flown over outwith noise contours
- communities currently not flown over.

Map A: 2018 LAeq Summertime contour map

Map B: 2018 LAeq Summertime contour overlaid on the mean departure and arrival flight paths using EDI radar data supplied via ERCD

Rationale for these areas

We considered areas within a 15-mile radius of Edinburgh Airport [dotted blue line on map C] to cover most departing flights reaching 7,000ft in both directions (concluded by a random selection of flights over two 2-day periods in July 2019 to take into account wind direction). For arrivals under 7,000ft off runway 24 West and East Lothian and the Borders needed to be included, and off runway 06, North and South Lanarkshire, Stirling, Clackmannanshire and Falkirk in addition to East Lothian and the Borders needed to be included [map C].

Map C: 15 mile radius from Edinburgh Airport

We also will identify stakeholders whose expertise is required to inform the design principles and stakeholders who have an interest in the ACP. These are mapped below considering their influence and interest in the ACP and ensure during recruitment of stakeholders to discussion groups and workshops we will have a broad range of representation and interest.

The market research agency will stakeholder map against the stakeholder identification methodology contained in this document to ensure it is met.

Monitoring opinion

We'll conduct sentiment analysis to capture the views of the general public. This will be done via two methods:

- opinion research as part of 1B to use as a base line measure potential changes in attitude
- social listening throughout our programme to determine sentiment and hear the conversations from those other audiences who are seldom heard.

These views will help us to monitor trends and attitudes towards the Airspace Change Programme and adjust our approach or communications accordingly.

We will create a Stakeholder Reference Group (SRG) to further support our engagement through CAP1616. The SRG is a time limited group which will coincide with the CAP1616 process, established to contribute to and comment on the EAL's Airspace Change Programme and how it proceeds through CAP 1616.

The SRG will form part of the Consultation Institute's Quality Assurance service. This is an independent, arms-length approach to provide a robust additional level of assurance and scrutiny to enhancing EAL's confidence regarding its approach.

Risks

We have identified the following key risks at Step 1B Design principles:

- being perceived to select workshop attendees to influence outcomes
- not engaging the right mix of stakeholders
- developing unachievable design principles
- community, media or political pressure to broaden the invite-only engagement process.

To mitigate the first two of these risks above during Step 1B Design principles, Edinburgh Airport will appoint a third-party market research agency to conduct the design principles workshops on our behalf.

We have determined the three types of representative groups we want to target through our engagement process – aviation, other stakeholders, such as businesses, third sector organisations and pressure groups, and communities that are or may be potentially impacted. We believe that this representation across aviation, industry and community will ensure that we engage the right mix of stakeholders in setting out our design principles.

To mitigate the third risk of developing unachievable design principles, we will work with our environmental and technical experts to ensure that legislative, regulatory and statutory requirements are established before the discussion groups to set a benchmark with the groups and set expectations about the possible options.

The stakeholder groups will be asked to determine a long list of design principles that are based on criteria within CAP1616. The market research supplier will be supported through the sessions by experts to help ensure questions are answered throughout the process. To mitigate the fourth risk and to maintain the integrity and consistency of the consultation and engagement methodology, those who are invited but can not make it and want to participate will be offered the opportunity to still participate through an electronic survey – it will only these participants who want to participate but cannot attend who will be offered the opportunity to participate in this way.

Meeting technical and legislative requirements

The International Civil Aviation Organization (ICAO) is a specialised agency of the United Nations. It codifies the principles and techniques of international air navigation and fosters the planning and development of international air transport to ensure safe and orderly growth. The United Kingdom is a member State of ICAO.

The ICAO Council adopts standards and recommended practices for a wide range of matters. For airspace design, the standards and recommended practices contained in PANS-OPS and PANS-ATM are most relevant.

- PANS-OPS is an air traffic control acronym which stands for Procedures for Air Navigation Services – Aircraft OPerationS.
- PANS-ATM: Procedures for Air Navigation Services – Air Traffic Management specifies the actual procedures to be applied by air traffic services units in providing the various air traffic services to air traffic.

PANS-OPS outlines the principles for safe and standardised procedure design to which all ICAO member States must adhere and contains standards and recommended practices for designing instrument approach and departure procedures.

Section 70(2) of the Transport Act 2000 requires the Civil Aviation Authority (CAA) to take account of any guidance on environmental objectives given to it by the Secretary of State (SofS) when carrying out its air navigation functions.

The Air Navigation Guidance 2017 contains the SofS's guidance to the CAA on its environmental. These environmental objectives are designed to minimise the environmental impact of aviation within the context of supporting a strong and sustainable aviation sector. These objectives are, in support of sustainable development, to:

a. limit and, where possible, reduce the number of people in the UK significantly affected by adverse impacts from aircraft noise;
b. ensure that the aviation sector makes a significant and cost-effective contribution towards reducing global emissions; and
c. minimise local air quality emissions and in particular ensure that the UK complies with its international obligations on air quality.

Paragraph 1.3 of the Air Navigation Guidance makes clear that to deliver the policy, decisions which affect how aircraft noise is best distributed should be informed by local circumstances and consideration of different options. Options,

and appraisal of the pros and cons, may include concentrating traffic on single routes, which normally reduce the number of people overflown, versus the use of multiple routes which can potentially provide relief or respite from noise if routes can be sufficiently separated.

Para 3.2 – states that 'Noise from aircraft flying at or above 4,000 feet is less likely to affect the key noise metrics used for determining adverse effects and as aircraft continue to climb above this altitude their noise impact reduces'

Para 3.2 goes on to state that 'The CAA should apply the following altitude-based priorities of the government:

a. in the airspace from the ground to below 4,000 feet the government's environmental priority is to limit and, where possible, reduce the total adverse effects on people;
b. where options for route design from the ground to below 4,000 feet are similar in terms of the number of people affected by total adverse noise effects, preference should be given to that option which is most consistent with existing published airspace arrangements;
c. in the airspace at or above 4,000 feet to below 7,000 feet, the environmental priority should continue to be minimising the impact of aviation noise in a manner consistent with the government's overall policy on aviation noise, unless the CAA is satisfied that the evidence presented by the sponsor demonstrates this would disproportionately increase CO2 emissions;
d. in the airspace at or above 7,000 feet, the CAA should prioritise the reduction of aircraft CO2 emissions and the minimising of noise is no longer the priority;
e. where practicable, it is desirable that airspace routes below 7,000 feet should seek to avoid flying over Areas of Outstanding Natural Beauty (AONB) and National Parks; and
f. all changes below 7,000 feet should take into account local circumstances in the development of the airspace design, including the actual height of the ground level being overflown, and should not be agreed to by the CAA before appropriate community engagement has been conducted by the sponsor'.

Para 3.25 – states that 'the government also expects the CAA to encourage the use of new and innovative approaches to managing aviation noise through airspace design such as the provision of respite for communities already significantly affected by aircraft noise where possible'

Para 3.28 – states that 'emissions from aircraft above 1,000ft are unlikely to have a significant impact on local air quality

We will determine principles to ensure we meet these legislative, regularly and statutory requirements. We will then explain the legislative, regularly and statutory requirements within the workshops and share our proposed core principles for noting by attendees.

Workshops

There will be a first round of four 2.5 hour workshops with 15-20 per workshop, these will include community, aviation and stakeholder representatives.

These invitations have been independently sourced by our market research agency to meet our brief ensuring that Edinburgh Airport hasn't been able to directly influence who is included within these groups. The market research agency has developed two lists of stakeholders to invite to the workshops, a second B List with back up invitees who meet the brief has been developed. This list has also been shared with our environmental and diversity consultants to ensure key stakeholders are included.

It is envisaged the workshops will determine a long list of design principles. Workshops will require the creation of a topic guide to inform and probe the workshops. This outlines all the issues of importance to discuss including the core questions cited in CAP1616. The topic guide would be jointly developed with the project team and signed off by Edinburgh Airport to ensure the approach meets this brief.

The way workshops are recruited and moderated, the issues of importance, and existing levels of knowledge are likely to be different across groups and so topic guides will be tailored to reflect that. Discussions will be held to understand the issues of importance to stakeholders and the reasons why. From these discussions, the workshop attendees will be asked to rank the design principles in order of importance. The output of these workshops will be long list of design principles.

The market research agency will provide the Programme Working Group supported by technical, environmental and diversity experts with their requirements for stimulus material to support the facilitation of the discussion groups. The Programme Working Group will the work through a drafting process with suppliers and our designers to finalise stimulus material. EAL will have final sign off on this material to ensure it meets the brief.

Focus groups
To test the views of the general public and ensure they have an opportunity to be involved at the earliest of stages we will recruit and run three x 1.5 hour focus groups of 8-10 people. These will be representative of the views of people currently overflown within noise contours, currently overflown out with noise contours, potentially overflown and currently not overflown.

This approach will help to ensure that there is inclusion of seldom heard voices and will provide those with less of an involvement in the airport or airspace change an opportunity to be part of the process. This approach may produce various different perspectives and may serve to balance some views which the airport hears on a frequent basis.

Recruitment of focus group attendees will be by the market research agency. The development of topic guide and stimulus material will be based on the materials used for the Workshops but will recognise the necessity to tailor these sufficiently to ensure clear understanding and to maximise the opportunity for participants to provide insights, observations and opinions.

The focus groups will be audio recorded and transcribed to ensure the market research agency captures the important intelligence. The market agency will provide a written report documenting the views of the focus groups, providing the appropriate level of detail and analysis to allow EAL to consider the information and use this to influence the development of the design principles.

Supplementary activity
We recognise the interest of certain stakeholders such as elected representatives, however, their participation in workshops may not be appropriate therefore we will write to MSPs, MPs and MEPs to inform them about our activity and invite comment through written communication.

The process is a targeted process to ensure a true and fair representation of areas and stakeholders are including in the design principle development. Therefore, we will not be including an option for online participation for general public.

Programme Working Group
The Programme Working Group will determine a short list from the long list developed through the workshop engagement. The Programme Working Group supported by the environmental and technical consultant experts will review the long list against CAP1616's legislative, regulatory and statutory requirements. They will decide if the design principles are accepted or rejected and provide reasoning behind the decision on each design principle. This will create a shortlist of design principles.

Final Stage 1B Workshop
The shortlist will then be tested by going back out to representatives from the original workshops through two x 1.5 hour recall workshops with 10-15 people. The membership of this final group of representatives will be determined by the market research agency from all of the attendees during the initial round of workshops ensuring fair representation from community, aviation and stakeholders.

The market research agency needs to present the evidence and information gathered and analysed during the rounds of engagement to ensure that information has been appropriately and adequately captured and interpreted.

In having this iterative conversation with relevant stakeholders, Edinburgh Airport must be clear about the technical considerations that will inform the development of the designs, including:

- the operational aim of the proposal
- safety constraints or opportunities
- operational constraints or opportunities
- technical constraints or opportunities
- economic constraints or opportunities
- the policy and regulatory framework with which the proposal must comply.

The output of this work is agreed design principles for Edinburgh Airport's Airspace Change Programme.

Communicating outcomes to participants
Once the design principles are finalised through the engagement work and the Stage 1 application is submitted to the CAA, EAL will communicate that the submission has been made to the CAA, the documents are available on the CAA's portal and thank the participants for their involvement in the process.

On the submission review date, EAL will write to the participants of Stage 1 to advice of the outcome of the application.

Reporting
After the market research and engagement activity, EAL must write a summary paper explaining how our design principles was created supported by evidence which verifies the decision-making process. It is therefore essential that evidence is collated throughout the programme to confirm the processes followed and document the decisions made.

EAL will require:
- a full methodology paper from the market research agency determining the process involved in meeting the brief to conduct these workshops.
- Copies of List A and List B of workshop invitees
- Copies of all communication sent by the market research agency to secure attendance at the workshops
- transcripts of each of the workshops
- a full report from the market research agency on the work conducted
- a long list of the design principles
- evaluation reports of the long list of design principles
- methodology behind the recruitment of the second wave of workshops to review the shortlist
- Copies of the List A and List B of the second wave workshop invitees
- Copies of all communication sent by the market research agency to secure attendance at the second wave of workshops
- transcripts of each of the second wave of workshops
- a full report from the market research agency of the work conducted.

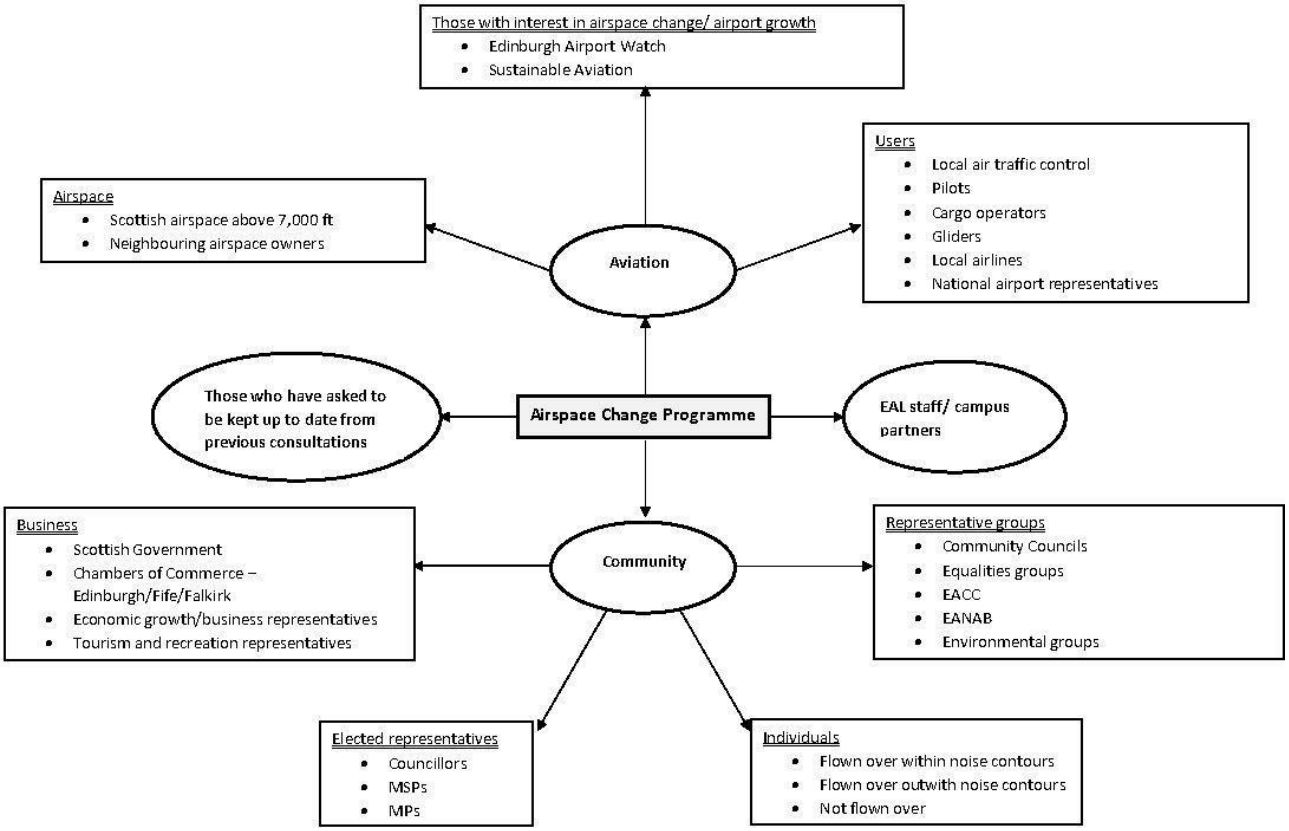
Next steps
EAL will draft a summary paper to explain the design principles and the process EAL followed to get to them. EAL will circulate this through the programme working group and expert consultants to ensure a robust paper is developed. EAL will then ask all agencies to provide evidence for all parts of the 1B process. EAL will submit an application for Stage 1 approval at the January 2020 gateway.

This document will be submitted to the CAA on 3 January 2020 ahead of the Stage 1 Define Gateway, due to take place on 31 January 2020.

On 3 January 2020, we plan to send email communications to all people who have participated in our process or advised they would like to participate but cannot participate at this point in time. This communication will let people know that we have submitted our Application for Stage 1 Define Gateway with the CAA that redacted versions are available on the CAA's portal. We will also advise that our Gateway date is 31 January 2020 and that we will communicate the result of this application once we hear the result – we will also provide a copy of the final design principles at this stage.

We will also thank people for their involvement and participation in the process so far.

Appendix L – Stakeholder identification



Appendix M – Correspondence with Elected Representatives

Email – 18 April 2019

Edinburgh Airport
Where Scotland meets the world

Hello,

As you know, our initial application for airspace change was rejected by the Civil Aviation Authority (CAA) last year and although we were disappointed by that decision, we took note of the reasons to formulate our next steps on an issue which is important to allow Scotland to continue to benefit from growth in air travel.

We said at the time that we would look to restart that process as quickly as possible and in the months since we have been working on our approach and to understand the CAP 1616 process that we have been asked to work on, and that is why I write to you today.

The need for modernising our airspace remains as we must find a way to manage current demand and provide capacity for future growth and that remains the case. This modernisation process is also something that we and every other airport in the UK has been asked to look at by the UK Government as it moves towards a more accurate and efficient approach to airspace management.

We have lodged our Statement of Need with the CAA and that marks the start of this new process. This Statement of Need explains why we think we need to modernise our airspace, with the technical details and proposals coming later this year following consultation and engagement with local communities and stakeholders. You can view our Statement of Need here: https://airspacechange.caa.co.uk/PublicProposalArea?pID=163

The CAP1616 process is different to the one we embarked upon previously and we will be happy to answer any questions you may have on it, but it might be useful for you to read the CAA's guidance on the process and understand what will happen going forward: www.caa.co.uk/cap1616

Clearly we must now wait for the CAA to consider our statement before we can progress, but we will ensure that you are kept updated as we move forward.

Thanks,

[redacted]

Unsubscribe

Recipient list

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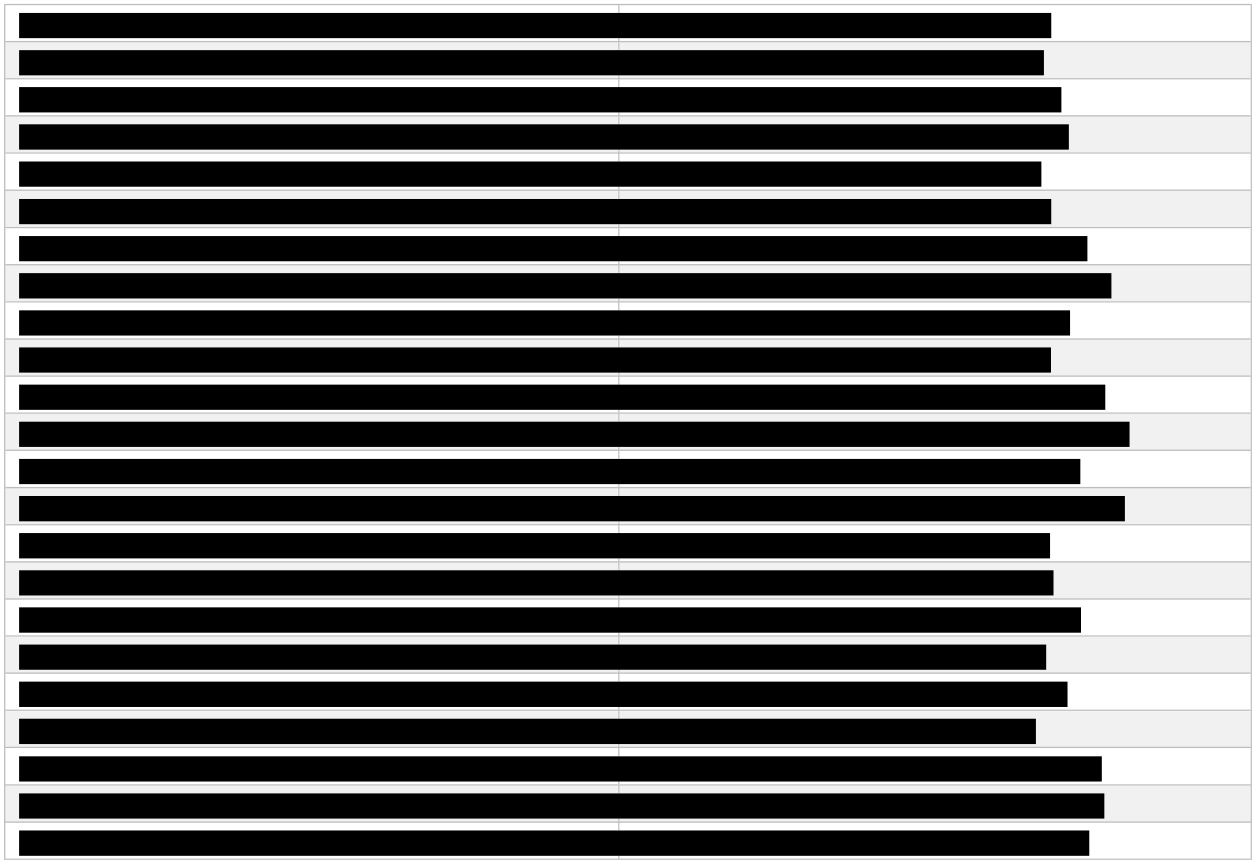

Letter from a member of the UK parliament, 19 July 2019

[redacted]

HOUSE OF COMMONS
LONDON SW1A 0AA

[redacted]

19th July 2019
Our Ref: DC/LH/EdinburghAirport

Dear [redacted]

Airspace Change Programme

Further to our meeting in March, I note that you have now submitted a new Statement of Need to the CAA to start the process of applying for airspace change under CAP 1616.

I am looking forward to continued engagement with both Edinburgh Airport and my constituents in [redacted] who are likely to be most affected by the proposed changes as your application progresses.

I appreciate that the application is still in its early stages; however, I do have some enquiries in terms of some of the ongoing work around these proposals that I am hoping you can help me with.

Firstly, I understand that noise monitors have been deployed in various locations throughout the vicinity of the airport in order to capture data on current noise levels from aircraft on existing flight paths. I would be grateful if you could inform me when you expect to publish the data obtained from these monitors so far.

Secondly, I believe that you were investigating the option of shifting flight paths originally proposed to fly over the southern coast of Fife further east over the River Forth. I would be grateful of an update on your investigation and any findings you are able to share at this stage.

I look forward to hearing from you in due course.

Yours sincerely,

[redacted]

[redacted]

Edinburgh Airport
Where Scotland meets the world

Letter to [redacted] 31 July 2019

Edinburgh Airport
Where Scotland meets the world

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T: +44 (0)844 448 8833
W: edinburghairport.com

[redacted]

31 July 2019

[redacted]

Thank you for your email and for your continued interest in airspace change.

As you know, the airspace we use is something that all airports in the UK are being asked to modernise and it is a programme which is lengthy and detailed. Engagement with interested groups and communities is an important part of that, as is engagement with our business partners and airlines, so that engagement work will form a central part of our strategy going forward.

Our previous application process saw us engage with our local communities and led to the formation of the Edinburgh Airport Noise Advisory Board (EANAB). As part of our discussion with EANAB, we purchased mobile noise monitors to allow us to gather more data in co-operation with communities about the noise climate in neighbouring regions and get a better understanding of aircraft noise.

We are currently carrying out community noise monitoring in various locations around Dalgety Bay, North Queensferry and Aberdour and once completed, the results will be compiled into a report which we will make publicly available on our dedicated Noise Lab web site:

http://noiselab.casper.aero/edi/

In terms of any proposals for the flight paths, we received feedback during our last Airspace Change Programme from communities that asked us to use the Firth of Forth more instead of flying over local communities. This is obviously a new programme and we will be relooking at all of our flight paths and doing more work to determine viable flight path options.

At this stage, nothing is confirmed and our Airspace Change Programme follows the process outlined by the CAA CAP1616 which requires us to determine design principles and design options and test these with stakeholders. As I referred to earlier, our engagement strategy with key partners will be very important and take into account the need to share proposals, something the CAP1616 process also places great value on.

You and your constituents can keep up to date with our process at the following page, but we will also be on hand to help with queries as we move through the process:

https://airspacechange.caa.co.uk/PublicProposalArea?pID=163

I hope that helps with the enquiries that you had, please get in touch if you require anything further.

Yours sincerely

Appendix N – Initial round of engagement report, Progressive Partnership

Edinburgh Airport Limited

Airspace Change Programme

WP1 Design Principles

Final Report

20 December 2019

progressive

Contents

Contact information

[redacted]

Introduction

This document reports on feedback gathered from the first round of engagement workshops and focus groups conducted by Progressive Partnership on behalf of Edinburgh Airport Limited (EAL) to aid their work to develop a long list of design principles for the Airspace Change Programme (ACP) 2019.

Summary of method

This section gives a brief overview of the engagement method. A full description of method can be found in the Project Initiation Document (PID) revised 2, contained in Appendix A. The first round of engagement comprised five workshops, conducted with community stakeholders, aviation stakeholders, Edinburgh Airport Noise Advisory Board (EANAB), and a broader group of stakeholders that included: local council officers (typically planning and environmental health), industry, equalities groups, and environmental organisations; followed by three focus group discussions with residents.

The engagement was undertaken in accordance with the Stage 1B Engagement Plan objectives contained in the ACP Engagement Strategy produced by EAL, which outlines EAL's approach to the Airspace Change Programme 2019. They are to ensure:

- a fair representation of stakeholders is involved in the design principle development;
- a broad representation of views is received;
- EAL can combine local context with technical considerations; and
- the design principles are influenced by stakeholders, meeting the CAP1616 guidance.

The engagement sessions were held in Edinburgh from 23 September to 9 October.

Attendees

A full listing of participants can be found in Appendix B and summarised below.

Workshop recruitment

Progressive recruited representatives from a wide range of stakeholder groups and communities, including:

1. Aviation and technical groups such as: cargo, recreation, training and traffic control
2. Stakeholder representative groups such as: property developers, environmental groups environmental activists, councils and equalities organisations
3. Community representatives covering:

    - Edinburgh West/West Lothian North
    - Edinburgh East/East Lothian North
    - Fife South West/Fife South East
    - Falkirk/West Lothian (rest of)
    - Outlying areas (Midlothian, rest of Fife, rest of East Lothian, Perth and Kinross, Borders, Stirling, Clackmannanshire)

The starting point for the recruitment was to develop a database of potential participants. This drew largely from contact details provided by EAL, held as a result of past consultations and a request from people to be kept informed. This was supplemented by contributions from the project team, based on their knowledge and experience of key stakeholders operating in the topic area; and by desk-research undertaken by Progressive, to update contact details in the EAL contact list, to identify contacts in outlying areas not covered by the EAL database, and to expand the range of contacts within the database (for example, ensure the local authority contacts included all relevant departments). The contacts were built into a single database of around 1,333 records.

The database was then cleaned and sorted:

The dataset was 'cleaned':

- Records without valid contact details were identified and prioritised. Further work was undertaken to source contacts details for these (names/phone numbers/email addresses for stakeholders.) e.g. google searches of local directories, calls to key organisations, re-contact EAL/partners.
- Contacts where email addresses remained missing following mitigating actions were excluded.
- It was noted that many of the records within the EAL database e.g. libraries and leisure centres, related to information contacts that would enable EAL to distribute information, but were not organisations with a representative structure with whom we could engage. These were deprioritised in the engagement.

The cleaned database was sorted into 'List A' respondents and 'List B' respondents[1].

- Allocation into the list drew on a preliminary stakeholder mapping exercise undertaken by Progressive; this was updated when EAL completed their draft stakeholder mapping exercise and were able to provide a list of key stakeholders to include in the engagement exercise. This include key organisations (public and private sector) and community councils.
- Allocation of records into these categories was undertaken to ensure all key organisations, identified through the stakeholder mapping exercise, were invited.

[1] This will be shared to the project team as a separate document once it is complete

- We also sought to ensure a good mix and spread of organisations at each event. For example, the community stakeholder workshop sought to include a mix of the following: representative and social organisations; tenant/resident groups; a selection of recreation and interest groups; and a selection of the community councils from the local area.
- List A organisations were contacted first, with List B contacts forming the back-up pool.
- After a low response to email invites, a further List C was drawn up comprising local representatives from national organisations and local organisations.

Email invites were sent to all representatives inviting them to attend on the date assigned to the workshop for their respondent type. See Appendix C. Recipients were offered three options in the email, (1) *I am interested and can attend*, (2) *I am interested but cannot attend*, (3) *I am not interested, remove me from the data base*.

Response to the initial email was lower than expected: the number volunteering to take part was only 41 in the first week of being emailed. Follow up telephone calls were therefore made to non-responders to determine interest and availability. In total 484 organisations were emailed and 283 were telephoned. Many organisations were called up to five times in order to find an available/relevant person.

Because they were from a wide area and some distance from Edinburgh, many community representatives were reluctant to spend time and money in travelling to attend workshops. To compensate and encourage engagement, an incentive of £40 was offered to all delegates of the community workshops.

Once all workshops were fully recruited delegates were sent confirmation details which also sought recording permissions. See Appendix D. All delegates were contacted by telephone the evening before the workshop to confirm their attendance.

The inclusion of an EANAB workshop

Discussions between EAL and EANAB in reference to taking part in 1B design principles stage were ongoing throughout August. EANAB complained that they had insufficient opportunity to comment and we considered this complaint. It was decided as this group of individuals has an existing relationship with EAL, are more knowledgeable on this topic and already has a strong opinion, that it would be beneficial to the wider piece of engagement that they were offered a separate workshop to allow participation.

TCI also endorsed the proposal given EANAB's noise-related functions. This additional workshop took place on Saturday, 28 September 2019. EANAB selected which of their members would attend the session; they were asked to not invite members who had previously aired their views in one of the community workshops so that feedback was collected from the widest representative group as possible.

Focus group recruitment

The focus groups were drawn from a cross-section of the general public. The participants were recruited by Progressive's team of experienced recruiters. This involved recruiting members of the general public on-street in the study areas, using precise specifications which included factors such as location, social group and family type. In addition, the recruitment screened out members of any lobbying or advisory groups to the airport and those who worked in aviation. This recruitment process

ensured each group included a broad mix of participants, and the data gathered was reflective of the target audience specified in the brief. The recruitment specification was approved by the client. We constantly monitor recruiters to ensure that they are delivering high quality respondents that meet the project specification. Qualitative recruitment was back-checked by re-contacting 100% of respondents and re-administering part of the recruitment questionnaire.

Respondents to the groups overflown were given an incentive of £40 for attending. Those who travelled from further afield (not overflown) were given an incentive of £50.

Principles of inclusion

Our methodology was designed to include a wide representation of views. We invited representatives from action groups such as: EANAB and Extinction Rebellion, as well as community councils known to be opposed to the airport. People with protected characteristics and those representing equalities groups were included and supported. For example, a representative from Royal National Institute of Blind People (RNIB) was given support from a researcher whose role it was to translate any visual information into spoken, and write down his views so they could be included in the group's inputs. Members of the general public who are less used to speaking at large public forums were proactively recruited and given their voice in focus groups. Those who were interested in taking part in the workshops but couldn't, either because they couldn't make the time or because they had autism and found large public meeting too difficult, were given the opportunity to contribute online. This was fully supported by Diversity Dynamics, experts in inclusion.

Moderation

Each of the workshops was moderated by two senior practitioners from Progressive and attended by representatives from other members of the Airspace Change Project team: the client: EAL, the diversity advisors: Diversity Dynamics and the environmental consultants: WSP. The aviation consultants To70 jointly moderated the aviation workshop. Attendees were sent a copy of the EAL Statement of Need (SON) prior to attending the workshop. See Appendix E. The agenda for the engagement sessions was:

- To make the group aware of the Airspace Change Programme;
- To provide an overview of the CAP1616 process – in particular, what Stage 1B involves/requires;
- To seek the group's input into developing a list of potential design principles, by which we meant the main factors that determine how the changes in airspace will be planned;
- By the end of the session to have produced a long list of design principles;
- To have an understanding of which design principles the group would prioritise and why.

The themes under discussion included:

- Responses to the SON
- Environment
- Community
- Technical
- Economic: business and economy
- Equalities

Where time permitted, communication about airport related matters was also discussed. Initially the topic guide was designed to include a summary section on trade-offs with a view to determining attendees' preference for one design principle over another. This was met with resistance from the

majority of attendees who claimed the issues were too complicated to state preferences. Following the first workshop on 23 September 2019 it was suggested by Progressive and agreed by the rest of the project team to remove the trade-off section in the topic guide. This was replaced with a section on relationships between principles. A full copy of both of the topic guides can be found in Appendix F (the initial signed off version and the revised version).

A short presentation was made to attendees which set out the reasons behind the Airspace Change Programme. This gave an overview of EAL's SON, maps of flight paths with typical altitudes, the regulatory process CAP1616 and examples of design principles. This way attendees were fully informed in the responses they gave. A copy can be found in Appendix G.

Collecting the views of those unable to attend the workshops

We issued an online questionnaire (see Appendix H) to those who wanted to take part but couldn't attend the workshops (76 in total). We had five complete and 12 partial returns. All responses have been analysed and coded by theme and merged with the outputs from the workshops and group discussions.

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Summary of findings

Overview

This section summarises the issues discussed in the initial workshops (aviation, community stakeholders and other stakeholders) and the three focus groups, under each of the themes discussed in the workshops/focus groups.

Response to the Statement of Need

- Modernisation of EAL airspace needs to be undertaken as part of a more comprehensive review of wider airspace strategy so that constraints and opportunities can be more accurately assessed.
- Problems the airport is experiencing need to be identified more clearly to allow the principles for a new approach to be accepted.
- Consistency between the SON and Scottish and UK policy on emissions reduction has not been demonstrated.
- The relationship between runway capacity and airspace capacity needs to be clearly set out if a case is being made for greater runway capacity.
- Edinburgh Airport is in business to make a profit and pay the shareholders; that objective must be recognised when considering other design principles.

Environment

- The carbon footprint that people have as individuals, as communities, as countries, as the world, is growing, so airspace design needs to look to where policy priorities are going, not just where they are now.
- Older and/or more polluting aircraft, including freight planes, should face greater restrictions and higher charges.
- Offset adverse environmental impacts as locally as possible
- Protect environmentally sensitive areas.
- Apply "polluter-pays" principle to airspace changes.
- Minimise light pollution from planes (low level of comment but important)

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Community and health

- Monitor and report noise levels accurately and ensure compliance with airspace by airlines.
- Try not to overfly locations where there are expectations that residents are not on a flightpath
- Conduct health impact assessments including for schools, hospitals and care homes to ensure compatibility with health and care aims.
- Fly over water, where possible, with new routes down the Forth.
- Ensure that timing and routing restrictions placed on air travel are consistent with latest understanding of health issues, including mental health and sleep.
- Ensure all effects on schools are effectively considered including: noise affecting playtimes, pollution meaning windows need to be closed and other factors that affect healthy development.
- Take account of the landscape in which noise occurs.
- The height and dispersal of flights including above 7,000 feet needs to be built into the options appraisal.
- Planned housing development is likely to be affected, so there is a need to understand the number of people affected with and without the new homes.
- Include costs of community compensation and mitigation measures in plans
- Include design options that minimise the level of change to flightpaths including no change.

Technical

- Prioritise safety.
- Reduce flightpaths with tighter turns, since these expose some people to almost continuous noise: by the time one aircraft has completed the turn, the next one will be coming along.
- Restrict aircraft turning/holding areas over communities.
- Avoid overall expansion of controlled air space.
- Enable flightpaths that are as short as possible.
- Design for aircraft that cannot operate Global Navigation Satellite Systems.
- Ensure access to airspace by general aviation.

Economy

- The capacity and co-ordination of the road and public transport infrastructure and delivering efficient and complementary transport services into the airport needs to be included in any discussion about airport expansion.
- Tourism revenue flows in and out of Scotland so the contribution of aviation to the economy needs to be clear in considerations of air travel growth.
- Ensure that investment by the airport is sufficient to facilitate a joint approach to air travel, land transport and land use development that reflects the impacts of airspace changes.
- Demonstrate that plans at the airport are consistent with plans of public authorities at all levels.

Equality

- Consider who pays and who benefits, including opportunities to make taxation of air travel more progressive, recognising EAL's role in lobbying for policy change.
- Minimise adverse effects on those groups of people that suffer the greatest effects of noise and air pollution.
- Poorer people may fly less so, on equality grounds, should suffer less disbenefits from air travel.

Communication

- Ensure transparency of data, information and decision making process.
- Enable and support community pride in their local airport, supporting modernisation and supporting the ACP through community involvement and openness.
- Ensure all EAL's inputs in relation to plans for surface access to the airport are transparent.
- CAA must demonstrate their accountability to the population around Edinburgh airport if they are making decisions about what happens.

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Summary of design principles

Throughout the discussions, delegates and participants were encouraged to write down their suggestions for design principles on post-it notes. Progressive collected these, transcribed them into an Excel spreadsheet, and then analysed the statements to determine common themes and design principles. The table below include all of the suggested design principles that were collected from the post-it note exercise and gleaned from the transcripts, together with material from the online submissions. In line with standard market research practice, the table omits issues mentioned by a single delegate/participant. The ordering within the table broadly reflects the number of mentions across the sessions.

Summary of design principles
Reduce night flights and early morning flights
Fly over the sea/fly down the Forth
Consider impact of aircraft type/penalise poor performers/old aircraft
Ensure decision making is evidence based (and evidence is appropriate/high quality)
Reduce flights over communities/fly over less populated areas
Minimise noise
Reduce emissions/pollution
Avoid overflying of schools
Do not fly over currently unaffected areas in planning
Adhere to WHO regulations
Ensure consideration of all airspace users
Ensure fully integrated airspace change
Restrict air craft holding areas over communities
Consider impact on mental health/wellbeing
Consider noise from take-off/ landing/turning
Take background noise into account
Consider/offset the impact on wildlife/the environment
Minimise noise/flights below 7,000ft
Avoid over flying rural areas
Cjf set emissions
Consider other health impacts
Consider needs of the elderly/ children/those with ill health/autism/sensory impairment

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Recognise impact of flight paths on house prices and social migration
Restrict air craft turning over communities
Avoid overflying hospitals and care/retirement homes
Review need for growth
Prioritise safety
Do not concentrate flight paths over
Avoid overflying of historical sites
Consider impact on sleep
Redesign the terminal airspace
Reduce flights
Ensure consideration of wider tourism impacts
Ensure true accessibility in design
Minimise route deviations
Consider no change to flight paths
Take account of noise above 7,000ft
Minimise light pollution
Consider climate impact
Ensure access to airspace by general aviation
Consider impact on animal welfare
Considerations for specific routes
Concentrate flight paths during work hours
Review routes/flight corridors
Reduce impact on greenspaces
Avoid flying over the zoo
Make take off/landing gradients steeper
Take into account segregation of different plane types (e.g. turbo jet and prop)
Make routes as short as possible
Fly the west side of the River Almond

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Other issues mentioned

Delegates and participants also raised a number of other issues that were clearly recognised as falling outside the scope of design principles, but nonetheless were considered issues of great importance in the context of airport expansion. In particular, delegates and participants in many of the groups identified congestion around the airport, and the capacity of local infrastructure to cope with future/different ACP options.

Ensure planning integration: transport infrastructure - surface access
Ensure planning integration: local authorities/other agencies
Ensure planning integration: transport infrastructure – general
Ensure planning integration: transport infrastructure - public transport

Noise and emissions were important to people and there was a lot of concern about carbon emissions and the idea that continued growth of the airport is counter to the Scottish Government's response to the Climate Change.

Monitor and report accurately on noise
Monitor air quality/emissions
Use technology to reduce noise/pollution impacts
Consider government targets on the environment
Consider risks of auditory damage

Other issues of importance connected to economic issues, such as, mitigation for those overflown and making clear the business case for expansion were mentioned as being important.

Consider compensation/ mitigation for those overflown
Ensure business case is well documented/evidenced
Recognise flights are not used by all
Increase flight costs to reduce peak demand

Other comments were made in about how EAL can support tourism and create jobs. Some claimed that EAL should communicate more and make it case for change know to more people. There was some concern that an expansion of flights will put pressure on the terminal building that it would not be able to cope. This led them to suggest efficiency and effectiveness needs to be addressed in the terminal.

Create more jobs
Support tourism/business
Ensure effective and clear communication
Ensure efficiency and effectiveness through terminal

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Environment summary

Design principles for environment
Consider impact of aircraft type/penalise poor performers/old aircraft
Minimise noise
Reduce emissions/pollution
Adhere to WHO regulations
Consider noise from take-off/ landing/turning
Take background noise into account
Consider/offset the impact on wildlife/the environment
Avoid over flying rural areas
Cff set emissions
Minimise light pollution
Consider climate impact
Consider impact on animal welfare
Reduce impact on greenspaces
Avoid flying over the zoo

Community summary

Design principles for communities
Reduce night flights and early morning flights
Fly over the sea/fly down the Forth
Reduce flights over communities/fly over less populated areas
Avoid overflying of schools
Do not fly over currently unaffected areas in planning
Restrict air craft holding areas over communities
Minimise noise/flights below 7,000ft
Restrict air craft turning over communities
Avoid overflying hospitals and care/retirement homes
Avoid overflying of historical sites

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Reduce flights
Take account of noise above 7,000ft
Concentrate flight paths during work hours
Review routes/flight corridors
Get people to accept noise
Fly the west side of the River Almond

Technical summary

Design principles for technical
Ensure decision making is evidence based (and evidence is appropriate/high quality)
Ensure fully integrated airspace change/clean sheet
Prioritise safety
Do not concentrate flight paths
Redesign the termina/terminal airspace
Minimise route deviations
Considerations for specific routes
Consider no change to flight paths
Make take off/landing gradients steeper
Take into account segregation(e.g. turbo jet and prop)
Make routes as short as possible
Ensure access to airspace by general aviation

Economy summary

Design principles for economy
Ensure consideration of all airspace users
Review need for growth
Ensure consideration of wider tourism impacts

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Equalities summary

Equalities
Consider needs of the elderly/ children/those with ill health/autism/sensory impairment
Recognise impact of flight paths on house prices and social migration
Ensure true accessibility in design

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Community representatives: North and West

Group dynamics

This workshop was held on the 23 September 2019. It comprised 19 delegates from 15 different organisations.

Some of the community council representative members were also EANAB members. The EANAB members tried to dominate the conversation and derail it from a constructive discussion about design principles to a complaints' session. This was largely overcome by employing a technique of asking delegates to write responses down on post-it notes that were then collected and grouped according to theme.

The workshop was jointly moderated by [redacted] and observed by [redacted]

Response to the Statement of Need

This group strongly contested the growth premise underpinning the SON, with this discussion dominating the early part of the workshop. They contested EAL's growth targets for 35 million passengers by 2050, claiming that this was against current Scottish and UK government's thinking on reduction in emissions. One of the attendees stated:

> *I'm afraid that goes back to the very first point, which is that fairly...what appears to me, and it's a strong word, but it's a fairly bogus statement of need. I just don't see this need for growth.*

Some expressed the need to remove traffic queues from feeder roads and reduce delays of flights. While others doubted that a need for increased flights should be justified on the need to reduce early morning delays, claiming that better flight management and pricing slots could alleviate bottlenecks in the morning.

> *To be able to go forward, we also need to be able to question the assumptions in that statement of need, and they need to actually look at the evidence that is presented for that statement of need, as a part of the design principles. We can't separate out the two, they have been given permission to move forward, but we can't actually discuss design principles without questioning some of the statement of need in the first place.*

Increase in inbound tourism was dismissed by many as a support for expansion, claiming that for every tourist dollar that flies in 3 fly out.

As with other workshops, delegates expressed the need for a root and branch review of airspace that takes national policy and FASI-N (Future Airspace Strategy Implementation – North) into account. It was considered that some of the design principles determined at this stage of CAP1616 could be rendered obsolete if the national airspace changes.

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So I think although you have a controlled airspace that's very limited around Edinburgh Airport, I think it would be hugely beneficial if Edinburgh Airport Limited really bit into this and pushed for a national change and an international change in airspace.

FASI-N charges need to be fully integrated with this ACP, but there is no recognition within the Statement of Need.

The first design principles were therefore:

Design Principles
Ensure fully integrated airspace change/clean sheet
Consider no change to flight paths

Environment

The issues that dominated the thinking of this group were bound in the theme of community and environment. One of the key topics of discussion before design principles were collected was the societal move away from cheap, frequent flights and a general acceptance in this group that flying is not good for the environment. Noise was central in the discussion about environment and the comments made above were reiterated.

Noise

The dominating theme for this workshop was noise. At its simplest, the group wanted to reduce noise in general. There were heated comments about the accuracy of current noise monitoring, and a desire was expressed for independent and accurately reported noise monitoring. Concern was expressed over the height at which noise becomes a nuisance, with many arguing that 7,000 feet is not a sufficiently high cut-off, as noise continues to be a nuisance when planes are above that height.

Delegates also commented on the impact of cumulative noise: they claimed they could hear planes waiting for take-off as well as those taking-off and landing; turning and banking manoeuvres were reported to increase the levels of noise by 3 to 4 decibels; noise levels were felt to have been increasing in some areas. Many felt that freight planes can be older and noisier so should face more restrictions from flying at night. Concerns were expressed about a lack of accurate monitoring of noise. Many felt that EAL based its thinking on modelling rather than monitoring and, in some instances, respondents doubted the validity of the positioning of monitors. This led to a request to *monitor and report accurately on noise*. World Health Organisation (WHO) guidance on health and noise was commonly referred to. Some called for avoidance of flying over rural areas because they felt that the noise impact is greater in those areas due to less ambient noise.

Noise was a subject talked about in the context of community and environment. The following table lists the design principles for noise in order of importance.

Design Principles for noise
Consider impact of aircraft type/penalise poor performers/old aircraft
Adhere to WHO regulations
Minimise noise - overall
Minimise noise below 7,000 feet
Take account of noise above 7,000ft
Avoid flying over rural areas

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Pollution

Reducing pollution and emissions were also an important issue. Delegates talked about the need to consider wildlife and migrating birds. They also talked about the need to consider the smell of aviation fuel.

Design Principles for pollution
Reduce emissions/pollution /improve air quality
Consider, mitigate and offset impacts on wildlife and the environment

Community

This group suggested EAL's motive for expanding airport capacity was to boost the airport's sale value rather than to improve their air services for the community. Many felt that all design principles should reduce the need to fly over communities.

Delegates were concerned that communities were being "pitted against each other" when discussing dispersed versus concentrated flight paths. On one hand, they wanted flights to be moved away from their community; on the other they didn't want other communities to suffer at their expense. The outcome was a general agreement that the number of flights need to be reduced.

An important design principle to emerge from this group was the need to provide respite from the noise by reducing flights through the night and early hours of the morning.

Delegates also expressed their wish for a reduction of flights over populated areas. Many thought that moving flights over the Forth would be a good solution to flying over populated areas. This design principle came up in different sections of the workshop and was reiterated several times.

> *Every single community on both sides of the Firth of Forth would be spared any of the noise they get at the moment. But it does mean going further down the Forth, down the middle, and getting to at least ten thousand before you vector off.*

A view expressed with some force was the need to avoid flying over housing developments that have not been flown over before.

Some claimed that reducing flights was the only legitimate way to reduce CO_2 emissions and noise. Others claimed that any increase in flights will also lead to an increase in traffic which would result in a negative effect. Schools came up as being of importance and some cited research pointing to the negative effects of noise on the ability to concentrate. Turning aircraft and holding over communities were thought to increase noise and one of the design principles clearly articulated was not to turn over communities. A few called for compensatory measures to help insulate houses under flightpaths from noise. A few mentioned the need to review flight corridors in light of UK Government's Airspace Modernisation Strategy.

Design Principles for community
Do not fly over currently unaffected areas
Reduce night flights and early morning flights

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Fly over the sea/fly down the Forth
Reduce flights/reduce flights over communities
Avoid overflying of schools
Restrict aircraft turning/holding areas over communities
Review routes/flight corridors

Health

The discussion on health linked into the subject of noise: the WHO report from 2018 was quoted as having the most comprehensive set of guidelines on noise limits. The design principle to come out of that discussion was not to create noise above 45 decibels.

Respondents also referred to the Air Navigation Guidance 2017. This states that effects on noise sensitive properties, including schools and hospitals, should be absolutely minimised. The respondents took this as a key design principle.

Design Principles for health
Do not increase noise levels above 45 decibels
Effects on noise sensitive properties, hospitals, should be absolutely minimised
Consider impact on mental health/wellbeing
Consider impact on sleep

Technical

Many perceived a difference in noise made by old and new planes. Delegates were consistent in their view that old planes should be phased out or charged heavy penalties if they contravene modern CO_2 emission and noise standards.

> *Airlines, are using aeroplanes until they run out of life, which could be thirty years. ……., some of the aeroplanes coming into land or taking off are much louder than others, plus they're much more polluting, much greater CO_2 emissions…because they're older. If everybody moved to a modern aircraft, or more modern aircraft, then many of these things would at least be reduced, which would be a benefit. So, the trade-off that is not discussed is whether the airlines should be pushed – nudged, whatever it is – to using more modern aircraft by looking at the rates they're charged in landing fees. If it's a noisy, high CO_2 aeroplane, it should be paying more to land at Edinburgh, or any of the UK airports, than a modern, low CO_2 one.*

Another less often mentioned issue was the need to segregate turbo jet and turbo prop aeroplanes. The design principles in relation to technical considerations are listed in the table below in order of importance.

Safety, both in flight and through the airport terminal, was prioritised as a key design principle.

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Design Principles for technical
Prioritise safety
Remove or penalise old aircraft that contravene modern noise standards
Fly fewer freight planes
Take account of segregation (e.g. turbo jet and prop)
Ensure decision making is evidence based (and evidence is appropriate/high quality)

Economy

Overall, this subject prompted less discussion than environment and community. However, there was a high level of agreement on the need to improve surface access and to have integrated-transport policy. While these are out of scope for design principles, they are issues that were of great importance for all respondents to this engagement exercise. These issues were given more prominence that others under the heading of economy.

Issues of great importance
Ensure planning integration: transport infrastructure - surface access
Ensure planning integration: transport infrastructure - public transport
Ensure planning integration: transport infrastructure - general

Most participants contested the economic arguments in favour of increasing the number of passengers and runway movements at Edinburgh Airport; using the same arguments as they contested the SON). Some said that EAL's reasons for expansion were flawed as a result of the downturn in air-travel, with a few pointing to a decrease in the number of flights because of flight shaming and environmental conscientiousness. Some disputed the argument that EAL supports tourism in Scotland, referring back to the argument that the airport also facilitates tourism out of Scotland. Others argued against the need for an increase in business flights.

Design Principles for Economy
Review need for growth
Ensure consideration of wider tourism impacts

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Equality

Some participants claimed that, in their opinion, the airport is not used for the good of all and that flying is an elitist activity for 15% of the people.

> *50% of flights are used by 15%[2] of people. And so, that's people with money. That's the privileged, yeah? And businesses. The people that want to go to Spain for their holidays are a different category, and they're being affected by this as well. It is a very unfair playing field.*

One person referred to the Rights of the Child which linked back to the point about not overflying schools.

Another dominant comment was that homes in populated areas that are overflown reduce in value and amenity, which leads to, what they perceived as, "ghettoization" of the poor who may be unable to afford to move. The key design principle to be deduced from this is do not fly over populated areas that have not previously been flown over. This is documented in the community section.

The perceived inequality of not paying tax on aviation fuel when it is charged on road and rail fuel was also noted.

Design Principles for Equality
Recognise impact of flight paths on house prices and social migration
Consider needs of the elderly/ children/those with ill health/autism

Social benefits of efficient air travel

This group were reticent to talk about the social benefits of air travel, claiming that social benefits, such as, employment should not be a reason to subject people to being overflown 24/7.

Some claimed EAL doesn't benefit them in terms of travel because English airports are cheaper than Edinburgh and so they drive down to other airports, such as, Newcastle.

> *I'm not denying that we do make flights, we all go on holidays. But yeah, no, we tend not to use Edinburgh because the Scottish airports seem to be more expensive.*

Others claimed that technology was reducing the need to travel and people could communicate efficiently online which negates the need to increase capacity for business users.

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[2] The claim that 50% of flights are taken by 15% of the people is incorrect. It's actually **70%** of flights taken by 15% of the people... https://fullfact.org/economy/do-15-people-take-70-flights/

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Community representatives: South and East

Group dynamics

This workshop was held on the 3 October 2019. It comprised 16 delegates from 16 different organisations. There was some overlap across these organisations, for example, a member of Ecclesmachan Community Council represented himself as the Broxburn Traders representative and Ecclesmachan Community Council was separately represented by a different member; likewise the representative of Cramond Kirk was also member of Cramond and Barton Community Council and the Community Council was also separately represented). We had one community councillor who was also a member of EANAB.

Attitudes amongst this group were mixed. Some were directly under the flight path in Cramond and had a generally negative disposition to the airport. Others from further afield e.g. Pencaitland were less exercised. On the whole this group of people were very knowledgeable and well informed of the ACP and EAL.

The workshop was jointly moderated by [redacted] It was observed by [redacted]

Response to Statement of Need

This group also strongly contested the validity of the Statement of Need and the need to expand the number of air traffic movements. They pointed to morning delays cited in the SON claiming that delays are built in due to timetabling, they felt, which could be improved without the need to increase flight movements. They also claimed that flights between 6am and 7am are less delayed than other times of the day. In fact, they claimed that citing other delays during the day would have strengthened the airport's case.

They also questioned the need for expansion claiming that the airport only ever runs at 70 to 75% capacity.

> *The CAA have not agreed the Statement of Need at present. All they've said is, 'This document fits our definition of a Statement of Need, and therefore you can proceed from stage 1A to stage 1B'. It's only at the end of stage 1 they finally give it the big tick. The fact they've said you can move on from stage 1A probably means they're fairly happy with it, but we mustn't think that it's been agreed, because there are actually – I'm not sure if we're going to discuss this tonight – but there have been huge questions over how valid this Statement of Need actually is.*

One respondent referred to a drop in air traffic movements and quoted the CEO of Edinburgh Airport as having said there has been a drop in the number passengers. They also cited the reversal of the Scottish Government's policy to halve passenger duty, claiming that this will slow down the growth in passenger numbers.

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So for the last Thursday in September in Twenty Nineteen and in Twenty Eighteen and in Twenty Seventeen, there actually was a drop in the number of ATMs, that is, Air Traffic Movement, landing or taking off. There was actually a drop this year compared with last year. There was a 3.2% increase in 2017-2018, but now it's levelled off and it's going down. Gordon Dewar the CEO of the airport, talking to the Edinburgh Airport Consultative Committee back in May, reported the first drop in passengers in ten years. They are levelling off. You may have heard of a thing called Flight Shame, '[Swedish]', it comes from Sweden, the home of Greta Thunberg, and in Sweden people are now cutting down the flights they take. So I seriously question whether we should be accepting, at face value, the airport's' totally undocumented claims that they need to grow.

Some members of this group were also keen to understand if EAL intended to revisit previous work it has conducted into seeking an alternative route into the landing strip that avoided parts of Cramond or if it was intending to preserve the existing path. Others were keen to understand if EAL had any plans to build a second runway which they felt could potentially alleviate some of the noise.

The first design principle was therefore:

Design Principle
Consider no change to flight paths

It took some time (around 20 minutes) to bring the group around to thinking about design principles and the point of the exercise was questioned again by one respondent one hour into the workshop. Overall delegates to this workshop were far less inclined to commit their design principle ideas to paper (writing them on post-it notes) but were happier to talk about them as illustrated by the quote below:

And just in case you get the impression by the numbers [of design principles written on post-it notes], I think community councils are really one hundred percent, bar maybe about half a percent, about noise abatement, we really don't actually mind that much about the effect on biodiversity because it's not that noticeable. Fine air particles, CO_2 commissions, as you say they're nothing compared with traffic and the airport contributions that is very small indeed. So I think I'd like to sort of make the point that if you go away with the impression that we're interested in anything other than noise abatement procedures, you're mis-quoting the whole thing.

In this case a lot of the design principles have been drawn out from comments recorded in the transcript of the session.

Environment

As with the other community representatives, during the North and West area session, noise was the dominating theme. Delegates were concerned about the negative effects of noise on their communities in terms of devaluing their homes, negatively affecting schooling of children, flying over large new developments that have not previously been flown over. They were also very concerned about the road access infrastructure claiming that roads are already facing very heavy traffic jams which, they felt, would only get worse if the airport expands. They then went on to talk about pollution and the negative effect on the planet from CO2 emissions.

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Noise

As already noted above, noise was the dominant theme with this group, who claimed that it has increased and that many people bought their homes when noise was less of an issue. They were concerned about the accuracy of information on noise and claimed the noise contours currently in place are based on inaccurate population figures.

One member representing a rural area south of Edinburgh claimed that, while the area is not generally affected by noise from planes, it does become noticeable when planes are slowing down. This was followed by another commenting that they believe that continuous descent approach (CDA) is being implemented, which has decreased the incidence of noise from planes changing speed.

> *Now you can sleep through a normal flight but when they add breaks on to that you wake up thinking, 'is that thunder? What is it?' you know. I do not know what height they are at when they fly over us but the noise is quite phenomenal when there's a change in the methodology of flying that plane.*

There was some concern expressed that, despite the new more accurate navigation system, some pilots will always make deviations for reasons of avoiding bad weather, saving fuel or saving time. It was claimed that EAL does not impose fines on those who break the rules as they have no legal requirement to do so.

> *Irrespective of the spread and the type of navigation that we are using and whether it be focused or spread, there are still a huge number of pilots for reasons other than emergency and passenger safety. Weather conditions, i.e. heavy thunder clouds and thunder... they are making deviations because they are probably late*

A representative from Dreghorn commented on the perceived increase of helicopter noise, however this was not fed into a design principle. Cargo and mail planes were cited as being particularly noisy because they are old and significantly more noticeable.

> *But if you have visitors they are all like 'what?' And that is telling, I think, the more it happens, the more you get used to it. What we will never get used to is the real early morning ones when the roar wakes you up. And we get that quite often.*

Design Principles for noise
Minimise noise
Reduce the need for aircraft holding
Minimise the noise from planes changing speed
Consider impact of aircraft type/penalise poor performers

Pollution

Pollution and emissions were also an important issue to this group, but delegates talked about the need to consider pollution on roads due to congestion as well as pollution for aircraft.

> *Everybody knows that they [St John's Road and Queensferry Road] are the most polluted roads in Scotland. What the communities are on about is better infrastructure, trying to alleviate some*

of that traffic issue and I suspect any big change to the airport isn't going to make it any better, in fact, it is going to make it worse. Substantially worse, and that's what is on the minds of the communities.

There were concerns about the wildlife in/on the Forth but these did not override the overall desire that planes fly over water. Delegates commented that some form of offsetting could help compensate for distress on wildlife in the Forth.

I can certainly agree with rewilding, not necessarily on the Forth. The Isle of May has a certain area where they [birds] are protected.

Design Principles for pollution
Reduce emissions/pollution /improve air quality
Offset the carbon footprint/consider rewilding

Community

Issues of importance to the community overlapped with issues of the environment, with noise the biggest negative impact on the community. One of the key points made in the context of community was to preserve the quiet of houses that are not currently affected, even if it means flying over larger populations. Another was to reduce the impact of night noise as the participants felt it has more impact due to perceived lower levels of ambient noise. Frankfurt Airport was given as an example of an airport that has successfully banned flights from 11pm to 6am.

As with other groups, the potential resource of the Forth was mentioned as being a solution to avoiding densely populated areas. One respondent claimed that the Ministry of Defence no longer has this mapped as a restricted area because Leuchars airfield (formerly RAF Leuchars) has now closed down. However, one respondent comment that by the time planes are over the water they are quite high and thus create less disturbance.

I'm not sure that water isn't a red herring because as you're landing, you're coming from the East and you are on your 10-mile flight path. You are quite high over the water, you're quite low when you get to Cramond and Barnton, so, and with take offs, only fifty percent of the traffic is taking off in that direction and you are quite noisy when you are taking off and tend to go over the water when you are quite high. So water is a wee bit of a red herring. Let's use it if we can, but it will not solve the problem, it may alleviate slightly.

The overarching design principle was to reduce flights over communities. This came with a strong recommendation not to sacrifice the needs of one community over another. Planning routes over the sea or over unpopulated areas was seen as the solution to this. Schools were cited as buildings that should be avoided when overflying as the participants felt that noise can impinge on learning. Hospitals and care homes were also placed on the sensitive building category as places that should be avoided because the residents may have no way to escape the noise.

The issue of maintaining access for families to see relatives instigated a lot of conversation. Access to the Islands was seen as being of particular importance not just for communitarian reasons but for economic ones as well.

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Design Principles for community
Do not fly over currently unaffected areas
Restrict night flights and early morning flights
Fly over the sea/fly down the Forth
Reduce flights/reduce flights over communities
Avoid overflying of schools
Avoid overflying hospitals and care homes
Prioritise flights for essential access to Scottish islands
Recognise the increase in flights that communities under flight paths have experienced

Health

The subject of noise was raised in the context of health and many disputed the lowest-observed-adverse-effect level (LOAEL) measurements put in place by the government to measure noise. Delegates from Cramond said that an average of 51 decibels during the day and 45 at night did not give a true reflection of conditions when Cramond is exposed to 64 decibels which they felt was beyond being a nuisance.

Design Principles for health
Conduct a Health Impact Assessment
Effects on noise sensitive properties, including schools and hospitals, should be absolutely minimised
Consider impact on mental health/wellbeing
Consider impact on sleep

Technical

While safety wasn't mentioned by many, it was considered a given by all. Key design principles in relation to technical issues were again based on a need to reduce noise. These were to penalise old aircraft and fly fewer freight planes, especially at night. Some claimed that night flights are penalised but by not enough to act as a real deterrent.

Design Principles for technical
Prioritise safety
Remove or penalise old aircraft that contravene modern noise standards
Fly fewer freight planes
Reduce holding (stacking) planes over communities

Economy

Discussions around the economy prompted a high level of agreement on the need for improvement to transport and the need to take into account the current pressure on roads such as Queensferry Road and St John's Road. As with other workshops these issues were given more prominence that others under the heading of economy.

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Issues of great importance
Ensure planning integration: local authorities/other agencies
Ensure planning integration: transport infrastructure - surface access
Ensure planning integration: transport infrastructure - public transport
Ensure planning integration: transport infrastructure - general

Delegates also commented that there had been a drop in the value of their homes and sluggishness in sales in Broxburn due to noise. This was evidenced by the experience of an estate agent who was a member of the Broxburn & Uphall Traders' Association.

Some commented on the need to reinsulate and re-glaze properties that had been compensated for in 1996. Comments were made about the need for developers to build to higher insulation standards, which, according to the participants, costs more and leaves developers who are just outside the sound contour out of pocket. This conversation also reiterated the perception that the noise contours do not accurately reflect the needs of communities around Edinburgh airport.

We need accurate noise contours based on Edinburgh data and not based on Gatwick data.

Some also mentioned the previous consultation that made a late decision to place a flight path over Winchburgh, and commented this had prompted a lot of people to try to sell their homes there. Discussions about higher cost to insulate homes and potential impacts on property prices led delegates to put forward a request for compensation for those overflown.

Design Principles for Economy
Ensure decision-making is evidence-based (and evidence is appropriate/high quality)
Do not impact on the value of homes
Offer free trams to Edinburgh Gateway station

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Stakeholder representatives

Group dynamics

This workshop was held on 1 October 2019. It comprised 15 delegates from 15 different organisations. Delegates were from a broad church and included representatives from environmental activist groups, such as Extinction Rebellion, property developers, local authority environment health departments, environmental protection organisations, such as SEPA, and equalities organisations, such as Royal National Institute of Blind People (RNIB), Fife Centre for Equalities, Disability and Equality Scotland. Progressive provided support for one delegate who had visual disabilities, in the form of a scribe to, take down and contribute any written comments.

Attitudes amongst this group were mixed, but the mood was generally constructive. Delegates were not as emotionally charged as delegates from community councils, which meant that the discussion on design principles took off a little quicker than in the community stakeholder groups.

The workshop was jointly moderated by [redacted] It was observed by [redacted]

Response to Statement of Need

This group raised questions about the process of planning airspace change and participants were concerned about integration of planning processes. As with other workshops, the Climate Change was top of mind and one person commented that the Climate Change Bill will commit Scotland to net zero emissions, so the airport needs to set out how its approach contributes to the overall goal, including through its flightpath design. There were concerns about planning integration and the need to deal with the significant surface water management issues which they claimed were associated with the scale of new development within the Fife and Lothians in particular. This was thought to be relevant to expansion of the airport and the added impact that it may have.

> *I guess if this is about building capacity and ultimately increasing the number of flights, then there's all sorts of questions about how this process relates to all sorts of other consultations around airport management, passenger management, assistance, use of land space – I know that's not part of this particular study, but it would be good to know that all of these things are linked together so that we don't just end up with an airport that has lots of airspace capacity but no capacity to actually support passengers.*

Unlike community stakeholder groups, opposition from this group to the SON was comparably low. Even so, the presumption that growth is necessary was strongly challenged, not least by Extinction Rebellion.

There were questions over the process and how the Scottish Government plays a role when aviation is a matter reserved to Westminster.

The first Design Principle therefore was:

Design Principles
Consider no change to flight paths

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Environment

As with community stakeholder groups, noise played a big part in the discussion about environment. However, the stakeholder group considered a broader set of issues, including tourism and the acoustic landscape. The wider responsibility of planning Edinburgh's infrastructure, and integrating this with the surrounding local authority areas, was also key to this group. Infrastructure planning was a subject of great importance, not least to the developers in the group.

Noise

As noted above, and as with most workshops, noise was the biggest issue. Delegates discussed the effects of different types of noise, and commented that constant background noise was an issue, as much as taking off and landing noise, to those living in close proximity to the airport. One commented that hearing loss is becoming a big issue in Scotland and that any additional noise in the environment should be carefully considered. The type of noise should be considered, as other factors, such as the frequency and the general audio landscape. For example, the participants felt that a plane flying over Edinburgh Castle will have a different impact to one flying over Inchcolm Abbey, because of the perceived impact of noise from the railway below and general ambient noise from the city. This was summarised in a Design Principle of taking audio landscape into consideration.

Design Principles for noise
Consider and offset the impact on wildlife and the environment
Take background noise into account
Minimise noise
Take audio landscape into consideration

Pollution

CO_2 emissions and aviation fuel deposits were an issue for many participants, and more so for the representative of Aberdour, who claimed that many in the area complain of fuel smells. Many wanted to know how air quality was being measured.

> *It's [air quality] an issue. It's a great fear to people. But what's being done to countenance that fear? And how will that be presented within the consultation?*

Design Principles for pollution
Reduce emissions/pollution /improve air quality

Community

Noise was the principal consideration in the context of community. For the majority of respondents, their concern was based on a theoretical basis rather than the experience of being subjected to noise. Some lived under flight paths, but they felt that the planes were high enough not to affect their quality of life. The representative from Aberdour Community Council was the exception to this. He commented that his community was overflown at sub-four thousand feet by large planes, due for the Far East, that freight planes wake the community at 4am and that schools are overflown. He also made

the point that, to his understanding, when planes take off to the East, the turning noise over Aberdour was extreme.

One core principle voiced by this group was the need to take into account areas that are not currently overflown. They felt that the responsibility on part of EAL should be to demonstrate that any changes in airspace will not impact negatively on planned spaces for housing development .

> *As a developer we won't get planning permission for any development where there are noise generating sources unless we demonstrate how they are mitigated and as we are finding currently that mitigation for a residential property has to be with windows open. So you can't just simply tell people to close your windows. That mitigation has to be as a result of detailed noise impact assessments and testing current ambient noise for an area against the likely noise impact from the source. You at the airport are going to be creating that noise source and likewise they shouldn't be getting permission to impact on not only existing properties but also planned communities unless they can demonstrate through a comprehensive noise impact assessment of central Scotland that they are not breaching the same guidelines that we're burdened by.*

It appeared that some reassurance was given to the group when they learned an independent noise assessment was taking place.

Children were said to be more sensitive to noise and therefore overflying schools should be avoided.

Many agreed that flying over the sea was a natural solution, but some cautioned against this as Edinburgh has two award winning beaches that are a magnet for tourism and Inchcolm Island (in the middle of the Forth) is an important historic site.

The representative from Historic Environment Scotland (HES) proposed a widely endorsed idea that the historic environment is not reliant solely on the visual landscape and that audio landscape is equally as important to some sites.

The issue of overflying rural areas versus urban areas came up as delegates discussed the pros and cons of both. The resulting Design Principle was not to fly over rural areas as a justification for flying over fewer people, because they felt that the impacts of noise in a rural setting is likely to be greater than in a setting where there are higher levels of ambient noise.

Design Principles for community
Fly over the sea/fly down the Forth
Do not fly over currently unaffected areas
Restrict night flights and early morning flights
Avoid flying over historical sites
Avoid overflying of schools
Avoid over flying rural areas

Health

Delegates pointed to a body of research that sets out the negative effects of noise on health and, as a result, the overriding principle in the context of health was to reduce noise. One comment was made

about the need to support people who rely on sound to navigate. An example was given of a blind person being unable to move safely until the sound of an overflying plane was gone. This led to the Design Principle on assisting the movement on ground for people who rely on auditory signifiers to navigate.

Design Principles for health
Minimise noise
Support movement on ground for people who rely on auditory signifiers to navigate

Technical

The Design Principle of making evidence-based decisions was partly based on the need to monitor real live noise rather than rely on modelling, which many felt was inaccurate. Some were cautious about making a Design Principle as emphatic as flying down the Forth and felt that EAL should talk to National Air Traffic Services (NATS) about all possibilities for opening up airspace instead.

Design Principles for Technical
Ensure decision making is evidence based (and evidence is appropriate/high quality)
Explore other opportunities with NATS

Economy

Infrastructure was an issue of great concern to many of the delegates to this workshop. It appeared that many were thinking from the point of view of connecting to wider geographical areas, such as East/West Lothian and Fife. Many agreed with the point that integration of transport planning was necessary and that looking at the airport in isolation was not going to bring about an effective transport solution. This was expressed in the desire to ensure planning integration.

There was a call by one participant for Edinburgh to share the cost of mitigating ill-health and the cost for improved infrastructure that they felt was likely to result from growth.

One participant commented that EAL supports the Edinburgh economy, but that economic benefits reduce the further away from Edinburgh an area is, for example, Falkirk derives much lower economic benefits from Edinburgh Airport than the City of Edinburgh. This led to a conversation about how to measure the Airport's benefits to communities, and it was clear delegates knew very little about the support that EAL provides in the community. This was expressed in the desire to invest in infrastructure.

Issues of Great Importance
Ensure planning integration: local authorities/other agencies
Ensure planning integration: transport infrastructure - general
Invest in infrastructure and work with local authorities

Tourism was an important issue to many, both in terms of the necessity to support the tourist industry in Scotland but also to protect tourist sites in and around Edinburgh, by considering their acoustic and visual landscapes.

Some felt that imposing a "frequent flyer levy" would reduce the number of flights overall and could reduce congestion in the mornings as many frequent flyers are likely to be business flyers leaving early in the morning.

Design Principles for economy
Ensure consideration of wider tourism impacts

Equalities

The conversation about equalities centred on accessibility for blind people and people with a sensory impairment. There was a discussion about hidden disabilities, such as autism, and the need to take ill health and the needs of those who cannot cope or have a sensitivity with noise into account. This presented as the design principle for considering the needs of children/those with ill health/autism.

The needs of older people were thought to be important as there is, reportedly, an elderly population in Dalgety Bay and Aberdour, who may have limited mobility and, thus, may rely on the amenity of their gardens, which could be compromised by constant overflying.

Design Principles for equalities
Ensure true accessibility in design
Consider needs of older people/ children/those with ill health/autism/ sensory impairment
Consider needs of older people

Comments were made about the need for support at the airport for those who may need additional assistance and that increasing the number of passengers will add to the pressure on the assistance available. Another comment was made about the complexities of bringing in greater numbers of people and the effect that might have on security for Edinburgh in the context of issues, such as human trafficking and sex tourism. This was summarised as a need to think carefully about the interdependence of what happen in the sky and the infrastructure at the airport below and expressed in the issue of importance as Ensure true accessibility in design.

Issue of great importance
Ensure true accessibility in design

Communication

This workshop generated a lot of questions from respondents. One of the concerns that came out clearly was a need for more information on airport-related matters. Many stated that they would

welcome more communication from EAL in terms of what their plans are, for example, for integrated road planning, as illustrated by the quote below:

> *I mean, I think I would want to hear, actually, what investment you would make, in terms of improving the transport from the airport to Fife. It's not about Fife Council making that investment, it's actually about the Airport making that investment. I think that might then buy your kind of support from the communities.*

Design Principles for communication
Make the process of engagement and consultation transparent
Make public EAL's input into planning and road infrastructure

During the course of the workshop, it became apparent that communities would like to engage more with the airport, and that the security at the airport and keeping Scotland safe was an important issue to some. Many wanted clarity on why planes have to fly in certain routes. Some wanted to hear more about EAL's policy on energy and renewables at the airport.

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Aviation representatives

Group dynamics

This workshop was held on 26 September 2019. It comprised 16 delegates from 14 different organisations. Delegates represented a broad range of interests, including cargo, recreation, airspace lobbyists and activists. A full list of delegates can be found in the Appendix B. In addition to those listed in the appendix we had two online returns from those invited to the aviation workshop. They included the Ministry of Defence[3] and Glasgow Airport.

Attitudes amongst this group were mixed and some were more open to the idea of expansion than others.

The workshop was jointly moderated by [redacted] It was observed by [redacted]

Response to Statement of Need

A recurring theme across different workshops was the doubt that increasing capacity will reduce delays. One very specific comment on this issue was made in relation to evidence about EAL reaching 42 air traffic movements (ATMs) per hour:

> *You mentioned in an earlier slide that the current airway capacity is 42 ATMs an hour. That's 42 take-offs, landings, or a combination of the two. I'm interested to understand when the airport is actually reaching that, or exceeding that because I'm not convinced yet that I've seen any evidence that increasing the airspace capacity will actually result in a reduction of delays. Because the delays might not actually be due to issues with the airspace. So we'd actually be quite interested to understand what the evidence is behind what was in the Statement of Need regarding delays reduction because there can be 101 reasons for a delay, which may not be related in any way to airspace. And I think we absolutely need to understand that.*

There was a call for EAL to explain more about how the projected increase in passenger numbers from 14 to 35 million passengers in 2050 translates into actual ATMs.

> *What we're needing to look at or get a feel for is how does that need actually translate into aircraft movements, and how does that translates into restrictions over widening or changes to the airspace pattern that we have in Edinburgh? That's a concern, so I think that one of the design principles should be an expectation that data, particularly forecasts, need to include details of any and all assumptions.*

While out of scope of Design Principle discussions, the following points were shared by all delegates:

- Start with a "clean sheet" approach and change more than just the existing routes into performance-based navigation (PBN) ones;

[3] The response from the MOD to all questions on what EAL should consider regarding: Economic, social and environmental, health and equalities was: *MOD has no comment.*

- CAP1616 needs to be improved to permit better co-ordination between airports and their ACPs.

As with other workshops, delegates felt that a different approach, that takes into account the plans for changes to wider UK airspace, such as the FASI North programme, and thinking beyond the ceiling of 7,000 feet in terms of noise impacts, should be taken by EAL. This led to the Design Principle about taking a "clean sheet" approach and ensuring a fully integrated approach to airspace change. This design principle was considered to be the most important to this group.

> *And I'm also hearing we aren't planning on changing any airspace. So, I had expected that if we're going to look at from the ground up, departures and arrivals in and around Edinburgh that we have a golden opportunity to look at what's actually needed for airspace, what's not needed for airspace and to have a logical, properly designed airspace situation. If your objective is different, which is just to fill in an hour and a half discussing the existing airspace, the structures, then I think we've been missing a huge opportunity to do this thing right.*

Participants in this workshop felt very strongly that opportunities would be missed if Edinburgh Airport airspace is designed separately from changes in the airspace that Glasgow Airport is considering, and that they all need to be considered together. Glasgow Airport submitted a response online and it was as follows:

> *Designs must be developed collaboratively alongside Glasgow Airport and NERL so as not to adversely affect designs for the wider network or local designs being developed by Glasgow Airport in the course of their ACP. A design principle should be included that ensures that a fully integrated and coordinated approach is in place with neighbouring airports and NERL.*
> *As an output of the FASI-N technical working group (held on 24th Sept) and attended by GLA, EDI, NERL and ACOG it was tabled that GLA and EDI would both include the same principle in their Design Principle submission: "Routes to/from Glasgow and Edinburgh airports should be procedurally deconflicted from the ground to Flight Level 90". Glasgow Airport are supportive of this and have tabled at our workshop sessions. It is proposed that EDI do the same.*

The first set of Design Principles from this group were:

Design Principles
Ensure fully integrated airspace change/clean sheet
Routes to/from Glasgow and Edinburgh airports should be procedurally deconflicted from the ground to Flight Level 90
Data, particularly forecasts, need to include details of any and all assumptions

Environment

The most important issue in the context of the environment was to minimise noise as much as possible. It was also suggested that another way to reduce noise was to adopt a "polluter-pays" approach, which would penalise poor performers. It was, however, noted that this is already in place, as illustrated by the quote below:

> *There's a new surcharge applied to all of our departure, landing fees if you like. And it's lower for us because we operate exclusively Chapter Four aeroplanes. I mean I'm talking, to put some scale on it, I think it's £26 a departure if you depart Chapter Three. And it's £13 a departure if*

you depart Chapter Four. You add that up over the number of flights we do over the year, it's a sum of money. A significant sum of money.

The issue of pollution was also top of mind. In relation to potential solutions to reducing pollution, suggestions were noted on making routes as short as possible and keeping ascent and descent gradients steep. These Design Principles are reported in the technical section. However, these ideas also raised questions about the impact of noise due to a suggestion that steeper gradients may lead to increased noise.

I appreciate fully that...there needs to be a move towards lower fuel burn and therefore lower emissions. But equally I think it's very important that the noise issues that potentially created by that are not ignored.

Design Principles for environment
Minimise noise
Reduce the need for aircraft holding over communities
Consider impact of aircraft type/penalise poor performers

Community

During this session it was noted that, from a community perspective, there is a call for planes to fly over the Forth instead of land. It was claimed this would help communities living with noise and would help Edinburgh Airport. The subject caused quite a lot of discussion as it was claimed some planes already fly down the Forth. There was some confusion as to the height and whether the planes were controlled from Prestwick or Edinburgh. On balance, the group thought the most likely scenario was that these flights were above 7,000 feet and controlled by Prestwick.

The issue of not overflying housing developments that are still at the planning stage in areas that have not been subjected to noise thus far was voiced.

There was also some discussion about the potential plans for concentrating flight paths and how this may result in increased noise for some communities. It was felt that the airport would need to have a robust process in place for compensating the impacted communities should this happen.

Design Principles for community
Fly over the sea
Do not fly over currently unaffected areas in planning
Restrict aircraft turning

Technical

The issue of turning aircraft was raised during the discussion about technical issues, with one highlighted concern being that tight turns over a community prolong the noise exposure for those on the inside of the turn, and as such, should be avoided.

Safety was the key priority, and the majority argued that, if there is a safety reason for placing a route in a specific place, that should take precedence over all other issues.

Some wanted to have the number of aircraft movements fully understood in the context of passenger numbers. This, amongst other calls for high quality evidence, tied into the principle about ensuring decision making is evidence-based.

Many argued that, in the interests of reducing costs, CO2 emissions and reducing the impacts of noise, it would be better to have steeper descents and approaches. This ties into the principle of making off/landing gradients steeper.

Making routes as short as possible was an idea mentioned in the context of environmental economic and technical objectives. It was also noted that, from a commercial perspective, it is important to have routes as short as possible in order to reduce fuel burn, reducing hours on the engine and reducing emissions.

One of the issues that came up in the context of technical considerations, was that many planes can't fly Global Navigation Satellite System (GNSS) because they were not equipped for it. This could potentially be out of scope but a point worth noting for the future. It was translated into the design principle about giving a consideration to planes that can't operate GNSS.

Another issue, that may be out of scope for this programme and was raised by gliding organisations, was the desire to have a gap that is ten nautical miles wide through the central belt at 2,000 feet.

The issue of joined up thinking with Glasgow airspace in the context of national strategy was also mentioned in the technical section of the discussion and is illustrated in the quote below. This is fully reported in the section on response to SON and tabled as the design principle of "ensure fully integrated airspace change".

> *There must be some means of ensuring all these different ACP sponsors actually having a means of talking to each other, because we are going to end up with a dromedary, when actually, what we wanted was a horse*

The issue of airspace between Glasgow and Edinburgh also prompted a conversation about access to airspace for general aviation. This is expressed in one of the design principles listed below.

> *Corridor between GLA and EDI needs to be made wider and deeper Class G. This would allow better access for GA and reduce noise from CAT for communities*

Design Principles for technical
Prioritise safety
Ensure fully integrated airspace change/clean sheet
Ensure decision-making is evidence-based (and evidence is appropriate/high quality)
Make take off/landing gradients steeper
Make routes as short as possible
Considerations for specific routes
Consider those who can't operate GNSS.
The spacing requirements under (performance-based navigation (PBN) can be reviewed to create capacity in the air
Ensure access to airspace by general aviation

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Economy

During this discussion, a previously unmentioned perspective on the Statement of Need was raised. One of the participants expressed the desire not to see any expansion of controlled airspace.

> *A lot of air activity as a gliding firm relies on the unique conditions of Scotland that attract tourists from abroad, flying to us to come and fly wave conditions and fly in the Scottish mountains. And we have previously had instances where threats to our airspace for example, transponder mandatories all above flight level 100, for example, has an impact on tourists coming.*

One delegate also asked if there was going to be a continued sympathetic approach towards recreational aviation and suggested that this should become a design principle.

> *When I fly in Scotland and I make a request to transit through Glasgow, I've never been refused. I make a request to transit through Edinburgh, I've never been refused. No one's asked me what equipment I have, I just want to make a VFR flight from A to B. And I think that's fantastic, that that happens right now. What I worry, will it happen in the future? Will that sympathetic approach continue? Will we continue to enjoy it? Will we continue to have it available to us?*

"It was noted that both, business and safety considerations, mean that the crews and air traffic controllers must be able to navigate/fly the routes and be trained in using them" - this comment was made by the NATS/NERL representative in the context of air traffic controllers at Prestwick Centre. They went on to say that air traffic controllers need training and the more complex the system the higher the cost in training and the longer it would take. While this may be out of scope it tied back to the principle of making sure design principles are achievable.

Design Principles for economy
Ensure consideration of all airspace users
Maintain as much Class G airspace as possible to meet everybody's requirements
Maintain a sympathetic approach to recreational aviation

progressive

EANAB representatives

Group dynamic

This workshop was held on 28 September 2019. It comprised 6 delegates, all from EANAB, with all representing communities that are flown over within noise contours, on the border of contours or outwith. They came from Cramond, Ratho, Uphall, Ecclesmachan and Blackness. A full list of respondents can be found in Appendix B.

Attitudes amongst this group were generally in opposition to any form of airport expansion but the mood was generally constructive.

The workshop was jointly moderated by [redacted] It was observed by [redacted]

Response to Statement of Need

As with many other workshops, one of the initial points of conversation was that the opportunity to look to the wider airspace context, that includes national policy and taking FASI-N into account. The group argued that both, the MOD airspace proposals and the airspace above 7,000 feet, should be taken into account during the consultation. This led to the design principle of ensure fully integrated airspace change.

> *I think we should be thinking about the FASI-North programme just now that's looking at the wider airspace. Because that's something that's going to be a constraint as to what the design options may be. Now whether that's a design principle, I don't know but it's something that is fundamental. I mean all the ACPs that are happening down South East just now are under the umbrella FASI-South. So, I think it would be a lost opportunity, a missed opportunity for us not to have the FASI-North equivalent.*

Many felt that West Lothian is in a vulnerable situation, because it faces 70% of take offs and yet is not the Airport's "preferred partner". Instead, the City of Edinburgh is Airport's "preferred partner" although the city isn't flown over. This, they claimed, denies them of a voice in what's happening at the airport.

Some considered EAL's sole purpose for the airspace change is increase capacity and, as a result, increase the share price. This coloured their view throughout the discussion during which they propagated the idea that EAL is there for commercial gain only and doesn't really care for the community. Some argued that EAL is not running at capacity, in that, that it does not reach 42 movements an hour stated in the SON but operated doser to 30 per hour. This reinforced the design principle on considering no change.

> *You've only got to look at the aircraft movement data. The aircraft movement data at the moment, periodically, during any 24-hour period, briefly gets to a figure of around thirty movements an hour.*

Additionally, many in this group felt that maintaining the status quo would be no bad thing for communities. This led to the design principle on considering no change.

It doesn't follow that to be able to introduce RNAV you have to change the flight paths. You can keep the flight paths as they are and introduce RNAV, could you not?

While they may be out of scope, the first Design Principles to emerge from this session were:

Design Principles
Ensure fully integrated airspace change/clean sheet
Consider no change to flight paths

Environment

For this group, having up-to-date and accurate information on noise was key. There was some doubt expressed about the accuracy of the modelling exercises that have been provided thus far and confusion about the available data. Delegates asked for data to be provided in a clear and easy to understand format. This led to the request to monitor and report accurately on noise.

There was also a lot of concern about carbon emissions and the idea was expressed that continued growth of the airport is counter to the Scottish Government response to the Climate Change. Participants considered that continued expansion of the airport would contribute to an increased carbon footprint at a time when we should be thinking about reducing it. One respondent pointed to the current trend of people choosing not to fly which cast doubt on the need to accommodate expansion. This led to the principle on considering the climate impact.

I just feel that we're attacking things like car transport, energy but no one's ever raised the subject really seriously about what they can do on air traffic. And yet here we are doing something which will generate more traffic if it's successful. And I just feel it runs against current thinking.

Infrastructure was an issue of great concern to this group, who claimed to notice traffic congestion all the way from Edinburgh onto the M8. This, in their minds, lead not just to inconvenience on the roads but to pollution as well.

Some felt there was a conflict with the expansion objective and airport's current airport infrastructure, which, they felt, barely copes with the volume of travellers already. This led to a discussion about how the airport need to improve access though the airport as well as surface access to it. This was summarised into the principle on redesigning the terminal.

Design Principles for environment
Adhere to WHO regulations
Reduce emissions/pollution/improve air quality
Redesign the termina/terminal airspace
Consider climate impact

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Noise

Noise was reported as being the biggest point of concern to residents. One key issue to come out of the discussion was that the participants felt that there is no accurate data on noise levels. This, they felt, means that local communities cannot review/challenge the airport's assertions on noise levels. This led to the request to monitor and report accurately on noise.

Night time noise, in particular, was reported as an issue. Participants commented on their perception that night-time noise had worsened in the last ten years. They noted that night flights used to be subject to time restrictions and were largely commercial (cargo), whilst increasingly there are much more frequent and unrestricted flights of mixed nature. This led to the design principle on restricting night flights and early morning flights.

There was discussion about some noise polluters being fined. However, delegates were doubtful that this was being done in an accurate way and called for punishment to be made more transparent. This led to the design principle on considering the impact of aircraft type/penalise poor performers. This issue is illustrated by the quote below.

> *The airports paying lip service on that. I think they fined about 2 airlines in I don't know how many years so it's a bit of a joke that really.*

Design Principles for noise
Minimise noise
Reduce night flights and early morning flights
Consider impact of aircraft type/penalise poor performers

Community

The majority of comments that were made in relation the community were about noise and minimising noise. Night and early morning flights were reported as a particular problem, that participants felt EAL had failed to control through financial penalty. Flights arriving from Tenerife at 2.30am and Beijing at 5am were given as examples of unnecessarily early, and something the airport could refuse to offer if it so chose. Frankfurt was given as an example of an airport that had successfully restricted night flights.

One of the most important points to this groups was that of protecting residents who have bought houses thinking they are not under a flight path. The new builds in Winchburgh and West Calder were mentioned as areas where this had happened to people in the past. Areas where housing development is growing were named as Winchburgh, Uphall, Calderwood East. This led to the principle on not flying over currently unaffected housing developments at the planning stage.

Another point related to community and noise was the desire to reduce the footprint of noise, and not make noise any worse for residents under flight paths. This should be considered both in height and dispersal. This led to two design principles on not concentrating flight paths over communities and minimising noise and flights below 7,000 feet.

As with many of the workshops, the subject of using the Forth as a flight channel came up as a possibility and was encapsulated in the Design Principle on flying over the sea.

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Delegates talked about evidence that shows the detrimental effect of noise on education which led to the principle of "avoid overflying schools". This they realised is not always possible and pointed to the example of a new school that is due to be built on Turnhouse Road, but they called for an understanding of what the issues are as a way of enabling the airport to plan interventions that could help mitigate effects.

Design Principles for community
Reduce night flights and early morning flights
Do not fly over currently unaffected areas in planning
Do not concentrate flight paths over communities
Minimise noise/flights below 7,000ft
Fly over the sea
Avoid overflying of schools

Health

This group noted their understanding that noise, and constancy of noise, has a detrimental effect on health, particularly hypertension. Broken sleep, caused by night flying, was reported as being a contributory element to poor health. This design principle is reported in the section on community as one on reducing night flights and early morning flights.

The subject of noise was also raised in the context of health, and delegates called for adherence to LOAEL measurements put in place by the World Health Organisation. Respondents commented that being outdoors, sitting in the garden and relaxing, contributes to wellbeing. They claimed this is curtailed by the interruption of plane noise. This translated into the Design Principle on minimising noise.

This group also noted that disturbance also comes from shadows being cast by planes during the day and lights from planes at night. This translated into the Design Principle on minimising light pollution.

Design Principles for health
Consider impact on sleep
Consider impact on mental health/wellbeing
Consider health impacts (other than mental health wellbeing)
Adhere to WHO regulations
Minimise noise
Minimise light pollution

Technical

One of the issues raised under the theme of technical was a need to stick to designed routes. Delegates claimed that many flights are vectored off-route and, as a result, effect people who are not normally flown over. There was some confusion over vectoring altitude but there was agreement that it happened too often and without good cause.

> *The reality for Edinburg at present is some flights are vectored at 3000 feet, 4000 feet, so we can talk about where the flight paths are and so on but it's a free for all at the end.*

Safety was of key concern to this group who commented that everything the airport does should be safe and secure.

When prompted on the subject of aircraft turning over communities, delegates referred to early-turn trials that created more noise. The outcome of the conversation was the suggestion that planes should avoid turning over communities below 7,000 feet.

Design Principles for technical
Do not vector-off designed routes unless in an emergency
Prioritise safety
Restrict air craft turning/holding areas over communities

Economy

Planning an integrated transport infrastructure was of key importance to this group, to address congestion on roads accessing the airport, and the road network in the vicinity. This discussion pointed to the relatively high cost of trains when they are so much more climate-friendly and the need to address this by taxation/some other intervention.

The group also commented on the need to plan with local authorities in the context of housing schools and other civic developments. This translated into the desire to ensure planning integration: local authorities/other agencies.

Issues of great importance
Ensure planning integration: local authorities/other agencies
Ensure planning integration: transport infrastructure - general

This group disputed tourism growth as an argument to support to the airport's expansion, claiming that more money goes out of Scotland than comes in. They went on to say that this undermines many of the points in the EAL SON in terms of support for the economy.

Equality

Delegates were concerned for older people who may have their sleep broken, claiming it has a greater effect on them because of their potential physical frailty and because they may feel unable to move. Cramond and Barton were reported as having a large population of older people, with many care homes in the areas. Children were cited as vulnerable because of the effects of overflying schools. These ideas are partly captured in Design Principles on not overflying schools and minimising night flights but the potential impact on older people is captured in the Design Principle on considering the needs of the elderly.

Design Principles for equality
Consider needs of the elderly/ children/those with ill health/autism

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Communication

The group expressed their belief that the airport was "being clever with words", in that it reports things that can be read at face value but fail to give the whole picture. Respondents asked for more openness and accuracy in airport's communications.

Design Principle for communication
Be open and honest when communicating

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Residents: focus groups

Group dynamics

In total, 28 focus group participants took part in the engagement. We recruited from a range of areas across Scotland and included the following:

Group 1 Currently overflown within noise contours	Group 2 Currently overflown outwith noise contours	Group 3 Not overflown but potentially could be
Pumpherston Newbridge Cramond Livingston	Queensferry South Queensferry North Davidsons Mains Newhaven	Clackmannanshire Fife area Falkirk Penicuik/Borders area

The groups were of mixed age, socio economic group (SEG), gender and working status. A full description of the groups' profiles can be found in Appendix B. Two of the groups were held in hotels in Edinburgh, the third was held in an Edinburgh viewing studio and observed by three representatives from EAL and a member of EANAB.

All were in favour of the airport and the benefits it brings to Scotland and their communities. They enjoyed the proximity to the airport, the ease of flying on holiday, the increased routes now on offer and the benefits of employment and tourism the airport brings to Scotland and the benefit of being able to get to family in the islands, and elsewhere in the UK, quickly.

> *Because I'm from the Isle of Lewis and I can fly home from Edinburgh to Lewis in 40 minutes. Because previously, if you travelled up north and then get the ferry from Ullapool, we're talking 8 hours to get home.* ***Overflown outwith contours***
>
> *We've travelled to Newcastle and places like that but we always revert back to Edinburgh airport because it's so handy.* ***Not overflown***
>
> *I think I'm acclimatised to it, now. Because there was a time when we were aware of the noise, but see now, it doesn't really bother me. I see them going over but the noise is fine. I think you learn to live with it, it kind of becomes part of your day.* ***Overflown outwith contours***
>
> *I also live in Cramond. Directly on the flight path. I live in a terraced house and I've been there for 15 years. The airport's noisy. There's no getting away from that, to be honest. I've got double glazing. You can still hear the flights, but you kind of get used to the noise of your own house, so that's just part of the noise of the house.* ***Overflown within contours***

They were concerned about congestion on the roads in and around the airport. A few were concerned about the Climate Change. On the whole, they had limited sympathy for those who lived directly under flight paths and complained about noise, claiming that they [the buyers of homes] knew the airport was there.

While these members of the public had no previous experience of aviation policy, they actively engaged in the process of discussion about their experience of living in areas that are overflown or not overflown, and what design principles EAL should put in place.

Those who were overflown and living within noise contours were generally accepting of the fact that they bought their house knowing they were under the flight path. They expressed some annoyance about the noise, commenting that it is more of an acute problem in the summer, when they are out in the garden or windows are open more often. However, the majority liked the convenience of the airport, with many stating they use it for holidays and work and prefer not to have to travel far to fly abroad. They welcomed the expansion as they felt this may give opportunities to travel further afield. The main points of concern to this group were the surface access infrastructure, the impact that overflying has on education and schools, and the desire to keep green spaces in the city free of overflying.

Those who were overflown and living outwith noise contours were very positive about the airport and about the proposals for modernisation. The majority of respondents in this group were aware of the planes but were not bothered by them. They could see them and could occasionally hear them (for some the early morning flights were noticeable), but none felt the noise was irritating, distracting, or interfered with their lives. One participant, who'd lived in Dunfermline for 11 years, commented that he'd noticed the planes more over the last 6-9 months. Several participants commented that their issue regarding the airport was infrastructure and, in particular, how their commute was affected by the airport traffic.

Those who are not currently overflown were in general very positive about the airport because they use it for holidays or work and mentioned many benefits to having an airport nearby. One respondent mentioned being woken up by two planes at around 4am. He lived in Dunfermline and assumed they were freight planes. One respondent lived high up in Penicuik (Eskhill) therefore he does see the planes overhead but reported liking seeing them. The other four respondents reported not really noticing the planes, seeing them or hearing them.

The group discussions were jointly moderated by Sarah Ainsworth, Valerie Strachan and supported by Leah Ringland, Director, all from Progressive. They lasted on average 90 minutes.

Response to Statement of Need

Concerns about expansion

Two respondents from Cramond expressed some doubt about the sincerity of EAL's engagement; commenting that EAL will do what it wants regardless of public opinion. The same respondents expressed concerns about planes overflying schools because of negative effect that could have on education. One also reported having concerns about the Climate Change and the contribution that aviation makes to it.

The issue of greatest concern in response to the SON and the proposed expansion was participants' belief that the road infrastructure is being stretched to the point where it can't cope. Many said that the roads in and around the airport are already congested and reported that exiting the Park and Ride by the airport can take 40 minutes because of congestion on the surrounding roads. One respondent, who works on Eastfield Road (access road to the airport), commented that traffic volume was a downside to expansion.

One group commented on the problems of surface water on the roads near the airport and pointed to the time in August when the roads to the airport were completely flooded. They felt that expansion would make such issues even worse.

One commented that having a footpath on only one side of the access road was problematic as there are no safe crossings on the road.

Some mentioned the Royal Highland Show and commented that travel is almost impossible each June when it is running; they felt that further airport expansion could add to the problem.

Positive reactions

Having more direct routes was one of the positive aspects of recent expansion raised by the participants. In particular they welcomed new routes to the Far East and to Norway; others valued not having to fly to London to get a connecting flight.

Many said the positive effects on tourism, both outgoing and incoming, outweighed any negative effects.

One of the sessions was attended by a plane-spotter who reported enjoying watching planes and welcomed airspace change and expansion.

Some commented on the positive effects expansion would have on employment in the area.

> *There's a lot of commercial stuff as well. It seems to be they're expanding their team constantly. With the increased demand as well, I'd imagine. Because the airport is busier. Because of the services and the flights that they offer now. So there's always jobs on LinkedIn that I've seen.*
> ***Overflown outwith contours***

Some were hopeful that expansion would mean fewer delays, which they were all in favour of.

Others were positive about the expansion to the airport terminal and what that means in terms of additional airport services, such as eateries and pubs.

Many said that expansion was a positive thing for the capital city of Scotland and something that should have been done a long time ago. This was endorsed by the claim that people should not have to travel to Glasgow to get a flight.

Environment

On the whole, the focus group respondents were not as concerned about the environment, commenting that Climate Change is inevitable and there is nothing they can do about it. A few mentioned the phenomenon of *flight-shaming* but said this wouldn't deter them from flying as there is no viable alternative.

There was some minimal concern expressed about emissions and a view that manufacturers should be doing something about that. It was suggested by the participants that older planes are worse than new ones.

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The idea that the airport should offset its emissions was made by a few, with planting trees and using solar panels suggested as actions that the airport could easily take. While the suggestion was out of scope, it is worth noting that some felt the airport should recycle more inside the terminal.

Some felt that an expansion might have a positive effect on emissions - if delays are minimised, aircraft would not be idling and so less fuel would be used.

> *Well if they're going to increase the capacity per hour, per flight, there's less delay in aircrafts sitting idle. So obviously, they're up and away, so they're not wasting fuel and then very quickly so they're going to be up and away. On time. You don't have aircraft backed up, do you?* ***Overflown outwith contours***

Design Principles for environment
Reduce emissions/pollution
Offset emissions
Consider impact on animal welfare
Reduce the need for aircraft holding
Reduce impact on green spaces

Noise

Noise was not reported as a significant problem for the majority of respondents in the focus groups. The majority of those who were overflown and living within noise contours were affected by noise but they were not concerned about it. One respondent was less accepting of noise than other were. The majority of those who were overflown and living outwith noise contours were aware of noise but were not compromised by it. Those not currently overflown were not affected by noise and couldn't envisage ever being affected by noise as they were so far away from the airport. They did state that their opinion on noise may change if they were to find themselves overflown.

Those living nearer to Edinburgh (overflown within and outwith contours) were aware of the need for respite and many claimed the night and early morning flights should be kept to the minimum, with emergency landings or delayed flights being the exception. One of the most often mentioned design principles in the context of noise was reduce night flights and early morning flights.

One respondent felt that some homes under the flight path could perhaps be compensated with triple glazing but on the whole, overflown groups felt this was something that people who live close to the airport should just deal with it and so in the end the idea was dropped. Many said that living in a capital city with all its benefits means you have to put up with some noise.

> *When I first moved to Newhaven it was quite a quiet wee place and now there must be about 10,000 new flats all in a small area and to me that's more of a pain in the arse than airplanes. So that's caused more impact on my life, with the traffic, the people, the general noise than a plane maybe flying overhead. I have to deal with it, it's modern life now, especially in a city like Edinburgh.* ***Overflown outwith contours***

Old aircraft were thought of as being the noisiest and it was noted that they should be penalised for noise or removed. This led to the Design Principle on considering impact of aircraft type/penalise poor performers/old aircraft.

The discussion on the use of dispersed versus concentrated flight paths prompted two people to suggest that concentrated flight paths would be good for the community if they were used during working hours when most people were out.

Design Principles for environment
Reduce night flights and early morning flights
Consider impact of aircraft type/penalise poor performers/old aircraft
Concentrate flight paths during work hours

Community

Those living nearer to Edinburgh suggested the Design Principle on not flying over populated areas. One respondent from Cramond expressed a very clear wish to have planes fly the other side of the River Almond, thus avoiding populated areas.

Respondents had mixed views on whether planes should fly over rural areas, with some saying it could affect livestock and others saying it was preferable as there are fewer people in those areas. There was a fairly strong sense in the group not overflown that all attempts should be made not to fly over populated areas.

There was some concern from those not overflown and living in the Scottish Borders about the prospect of holding areas changing and then finding themselves being overflown when they had bought their homes a long time ago without any thoughts of being under a flight path. This led to the Design Principle on not flying over currently unaffected areas.

Some felt that the centre of Edinburgh as a UNESCO site should be avoided. The participants felt that, in the interests of tourism, Edinburgh Castle should be avoided, and Edinburgh Zoo should be avoided to protect the animals.

Design Principles for community
Reduce flights over communities/fly over less populated areas
Avoid overflying of schools
Fly over the sea/ fly down the Forth
Do not fly over currently unaffected areas
Avoid overflying hospitals and care/retirement homes
Fly the west side of the River Almond
Avoid overflying of historical sites
Avoid flying over Edinburgh Zoo

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Technical

Respondents from not overflown areas said they would like to know more about the effects of emissions, and commented this information is not well publicised. This led them to suggest the design principle of make sure decision-making is evidence-based.

There was a strong view in the overflown outwith contours group that communities should not be subjected to concentrated flight paths as this would subject them to relentless noise.

Design Principles for technical
Ensure decision-making is evidence-based (and evidence is appropriate/high quality)
Do not concentrate flight paths

Economy

Transport infrastructure was the biggest single issue in the relation to the economy, with many saying roads around the airport are already stretched to breaking point. Concerns were raised about how roads would cope following further expansion.

Issues of great importance
Ensure planning integration: transport infrastructure - surface access
Ensure planning integration: transport infrastructure - public transport

The majority of other economic comments were positive. Many respondents said that the airport and its expansion is making Edinburgh and Scotland more accessible. The airport was seen as a great supporter for tourism and business in general. It was also seen as an important employer. While these views are out of scope for design principles they were commonly voiced opinions.

Equality

Some felt that airplane noise might have a severe effect on those with autism and that the airport should take this into consideration. This was considered to be more of a problem in the areas closest to the airport than in outlying areas.

Design Principles for equality
Consider needs of older people/ children/those with ill health/autism/sensory impairment

Communication

Respondents were keen to hear more from EAL and called for effective communication on airport-related matters, for example, they felt that the decision-making should be explained from a clear and

non-technical point of view. Others wanted to know more about what the airport was doing in the community and how it is developing as an airport.

> *Because you mentioned about changing the path, but it could be technically impossible for them to do that. I'm not saying that it is technically possible. It could be, but by them not engaging in the community, 'look, you want the flight to move from this path to this path, however, because of some technicalities we might not be able to do that'. So I think it's all about engagement.* ***Overflown within contours***

One respondent commented that EAL was good at communicating on social media, but they felt that getting out into the community would be more effective.

Social benefits

The participants felt that there would be many social benefits to airport expansion. These were summarised as supporting tourism both, incoming and outgoing, supporting employment, and connecting Edinburgh to the rest of the world more efficiently.

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Appendix

A. Project Initiation Document (PID) revised 2

10402 WP1 Design PrinciplesPIDrevised

B. Names of attendees

Workshop 1. Community stakeholders: North and West

Name	Organisation	Name	Organisation
[redacted]	North Queensferry Community Council	[redacted]	Linlithgow & Linlithgow Bridge Community Council
	North Queensferry Community Council		Low Valleyfield Community Council
	Dalgety Bay & Hillend Community Council		Kirknewton Community Council
	Dalgety Bay & Hillend Community Council		Charlestown, Limekilns and Pattiesmuir Community Council
	Bathgate Community Council		Murieston Community Council
	Blackness Community Council		Royal Burgh of Burntisland Community Council
	Royal Burgh of Kinghorn Community Council		Uphall Community Council
	Royal Burgh of Kinghorn Community Council		Lochgelly Community Council
	Elie &The Royal Burgh of Earlsferry Community Council		Fife College
	Murieston Community Council		

Workshop 2. Aviation

Name	Organisation	Name	Organisation
[redacted]	Scottish Gliding Centre	[redacted]	British International Freight Association
	British Helicopter Association (BHA)		NATS/NERL
	East of Scotland Microlights		British Parachute Association (BPA)
	East of Scotland Microlights		West Atlantic Airlines

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[redacted]	Royal Mail	[redacted]	Scottish Mountain Paragliding Club pp British Hang Gliding and Paragliding Association (BHPA)
	Airspace4All		Guild of Air Traffic Control Officers
	Royal Mail		Edinburgh Airport Watch
	Skydive St Andrews (Parachute Operation)		Tayside Aviation (Fife)

Workshop 3. Edinburgh Airport Noise Advisory Board (EANAB)

Name	Organisation
[redacted]	Blackness Area Community Council
	Cramond Association
	Ratho and District Community Council
	Co-opted Ecclesmachan resident
	Uphall Community Council
	Cramond and Barnton Community Council

Workshop 4. Stakeholders: general

Name	Organisation	Name	Organisation
[redacted]	Environmental Protection Scotland	[redacted]	Fife Centre for Equalities
	Disability and Equality Scotland.		West Lothian Council
	Aberdour Community Council		Walker Group
	East Lothian Council Environmental Health Service		Extinction Rebellion
	Falkirk Council		Historic Environment Scotland
	Winchburgh Developments		Fife council environmental health
	Royal National Institute of Blind People		Scottish Environmental Protection Agency
	PPCA Ltd.		

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Workshop 5. Community South and East

Name	Organisation	Name	Organisation
[redacted]	Broxburn & Uphall Traders' Association	[redacted]	Cramond and Barnton Community Council
	Ecclesmachan Community Council		Innerleithen Community Trust
	Colinton Community Council		Sighthill/Broomhouse & Parkhead community council
	Craigentinny/Meadowbank - Community Council		Pencaitland Community Council
	Cramond and Barton Community Council		Queensferry and District Community Council
	Midlothian Council		Ratho and District Community Council
	Dalkeith and District Community Council		Drum Brae Community Council
	Fairmilehead Community Council		Gullane Area Community Council

Focus Group Composition

Group 1 Currently overflown within noise contours	Group 2 Currently overflown outwith noise contours	Group 3 Not overflown but potentially could be
Pumpherston Newbridge Cramond Livingston	Queensferry South Queensferry North Davidsons Mains Newhaven	Clackmannan Alloa/Fife area Falkirk Penicuik/Borders area
Mix SEG	Mix SEG	Mix SEG
6 were parents of children living at home across a range of ages 1 to 11yrs old	6 were parents of children living at home across an age range of 3 to 17yrs old	2 were parents of children living at home, across an age range of 1 - to 18yrs old
4 males 7 females	4 males 7 females	3 male 3 female
Ages ranged from 20 to 66	Ages ranged from 34 to 66	Ages ranged from 38 to 66
4 with protected characteristics[4]	3 with protected characteristics	2 with protected characteristics
2 retired 1 unemployed 1 part time 7 working full time	3 retired, 7 working full time, 2 working part time	2 working part time, 3 working full time 1 retired
11 respondents in total	11 respondents in total	6respondents

[4] Age / disability / gender reassignment / marriage civil partnership / pregnancy-maternity / race / religion or belief / sexual orientation

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C. Invite to Attend

10402 Email script signed off 2908201

D. Confirmation of Attendance

10402 - Workshop 1 Confirmation Ema

E. Statement of Need

Statement of need.pdf

F. Topic Guide

10402 Topic guide 6 revised 250919 WSP

10402 Topic guide signed off 6 200919

G. Presentation

EDI - ACP presentation draft3

H. Online Questionnaire

10402 online Questionaire signed

Technical Appendix: Method

1. The data was collected using engagement approach.
2. The target group for this research study was communities overflown/potentially overflown by Edinburgh Airport and EAL stakeholders.
3. The sampling frame used for this study was EAL engagement and communications database, supplemented by study partner databases and Progressive research.
4. In total, 5 workshops and 3 focus groups were undertaken. 4 of the workshops contained approximately 20 people, the fifth workshop contained 6 people. The focus groups contained between 6 and 12 participants.
5. Fieldwork was undertaken between 23 September and 9 October 2019
6. Workshop respondents were contacted by telephone, following an initial contact by email, by Progressive's skilled in-house team of qualitative recruiters. These recruiters worked to ensure that the workshop composition reflects the requirements of the project.
   - An incentive of £40 was available to respondents in the Community Stakeholder groups) to compensate them for their time, any out of pocket expenses and travelling expenses (Note – anumber of the respondents in the Community Stakeholder groups either refused or asked that it be donated.)
7. Focus group respondents were recruited face-to-face/by telephone by Progressive's skilled in-house team of qualitative recruiters. These recruiters work to predetermined quota controls to ensure that the final sample reflects the requirements of the project. All respondents are screened to ensure that they have not participated in a group discussion or depth interview relating to a similar subject in the last 6 months prior to recruitment.
   - An incentive of £40 (£50 those in outlying areas) compensated respondents for their time and travelling expenses.
8. All workshops were run by two moderators, all focus groups were run by a moderator and an assistant. In total, 5 moderators were involved in the fieldwork for this project. In addition, all workshops were supported by members of the project team, available to respond to technical questions where these arose. Support was provided from To70, EAL, WSP, and Diversity Dynamics.
9. Stimulus materials were used during the group discussions/depth interviews. These included copies of the Statement of Need circulated to workshop participants prior to the session, and a presentation on the Airspace Change Programme rationale/objectives/process during the workshop/focus group.
10. Each recruiter's work is validated as per the requirements of the international standard ISO 20252.
11. All focus group respondents were subject to validation, either between recruitment and the date of the group discussion/depth interview, or on the day of the group discussion/depth interview. Validation involves focus group respondents completing a short questionnaire asking pertinent profiling questions and checking that they have not participated in similar research in the past 6 months.
12. All research projects undertaken by Progressive comply fully with the requirements of ISO 20252, the GDPR and the MRS Code of Conduct.
13. The engagement methodology was compliant with the requirements of CAP1616.

Appendix O – Organisations invited to the first round engagement workshops

Name of the organisation	Number of contacts approached
2050 Climate Group	3
75th Braid Scout Group	2
Abbeyview Community Council	2
Abdie And Dunbog Community Council	2
Aberdour Community Council	1
AC Gliders Kinloss	1
Addiewell and Loganlea Community Council	3
Age Scotland	2
Aircraft Owners and Pilots Association	2
Airlines UK	1
Airport Operators Association	4
Airspace4All	1
Airth Parish Community Council	1
Almond Housing Association	1
Amazon	1
Air Navigation Solutions Ltd.	1
Antiquaries Tenants and Residents Association	1
Armadale Community Council	2
Association of Remotely Piloted Aircraft Systems	1
Asthma UK	1
Auchertool Community Council	2
Autism Initiatives	3
Aviation Environment Federation	1
Avonbank Residents Association	1
Avonbridge And Standburn Community Council	1

Name of the organisation	Number of contacts approached
BAE Systems	1
Baha'i Faith in Borders	1
Balerno Community Council	1
Balgreen Playgroup	1
Bathgate Community Council	2
Bellsquarry and Adambrae Community Council	1
Berwickshire Civic Society	3
Blackburn Community Council	2
Blackness Boat Club	2
Blackness Community Council	1
Blackridge Community Council	2
Blairhall Community Council	1
Bo'ness Community Council	1
Bonnybridge Community Council	2
Borders Care Voice	3
Borders Forest Trust	4
Bowden Scottish Women's Rural Institute	4
Braehead Residents Group	1
Bertram Nursery Group	1
Bristow Helicopters Aberdeen	1
British Air Transport Association (BATA)	3
British Airline Pilots Association (BALPA)	3
British Airways (BA)	1
British Association of Balloon Operators	1
British Balloon and Airship Club (BBAC)	3

Name of the organisation	Number of contacts approached
British Business and General Aviation Association (BBGA)	2
British Deaf Association Scotland	2
British Gliding Association (BGA)	2
British Hang Gliding and Paragliding Association (BHPA)	3
British Heart Foundation Scotland	4
British Helicopter Association (BHA)	1
British International Freight Association	2
British Microlight Aircraft Association Ltd	1
British Model Flying Association (BMFA)	5
British Parachute Association (BPA)	1
Broxburn and Uphall Traders' Association	1
Broxburn Community Council	1
Broxburn Scottish Women's Rural Institutes	4
Bumblebee Conservation Trust	1
Butterfly Trust	1
Canongate Youth	2
Capability Scotland	3
Carers of West Lothian	1
Carers Scotland	3
Central Scotland African Union	2
Central Scotland Regional Equality Council	1
Ceres and District Community Council	2
Charlestown, Limekilns and Pattiesmuir Community Council	4
CHC Helicopters Aberdeen	2

Name of the organisation	Number of contacts approached
Chest Heart and Stroke Scotland	4
Children 1st	2
Children and Young People's Commissioner	3
Children's Hearings Scotland	2
Civil Aviation Authority (CAA)	1
Clackmannanshire Council	4
Climate X Change	2
Coalition of Care and Support Providers Scotland (CCPS)	1
Cockenzie And Port Seton Community Council	3
Cockenzie West Tenants and Residents' Association	3
Colinton Community Council	3
Confederation of British Industry	2
Corstorphine Community Council	5
Craigentinny Community Centre	2
Craigentinny Meadowbank - Community Council	4
Craigleith Blackhall - Community Council	2
Craiglockhart Community Council	1
Craigmillar Community Council	5
Craigshill Good Neighbour Network	2
Craigswood Community Council	1
Cramond and Barnton - Community Council	2
Cramond Kirk	1
Cramond Noise Action Group	2
Creative Scotland	2
Crewe Road Nursery	1

Name of the organisation	Number of contacts approached
Crossford Community Council	1
Cults Community Council	5
Currie Community Council	1
Dalgety Bay and Hillend Community Council	2
Dalkeith And District Community Council	1
Dalkeith Miners Club	1
Deaf Scotland	2
Dechmont Community Council	2
Denny And District Community Council	1
Denny Community Flat	2
Denny Writers	3
Disability Equality Scotland	5
Dobbies Garden Centre	2
Drum Brae Community Council	1
Drylaw Telford Community Council	4
Dunbar Community Council	1
Dundee Airport	1
University of Dundee	1
East Fife Federation	2
East Lothian Council	6
East Lothian Co-Op Employees Bowling Club	5
East of Scotland Microlights	2
East Wemyss Community Council	1
Easyjet	1
ECAS	2
Ecclesmachan Community Council	2
Edinburgh Access Panel	1
Edinburgh Airport Airline Operators Committee	1
Edinburgh Airport Watch	4
Edinburgh And Lothians Regional Equality Council	3

Name of the organisation	Number of contacts approached
Edinburgh Chamber of Commerce	2
Edinburgh College	1
Edinburgh Leisure	1
Edinburgh Napier University	3
Edinburgh Tourism Action Group	5
The University of Edinburgh	4
Elie and the Royal Burgh of Earlsferry Community Council	2
Enable Scotland	3
Engender Scotland	2
Environmental Protection Scotland	1
Equal Futures	1
Equality and Human Rights Commission - Scotland	2
Equality and Rights Network (EARN)	2
Equality Network (including Transgender Alliance)	1
Extinction Rebellion	3
Fairmilehead Community Council	1
Falkirk Allotment Society	1
Falkirk Armed Forces and Veterans Breakfast Club	2
Falkirk Community Trust	3
Falkirk Council	12
Falkirk High School	2
Ferryfield Playgroup	1
Fife Airport	1
Fife Centre for Equalities	1
Fife Coast and Countryside Trust	2
Fife College	2
Fife Council	10
Fife Sports and Leisure Trust	1
Fife Tenants Forum	1
Firrhill Community Council	2

Name of the organisation	Number of contacts approached
Flying Colours Nursery	1
Forth Environment Link	2
Forth Estuary Forum	5
Forth Valley Advocacy	2
Forth Valley College	3
Forth Valley Migrant Workers Network	2
Forth Valley Sensory Centre	2
Friends of the Earth Scotland	2
Galashields Community Council	1
Get2gether	2
Gilmerton Community Centre	2
Gilmerton/Inch Community Council	2
Glasgow Airport	2
Glenrothes Area Residents Federation	2
Gorebridge Community Council	1
Gorgie/Dalry Community Council	1
Grahamston, Middlefield And Westfield Community Council	2
Grange Centre Badminton Club	1
Grangemouth Community Council	1
Guild of Air Traffic Control Officers	2
Gullane Area Community Council	3
Gullane Tenants and Residents Association	3
Haddington and District Community Council	3
Haddington East Tenants and Residents' Association	3
Health in Mind	2
Health Protection Scotland	1

Name of the organisation	Number of contacts approached
Helicopter Club of Great Britain (HCGB)	2
High Valleyfield Community Council	2
Historic Environment Scotland	3
Hutchison Chesser Community Council	2
Inclusion Scotland	1
Innerleithen Civic Association	4
Innerleithen Community Council	1
Innerleithen Community Trust	2
Interfaith Scotland	1
James Gillespies High School, Edinburgh	1
Jet2.com	2
Juniper Green	2
Kinneil Museum	1
Kirknewton Community Council	2
Knox Academy Parent Council	3
Langlee Residents Association	1
Larbert And Stenhousemuir Community Council	2
Lauriston Nursery (Dunfermline)	2
Lead Scotland	1
Learning Disability Alliance Scotland	2
Leith Business Centre	1
Leith Harbour and Newhaven Community Council	4
Leith Links Community Council	2
Leprosy Mission	2
LGBT Health and Wellbeing	1
LGBT Youth Scotland	2
Liberton And District Community Council	2

Name of the organisation	Number of contacts approached
Light Aircraft Association (LAA)	5
Linlithgow and Linlithgow Bridge Community Council	4
Linlithgow and Linlithgow Bridge Pensioners Association	1
Linlithgow Civic Trust	2
Linlithgow Heritage Trust	2
Linlithgow Union Canal Society	2
Little World of Play	2
Liverpool Airport	1
Livingston Mosque	1
Loanhead Community Development Association	1
Lochgelly Community Council	3
Lochgelly Community Development Forum	3
Loganair	3
Lothian Autistic	3
Low Valleyfield Community Council	3
Lower Braes Community Council	2
Maddiston Community Council	2
Maddiston Community Education Centre	2
Maddiston Community Hall	2
Mayfield Community Club	1
Midlothian Council	18
Miller Homes	2
Milton and Coaltown Of Balgonie Community Council	1
Mobility and Access Committee for Scotland (MACS)	1
Ministry of Defence	4
Murieston Community Council	2

Name of the organisation	Number of contacts approached
Musselburgh Armed Forces and Veterans Breakfast Club	1
National Federation for The Blind UK (NFBUK)	2
National Gypsy Traveller Association (NGTA)	2
National Trust for Scotland	3
NATS/NERL	4
Newburgh Community Council	2
Newcastle Airport	5
NHV Helicopters UK	1
North Berwick Community Council	1
North Berwick Men's Shed	2
North Lanarkshire Council	5
North Queensferry Community Council	2
Ogilvie Ross LLP	2
Open Door Accommodation Project	2
Ormiston West Tenants and Resident Association	3
Paragon Skydiving	1
Parents of Autism Spectrum Disorder Adults (PASDA)	2
Peek-A-Boo Nursery (Leven)	2
Pencaitland Community Council	3
Pentland Hills Regional Park	1
Perth and Kinross Council	8
Perth High School	1
Philpstoun Community Council	1
Polmont Community Council	1
Portobello Toddlers Hut	1
PPCA Obo Winchburgh Developments	1
PPL/IR Europe	1
Project Scotland	1

Name of the organisation	Number of contacts approached
Queensferry And District Community Council	1
Rainbow Muslim Women's Group	2
Raith Rovers Football Club	2
Ramblers Scotland	1
Ratho And District Community Council	1
Ross High Parent Council	1
Rosyth Community Council	3
Rowanfield Special School	2
Royal Aeronautical Society	1
Royal Bank of Scotland	1
The Royal Blind School	1
Royal British Legion Crossgates Branch and Club	2
Royal Burgh of Burntisland Community Council	1
Royal Burgh of Kinghorn Community Council	3
Royal Infirmary of Edinburgh	1
Royal Mail	2
Royal National Institute of Blind People (RNIB) Scotland	2
Royal Society for The Protection of Birds (RSPB) Scotland	1
Safety and Regulatory Group (SARG)	3
Saheliya	1
Scottish Autism	4
Scottish Borders Council	1
Scottish Commission for Learning Disability (SCLD)	4
Scottish Environment Link	1
Scottish Environmental Protection Agency (SEPA)	2
Scottish Gliding Centre	2
Scottish Mountain Paragliding Club	1
Scottish Natural Heritage	1
Scottish Refugee Council	1

Name of the organisation	Number of contacts approached
Scottish Tourism Alliance	2
Scottish Veterans' Garden City Association, Stenhousemuir Branch	2
Stop Edinburgh Airspace Trial	1
Sense Scotland	2
Shieldhill And California Community Council	1
Sighthill Broomhouse and Parkhead Community Council	2
Skydive St Andrews	2
Skydive Stathallan	1
South East Edinburgh	1
South Lanarkshire Council	1
South Queensferry And District Community Council	1
South West Edinburgh	1
The Lothian Cycle Campaign - Spokes	1
St Andrew's University	1
St Leonards School	1
Stonewall Scotland	1
Sunshine Nursery Kirkcaldy	1
Supportoursoldiers.co.uk	1
Sustainable Aviation	1
Tayside Aviation (Fife)	1
Tenants Information Service	1
The City of Edinburgh Council	15
The Edinburgh Inter-Faith Association	2
The Fisherrow Centre, East Lothian	1
Lime Grove Association	4
The Minority Ethnic Learning Disability Initiative (MELDI)	1
The National Parent Forum of Scotland	3
The Pennypit Community Centre	3

Name of the organisation	Number of contacts approached
The Royal Environmental Health Institute of Scotland	1
The Royal Highland and Agricultural Society of Scotland	2
TNT UK	2
Transform Scotland	4
Transport Scotland	3
Turnhouse Golf Club	2
U3a Edinburgh	1
UK Airprox Board (UKAB)	1
UK Flight Safety Committee/The Guild of Air Pilots and Air Navigators	5
Unmanned Aerial Vehicle Systems Association (UAVS)	2
Uphall Community Council	3
Uphall Station Community Council	1
Virgin Atlantic	1

Name of the organisation	Number of contacts approached
Visit Scotland	4
Walker Group	2
Wallyford Community Education Centre	1
Wee Gems Nursery	2
Wellside Kindergarten	2
West Atlantic Airlines	2
Perth College UHI	2
West Lothian Access Committee	1
West Lothian Council	6
West Lothian Sports Council	1
West Lothian Youth Action Project	2
What's Happening Rosyth?	1
Winchburgh Developments	1
Windsor Park School	2
Woodfield Spa	1
Woodland Trust	3
Writers Umbrella	1
Young Scot	1

Appendix P – Minutes of the internal meeting to shortlist draft design principles

Airspace Change Programme Design Principles workshop – Stage 1B

21/10/2019

Attendees:

[redacted] – EAL [redacted]
[redacted] EAL (AL)
[redacted] – EAL [redacted]
[redacted] – EAL [redacted]
[redacted] – EAL [redacted]
[redacted] – EAL [redacted]
[redacted] – EAL [redacted]
[redacted] – EAL [redacted]

[redacted] – ANS [redacted]
[redacted] – Eurocontrol [redacted]
[redacted] – WSP [redacted]
[redacted] – TCI [redacted]
[redacted] – To70 [redacted]
[redacted] – To70 [redacted]
[redacted] – To70 [redacted]

[redacted] welcomed the attendees and asked everyone to introduce themselves, followed by a clarification from [redacted] on similar processes by the Glasgow Airport and NATS/NERL. In response to reports that engagement sessions questioned the Statement of Need (SoN), it was also noted that it has been approved by the CAA.

[redacted] proceeded to go through the background information about Stage 1B requirements, and [redacted] added that the CAA wants us to show a story from SoN through to the Design Principles (DPs) and the end result. He also acknowledged that the fact SoN is already being challenged, shows how important it is to have a detailed and tight justification for the decisions we make today.

[redacted] noted that there are two DPs that we should add – one from Glasgow Airport (Routes to and from Glasgow and Edinburgh should be procedurally deconflicted from the ground to Flight Level 90 (PDP51)) and one from NATS (The airspace design and its operation must be as safe or safer than today(PDP52)). This was agreed to with no objections.

[redacted] wanted to clarify who are the decision makers. [redacted] explained that it is himself [redacted] and he is also deferring to To70 representatives on design and safety issues.

First round of discussing the Draft Design Principles (DDP), as grouped by theme:

Theme	Design principle	Initial engagement report reference number	Notes
Communities	**Reduce night flights and early morning flights**	1	After a short discussion, this DDP was accepted for further discussion.
Communities	**Fly over the sea/fly down the Forth**	2	After noting that the airport should agree definitions for "over" and "avoid" in this context, this DDP was accepted for further discussion.

1

Communities	**Reduce flights over communities/fly over less populated areas**	5	There was once more a discussion about the importance of defining "over" and "less populated". This DP was split into two. "Reduce flights over communities" and "Fly over less populated areas."
Communities	**Avoid overflying of schools**	8	After considering the current situation and noting that there is some evidence that noise may have an impact on children's education, this DDP was accepted for further discussion. [redacted] suggested that this could be merged into an overarching DDP of – **Reduce adverse impacts on noise of communities**, at the next stage of discussion.
Communities	**Do not fly over currently unaffected areas in planning**	9	It was clarified that this is in relation to current applications. [redacted] stated that under the CAP1616 we are required to consider future planning already. DDP accepted for further discussion.
Communities	**Restrict aircraft holding areas over communities**	13	[redacted] confirmed that hold areas are at height over 7,000ft. As a result, the DDP not accepted due to being out of scope of the ACP and part of NERL's ACP.
Communities	**Minimise noise/flights below 7,000ft**	18	During a short discussion of this DDP, [redacted] suggested that the 7,000ft definition considers the terrain. It was agreed that there are two distinct themes here – one about minimising noise and one about minimising flights. As airlines are in charge of flight scheduling, it was decided to take forward the issue of minimising noise. [redacted] also suggested that this could be merged into the overarching DP on noise, for example, "reduce adverse impacts on noise of communities" at the next stage of the discussion. This action was agreed, with text to be determined and with no objections.
Communities	**Restrict aircraft turning over communities**	24	There was a discussion on this DDP during which it was noted that aircraft turning

			leads to double the noise in comparison to flying over. [redacted] noted if we were to use the Forth option, we would probably have to turn over smaller communities. It was agreed that we should focus on the best result for most people. This DDP was accepted for further discussion.
Communities	**Avoid overflying hospitals and care/retirement homes**	25	After noting that this is a requirement under the CAP1616 process, this DDP was accepted for further discussion. [redacted] noted that we currently overfly St John's in Livingston so we need to take that into account.
Communities	**Avoid overflying of historical sites**	29	[redacted] pointed out that this is not in CAP1616, but it is a local consideration, which was raised by the Historic Environment Scotland. [redacted] felt that we cannot decide on this unless we have a map of all the historic sites and also provide a rational explanation for why we are avoiding certain sites over others. An action was agreed to create a map with historical sites. DP accepted for further discussion.
Communities	**Reduce flights**	32	It was noted that this is against the SoN and that the airport is a demand-based business so cannot turn away requests for more business. This also affects the future growth and economy of Scotland. DDP not accepted due to being against the SoN.
Communities	**Take account of noise above 7,000ft**	37	It was noted that this is out of scope for the ACP, therefore the DDP was not accepted but it was agreed that a DP be amended to include terrain and sea level consideration.
Communities	**Concentrate flight paths during work hours**	43	During a short discussion it was confirmed that the only thing that the CAA says about this issue is that we should seek to have the lowest total of adverse impact. Additionally [redacted] felt that this would be too complex to implement.

			It was noted from the detailed comments document that only two people raised this issue. Furthermore, it was noted that more people are flexible working or working from home, we would need to define what "working hours" mean. It was felt that generally this is not achievable but should be part of further discussion, this DDP was therefore accepted for further discussion at the next stage of the meeting.
Communities	**Review routes/flight corridors**	44	It was noted that the whole ACP is about this and therefore should be accepted for further discussion as a given. There was some discussion about the situation in Cramond, which was recognised as the most affected community at the moment.
Communities	**Avoid flying over the zoo**	46	There was a general agreement that this DP should be accepted, with no objections. DP accepted for further discussion.
Communities	**Fly the west side of the River Almond**	50	During the discussion, it was recognised that planes cannot physically do what this DP asks for. DP not accepted as it breaches safety standards.
Economy	**Review need for growth**	26	There was a general agreement that this is something that we need to do as part of the wider process. It was also agreed that we need to consider what the growth will do and undertake a reputational study. This DDP was accepted for further discussion.
Economy	**Ensure consideration of wider tourism impacts**	33	[redacted] pointed out that this is not a design principle. [redacted] agreed but felt that we should still consider it in the background. It was also noted that the Scottish Government wants more tourists to come to Scotland and we are part of this vision. This DDP was not accepted due to being out of scope but tourism was added to issues to consider.

Environmental	**Consider impact of aircraft type/penalise poor performers/old aircraft**	3	During this discussion it was agreed that the airport already does this through its charging structures. Furthermore, it was felt that this is by and large an operational issue. This DP accepted for further discussion.
Environmental	**Minimise noise**	6	It was felt that a lot of the points made in the "community" section are related to noise. It was also recognised that this is already a requirement under the CAP1616. This DDP accepted for further discussion.
Environmental	**Reduce emissions/pollution**	7	[redacted] pointed out that this is in CAP1616 but that we need to consider what measure to use in determining the reduction. This DDP was accepted for further discussion.
Environmental	**Adhere to WHO regulations**	10	During a discussion, it was recognised that this is not a requirement under the CAP1616 process and that the UK Government has not formally adopted this. [redacted] pointed out that these are "guidelines", not "regulations". It was agreed that the guidelines are not adopted by the UK Government or the CAA and the DDP was not accepted on that basis, as well as due to not being a regulatory requirement.
Environmental	**Consider noise from take-off/ landing/turning**	15	This DDP was accepted for further discussion with a view of merging it into a general noise DDP.
Environmental	**Take background noise into account**	16	It was felt that this DDP stems from the debate about overflying urban areas versus overflying rural ones. DDP accepted for further discussion.
Environmental	**Consider and offset the impact on wildlife and the environment**	17	During this discussion it was noted that this is part of the CAP1616 process through the Habitats' Assessment. This DDP was accepted for further discussion.
Environmental	**Avoid over flying rural areas**	19	There was a general agreement that this is to be discussed further with other noise related DDPs. It was accepted for further discussion on this basis.

Environmental	**Offset emissions**	20	It was generally agreed that this is a strategic issue rather than an issue of design. It was also agreed that it is difficult to design offsetting. On that basis, the DDP was not accepted but added to issues to be considered in the background as part of the airport's sustainability strategy.
Environmental	**Minimise light pollution**	38	During the discussion it was noted that the lights used by the aircraft are a safety feature and cannot be switched off. This DDP was therefore not accepted due to not meeting safety standards.
Environmental	**Consider climate impact**	39	There was a general agreement that this should be merged with DDP 7 into a general climate change/environmental impact DDP. This DDP was accepted for further discussion on that basis.
Environmental	**Consider impact on animal welfare**	41	There was as general agreement that this DP should be combined with DDP 17. This DDP was accepted for further discussion on that basis.
Environmental	**Reduce impact on green spaces**	45	It was generally agreed that this was a very important issue that will be considered during the CAP1616 process, through the health impact and tranquillity assessments. This DDP was accepted for further discussion. An action was agreed to undertake further mapping to include areas of outstanding beauty and scientific interest.
Equalities	**Consider needs of the elderly/ children/those with ill health/autism/sensory impairment**	22	During the discussion it was noted that this is a requirement under the CAP1616 process. This DDP was accepted for further discussion.

Equalities	**Recognise impact of flight paths on house prices and social migration**	23	During the discussion it was recognised that this is already a requirement under the CAP1616 process using WebTAG. This DDP was accepted for further discussion on that basis. It was also noted that the airport undertook a study on three nearby areas - Cramond, Blackness and Livingston – about 4-5 years ago, and would need to be updated. An action was agreed for EAL to rerun the study on its impact on housing prices.
Equalities	**Ensure true accessibility in design**	34	It was agreed that the process we are undertaking is already ensuring that this is the case. This DDP was accepted for further discussion on that basis.
Health	**Consider impact on mental health/wellbeing**	14	During the discussion it was recognised as an important matter that will be considered as part of the CAP1616 process. There was also a general agreement that this should be merged with other health related DDPs and it was accepted for further discussion on that basis.
Health	**Consider other health impacts**	21	During the discussion it was recognised that this will be considered as part of the CAP1616 process. There was also a general agreement that this should be merged with other health related DDPs and it was accepted for further discussion on that basis.
Health	**Consider impact on sleep**	30	During the discussion it was recognised that this will be considered as part of the CAP1616 process. There was also a general agreement that this should be merged with other health related DDPs and it was accepted for further discussion on that basis.
Other	**Ensure decision making is evidence based (and evidence is appropriate/high quality)**	4	During the discussion it was agreed that this is out of scope of the project but important issue to consider in the background. This DDP was not accepted but added to issues to be considered by the airport.

Other	**Consider no change to flight paths**	36	During the discussion it was recognised that no change to flightpaths is used as a baseline for the CAP1616 process. This DDP was accepted for further discussion on that basis. Further discussion considered the possibility of a radical or "clean sheet" approach, and it was generally agreed as something to consider during the next stage of the discussion.
Technical	**Ensure consideration of all airspace users**	11	There was a general agreement that this DDP should be accepted for further discussion.
Technical	**Ensure fully integrated airspace change**	12	On the basis of a general agreement, this DDP was accepted for further discussion with a view to merge with other similar DDPs.
Technical	**Prioritise safety**	27	On the basis of a general agreement, this DDP was accepted for further discussion with a view to merge with other similar DDPs.
Technical	**Do not concentrate flight paths**	28	After a short discussion it was noted that RNAV already does this and that we should consider our ability to vary flight paths. This DDP was accepted for further discussion on the basis of a general agreement.
Technical	**Redesign the terminal airspace**	31	During the discussion it was noted that this DDP should be accepted for further discussion as the airport should consider its airspace needs in relation to the needs of other airspace users. [redacted] explained that this is a safety issue and that Edinburgh already must take aircraft outside the controlled airspace due to weather conditions and the space is already limited. This DDP was accepted for further discussion.
Technical	**Minimise route deviations**	35	This DDP was accepted for further discussion, although it was noted that the airport does this as part of its current operations.

Technical	**Ensure access to airspace by general aviation**	40	There was a general agreement on this DDP, and it was accepted for further discussion with the view of merging it with DDP 11.
Technical	**Considerations for specific routes**	42	It was generally agreed that this is about specific solutions and not a DP. These are operational issues. DDP not accepted as it is an operational matter, not a matter of design.
Technical	**Make take off/landing gradients steeper**	47	During the discussion it was noted that this is not an issue of design but rather an operational matter for the airport and the individual airlines. [redacted] also explained that this has been investigated previously, with Osprey carrying out a study on behalf of the airport and cannot be done. This DDP was not accepted on that basis.
Technical	**Take into account segregation of different plane types (e.g. turbo jet and prop)**	48	There was a general agreement that this DDP should be accepted for further discussion.
Technical	**Make routes as short as possible**	49	There was a general agreement that this DDP should be accepted for further discussion.

The remaining DDPs were reviewed, it was noted that the airport has a lot of data showing that people have a very positive outlook on the airport and its impact, and that this should not be missed in the process. Some DDPs were regrouped after the initial discussion.

The following groups emerged: Climate Change/ Environment, Economy, Equalities, Health, Noise, Safety, Technical.

The following DDPs were grouped under **"Noise"** – **1, 2, 3, 5, 6, 8, 9, 15, 16, 17, 18, 19, 22, 24, 25, 28, 29, 35, 41, 43, 44, 45, 46**.

DDPs – 8, 17, 25, 29, 41, 45, 46: With the general agreement of the group a new DDP was created –

Consider the evidence on the impact of noise on the protected species and noise sensitive receptors, subject to HRA.

DDPs – 2, 5, 9, 19, 28, 43: During the consideration of this group, the discussion focused on concentrating versus dispersing flight paths and needing to find a balance between overflying urban versus rural population areas. [redacted] pointed out that CAP1616 does not require us to minimise the population overflown but to reduce the overall impact i.e. more people can be overflown but it should have less overall impact on them.

[redacted] sought further clarification about what this actually means. [redacted] confirmed that this is about minimising the number of people exposed to 51/45 dba.

Furthermore, during the discussion, [redacted] suggested that one way in which dispersal could be achieved with limited space is that three paths could be done on the same SID – e.g. TALLA A, B or C – using the same exit point. This was themed by [redacted] as "concentrated dispersal" and further consideration of how this would work was added to the actions list.

At the end of the discussion a new DDP was created -

Minimise the total adverse impact of aircraft noise.

DDP 1: After a short discussion noting that this DDP is highly dependent on how each airport defines "night period", this DDP was moved to operational matters to be discussed outside the DPs.

DDP 44: It was generally agreed that we are doing this already, through the CAP1616 process. This was accepted unchanged for the next round of discussion.

DDP 35: During the consideration if this DDP it was agreed that there should be a DDP about deviations, which recognises that they are times when they are necessary and that some educational activity about reasons behind deviations may be necessary. A new wording was agreed -

Maximise the predictability of the track flown.

DDPs: 6, 15, 16, 18, 24: During the discussion, it was agreed that these DDP's are the subset of a general DP for noise below 7,000ft. It was agreed that we should adapt the wording from CAP1616 –

Minimise the total adverse impact of aircraft noise below 7,000ft.

DDP 22: [redacted] pointed out that we have a legal responsibility to consider this matter. It was noted that the issue regarding the sensory issues was raised by one person and it was added that we probably would not have to do that for just the one person but we should check with RNIB if there is anything else that we can do, e.g. purchase special kits that would help, however, this requires more research.

This DDP was moved to equalities section and it was noted that we should check with Diversity Dynamics if there is anything more that we should do on this.

DDP 3 – During the discussion it was reiterated that this is part of our sustainability agenda and an operational matter. This DDP was moved to issues to consider outwith the ACP process as a result.

The following DDPs were grouped under **"Technical"** – **11, 12, 27, 31, 36, 40, 48, 51, 52.**

DDPs – 27 and 52: After a short discussion and based on previous comments, these DDPs were merged into a single DDP -

The airspace design and its operation must be as safe or safer than today.

DPs – 11 and 40: By general agreement and based on previous comments, these DDPs were merged into one DDP -

Ensure consideration of all airspace users.

The wording was later discussed and changed to - ***Prioritise the needs of all airspace users.***

DPs – 12, 31, 48, 51: By general agreement and based on the previous comments, these DDPs were merged into a one DDP

Consider amending the routes to optimise the existing airspace.

DP 36: Was generally considered as a given and based on previous discussions was reworded as

Consider clean sheet approach to ACP.

As a result of discussion in this DP group and on reflection of stakeholder feedback, it was felt that a new DP should be added:

Design routes to ensure and effective route management.

This was agreed by everyone.

The following DDPs were grouped under **"Health"** – **14, 21, 30**

There was a general agreement that these are all related to noise. It was decided that all three would be merged into a single DDP –

Minimise health impacts created by aircraft.

The following DDPs were grouped under **"Equalities"** – **23 and 34.**

DDP 23 – After a short discussion it was agreed that house prices will be affected regardless of where the flight paths will be drawn and that this is a matter for post-implementation review and the resulting consideration of how any loss will be compensated.

After a discussion it was decided that DDP 23 is removed as a potential DP and added to the issues to consider further in the ACP process.

DDP 34 – After a short discussion it was decided that the issues behind this DDP are best dealt with through limiting the impact of noise. This DDP was moved to the "Noise" section for the next round of consideration.

The following DDPs were grouped under **"Economy"** – **26 and 33.**

During the discussion, it was agreed that the airport will need to write an economic impact statement. [redacted] suggested that we should investigate what the Scottish Government is saying. It was also agreed that we should add a DDP about airspace change facilitating growth.

A new DDP was written –

Support growth in line with Scottish Government Economic Development

It was also agreed that a further DDP will be drafted to recognise the economic aims of the SoN.

The following DDPs were grouped under **"Climate change/environment"** – **7, 39, 49.**

It was generally agreed that all three DPs in this section should be and rewritten into two –

Optimise routes to minimise emissions

Optimise routes to improve air quality

[redacted] went through the draft shortlist of DDPs. During the discussion,

[redacted] felt that we are missing a DP in relation to allowing a one-minute separation or airport capacity growth, suggesting that a DP should state that we will create an

"***airspace that does not constrain growth***."

This was generally agreed.

[redacted] felt that Safety and Operational points should be made into separate high-level headings. This was generally agreed.

With regards to the environment section, it was agreed that the two DDPs will be provisionally reworded as:

- ***Contribute to the Scottish Government climate change agenda by optimising flight paths to minimise CO2 emissions.***
- ***Optimise flight paths to minimise local air quality impact.***

With regards to the technical section -

DDP - Prioritise the needs of all airspace users: After a short discussion, it was agreed that the wording would be changed to "**balance the needs of all airspace users**". It was felt that the word "prioritise" did not strike the right balance and it was agreed that it should be changed to "consider".

DDPs **Consider a "blank page" approach to ACP**; **Consider replicating existing routes** and **Consider amending routes to optimise existing airspace,** were discussed together.

After a discussion, which considered the wording of the three DDPs and whether they are feasible as potential DPs when it comes to evaluating design options, it was decided that:

Consider replicating existing routes restricts our thinking and would be done as part of the modernisation process regardless. It was therefore removed from the potential DP list;

Consider amending routes to optimise existing airspace would be removed from the potential DP list;

Consider a "blank page" approach to ACP is to be reworded to **"Consider an open approach to airspace design**" and moved to the overall approaches of the ACP section and cut from potential DP list;

It was agreed by all that a new DDP should be added to the technical section –

All options considered shall be safe and feasible.

With regards to the safety section -

[redacted] felt that we should we remove "safer than today" from DP, "**the airspace design and its operation must be as safe or safer than today"**, as she felt that this was opening us up to a

challenge. It was generally agreed that this should be considered in the final rewrite and wording retained for the time being.

With regards to the operational issues, the following DDPs were discussed and agreed unchanged:

- ***Design efficient routes to minimise track miles and fuel burn.***
- ***Enable an increased airspace capacity.***
- [redacted] ***Design routes to ensure and effective route management.***

With regards to the health section, all draft DPs from the previous section were accepted. [redacted]noted that we need to define what we mean by "overflying".

With regards to the noise section, the following DPs were discussed and agreed unchanged:

- ***Minimise the total adverse impact of aircraft noise (41/51 dba LAeq)***
- ***Consider the impact on protected species and noise sensitive receptors. (subject to HRA)***
- ***Consider dispersal for mitigation purposes (if possible) –*** [redacted] ***suggested replacing 'consider' with 'evaluate'. This was agreed.***
- ***Maximise predictability of the track design/flown***

It was agreed that the health section and noise section would be merged because there is significant overlap between the draft design principles in these groups. This was agreed unanimously.

[redacted] then went back to review the long list of DPs that have not resulted in a Design principle to double check that after further discussions had taken place that the position on each hadn't changed.

DDP 23 - [redacted] reiterated the action on rerunning the study on housing prices, with the view that this will inform the consultation information and post-implementation information.;

DDP 50 – General agreement that this does not meet safety standards;

DPP 13 – General agreement that this is out of scope for the project;

DDP 3 – General agreement that this is an opportunity to look at charging structure outwith the programme;

DDP 37 – General agreement that this is out of scope [redacted] noted that, as the airport stands at about 100ft above the sea level and there are currently no terrain issues that affect flight parts for arriving and departing aircraft, and this circumstance is not anticipated to change, there is no need for a design principle to reflect terrain. It was agreed by all that this action would be removed from the action list;

DDP32 and DDP 18 (Minimising flights only) – General agreement that this does not meet the SoN;

DDP 1 – General agreement that this will be considered as part of the DP on minimising adverse effects of noise;

DDP 33 – General agreement that tourism impacts would be covered by an economy DP, to be drafted;

DDP 10 – It was reiterated that there is no requirement to do this in the UK, but we will focus on what is within CAP1616;

DDP 20 – General agreement that offsetting impacts of the operations cannot be designed as part of flight paths, but this will be considered as part of our wider sustainability strategy;

DDP 38 – General agreement that this does not meet safety standards;

DDP 42 – General agreement that these are specific solutions that would not translate into a workable design principle;

DDP 4 – General agreement that this will be taken on board as approach but not a DP;

DDP 47 – It was noted that the evidence shows that there is a negligible noise difference and that this is ultimately an operational issue [redacted] confirmed that we will design for the lowest performing aircraft. [redacted] also added that we will use Edinburgh, not Gatwick data in noise mapping.

It was agreed that the EAL project team would review the wording and circulate the Proposed Design Principles to the wider group for approval.

Actions from the meeting were reviewed and meeting closed.

END

Final output at the end of the session:

Theme	**Design Principles**
Economy	Support growth in line with Scottish Government Economic Development
	Add SON DP
Environment	Contribute to the Scottish Government Climate Change agenda by optimising flight paths to minimise CO_2 emissions.
	Optimise flight paths to minimise local air quality impact
Technical	Prioritise the requirements of all airspace users
	Options considered shall be safe and feasible
Safety	The airspace design and its operation must be as safe or safer than today
Operational	Design cost-efficient routes to minimise track miles and fuel burn
	Enable increased airspace capacity
	Design routes to ensure an efficient and effective route management
	Routes will only accommodate PBN capable traffic after xx years
Health	Minimise health impacts created by aircraft noise and emissions
	Minimise population overflown taking into account protected characteristics
	Minimise overflying sensitive locations
Noise	Minimise the total adverse impact of aircraft noise
	Consider impact on protected species and noise-sensitive receptors (subject to HRA)
	Evaluate dispersal for mitigation purposes
	Maximise predictability of the track design and how it's flown

Appendix Q - Recall round of engagement report, Progressive Partnership

progressive

Edinburgh Airport Limited

Airspace Change Programme

WP1 Design Principles

Recall Report

20 December 2019

progressive

Contents

Contact information

[redacted]

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Introduction

The first round of engagement sessions in Stage 1B were held in Edinburgh from 23rd September to 9th October to develop a long list of design principles. The engagement comprised a total of five workshops and three focus groups. The workshops were conducted with community stakeholders, aviation stakeholders, Edinburgh Airport Noise Advisory Board (EANAB), and a broader group of stakeholders that included local council officers (typically planning and environmental health), industry, equalities groups, and environmental organisations; the three focus group discussions were held with residents of areas potentially or presently affected by airport operations.

The first round of workshops generated a report of the design principles, set out by theme, in order of importance and frequency of mention. The first round of engagement identified 50 design principles that fell into broad themes of: environment, community, technical, economy and equalities. Two further design principles were later provided by NATS En-route PLC (NERL) and Glasgow Airport (GLA), taking the long list of design principles considered by the shortlisting session to 52. In addition to the design principles, issues relating to ground traffic, monitoring and reporting, and social issues were identified – these are also discussed in the report and listed as 'issues of importance'. The table with 52 design principles derived from the workshops can be seen in appendix A.

Edinburgh Airport's Programme Working Group, supported by the environmental and technical consultant experts, reviewed the long list against CAP1616 and other legislative and regulatory requirements. The Working Group determined if the design principles were accepted or rejected, and provided reasoning behind the decision on each design principle. This created a shortlist of design principles. Two 'recall workshops' were then convened, to enable the short list of design principles to be reviewed by a representative group of the stakeholders involved in the original design principles discussions.

This document reports on feedback gathered from the recall round (Stage 1B) of engagement workshops to review the shortlist of design principles for the Airspace Change Programme (ACP) 2019. In order to gain a full understanding this report should be read in conjunction with the report on the first round of engagement workshops.

Methodology

The recall workshops allowed us to invite a varied selection of people who had attended the original workshops to represent a wide group of locations and interests.

Delegates from the aviation industry are well informed about airspace change and have areas of interest that are different to those who represent community interests. Their interests often include their own use of airspace. A large workshop where ideas are exchanged at a high level of understanding with a large number of delegates is well suited to this group. For these reasons we opted to give them their own forum and run a workshop dedicated to Aviation delegates.

Members of community councils represent not just their own interest but those of people who reside in their area of residence. When considering community councils, we looked at guidance and information on their role in Scotland. As per Scottish Government description, they are the "most local tier of statutory representation in Scotland" and they "bridge the gap between local authorities and

communities and help to make public bodies aware of the opinions and needs of the communities they represent." This helped inform our thinking when considering a wider invitation to the recall workshops as community councils would provide a wide range of views from those within their community, thus informing our thinking at a local level.

To further inform our thinking we invited a broader group of stakeholders that includes organisations that represent special interest groups such as: equality, disability, environmental issues, historic environment, local council officers (typically planning and environmental health), industry, property development and so forth. Delegates from these organisations represent views often from a national view point. A large workshop where ideas are exchanged at a high level of understanding with a large number of delegates is well suited to this group. For these reasons we opted to run one workshop dedicated to a wide range of stakeholders.

Workshop Recruitment

A representative sample of attendees to the first round of workshops were sent an invitation to attend a recall workshop. This included: all of those who attended the aviation workshop; a representative sample of community stakeholders to ensure each region was represented, those currently overflown within noise contours, currently overflown out with noise contours and currently not overflown but could be were included; a representative from EANAB; and delegates from other stakeholders such as property developers, environmental groups, environmental activists, councils and equalities organisations. The invitation can be found in appendix B.

The approach to selecting the organisations invited to the community and stakeholder recall workshop was as follows:

- A database of organisations who attended the first round of community and general stakeholder workshops was compiled and randomised within group.
- A starting point was identified within the database at random.
- Organisations to the recall workshop were selected to ensure representation from each region, those currently overflown within noise contours, currently overflown out with noise contours and currently not overflown but could be included; a representative from EANAB; and delegates from other stakeholders such as property developers, environmental groups,
- Given the limited space available in the workshop, priority was given to achieving a range of representation, therefore, opportunities for representation for more than one organisation within each group were limited. Places were limited to one per organisation.

Because stakeholders were from a wide area and some distance from Edinburgh, many community representatives were reluctant to spend time and money travelling to attend workshops. To compensate and encourage engagement, an incentive of £40 was offered to all delegates of the community workshops. The stakeholder workshop was held on the 5 November 2019.

The aviation workshop was originally arranged to be held on the 31 October. All delegates from the initial aviation invitation list were emailed. In total 21 organisations were invited to attend. Initially 10 agreed to attend. The date for this workshop had to be moved because EAL had asked for additional time to confirm the short list of design principles. A postponement email was sent to all 21 aviation organisations including those who could not attend stating the workshop would be held week commencing 11th November. See appendix C. An invitation confirming the revised date of November 13th was sent and eight agreed to attend the re-arranged workshop. See appendix D for the invitation.

Once all workshops were fully recruited, delegates were sent confirmation details which included a copy of the draft shortlist, as well as a recording permission request. See the confirmation email in appendix C. All delegates were contacted by telephone the evening before the workshop to confirm their attendance.

Principles of inclusion

Our methodology was designed to include a wide representation of views. We invited representatives from action groups such as: EANAB and Extinction Rebellion, as well as community councils known to be opposed to the airport's growth. People with protected characteristics and those representing equalities groups were included and supported.

Moderation

Each of the workshops was moderated by senior practitioners from Progressive and attended by representatives from Edinburgh Airport (EAL), Diversity Dynamics: equalities experts, WSP: environmental experts andTo70: technical experts. Attendees were sent a copy of the shortlist of design principles prior to attending the workshop. See Appendix D.

A short presentation was made to attendees which set out the shortlist of design principles, issues that respondents to the first wave of workshops thought important but were not design principles, and the longlist of design principles derived from the first wave workshops.

The Stakeholder recall workshop identified some strong views on the wording of the shortlist principles. It was decided to test the amendments proposed by the stakeholder recall workshop in the Aviation workshop. A copy of the stimulus can be found in appendix E.

Collecting the views of those unable to attend the workshops

The recall phase was designed to be a test exercise, we did not collect views of those who did not want to attend the session.

Analysis

Both workshops were recorded and transcribed. Delegates were asked for their permission to record. This was sought on the day of the workshop and asked in person. It was also sought in the confirmation email that was sent to delegates. Full transcripts can be found in appendix F.

We conducted qualitative data analysis using a consultative process that began with listening to the recordings and agreeing on the key themes. Two of the senior project executives were involved at this stage to ensure that the data, although subjective, was of high quality. All members of the team conducting analysis documented the prevalence of themes and strength of feelings expressed. As analysis progressed new themes emerged, and the team had regular update meetings to ensure that everyone was up to speed on themes, relationships and ideas as they developed.

There were several stages to the analysis:

- The researcher examined transcripts of recorded workshops, noting the relative frequency with which different issues arise, as well as the intensity of their expression.
- Qualitative data often occur in embedded material, e.g. an important issue may be interspersed among a cluster of comments from a discussion. It is important to recognise that qualitative analysis is not a linear process, and to revisit the data to examine whether additional questions or new connections between the data emerge.

- When completing analysis, we looked for patterns, common themes, deviations from patterns and any factors that may explain these.

Objectives

The aim of this round of recall workshops was to review the shortlist of design principles and sense check the design principles shortlisted by Edinburgh Airport's project team.

The agenda for the engagement sessions was to:

- recap on where we are with the process
- present the full list of draft design principles that were arrived at in round one
- gain a response to the contraction of 52 design principles to 16
- present the shortened list of proposed design principles
- have an understanding of responses to the shortened list.

Shortlist of design principles

The table below contains the shortlist of design principles that were tested at the workshops. It is noted that these had changed slightly from those draft design principles that were sent to delegates ahead of the workshop.

PDP1	Safety (Core)	The airspace design and its operation must be safe as or safer than it is today.
PDP2	Technical (Core)	The prioritised requirements of airspace users must be taken into account when designing flight paths.
PDP3	Technical (Core)	Flight paths must be flyable.
PDP4	Noise (Core)	Flight paths should be designed to minimise the total adverse effect on health and quality of life impacts created by aircraft noise and emissions.
PDP5	Economy	Flight paths should be designed to provide increased airspace capacity in order for Edinburgh Airport to support the Scottish Government's Economic Development agenda and the UK's wider aviation strategy. **Note:** wording issued to Delegates was *Flight paths should be designed to increase airspace capacity and meet Scotland's demand for connectivity*
PDP6	Environment	Flight paths should be designed to minimise CO_2 emissions above an altitude of 7000ft and, where it doesn't have a detrimental effect on adverse noise impacts, also between 4000ft and 7000ft.
PDP7	Environment	Flight paths should be designed to minimise adverse local air quality impacts.
PDP8	Operational	Flight paths should be designed with cost effective routes that minimise track miles and fuel burn.
PDP9	Operational	Flight paths should be designed to ensure efficient and effective route management.
PDP10	Operational	Flight paths must be designed to accommodate PBN traffic in line with CAA's modernisation strategy.

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PDP11	Health	Flight paths should be designed to minimise population overflown below 4000ft and, where possible, between 4000ft and 7000ft, taking into account any potential adverse impact, due to those overflown having protected characteristics, as defined by the Equalities Act 2010.
PDP12	Health	Flight paths should be designed, where possible, to minimise overflying sensitive locations and noise sensitive receptors (for example, the zoo, retirement complexes, green spaces, historic heritage sites, and others). **Note:** wording issued to at the Workshop was updated to include the examples of noise sensitive locations and receptors, i.e. to include: *(for example, the zoo, retirement complexes, green spaces, historic heritage sites, and others).*
PDP13	Noise	Where possible, flight paths should be designed to include track concentration and/or track dispersal options to provide noise respite.
PDP14	Noise	The predictability of flight tracks must be maximised for consistency of operations.
PDP15	NERL (Core)	Collaborate with other Scottish airports and NATS to ensure that the airspace design options are compatible with the wider programme of lower altitude and network airspace changes being coordinated by the FASI North programme.
PDP16	GLA (Core)	Routes to/from Glasgow and Edinburgh airports should be procedurally deconflicted from the ground to a preferred level in coordination with NATS Prestwick.

Overall summary response to PDPs

Overview

This section provides a summary of revisions suggested by delegates from both workshops; Aviation and Stakeholder. We have included the revised design principles where appropriate with the revisions suggested by delegates from both workshops. These feature in bold italics.

Respondents suggested the inclusion of a full glossary that spells out all acronyms and some of the thinking behind design principles such as PDP4 which captures many of the principles at the top of the long list. They also asked for EAL to supply the longlist of design principles and illustrate where they have been merged into the short list. Aviation asked for an explanation of thinking behind the apparent lack of a clean sheet principle to be included in the glossary.

PDP1
Agreed with no challenge
The airspace design and its operation must be as safe or safer than it is today.

PDP2
Remove the words *The prioritised*, use *should*:
Requirements of airspace users should be taken into account when designing flight paths.

PDP3
Agreed but needs to be further explained
Flight paths must be flyable.

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PDP4
It could merge with PDP7 in which case it should be mandatory and include the word *must*:
Flight paths must be designed to minimise the total adverse effect on health and quality of life impacts created by aircraft noise and emissions.

PDP5
The word *provide* could be replaced with enable, it should also include reference to *tourism and trade*:
Flight paths should be designed to enable increased airspace capacity in order for Edinburgh Airport to support the Scottish Government's Economic Development agenda and the UK's wider aviation strategy, including tourism and trade.

PDP6
Revert to the Air Navigation Guidance 2017 wording:
For flightpaths at or above 4,000 feet to below 7,000 feet, the environmental priority should continue to be minimising the impact of aviation noise in a manner consistent with the government's overall policy on aviation noise, unless this would disproportionately increase CO2 emissions.

PDP7
This could be deleted as long as PDP4 is mandatory and uses the word *must*
Flight paths must be designed to minimise adverse local air quality impacts.

PDP8
Remove the words cost effective:
Flight paths should be designed with cost effective routes that minimise track miles and fuel burn.

PDP9
Stakeholders suggested merging this with PDP8 as they are similar, but Aviation wanted it to be kept separate
Flight paths should be designed to ensure efficient and effective route management

PDP10
Spell out the acronym PBN: Performance Based Navigation:
Flight paths must be designed to accommodate modern performance based navigation (PBN) traffic in line with CAA's modernisation strategy.

PDP11
Use the revised version:
Flight paths should be designed to minimise population overflown below 4000ft and, between 4000ft and 7000ft, taking into account any potential adverse impact, due to those overflown having protected characteristics, and special requirements.
Give a fuller explanation

PDP12
Remove the phrase "*where possible*":
Flight paths should be designed to minimise overflying sensitive locations and noise sensitive receptors (for example, the zoo, retirement complexes, green spaces, historic heritage sites, and others).
Give a fuller explanation

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PDP13
Remove the phrase "*where possible*":
Flight paths should be designed to include track concentration and/or track dispersal options to provide noise respite.

PDP14
Agreed with no challenge
The predictability of flight tracks must be maximised for consistency of operations.
Give a fuller explanation

PDP15
Agreed with no challenge
Collaborate with other Scottish airports and NATS to ensure that the airspace design options are compatible with the wider programme of lower altitude and network airspace changes being coordinated by the FASI North programme.

PDP16
Agreed with no challenge from Aviation but community stakeholders were confused by it.
Routes to/from Glasgow and Edinburgh airports should be procedurally deconflicted from the ground to a preferred level in coordination with NATS Prestwick.

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Outcomes: Stakeholders

Group Dynamics

In total 50 representatives were invited. Recipients were offered two options in the email, (1) *would like to attend*, (2) *cannot attend*. Nineteen Stakeholder respondents agreed to attend. Twenty could not attend and eleven did not respond. An Excel file in appendix G identifies all three categories.

This workshop was held on the 5 November 2019. It comprised 16 delegates from 16 different organisations. There were nine organisations representing the interests of communities from North, East, South and West of Edinburgh. This included communities overflown within contours, overflown outwith contours and not overflown. Delegates included representatives from property developers, noise groups, environmental groups, equalities and traders. A full list of attendees can be found in appendix H. The workshop lasted three hours.

The workshop was jointly moderated by [redacted] notes were taken by [redacted] and the workshop was observed by [redacted]

Some papers and suggestions were submitted to Progressive and EAL at the point of and after running the recall workshop. These include: a paper from Royal Burgh of Kinghorn CC, and some suggestions by email from Bruce and Mari Finlayson. These papers were submitted out with the process; however, all content has been noted and passed on to EAL.

Overview

There were some concerns expressed over the linguistic style. Some found the language in some of the Provisional Design Principles (PDP) too technical to understand, specifically PDP 15 and 16 and those that use acronyms such as PBN and NATS. Some said this would be helped by having a glossary.

Some PDPs were thought to be too general as they used phrases such as *taking into account*, and *potential adverse impact*. There was a request for more specific and definite language. Some delegates did not like the use of caveats such as *where possible* as they thought this would give the opportunity to not apply the design principle. Some commented on the need to balance statements so that environment and operational issues are equally represented.

A comment made by one and agreed by many was the lack of a design principle that clearly pointed to flying over the water. This may be a solution to a route design and not strictly be a design principle, but it was a dominant suggestion in the first round of workshops and one that delegates expected to be reflected in the shortlist of design principles.

> *You're sort of carefully avoiding the use of the word "Forth". You could turn it around, saying, any area of open space ought to be used first. Particularly open space over water, without mentioning the Forth.*

The question of the need for expansion came up as a dominant theme in this recall workshop as it did in many of the previous workshops. Many saw PDP5 as inconsistent with the need to reduce carbon emissions. Others felt that the shortlist of design principles should include the idea that all flight

options and emissions considerations should be compatible with the national carbon reduction targets.

Responses to PDPs

This sub-section of the report comments on delegate's responses to the PDPs as they were discussed.

PDP1 Safety (core)
The airspace design and its operation must be as safe or safer than it is today.
There was no contest to this design principle. No one made any comments on how or if it should be improved, it was agreed and fully understood.

PDP2 Technical (core)
The prioritised requirements of airspace users must be taken into account when designing flight paths.
Many were unsure of what this means and questioned what an airspace user was. Many felt it needed to be written in less jargonistic language.

Some read it as being a statement to give the aviation industry priority over those who are on the ground. Given this was a Stakeholder group of people whose interests were firmly on the ground and in the community this was thought not to be a good idea.

Others picked up on the use of the word *must* and took that as a sign that this design principle would be considered more important than any with the word *should*. This prompted a lot of discussion on using a RAG system to prioritise principles with some saying that all principles that include the word *must* would be given priority over *should*. Most felt this should read *should*.

Others picked up on the word *core*. Both of these words were thought to give priority to aviation over other design principles, and respondents were not in favour of this.

Very few realised that this principle was designed with general aviation airspace users and many said it needed more explanation.

PDP3 Technical (Core)
Flight paths must be flyable.
There was no contest to this design principle. No one made any comments on how or if it should be improved, it was agreed and fully understood.

PDP4 Noise (core)
Flight paths should be designed to minimise the total adverse effect on health and quality of life impacts created by aircraft noise and emissions.
The use of the word *should* was contested in this design principle with many saying is has to be a *must*.

> *My background is health and safety, and whenever you had a choice where it says 'should' as opposed to 'must', then that opened up lots and lots of doors. So, we never – if we could get away with it – put 'should'. We put 'must' all the time, to strictly get to the place that we wanted to be, you should put 'should'.*

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This was considered by some to be a catch all principle that should list all the related principles from the long list.

PDP5 Economy
Flight paths should be designed to provide increased airspace capacity in order for Edinburgh Airport to support the Scottish Government's Economic Development agenda and the UK's wider aviation strategy.

This prompted a lot of discussion around the need for expansion. Many delegates argued against the need for increased capacity. The statement that was sent to respondents prior to the workshop was: *Flight paths should be designed to increase airspace capacity and meet Scotland's demand for connectivity*. The change in wording was noted.

One of the contentious points in this principle was the word *provide*. It suggested to many that a sole purpose of this design principle was to increase capacity and many argued against the need for this. Others argued that if government economic development agenda is to be cited then its policy on climate change should be given equal weight.

> *Unless I see some firm data showing, without question, that there is a need for increased capacity, then I'm afraid that I would be arguing strongly that PDP Five should go.*
>
> *It is the case that all governments are Janus faced; they look both ways and try to appease all their different constituencies. It would appear to me appropriate if you're going to put in that requirement as a 'should' and there should also be a requirement of the Climate Change Targets Bill in there at this level.*

Some felt the statement was too restricted to supporting aviation and should include reference to tourism and trade.

PDP6 Environment
Flight paths should be designed to minimise CO2 emissions above an altitude of 7000ft and, where it doesn't have a detrimental effect on adverse noise impacts, also between 4000ft and 7000ft.

Many felt this statement placed emphasis on CO2 emissions over the noise and it should be the other way around. The ANG2017 has a different focus and this, and in some respondent's minds the following should be adopted:

> *In the airspace at or above four thousand feet to below seven thousand feet, the environmental priority should continue to be minimising the impact of aviation noise in a manner consistent with the Government's overall policy on aviation noise, unless the CAA is satisfied that the evidence presented by the sponsor demonstrates this with disproportionately increased CO2 emissions.*
>
> *So, the focus of that between zero to four thousand, and four thousand to seven thousand – the prime focus is noise. The only exception is, if between four and seven thousand there is an impact on emissions, and therefore maybe alternatives. But, the way that PDP Six is worded just now, noise is not the main focus.*

PDP7 Environment
Flight paths should be designed to minimise adverse local air quality impacts.

Many respondents called for the wording of this to be *must* oppose to *should* as they felt there should be an imperative on the airport to protect air quality. Others argued for the inclusion of the word *local communities of people* because people should be prioritised over animals, arable land and water.

Others felt that it should include global as well as local, because wind will carry CO2 emissions to other countries, and because of the negative influence of contrails on greenhouse effects. This argument was countered by the point that local air quality is different to global pollution. This point is illustrated in the quote below:

> *It is a common misconception, but air quality is different to pollution. When we talk about local air quality, it's specific pollutants that affect people on the ground, like NO2, like particular matter, sulphurs, benzenes, things like that, lead. Which are enshrined in European legislation, UK-wide legislation, and Scottish legislation – what those levels should be in any city. For instance, in Edinburgh, we're looking at local... a low emission zone. There is going to be one in Glasgow, Aberdeen and Dundee as well. That's local air quality, so that's what that's about. It is different, completely different. That's why it's like the argument between diesels and not diesels, because diesels are good for having low CO2, but they're very bad for local air quality. They can get a lot of PM10s, a lot of NOX. That's the fundamental difference between those things. So, it's quite important to separate PDP Seven, because it's a specific piece of legislation and specific serious health effects from that to CO2, which is serious but something different. Does that make sense to everyone?*

PDP8 Operational

Flight paths should be designed with cost effective routes that minimise track miles and fuel burn.

The words *cost effective* confused some delegates who made an assumption that this was tied into the commercial strategies of airlines. This led many to agree that all design principles must be easy to understand and must have universal understanding.

> *I must admit, I took it to mean that if I start up What Airways and start doing a shuttle down to London, if I charge four pounds fifty a ticket, it's not going to be cost effective. If I charge forty-five pounds a ticket, it might well be cost effective. It seems to me the cost effective part of it is a very sort of passing sort of concept. I don't think what makes something cost effective all depends on what the airlines are charging for it. And if all airlines are having to fly the same way, they're all facing the same sorts of things, then it's up to them as to where they use more fuel efficient airplanes, or whatever. So, I would just want to take 'cost effective' out of it.*

At this point in the workshop it was noted by one and agreed by others that the design principles examined up to this point were stacked in favour of aviation and not balanced in support of the environment.

PDP9 Operational

Flight paths should be designed to ensure efficient and effective route management.

This was not immediately understood and needed to be explained. It was explained by observers as being a way to get planes in as quickly as possible, minimising halt times as well, which helps reduce fuel burned, track miles and CO2. Some thought this was so close to PDP8 that it could be merged, but then conversation followed that highlighted the difference in emphasis of one being about the minimisation of track miles and the other being about route management. By merging the two the flexibility of efficient and effective route management may be lost. The final outcome was a suggestion to keep them separate.

Other reiterated the need to keep this as a *should* and not a *must* as it may be necessary to create curved routes to avoid overflying communities.

PDP10 Operational

Flight paths must be designed to accommodate PBN traffic in line with CAA's modernisation strategy.

This was not understood because not everyone knew what PBN means and the CAA modernisation strategy was not understood by the majority. These points need to be spelt out in a glossary of terms in order for them to be understood.

A comment was made that three operational design principles had been discussed that potentially could be merged into one. This was thought to give the aviation industry a disproportional representation as routes would have to be evaluated against three rather than one operational design principle.

PDP11 Health

Flight paths should be designed to minimise population overflown below 4000ft and, where possible, between 4000ft and 7000ft, taking into account any potential adverse impact due to those overflown having protected characteristics as defined by the Equalities Act 2010.

The first observation was the need to remove the phrase *where possible* as this opens the way for this design principle to be ignored.

> *I'm not an advocate or a lover of open doors. And what we seem to have there is taking into account. Yeah, I could take something into account and still do something else and I don't like open door statements especially in something that we're proposing as a principle.*

The phrase *taken into account* was also thought to be too ambiguous for some. Some felt it should be strengthened: one way would be to replace it with the word *meet the requirements of communities defined as having protected characteristics.*

A comment that was made by the RNIB was that lots of principles have been designed to protect larger communities but there is not enough to protect the needs of those with specific requirements.

> *There's a lot of things in here already that talk about minimising negative impact on every system and every person, every creature, whatever. But I think it is important to recognise that there are, and I'm not even sure that I would use the term protected characteristics but to minimise adverse reactions of people with specific requirements: environmental, social and health requirements, or something. Because I think, referring to legislation again emphasises that sense that it's a tick box exercise.*

Many were not aware of the definition under the Equalities Act. This combined with the suggestion that reference to it looks like a tick box exercise led to the suggestion of removing the reference to the Equalities Act and placing more emphasis on those with special requirements.

A point made by PPCA LTD[1] on behalf of Winchburgh Development was that all statement thus far have focused on the existing population and that nothing has been said about future populations.

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[1] PPCA Ltd is a town planning consultancy based in Edinburgh and Dunfermline, Scotland

It needs to take into account the future population because it could be that a community falls below the threshold at this point in time but in ten years it could be above the threshold and so that obviously has to be taken into account when the words population and communities are used and obviously.

One of the outcomes of discussion around PDP11 was that once EAL has completed its mapping exercise of where communities are, where they might be and what should be avoided they [EAL] should make that public so that members of the public can better understand the rationale for proposed flight paths.

A comment made by Royal Burgh of Kinghorn CC was that adverse effects of flights above 7,000 feet should be recognised and that the principle should say flights up to 12,000feet. The same person commented that this principle doesn't differentiate between flights taking off and landing and that the difference in noise is tangible.

I live in an area where planes regularly come over between five and seven thousand feet and they're jolly noisy, particularly as they bank over Kinghorn. We think in Kinghorn that twelve thousand feel ought to be the regulated height, minimise population overflow and it ought to be twelve thousand feet.

It was noted by observers that EAL has no jurisdiction above 7,000 feet but this was disregarded by the one delegate who called for integration of airspace above 7,000 feet.

You can't say at the airport, oh we can't dictate that because we only take over after seven thousand feet. I don't care. Twelve thousand feet and you do it on an integrated basis joint between the airport and NATS Prestwick.

PDP12 Health

Flight paths should be designed where possible to minimise overflying sensitive locations and noise sensitive receptors.

Delegates asked for more certainty in this principle and wanted the phrase *where possible* to be removed. Some argued that this PDP should be under the heading *health and wellbeing* as noise is not just a health issue, it can be intrusive and thus affect wellbeing. The following quote illustrates this point:

It is a health issue in some ways but it's much more than that. If someone were to build a skyscraper on the top of Arthur's Seat you would say it was an eye sore but you wouldn't necessarily say it was a health issue, you might do. And it's the same with noise. I doesn't have to be a health issue for it to be an adverse impact and I've been worried. So that's where I think noise comes under health and wellbeing again, it's not just about health. And the thing about the one we're on now, talking about historic sites and so on – we did have a bit of discussion last time about ambient or contextual noise. So the impact of something flying over the castle in the middle of a noisy centre is perhaps, arguably less than something flying over Inchcolm Abbey, which is a very peaceful environment. So it would great if it would be possible to capture that.

The word *receptors* was not widely understood and needed to be unwrapped. This could be done by giving examples of the types of locations such as zoos and including a reference to this in a glossary of terms.

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PDP13 Noise

Where possible flight paths should be designed to include track concentration and/or track dispersal options to provide noise respite.

The phrase *where possible* was once more challenged and its removal requested. Otherwise this design principle was not questioned or challenged.

PDP14 Noise

The predictability of flight tracks must be maximised for consistency of operations.

There was debate as to whether this was an operational or noise design principle. Another point made in relation to this PDP was that it is dependent on air traffic control and vectoring.

Some claimed that the principle should be about minimising vectoring to conditions where safety and weather require it and that it should explicitly state that *"we will work with air traffic control to keep these flight paths as narrow as possible."*

PDP15 NERL (Core)

Collaborate with other Scottish airports and NATS to ensure that the airspace design options are compatible with the wider programme of lower altitude and network airspace changes being coordinated by the FASI North programme.

This design principle was welcomed by members of EANAB and others who were pleased to see joined up thinking. *FASI North* was not universally understood.

> *This is the third meeting like this. I have been at one for Glasgow and at one for Aberdeen. So, all sorts of things were going on. Why don't they all get together and talk to each other and have a real look at how airspace is used, how it links with what's going on further North. We haven't talked about it at all but the possibility of another corridor down the East coast, things like that. We have an opportunity right now to do all this as XXX said, I'm delighted to see that one in there. And I think it should really be FASI North, FASI stands for future of airspace strategy. So, that is what FASI North are doing at the moment, looking at that bigger picture above that... So, we are looking at what we're doing and part of that team as well to put a bit of space.*

PDP16 GLA (Core)

Routes to/from Glasgow and Edinburgh airports should be procedurally deconflicted from the ground to a preferred level in coordination with NATS Prestwick.

This design principle was accepted by all and no challenge was made to the wording by the Aviation stakeholders. Many of the Community Stakeholders did not understand the term 'deconflicted'. Following a discussion, delegates within this group were content to accept the DPD, but noted the terminology is not user-friendly. The design principle was agreed and no challenge was made to the wording by aviation workshop delegates.

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Issues that were raised in stage 1 workshops

In the last 30 minutes of the workshop we discussed the long list of design principles that were identified in the first wave of workshop. Some were rejected as not qualifying as a design principle and others were agreed and captured into the shortlist. Many were conflated into one.

Issues that didn't qualify as design principle

This is the list of issues that do not qualify as design principles, and delegates' thoughts on EAL's response.

Consider no change.
This was rejected as a design principle. However, Edinburgh Airport is going to be considering the "do nothing but modernise" approach, alongside the "clean sheet" and "replicating existing routes" approach as part of designs option process in stage two. However, it was noted that this may not meet EAL's increased capacity as outlined in the SON.

Some said there is a clear expectation that EAL will consider this as an option.

Ensure planning integration.
While the issues of planning infrastructure were considered to be very important to delegates in the first wave of workshops, they do not qualify as design principles for an airspace change programme. Delegates were, however, reassured to know that EAL intends to conduct a consultation to airport access routes prior to Christmas.

Monitor noise/air quality.
These points were all discussed, and the moderator explained that EAL already monitors air quality at the airport and that EAL will look at this as part of the environmental impact assessment. No comments were forthcoming from the delegates.

Use technology to reduce noise.
It was explained that EAL is conducting an environmental impact assessment as part of the ACP so they will review the outcomes of this report and determine actions depending on the outcome.

Consider government targets on the environment.
It was explained that this is encapsulated in PDP7. One person contested that this was the case.

Consider risks of auditory damage.
It was explained that this is encapsulated in PDP4. This was not contested.

Ensure business case is well documented/evidenced/ Recognise flights are not used by all/ Consider compensation/ mitigation for those overflown.

These points were read out as being important points that were raised in stage one workshops. Delegates agreed that they were noted.

Increase flight costs to reduce peak demand.
It was explained that airlines set flight costs and Edinburgh Airport cannot influence this. This was contested by some who thought EAL could affect cost through its landing and take-off fees.

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Routes to/from Glasgow and Edinburgh airports should be procedurally deconflicted from the ground to Flight Level 90.
It was explained that this was accepted and agreed wording with Glasgow has been included for both EDI and GLA.

It was noted that data, particularly forecasts, need to include details of any and all assumptions.

Those in favour of airport expansion in the first wave of workshops suggested that EAL continue to create more jobs and support tourism and business. Some contested the proposition that EAL is a key contributor to tourism, citing the idea that more money leaves the country than is contributed through tourism.

Issues that did qualify as design principles and were accepted

The workshop reviewed the longlist of design principles that were accepted and included in the shortlist with an explanation of which design principle captured each on the long list.

It was noted that many of the design principles have been subsumed into PDP4 and that as a design principle it now covers very many sub issues. Some people noted the need for an additional prioritised design principle "consider climate impact".

> *It means that PDP4 is now a huge blanket principle that covers lots of really important, specific issues, and while you can't disagree with PDP4, what I'm saying is that there's so much bound in there that could well have been broken down into three or four further sub-issues, and it's a way of minimising the impact, where perhaps there should have been a larger impact, because there are several of these things that should be included as separate design principles.*

Issues that did qualify as design principles and were rejected

The final part of the workshop concluded with a review of the longlist of design principles that were rejected. Some claimed that EAL's response to **Review the need for growth** overstated their case and that CAA had not accepted or passed the need for growth.

Fly the west side of the River Almond was rejected by EAL as being unsafe for approaches. Delegates argued that it may be safe for take-off.

Do not concentrate flight paths was listed as being contained in PDP13 but some argued that this conflicts with PDP13.

> *Can I just say the third one down, 'do not concentrate flight paths', you say it's covered in PDP13, but PDP13, it says 'flight paths should be designed to include track concentration', and that one says 'don't concentrate it'.*

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Summary Stakeholders

Overview

- Spell out all acronyms and some of the thinking behind design principles such as PDP4, which captures many of the principles top of the longlist such as fly down the Forth. Supply the longlist of design principles and illustrate where they have been merged into the shortlist.

PDP1

- Agreed with no challenge.

PDP2

- Need to clarify language. Change the word *must* to *should* so that aviation is not given priority over communities on the ground.

PDP3

- Agreed with no challenge.

PDP4

- Change the word *should* to *must* so that health and quality of life impacts are not ignored.

PDP5

- The need for increased capacity was contested and the word *provide* should be replaced with *enable*. Should also include reference to tourism and trade.

PDP6

- Place the emphasis on minimising noise rather than emissions.

PDP7

- Replace *should* with *must* as many felt there should be an imperative on the airport to protect air quality.

PDP8

- Remove the words *cost effective*.

PDP9

- Replace *should* with *must*.

PDP10

- These points need to be spelt out in order for them to be understood.

PDP11

- Remove the phrase *where possible*.

PDP12

- Remove the phrase *where possible*.

PDP13

- Remove the phrase *where possible*.

PDP14

- Needs a better explanation in glossary.

PDP15

- Agreed with no challenge.

PDP16

- Agreed but needs a full explanation or simplified wording.

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Outcomes: Aviation

Group Dynamics

In total 20 organisations were emailed; these were all organisations who had attended or been involved in the first stage, although in some cases the individual representing the organisation changed. Recipients were offered two options in the email, (1) *would like to attend*, (2) *Cannot attend*. Eight agreed to attend. Ten could not attend, one opted out and one did not respond.

This workshop was held on the 13 November 2019. It comprised seven delegates from seven different organisations. A full list of attendees can be found in the appendix J. One delegate was late to arrive at the workshop, but this did not interrupt the process. The workshop lasted two and a half hours.

The workshop was moderated by [redacted], supported by [redacted] The workshop was observed by [redacted]

Some papers and suggestions were submitted to Progressive and EAL at the point of and after running the recall workshop. These include: a paper from Light Aircraft Association principles for ACP consultations and the Lord-Kirkhope inquiry July 2019 which suggests that controlled airspace should be minimised. [redacted] from LAA requested that this be on record that that report exists and to be considered.

These papers were submitted out with this process; however, the documents are recognised and have been passed on to EAL.

Overview

Very few comments were made during the overview of the design principles. One delegate commented that the airport appears not to be giving away any airspace which it currently does not use. This point was noted and EAL commented that while it is not a point to be considered at this stage it could be at a later stage of the process.

> *The fact that you are not giving away the airspace that you don't currently use may have an impact on the safety of non-commercial users.*

Another commented on the apparent lack of inclusion of the "clean sheet" principle that was mentioned in the first round of workshops. This was fully reported (in the report on the first wave of workshops) and was thought to be one of the most important point to this group. This is captured in PDP15.

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Responses to PDPs

This sub-section of the report comments on delegates' responses to the PDPs as they were discussed.

PDP1 Safety (core)
The airspace design and its operation must be as safe or safer than it is today.
There was no contest to this design principle. No one made any comments on how or if it should be improved, it was agreed and fully understood.

PDP2 Technical (core)
The prioritised requirements of airspace users must be taken into account when designing flight paths.
There was some discussion about allowing in those who are not already in controlled airspace as General Aviation who might currently be refused entry have to route around.

> *It is General Aviation for instance that might be refused entry to controlled airspace for whatever reason; capacity, etc. At the moment they have to route round it for instance, potentially out over water and so on. Same issue happens over Glasgow as well. Providing a safe pathway for everybody; those in the airspace and those outside.*

Removal of the words *The Prioritised* was suggested in the Stakeholder groups. This was not opposed when discussed with aviation stakeholders but a more general point was that for EAL's controlled airspace to take up the minimum amount of overall airspace it requires in order that some controlled airspace may be released for the use of general aviation.

The replacement of the word *must* with *should* was initially discussed but this prompted a long discussion about the importance of the words and that *must* would take priority over *should* at design stage. At this point only person asked for *must* to be kept. The word *should* was agreed by the majority.

There was a lot of discussion about EAL's controlled airspace and the possibility of applying to give up airspace. While this was noted it is out of scope for this exercise.

> *I've run two give back, controlled airspace, airspace change proposals. One was part of the Solent City which they didn't use. And it generated lots of airspace in infringements. So, we raised an airspace change under what was called the release of controlled segregated airspace, which meant that if everybody agreed, it was just signed off at desk level in the CAA. It's not actually there anymore, but I'm told that you can do it through the standard ACP process, and they just take away all of the difficult requirements and just agree to it at a ground level. The reason I think it might be worth doing this is that certain bits of the draft aviation bill, which includes giving CAA the authority to demand that an airport reviews its controlled airspace and raises an airspace change, and comes up with penalties if they fail to do so, so if in due course the government decides that you ought to give away the airspace you don't need, you might be stuck with doing another airspace change which you probably don't want. Whereas if you did it in the margins of this one by saying we don't use the airspace for the cross runway at all and we're not going to in these new things, I believe that you can just give it up. But you would obviously want to take expert advice on that, not from me.*

This led to more discussion about changing controlled airspace to include flying down the Forth. It was noted that this principle was about using TMA (Terminal Control Area) creatively, not seeking solutions to flight paths.

While no definite refinements were made to this PDP, Aviation agreed the premise of removing the words *the prioritised* but caveated that no more airspace than is required should fall into the TMA.

PDP3 Technical (Core)
Flight paths must be flyable.
This principle created a lot of discussion because it is so simply written that it can be translated in many different ways. There was some discussion around the difference between flyable and safe and it was recognised that the two are very similar. Some mentioned the possibility of combining this idea with predictability, but as this is captured in PDP14 it was agreed to keep them separate.

There was a lot of discussion about the connection between PDP3 and PDP9 *Flight paths should be designed to ensure efficient and effective route management* and additional comments were made about routes needing to be compatible with Air Traffic Control Systems (ATC), technically manageable and to be fully tested before being presented to the community as a potential route.

> *It is just about the designers understanding what the limitations are with the ATC systems as part of what they are trying to design. To make sure that that is not missed and we need to work on that. See what the designs are and see if we can support them so it is not lost.*

Delegates at the aviation workshop suggested it would be helpful if EAL were to investigate the legal position of using the terms 'must' and 'should' in the design principle.

PDP4 Noise (core)
Flight paths should be designed to minimise the total adverse effect on health and quality of life impacts created by aircraft noise and emissions.
The use of the word *should* was contested by Stakeholders in the first recall workshop. As a result, we tested the proposition of replacing it with *must*. This prompted a lot of discussion about measurability of noise and its impact on health, with some saying the effect on health and quality of life was a difficult thing to measure.

The representative from Edinburgh Airport Watch was very keen to have the word *should* replaced with *must*. Others were less convinced that it was necessary or that is possible (as with PDP3, delegates suggested it would be helpful if EAL were to investigate the legal position of using the terms 'must' and 'should' in the design principles). Later in the discussion it was thought that this could subsume PDP7 in which case it should be mandatory and adopt the word *must*.

PDP5 Economy
Flight paths should be designed to provide increased airspace capacity in order for Edinburgh Airport to support the Scottish Government's Economic Development agenda and the UK's wider aviation strategy.
We tested the addition of the words tourism and trade to this statement as suggested by Stakeholders. This addition was agreed and understood by the group.

The statement that was sent to respondents prior to the workshop was: *Flight paths should be designed to increase airspace capacity and meet Scotland's demand for connectivity*. This was preferred by one respondent.

This PDP prompted discussion from one respondent who argued against the need for expansion. This was noted as being out with the purpose of the workshop but something that was captured and reported from the first wave workshops.

PDP6 Environment
Flight paths should be designed to minimise CO2 emissions above an altitude of 7000ft and, where it doesn't have a detrimental effect on adverse noise impacts, also between 4000ft and 7000ft.
Responses from the first workshop suggested we revert to the Airport Navigation Guidance (ANG17) definition. We tested this as an option.

> ***For flightpaths at or above 4,000 feet to below 7,000 feet, the environmental priority should continue to be minimising the impact of aviation noise in a manner consistent with the government's overall policy on aviation noise, unless this would disproportionately increase CO2 emissions.***

Overall, delegates preferred the ANG definition because it is less confusing than the original version.

PDP7 Environment
Flight paths should be designed to minimise adverse local air quality impacts.
As a result of stakeholder responses, we tested the replacement of *should* with *must*.

This prompted discussion over the prioritisation of *must* over *should* at design stage. The outcome of the discussion was that this is covered by PDP4 and the majority agreed that it could be deleted as long as PDP4 adopted the word *must*. One delegate urged caution over deletion as the community may interpret this as not caring about local air quality impacts.

PDP8 Operational
Flight paths should be designed with cost effective routes that minimise track miles and fuel burn.
The words *cost effective* confused delegates at the Stakeholder recall workshop and so we tested their removal. There was discussion about the difference in PDP8 and PDP9 and the correlation of less fuel burn with effective route management. After some discussion about the possibility of merging PDP8 with PDP9 because they are similar, the group agreed with the removal of the words *cost effective and keeping them separate*.

PDP9 Operational
Flight paths should be designed to ensure efficient and effective route management.
There was no contest to this design principle.

PDP10 Operational
Flight paths must be designed to accommodate PBN traffic in line with CAA's modernisation strategy.
Responses from the first workshop suggested we spell out *PBN* and use *performance based navigation*. This idea was tested and accepted by delegates to this workshop. Some felt there is a need to qualify PBN as higher standard or modern as not all PBN traffic is the same.

The design principle was agreed.

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PDP11 Health

Flight paths should be designed to minimise population overflown below 4000ft and, where possible, between 4000ft and 7000ft, taking into account any potential adverse impact due to those overflown having protected characteristics as defined by the Equalities Act 2010.

Delegates at the Stakeholder recall workshop suggested removing the phrase *where possible* as this opens the way for this design principle to be ignored. Because there was confusion over the Equalities Act and the lack of emphasis of duty of care to those with special requirements, we tested the following version of this PDP:

> ***Flight paths should be designed to minimise population overflown below 4000ft and, between 4000ft and 7000ft, taking into account any potential adverse impact, due to those overflown having protected characteristics, and special requirements.***

Some thought the phrase *special requirements* was too vague to be useful. Other did not know why only those with protected characteristics should be protected. Others felt it would be impossible to avoid everyone with a protected characteristic. Others felt this was covered by PDP4.

After being provided with an explanation of the intent of this PDP, that is, to cover schools, old age homes or care homes and thus to consider the impacts on non-mainstream populations (or alternative viewpoints), most agreed with this principle.

It was agreed that this principle will need a fuller explanation in an accompanying glossary.

PDP12 Health

Flight paths should be designed where possible to minimise overflying sensitive locations and noise sensitive receptors.

Delegates in the Stakeholder recall workshop asked for more certainty in this principle and wanted the phrase *where possible* to be removed. We tested this idea.

The phrase *noise sensitive receptors* was not widely understood. This will need a fuller explanation. The groups agreed with the removal of the words *where possible*.

PDP13 Noise

Where possible flight paths should be designed to include track concentration and/or track dispersal options to provide noise respite.

The phrase *where possible* was once more challenged and its removal requested by the Stakeholder workshop delegates, this idea was tested and agreed by Aviation Stakeholders.

> *Respite may therefore be needed to mitigate the other impacts, so it's a perfectly reasonable principle to adopt as it stands, I think.*

PDP14 Noise

The predictability of flight tracks must be maximised for consistency of operations.

This design principle was agreed by all and no challenge was made to the wording.

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PDP15 NERL (Core)
Collaborate with other Scottish airports and NATS to ensure that the airspace design options are compatible with the wider programme of lower altitude and network airspace changes being coordinated by the FASI North programme.

This design principle was agreed by all and no challenge was made to the wording.

PDP16 GLA (Core)
Routes to/from Glasgow and Edinburgh airports should be procedurally deconflicted from the ground to a preferred level in coordination with NATS Prestwick.

One delegate argued that a layperson would not be able to understand this, although the majority felt it is easily understood. This design principle was agreed by all and no challenge was made to the wording.

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Issues that were raised in Stage 1 workshops

As with the Stakeholder recall workshop, in the last 30 minutes of the workshop we discussed the long list of design principles that were identified in the first wave of workshop. Some were rejected as not qualifying as a design principle and others were agreed and captured into the shortlist. Many were conflated into one.

Issues that didn't qualify as design principle

Consider no change.
This was rejected as a design principle. However, Edinburgh airport is going to be considering the "do nothing but modernise" approach, alongside the "clean sheet" and "replicating existing routes" approach as part of the designs option process during stage two. That said, this may not meet the airport's objective for increased capacity.

No comments were made in response to this.

Ensure planning integration.
While the issues of planning infrastructure were considered to be very important to delegates in the first wave of workshops, they do not qualify as design principles.

No comments were made in response to this.

Monitor noise/air quality.
These points were all discussed, and the moderator explained that EAL already monitors air quality at the airport and that EAL will look at this as part of the environmental impact assessment.

One delegate claimed that EAL does not do this at a granular level.

> *Just a point on that... they probably don't do it on a granular enough level. It is very general, and people would prefer is there were far more noise monitors around the airport... and these were monitoring all the time.*

Use technology to reduce noise.
It was explained that EAL is conducting an environmental impact assessment as part of ACP so will review the outcomes of this report and determine actions depending on the outcome.

No comments were made in response to this.

Consider government targets on the environment.
It was explained that this is encapsulated in PDP7. One person contested that this was the case.

No comments were made in response to this.

Consider risks of auditory damage.
It was explained that this is encapsulated in PDP4. This was not contested.

No comments were made in response to this.

Ensure business case is well documented/evidenced/ Recognise flights are not used by all/ Consider compensation/ mitigation for those overflown.
These points were read out as being important point that were raised in stage one workshops.

Delegates agreed that they were noted.

Increase flight costs to reduce peak demand.
It was explained that airlines set flight costs and Edinburgh Airport cannot influence this.

Routes to/from Glasgow and Edinburgh airports should be procedurally deconflicted from the ground to Flight Level 90.
It was explained that this was agreed wording with Glasgow has been included for both EDI and GLA.

Issues that did qualify as design principles and were accepted

As with the Stakeholder recall workshop we reviewed the longlist of design principles that were accepted and included in the shortlist with an explanation of which design principle captured each on the long list.

Issues that did qualify as design principles and were rejected

The final part of the workshop concluded with a review of the longlist of design principles that were rejected.

Make take off/landing gradients steeper.
During a discussion about continuous climb, this principle was remarked on by one delegate who offered the Glasgow equivalent design principle:

> *The airport operating at Glasgow should climb and descend continuously to/from at least 7000 feet, with a preference for the most environmentally beneficial option to be chosen if both cannot be achieved simultaneously.*

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Summary Aviation

Overview

- Explain thinking behind the apparent lack of a "clean sheet" principle.

PDP1

- Agreed with no challenge.

PDP2

- Happy to accept the removal of the words *the prioritised*, the word *should* was accepted by the majority.

PDP3

- Agreed but needs to be explained in a glossary.

PDP4

- If it is to be kept as an addition to PDP7 then Aviation were happy for it to remain discretionary and the use of *should* could remain. It could subsume PDP7 in which case it should be mandatory and include the word *must*.

PDP5

- The word *provided* could be removed, it should also include reference to tourism and trade.

PDP6

- Revert to the ANG17 version: ***For flightpaths at or above 4,000 feet to below 7,000 feet, the environmental priority should continue to be minimising the impact of aviation noise in a manner consistent with the government's overall policy on aviation noise, unless this would disproportionately increase CO2 emissions.***

PDP7

- Many felt this could be deleted as long as PDP4 is mandatory and uses the word *must*.

PDP8

- Remove the words *cost effective*.

PDP9

- Agreed with no challenge.

PDP10

- Agreed with no challenge.

PDP11

- Use the revised version: ***Flight paths should be designed to minimise population overflown below 4000ft and, between 4000ft and 7000ft, taking into account any potential adverse impact, due to those overflown having protected characteristics, and special requirements.*** But give a fuller explanation in the glossary.

PDP12

- Remove the phrase *where possible* and give a fuller explanation in the glossary.

PDP13

- Remove the phrase *where possible*.

PDP14

- Agreed with no challenge.

PDP15

- Agreed with no challenge.

PDP16

- Agreed with no challenge.

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Appendices

A. Long list of design principles

Summary of Design Principles
Reduce night flights and early morning flights
Fly over the sea/fly down the Forth
Consider impact of aircraft type/penalise poor performers/old aircraft
Ensure decision making is evidence based (and evidence is appropriate/high quality)
Reduce flights over communities/fly over less populated areas
Minimise noise
Reduce emissions/pollution
Avoid overflying of schools
Do not fly over currently unaffected areas in planning
Adhere to WHO regulations
Ensure consideration of all airspace users
Ensure fully integrated airspace change
Restrict air craft holding areas over communities
Consider impact on mental health/wellbeing
Consider noise from take-off/landing/turning
Take background noise into account
Consider/offset the impact on wildlife/the environment
Minimise noise/flights below 7,000ft
Avoid over flying rural areas
Cff set emissions
Consider other health impacts
Consider needs of the elderly/ children/those with ill health/autism/sensory impairment
Recognise impact of flight paths on house prices and social migration
Restrict air craft turning over communities
Avoid overflying hospitals and care/retirement homes
Review need for growth

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Prioritise safety
Do not concentrate flight paths over
Avoid overflying of historical sites
Consider impact on sleep
Redesign the terminal airspace
Reduce flights
Ensure consideration of wider tourism impacts
Ensure true accessibility in design
Minimise route deviations
Consider no change to flight paths
Take account of noise above 7,000ft
Minimise light pollution
Consider climate impact
Ensure access to airspace by general aviation
Consider impact on animal welfare
Considerations for specific routes
Concentrate flight paths during work hours
Review routes/flight corridors
Reduce impact on greenspaces
Avoid flying over the zoo
Make take off/landing gradients steeper
Take into account segregation of different plane types (e.g. turbo jet and prop)
Make routes as short as possible
Fly the west side of the River Almond
Collaborate with other Scottish airports and NATS to ensure that the airspace design options are compatible with the wider programme of lower altitude and network airspace changes being coordinated by the FASI North programme.
Routes to/from Glasgow and Edinburgh airports should be procedurally deconflicted from the ground to a preferred level in coordination with NATS Prestwick.

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B. Invite to attend

10402 Email script recall groupssigned

C. Confirmation of details

10402 - Recall Workshop Confirm

D. Shortlist of principles

EAL PDPs.docx

E. Stimulus

DP recall - aviation.pptx

F. Transcripts

10402 Aviation Recall Transcript.do

110402 Digi1_stakeholders

G. List of all Stakeholders: invited/couldn't attend/didn't reply

10402 - Stakeholder Recall Workshop Ot

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H. Stakeholder attendees

Name	Organisation	Name	Organisation
[redacted]	Broxburn and Uphall Traders Association	[redacted]	Royal burgh Burntisland
	EANAB		Crammond Kirk
	Uphall Community Council		PPCA
	Environmental Protection Scotland		Extinction Rebellion
	North Queensferry CC		Environmental Health at Fife Council
	Kinghorn Community Council		Blackness Area Community Council
	Aberdour Community Council		Dalkeith and District Community Council
	RNIB		Drum Brae Community Council

I. List of aviation: invited/couldn't attend/didn't reply

10402 - Aviation Recall Workshop Ou

j. Aviation attendees

Name	Organisation	Name	Organisation
[redacted]	Airspace 4 All	[redacted]	Edinburgh Airport Watch
	British Parachute Association		Guild of Air Traffic Control Officers
	Scottish Mountain Paragliding Club pp BHPA		Light Aircraft Association
	NERL		

Technical Appendix: Method

1. The data was collected using an agreed engagement approach.
2. The target group for this research study was Community Stakeholders and Aviation.
3. The sampling frame used for this study was the database of all who were involved in stage one workshops for WPI design engagement.
4. In total, two workshops were conducted. The groups comprised 23 participants.
5. Fieldwork was undertaken on 5 and 13 November 2019.
6. Workshop respondents were contacted by telephone, following an initial contact by email, by Progressive's skilled in-house team of qualitative recruiters. These recruiters worked to ensure that the workshop composition reflects the requirements of the project.
   - An incentive of £40 was available to respondents in the Community Stakeholder groups to compensate them for their time, any out of pocket expenses and travelling expenses (Note – a number of the respondents in the Community Stakeholder groups either refused or asked that it be donated to charity).
7. All workshops were run by two moderators. In total, three moderators were involved in the fieldwork for this project. In addition, all workshops were supported by members of the project team, available to respond to technical questions where these arose. Support was provided from: To70, EAL, WSP, and Diversity Dynamics.
8. Stimulus materials were used during the discussions. These included copies of the short list of PDPs circulated to workshop participants prior to the session, and a presentation on the short and longlist of PDPs during the workshop.
9. All research projects undertaken by Progressive comply fully with the requirements of ISO 20252, the GDPR and the MRS Code of Conduct.
10. The engagement methodology was compliant with the requirements of CAP1616.

Appendix R - Step 1B: engagement summary report, Progressive Partnership

Edinburgh Airport Limited

Airspace Change Programme
WP1 Design Principles
Summary Report
December 2019

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Contents

Contact information

[redacted]

1. Introduction

This document provides a summary of the feedback gathered from the first round of engagement workshops and focus groups[1] conducted by Progressive Partnership on behalf of Edinburgh Airport Limited (EAL). The aim of the engagement was to develop a longlist of design principles for the Airspace Change Programme (ACP) 2019 and then to comment on and test the shortlist of design principles created by EAL against the longlist.

The report comprises four sections. This first section introduces the Airspace Change Programme and gives background and objectives to this programme of engagement.

The second section summarises the main report of the initial workshops and focus groups, issued to EAL on 18 October[2]. This reports on workshop delegates'/focus group participants' reasoning behind their choices of design principles by theme. It sets out the longlist of 50 design principles that were identified in the initial workshops/focus groups and lists them in order of frequency of mention. It identifies issues that were classified by EAL as issues not deemed to be design principles but thought by delegates to be of great importance in the context of airport expansion.

Section three is a summary of report on recall workshops, issued to EAL on 22 November[3]. This provides detailed feedback on each of the 16 shortlisted design principles developed by EAL. This summarises workshop delegates' responses to the shortlist of design principles and spells out any changes suggested.

The final section, section four, provides an overall summary of findings.

Background

Edinburgh Airport is reviewing its controlled airspace (0ft-7,000ft) through an airspace change programme. The UK Government's Future of Aviation Strategy asks all UK airports to modernise the technology used in air traffic control moving to area technology (known as RNAV technology).

The location of flight paths has not changed at Edinburgh Airport since the 1970s. The use over the years has changed due to technological advancements in the aircraft, the development of Edinburgh Airport and the destinations Edinburgh Airport serves. This means that some residents in Edinburgh, the Lothians and Fife already receive aircraft overhead and have for a number of years.

The Civil Aviation Authority requirements for engagement at Stage 1B

The Civil Aviation Authority (CAA) has developed CAP1616: *Airspace Design – Guidance on the regulatory process for changing airspace design including community engagement requirements*. This guidance details a seven-stage approach to applying for airspace change.

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[1] See Appendix 1 for a detailed description of the study approach.
[2] 10402EAL WP1 Design Principles Final draft
[3] 10402 Recall report

Each stage involves stakeholder engagement, which must be documented with decisions evidenced. At key points throughout the process, the CAA must assess and evaluate the work and approve the programme to move from one level to the next level.

This document reports on feedback gathered from the first round of engagement workshops and focus groups conducted by Progressive on behalf of Edinburgh Airport Limited (EAL) to gather community input to assist EAL develop the design principles for the ACP 2019.

Objectives

As set out in the CAP1616 document, stakeholders who may be impacted by airspace change will have the opportunity to discuss with change sponsors the principles underlying the airspace change and the development of options for the change.

Transparency as a prime objective: Those potentially affected by a change in airspace design should feel confident that their voice has a formal place in the process, if trust is not to be eroded. Openness also allows change sponsors to see more clearly what is expected from them.

The objectives of this Stage 1B engagement plan were to ensure that:

- a fair representation of stakeholders is involved in the design principle development;
- we included local context and technical considerations;
- w collected a broad representation of views from stakeholders and individuals;
- design principles were influenced by stakeholders; and
- we meet the requirements set out in the CAP1616 guidance.

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Summary of method for Stage 1B Design Principles

The figure below summarises the approach taken to engagement across the Stage 1b Design Principles. The engagement involved two phases – first, the workshops and focus groups to develop the longlist of design principles, and then, the recall workshops to comment on and test the shortlist of design principles. The shortlisting exercise was undertaken by EAL.

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Table of workshops

Date held	First stage workshops/focus groups	Moderated by:	Viewed by:
23.09.19	Community: North & West	[redacted]	[redacted]
26.09.19	Aviation		
28.09.19	Edinburgh Airport Noise Advisory Board (EANAB)		
01.10.19	Stakeholders: Others		
03.10.19	Community: South and East		
07.10.19	Residents overflown within contours		
08.10.19	Residents overflown outwith noise contours		
09.10.19	Residents not overflown		
Date held	Recall workshops	Moderated	Viewed
05.11.19	Stakeholders: All	[redacted]	[redacted]
13.11.19	Aviation		

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2. Initial workshops and focus groups

The section of the report summarises the first round of stakeholder workshops and the focus groups. This comprised the initial stage of engagement in the 2019 ACP.

Methodology

The engagement is summarised here, with a full description of the method provided in the Project Initiation Document (see Appendix A). The first round of engagement comprised five workshops and three focus groups.

The workshops were conducted with community stakeholders, aviation stakeholders, Edinburgh Airport Noise Advisory Board (EANAB), and a broader group of stakeholders that included: local council officers (typically planning and environmental health), industry, equalities groups, and environmental organisations..

Delegates from the aviation industry are well informed about airspace change and have areas of interest that are different to those who represent community interests. Their interests often include their own use of airspace. A workshop where ideas are exchanged amongst a large number of delegates (c.15-20) with a high level of understanding is well suited to this group. For these reasons we opted to give them their own forum and run a workshop dedicated to aviation delegates.

Members of community councils and other local groups, represent not just their own individual interests but those of people who live in the local area. The interests of these groups are often closely related to the place in which they live and the effects of airspace change on them. To enable community stakeholders from a wide area to attend, it was determined that two community workshops would be run, organised, to reflect interests in the north and west; the other to reflect interests in the south and east. A large workshop format, where ideas are exchanged at a high level of understanding with a large numbers of delegates is well suited to this group. For these reasons we opted to run two workshops dedicated to community stakeholder delegates.

A broader groups of stakeholders exists that includes organisations that represent special interest groups such as: equality, disability, environmental issues, historic environment, local council officers (typically planning and environmental health), industry and property development. Delegates from these organisations represent views often from a national view point. They are specialists in their filed and have well-formed views on the effects of airspace change. Again, a large workshop where ideas are exchanged at a high level of understanding with a large number of delegates is well suited to this group. For these reasons we opted to run a workshop dedicated to stakeholder delegates.

In addition to stakeholder workshops, three focus group discussions with residents of areas potentially or presently affected by airport operations were held. Members of the general public are less informed than group representatives. They know and are involved less in discussions on airspace change. Their interests are often restricted to their own personal needs and experiences. For these reasons we decided to run focus groups discussions. Focus groups are smaller in size that workshops; they often require the moderator to explain concepts in depth; and they are designed to encourage and enable those who are not familiar with public speaking to share their views. We opted to run three focus groups discussions: one for those who are overflown within the airport's noise contours,

one with those who are overflown but are out with the airport's noise contours and those who are not currently overflown.

The inclusion of an EANAB workshop

Discussions between EAL and EANAB in reference to taking part in 1B design principles stage were ongoing throughout August. EANAB complained that they had insufficient opportunity to comment and we considered this complaint. It was decided as this group of individuals has an existing relationship with EAL, are more knowledgeable on this topic and already has a strong opinion, that it would be beneficial to the wider piece of engagement that they were offered a separate workshop to allow participation.

TCI also endorsed the proposal to offer an additional, special workshop for EANAB, given their noise-related functions. This took place on Saturday, 28 September 2019. EANAB selected which of their members would attend the session; they were asked to not invite members who had previously aired their views in one of the community workshops so that feedback was collected from the widest representative group as possible.

The engagement was undertaken in accordance with the Stage 1B Engagement Plan objectives, contained in the ACP Engagement Strategy, produced by EAL, which outlines EAL's approach to the Airspace Change Programme 2019. They are to ensure:

- a fair representation of stakeholders is involved in the design principle development;
- a broad representation of views from stakeholders and individuals is received;
- EAL can combine local context with technical considerations;
- the design principles are influenced by stakeholders; and
- the requirements set out in the CAP1616 guidance are met.

The engagement sessions were held in Edinburgh from 23 September to 9 October.

Attendees

The profile of the sessions is summarised below:

Note: the convention throughout this report is to refer to those attending workshops as 'delegates' or 'stakeholders', with these attendees representing the views of their organisation/constituents; and to refer those attending the focus groups as 'participants', attending as individual members of the public. While in some cases the views of workshop delegates and focus group participants were similar, in many cases they differed; we have therefore summarised the views of each below.

Workshop recruitment

Progressive recruited representatives from a wide range of stakeholders and local communities, including:

1. Aviation and technical groups such as: cargo, recreation, training and traffic control
2. Stakeholder representative groups such as: property developers, environmental groups environmental activists, councils and equalities organisations
3. Community representatives covering:

    - Edinburgh West/West Lothian North
    - Edinburgh East/East Lothian North
    - Fife South West/Fife South East
    - Falkirk/West Lothian (rest of)
    - Outlying areas (Midlothian, rest of Fife, rest of East Lothian, Perth and Kinross, Borders, Stirling, Clackmannanshire)

The starting point for the recruitment was to develop a database of potential delegates. This drew largely from contact details provided by EAL, organisations and representatives involved in previous consultations and a request from people to be kept informed. This was supplemented by contributions from the project team, based on their knowledge and experience of key stakeholders operating in the topic area; and by desk-research undertaken by Progressive, to update contact details in the EAL contact list, to identify contacts in outlying areas not covered by the EAL database, and to expand the range of contacts within the database (for example, to ensure the local authority contacts included all relevant departments). The contacts were built into a single database of 1,333 records.

The database was then cleaned and sorted:

The dataset was 'cleaned':

- records without valid contact details were identified and prioritised. Further work was undertaken to source contact details for these (names/phone numbers/email addresses for stakeholders.) e.g. Google searches of local directories, calls to key organisations, re-contact EAL/partners.
- contacts, where email addresses remained missing following mitigating actions, were excluded.
- it was noted that many of the records within the EAL database e.g. libraries and leisure centres, related to information contacts that would enable EAL to distribute information, but were not organisations with a representative structure with whom we could engage. These were deprioritised in the engagement.

The cleaned database was sorted into 'List A' respondents and 'List B' respondents[4].

- Allocation into the list drew on a preliminary stakeholder mapping exercise undertaken by Progressive; this was updated when EAL completed their draft stakeholder mapping exercise and were able to provide a list of stakeholders to include in the engagement exercise. This include organisations (public and private sector) and community councils.

[4] This has been shared to the project team as a separate document

- Allocation of records into these categories was undertaken to ensure organisations, identified through stakeholder mapping exercise, were invited.
- We also sought to ensure a good mix and spread of organisations at each event. For example, the community stakeholder workshop sought to include a mix of the following: representative and social organisations; tenant/resident groups; a selection of recreation and interest groups; and a selection of the community councils from the local area.
- List A organisations were contacted first, with List B contacts forming the back-up pool.
- After a low response to email invites, a further List C was drawn up comprising local representatives from national organisations and local organisations.

Email invites were sent to all representatives inviting them to attend on the date assigned to the workshop for their respondent type. See Appendix C. Recipients were offered three options in the email, (1) *I am interested and can attend*, (2) *I am interested but cannot attend*, (3) *I am not interested, remove me from the database*.

Response to the initial email was lower than expected: the number volunteering to take part was only 41 in the first week of being emailed. Follow up telephone calls were therefore made to non-responders to determine interest and availability. In total, 484 organisations were emailed and 283 were telephoned. Many organisations were called up to five times in order to find an available/relevant person.

Because they were from a wide area and some distance from Edinburgh, many community representatives were reluctant to spend time and money in travelling to attend workshops. To compensate and encourage engagement, an incentive of £40 was offered to all delegates of the community workshops and to cover costs.

Once all workshops were fully recruited, delegates were sent confirmation details, which also sought recording permissions. See Appendix D. Additionally, all delegates were contacted by telephone on the evening before the workshop to confirm their attendance.

Focus group recruitment

The focus groups were drawn from a cross-section of the general public. The participants were recruited by Progressive's team of experienced recruiters. This involved recruiting members of the general public on-street in the study areas, using precise specifications which included factors such as location, social group and family type. In addition, the recruitment screened out members of any lobbying or advisory groups to the airport and those who worked in aviation. This recruitment process ensured each group included a broad mix of participants, and the data gathered was reflective of the target audience specified in the brief. The recruitment specification was approved by EAL (see table below).

Table of the focus group specifications

Group 1 Currently overflown within noise contours	Group 2 Currently overflown outwith noise contours	Group 3 Not overflown but potentially could be
Pumpherston Newbridge Cramond	Queensferry South Queensferry North Davidsons Mains Newhaven	Clackmannan Alloa/Fife area Falkirk Penicuik/Borders area

Livingston		
Mix of social group	Mix of social group	Mix of social group
At least 5 to be parents of children living at home across a range of ages	At least 5 to be parents of children living at home across a range of ages	At least 5 to be parents of children living at home across a range of ages
Mix gender	Mix gender	Mix gender
Range of ages	Range of ages	Range of ages
At least 2 to have protected characteristic[5]	At least 2 to have protected characteristic	At least 2 to have protected characteristic
At least 2 to be not in full time employment, either retired or unemployed	At least 2 to be not in full time employment, either retired or unemployed	At least 2 to be not in full time employment, either retired or unemployed

The focus group recruitment was back-checked (quality controlled) by re-contacting 100% of respondents and re-administering part of the recruitment questionnaire.

Respondents to the groups overflown were given an incentive of £40 for attending and to cover costs. Those who travelled from further afield (not overflown) were given an incentive of £50 and to cover costs.

Principles of inclusion

Our methodology was designed to include a wide representation of views. We invited representatives from action groups such as, EANAB and Extinction Rebellion, as well as community councils known to be opposed to the airport. People with protected characteristics and those representing equalities groups were included and supported. For example, a representative from Royal National Institute of Blind People (RNIB) was given support from a researcher whose role it was to translate any visual information into spoken and write down his views so they could be included in the group's inputs. Members of the general public who are less used to speaking at large public forums were proactively recruited and given their voice in focus groups. Those who were interested in taking part in the workshops but couldn't, either because they couldn't make the time or because they had autism and found large public meeting too difficult, were given the opportunity to contribute online. This was fully supported by Diversity Dynamics, experts in inclusion.

Moderation

Each of the workshops was moderated by two senior practitioners from Progressive and attended by representatives from other members of the Airspace Change Project team: the client: EAL, the diversity advisors: Diversity Dynamics and the environmental consultants: WSP. The aviation consultants, To70, jointly moderated the aviation workshop. Attendees were sent a copy of EAL's Statement of Need (SON) prior to attending the workshop. See Appendix E. The agenda for the engagement sessions was:

- To make the group aware of the Airspace Change Programme;
- To provide an overview of the CAP1616 process – in particular, what Stage 1B involves/requires;

[5] Age / disability / gender reassignment / marriage civil partnership / pregnancy-maternity / race / religion or belief / sexual orientation

- To seek the group's input into developing a list of potential design principles, by which we meant the main factors that determine how the changes in airspace will be planned;
- By the end of the session to have produced a long list of design principles;
- To have an understanding of which design principles the group would prioritise and why.

The themes under discussion included:

- Responses to the SON
- Environment
- Community
- Technical
- Economic: business and economy
- Equalities

Where time permitted, communication about airport related matters, was also discussed. Initially the topic guide was designed to include a summary section on trade-offs, with a view to determining attendees' preference for one design principle over another. This was met with resistance from the majority of attendees of the first workshop, who claimed the issues were too complicated to state preferences. Following the first workshop on 23 September 2019, it was suggested by Progressive and agreed by the rest of the project team to remove the trade-off section in the topic guide. This was replaced with a section on relationships between principles. A full copy of both of the topic guides can be found in Appendix F (the initial signed off version and the revised version).

A short presentation was made to attendees which set out the reasons behind the Airspace Change Programme. This gave an overview of EAL's SON, maps of flight paths with typical altitudes, the CAP1616 regulatory process and examples of design principles. This way attendees were fully informed in the responses they gave. A copy of the presentation can be found in appendix G.

Collecting the views of those unable to attend the workshops

We issued an online questionnaire (see appendix H) to those who wanted to take part but couldn't attend the workshops (76 in total). We had five complete and 12 partial returns. All responses have been analysed and coded by theme and merged with the outputs from the workshops and group discussions.

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Outcomes of initial workshops and focus groups

In total, 100 people took part in the first stage of engagement workshops and focus groups. A full listing of delegates can be found in appendix B.

First stage workshops and focus groups	
Community North & West	19
Aviation	16
EANAB	6
Community South and East	16
Stakeholders - other	15
Residents overflown within contours	11
Residents overflown outwith noise contours	11
Residents not overflown	6
Total	100

A total of 484 organisation were invited by email. Of these, **49 wanted to attend**, 99 were not interested, 40 were interested but could not attend the session, 46 asked to be removed from mailing list, and 250 did not respond. See appendix I for the database of responses.

The **six EANAB attendees** were self-selecting: the organisation was contacted, and its members invited to attend the session. It was up to the organisation who attended the session; the only limitation, to ensure that no individual participated more than once, was that delegates should not have attended one of the other first stage workshops to allow for a greater range of feedback to be received.

The remaining **46 delegates** to the workshops were recruited by telephone.

The first round of workshops and focus groups generated a report of the design principles, set out by theme, in order of importance and frequency of mention. The first round of engagement identified fifty design principles that fell into broad themes of: environment, community, technical, economy and equalities.

In addition to the design principles, issues relating to ground traffic, monitoring and reporting, and social issues were identified – these are also discussed in the report and listed as 'issues of importance'.

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Summary of design principles

Throughout the discussion, delegates and participants were encouraged to write down their suggestions for design principles on post-it notes. Progressive collected these, transcribed them into Excel spreadsheet, and then analysed the statements to determine common themes and design principles. The tables below include all of the suggested design principles that were collected from the post-it note exercise and gleaned from the transcripts, together with material from the online submissions. In line with standard market research practice, the table omits issues mentioned by a single delegate/participant. The ordering within tables broadly reflects the number of mentions across the sessions.

Technical and operational issues
Ensure decision making is evidence based (and evidence is appropriate/high quality)
Ensure fully integrated airspace change/clean sheet
Prioritise safety
Do not concentrate flight paths over communities
Redesign the terminal/terminal airspace
Minimise route deviations
Considerations for specific routes
Consider no change to flight paths
Make take off/landing gradients steeper
Take into account segregation (e.g. turbo jet and prop)
Make routes as short as possible
Ensure access to airspace by general aviation

Environment and noise issues
Consider impact of aircraft type/penalise poor performers/old aircraft
Minimise noise
Reduce emissions/pollution
Adhere to WHO regulations
Consider noise from take-off/ landing/turning
Take background noise into account
Consider/offset the impact on wildlife/the environment
Avoid over flying rural areas
Cff set emissions
Minimise light pollution
Consider climate impact
Consider impact on animal welfare
Reduce impact on green spaces
Avoid flying over the zoo

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Health and other community issues
Reduce night flights and early morning flights
Fly over the sea/fly down the Forth
Reduce flights over communities/fly over less populated areas
Avoid overflying of schools
Do not fly over currently unaffected areas in planning
Restrict air craft holding areas over communities
Minimise noise/flights below 7,000ft
Restrict air craft turning over communities
Avoid overflying hospitals and care/retirement homes
Avoid overflying of historical sites
Reduce flights
Take account of noise above 7,000ft
Concentrate flight paths during work hours
Review routes/flight corridors
Get people to accept noise
Fly the west side of the River Almond
Consider impact on sleep

Issues for the economy
Ensure consideration of all airspace users
Review need for growth
Ensure consideration of wider tourism impacts

Issues for equalities
Consider needs of the elderly/ children/those with ill health/autism/sensory impairment
Recognise impact of flight paths on house prices and social migration
Ensure true accessibility in design

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Discussion of design principles and other issues

Response to the Statement of Need

Workshops

Both, stakeholder and community workshop attendees, expressed disagreement on growth projections contained within the Statement of Need. This led to many of the delegates from both workshops saying that EAL should **consider no change to flight paths.**

Some EANAB delegates considered EAL's sole purpose for the Airspace Change Programme was to increase capacity and, as a result, increase their share price. This coloured their view throughout the workshop; they propagated the idea that EAL is there for commercial gain only and doesn't really care for the community. Some argued that EAL does not currently reach its declared maximum 42 movements an hour as stated in the SON but operated closer to 30 movements per hour.

A recurring theme across the different workshops was a doubt that increasing capacity will reduce delays. The aviation workshop called for EAL to explain more about how the projected increase in passenger numbers from 14 to 35 million passengers in 2050 translates into actual Air Traffic Movements (ATMs).

In all workshops, climate change was top of mind. It was thought that the Climate Change Bill may commit Scotland to net zero emissions, so the airport needs to set out how its approach contributes to the overall goal, including in its flightpath design.

The stakeholder workshop questioned the SON process and the Scottish Government's role when aviation is a matter reserved to Westminster.

Participants in all workshops argued for a change in thinking about airspace that includes national policy, taking FASI-N[6] (Future Airspace Strategy Implementation – North) into account and thinking beyond the ceiling of 7,000 feet. The Aviation workshop specifically argued for a "**clean sheet approach**" and ensuring "a **fully integrated approach to airspace change**". EANAB noted that both, the MOD airspace proposals and that airspace above 7,000 feet should be taken into account during the consultation.

There was a strong opinion that opportunities will be missed if Edinburgh Airport's airspace is designed separately from changes in the airspace for Glasgow Airport; and consequently, that they all need to

[6] FASI(-N) is a combination of airspace redesign modules that comply with the UK's Future Airspace Strategy through the provision of Performance Based Navigation routes, Standard Instrument Departures and Standard Arrival Routes which facilitate continuous climb and continuous descent operations, user preferred routes, Flexible Use of Airspace and simplified boundaries between controlled and uncontrolled airspace. The redesign and modification will include the Manchester Terminal Control Area, Scottish Terminal Control Area, Belfast Terminal Control Area and Irish Sea sector operations Source - https://www.caa.co.uk/Commercial-industry/Airspace/Airspace-change/Decisions/FASI(N)/

be considered together. It is noted that Glasgow Airport did not participate in the workshops, but did submit a response online, as follows:

> *Designs must be developed collaboratively alongside Glasgow Airport and NERL so as not to adversely affect designs for the wider network or local designs being developed by Glasgow Airport in the course of their ACP. A design principle should be included that ensures that a fully integrated and coordinated approach is in place with neighbouring airports and NERL.*
> *As an output of the FASI-N technical working group (held on 24th Sept) and attended by GLA, EDI, NERL and ACOG it was tabled that GLA and EDI would both include the same principle in their Design Principle submission: "Routes to/from Glasgow and Edinburgh airports should be procedurally deconflicted from the ground to Flight Level 90". Glasgow Airport are supportive of this and have tabled at our workshop sessions. It is proposed that EDI do the same.*

Many EANAB delegates felt that West Lothian is in a vulnerable situation because it faces 70% of take-offs and yet is not the Airport's "preferred partner". Instead, the City of Edinburgh is the Airport's "preferred partner", although the city isn't flown over. This, they claimed, denies them of a voice in what's happening at the Airport.

There were concerns about planning integration and the transport infrastructure/integration associated with the scale of new housing developments within the Fife and the Lothians. Delegates considered that the expansion of the airport would further impact on these issues and suggested that these impacts be taken into account.

Focus Groups

The Focus Groups' greatest concern in response to the SON and the proposed expansion was that the road infrastructure is being stretched to the point where it can't cope. Many of the participants said the roads in and around the airport are already congested and that exiting the Park and Ride by the Airport can take up to 40 minutes because of congestion on the surrounding roads.

The Focus Group participants expressed a range of positive reactions to the proposed expansion, including more direct routes, positive effects on tourism, both outgoing and incoming, employment, and improvements to the terminal. Many said that expansion was a positive thing for the capital city of Scotland and something that should have been done a long time ago. This was endorsed by the claim that people should not have to travel to Glasgow to get a flight.

Technical and operational issues

Workshops

The aviation delegates covered the technical issues in the greatest detail, however all the workshops and focus groups at least touched on the key issues of noise control and safety. The key issues addressed during the aviation workshop were:

Safety: this was the key priority; the majority of delegates argued that if there is a safety reason for placing a route in a specific place that should take precedence over all other issues.

Turning: a point was made that tight turns over a community prolong the noise exposure for those on the inside of the turn and, as such, should be avoided.

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Steeper take-off/landing gradients: many argued that in the interests of reducing costs, CO_2 emissions and reducing the impacts of noise, it would be better to have steeper descents and approaches.

Route length: it was argued that, from a commercial perspective, it is important to have routes as short as possible in order to reduce fuel burn, reduce hours on the engine and reduce emissions. This led to the design principle of "**considerations for specific routes**".

Global Navigation Satellite System (GNSS): it was noted that many planes can't fly Global Navigation Satellite System (GNSS) because planes were not equipped for it. While this may be out of scope for the ACP, it is a point worth noting for the future.

Glasgow airspace: there is a need to consider a joined up thinking with Glasgow airspace was reiterated, both with respect to the Airspace Change Programme and access to airspace by general aviation. This led to the design principle "**ensure fully integrated airspace change/clean sheet**".

Delegates also commented that the design principles should **"ensure airspace access for general aviation". It** was suggested that the Glasgow - Edinburgh corridor needs to be made wider and deeper, as this would allow better access for general aviation and reduce noise from civil aviation transport for communities.

Evidence: there is a need to ensure the number of aircraft movements is fully understood in the context of passenger numbers. This led to the design principle "**ensure decision-making is evidence-based (and evidence is appropriate/high quality)**".

Other issues raised by community and stakeholder delegates included:

- The need to stick to **designated routes:** Delegates claimed that many flights are vectored off-route and, as a result, affect people who are not normally flown over. There was some confusion over vectoring altitude but there was agreement that it happened too often and without good cause.
- Turning over communities: Delegates referred to early-turn trials that demonstrated the practice created more noise. The outcome of the conversation was to create a design principle **to avoid turning over communities below 7,000 feet.**
- Many were aware of the different noise made by old and new planes. Delegates were consistent in their view that **old planes should be phased out or charged heavy penalties** if they contravene modern CO_2 emission and noise standards.
- **Safety**, both in flight and through the airport terminal was prioritised as a key design principle.
- Data: the need to **monitor real live noise** rather than rely on modelling, which many felt was inaccurate
- Noise management: there was a desire to reduce the footprint of noise, which led to the design principle of **do not concentrate flight paths over communities.** Some community stakeholders commented on the different noise made by different types of planes. They felt that there was need to segregate turbo jet and turbo prop aeroplanes. This led to the design principle **take into account segregation (e.g. turbo jet and prop).**
- Terminal: There comments that an expansion of flights will place added pressures on security and facilities within the terminal building. This led to the design principle of **redesign the terminal/terminal airspace.**

One other point that may be out of scope but was recorded for completeness was the option of doing nothing. Many in the community groups felt that maintaining the status quo would be no bad thing

for communities. Some in the stakeholder group commented that the airport needs to set out how its approach contributes to Scottish net zero emissions targets. This led to the design principle of **consider no change to flight paths.**

Focus groups

Participants from not overflown areas said they would like to know more about the effects of emissions and commented that they felt this information is not well publicised.

There was a strong view from those in the overflown outwith contours group that communities should not be subjected to concentrated flight paths as this would subject them to relentless noise. This led to the design principle of **do not concentrate flight paths over communities.**

Environment issues

General

Workshops

Key themes during these discussions were community and environment. Delegates from across the workshop sessions raised the emerging issue of a societal move away from cheap, frequent flights; and the growing view that frequent flying is not good for the environment. They were concerned about pollution and the negative effect on the planet from CO2 emissions.

Delegates from the community workshops in particular were concerned about the negative effects of noise on their respective communities, in terms of devaluing their homes, negatively affecting schooling of children, and flying over large new developments that have not previously been flown over. They were also very concerned about the road access infrastructure, claiming that roads are already facing heavy traffic, which they felt will only get worse if the airport expands.

Focus Groups

Focus group participants were on the whole indifferent about any environment impact commenting that climate change is inevitable and there is nothing they can do about it. There were some low-levels of concern about emissions. These were mentioned by a few, and more to do with offsetting in general rather than meeting any net zero carbon targets. They pointed to offsetting by planting trees and using solar panels as actions that the airport could easily take.

Pollution issues

Workshops

The community delegates considered reducing pollution and emissions an important issue. They talked about the need to consider wildlife and migrating birds, giving the principle of **consider/offset the impact on wildlife/the environment**, but these concerns typically did not override the overall desire for flight paths to **fly over water.** They also talked about the need to consider the smell of aviation fuel.

EANAB raised concerns about carbon emissions and the idea that continued growth of the Airport is counter to the Scottish Government response to Climate Change. Delegates considered that continued expansion of the Airport would contribute to an increased carbon footprint when we should be thinking about reducing it. One delegate from EANAB pointed to the current trend of people

choosing not to fly which, in their opinion, casts doubt on the need to accommodate expansion. Together this led to the principle of **consider climate impact.** Delegates commented that disturbance also comes from shadows being cast by planes during the day and lights from planes at night. This translated into the design principle of **minimise light pollution.**

The aviation delegates commented that one of the key ways to reduce pollution was embodied in the principles of **making routes as short as possible** and **keeping ascent and descent gradients steep.** These design principles are covered in the technical section. However, there was a discussion about the impact of noise and whether steeper gradients lead to increased noise.

Focus groups

The idea that the airport should offset was made by a few participants; with planting trees and using solar panels suggested as actions that the airport could easily take. While the suggestion was out of scope, it is worth noting that some felt the airport should recycle more inside the terminal. This was led to the principle of **offset emissions.**

Noise issues

Workshops

The dominant environmental – and overarching - theme for the community and stakeholder workshops was noise. At its simplest, these groups wanted to reduce noise. There were heated comments about the accuracy of current noise monitoring, and a desire was expressed for independent and accurately reported noise monitoring, together with accurate estimates of the populations affected. Concern was expressed over the height at which noise becomes a nuisance, with many arguing that 7,000 feet is not a sufficiently high cut-off, as noise continues to be a nuisance when planes are above that height.

Delegates in the North and West claimed they could hear planes waiting for take-off as well as those taking-off and landing; turning and banking manoeuvres were reported to increase the levels of noise by 3 to 4 decibels; noise levels were felt to have been increasing in some areas; while delegates in the South and East cited cargo and mail planes as being particularly noisy because they are old and really noticeable because they fly at 2am.

Concerns were expressed about a lack of accurate monitoring of noise. Many felt that EAL based its thinking on modelling rather than monitoring and, in some instances, respondents doubted the validity of the positioning of monitors. This led to a request to **monitor and report accurately on noise**. World Health Organisation's (WHO) guidelines on health and noise were commonly referred to. Some called for avoidance of flying over rural areas because the noise impact is greater due to less ambient noise.

Delegates from the South and East were concerned about the negative effects of noise on their communities in terms of devaluing their homes, negatively affecting schooling of children, and flying over large new developments that have not previously been flown over.

The aviation delegates also considered minimising noise as much as possible the most important issue in the context of the environment. They suggested a way to reduce noise was to adopt a "polluter-pays" approach, which would penalise poor performers. The EANAB delegates discussed fining noise polluters: they were doubtful that this was being done in an accurate way and called for punishment

to be made more transparent. This led to the design principle of **consider impact of aircraft type/penalise poor performers.**

EANAB raised the issue of night-time noise. Delegates commented that night-time noise has worsened in the last ten years. They also commented that night flights used to be subject to time restrictions and were largely commercial (cargo); increasingly they are much more frequent, unrestricted and are a mix of flight types.

The stakeholder delegates raised a number of issues in relation to particular needs and representative groups. They discussed the effects of different types of noise, and commented that constant background noise was an issue, as much as taking off and landing noise, to those living in close proximity to the airport. Delegates commented that hearing loss is becoming a big issue in Scotland and that any additional noise in the environment should be carefully considered. They commented that the type of noise should be considered, as should other factors, such as the frequency and the general audio landscape. For example, delegates commented that a plane flying over Edinburgh Castle will have a different (lesser) impact to one flying over Inchcolm Abbey, because of the noise from the railway below and general ambient noise in the city.

Focus groups

Noise was not a major problem to the majority of focus groups participants. The majority of those who were overflown and living within noise contours were affected by noise, but they were not unhappy about it. One participant was less accepting of noise than others were. Many said that living in a capital city with all its benefits means you have to put up with some noise. This led to design principle of **get people to accept noise.**

A key concern for this group was the desire to keep green spaces in the city free of overflying leading to the principle of **reduce impact on green spaces.** The majority of those who were overflown and living outwith noise contours were aware of noise but were not compromised by it. Those not currently overflown were not affected by noise and couldn't envisage ever being affected by noise as they were so far away from the airport. They did say their opinion on noise would change if they were to find themselves overflown.

Those living nearer to Edinburgh (overflown within and outwith contours) were aware of the need for respite and many claimed the night and early morning flights should be kept to the minimum, with emergency landings or delayed flights being the exception. One of the most often mentioned design principles in the context of noise was **reduce night flights and early morning flights.** There was some understanding that older planes are worse than the newer ones in terms of their noise emissions.

One participant felt that some homes under the flight path perhaps could be compensated with triple glazing but on the whole, overflown groups felt this was something that people who live close to the airport should just deal with it and so in the end the idea was dropped. Many said that living in a capital city with all its benefits means you have to put up with some noise. Two participants suggested that it would be beneficial if flights were concentrated during working hours when most people were out. This led to the design principle of **concentrate flight paths during work hours.**

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Health and other community issues

Workshops

Issues of importance to communities overlapped with issues for the environment; with issues relating to noise mentioned as having the biggest impact on communities. A number of key themes emerged:

Community and stakeholder delegates were concerned with **avoiding densely populated areas** and **reducing flights over communities.** Planning **routes over the sea or over unpopulated areas** was seen as a way of addressing this, with flying down or using the Forth more frequently mentioned as a solution. One delegate in the South East community workshop considered this a workable option as the Ministry of Defence (MOD) no longer has the Forth mapped as a restricted area, now that RAF Leuchars has closed down. Others were not sure if using the Forth would provide a solution, as by the time planes are over the water, they are quite high.

Community delegates were concerned that communities were being "pitted against each other" when discussing **dispersed versus concentrated flight paths.** On one hand, they wanted flights to be moved away from their community; on the other, they didn't want other communities to suffer at their expense. The outcome was a general agreement that **the number of flights need to be reduced** and that there should be a **reduction of flights over populated areas.**

Community delegates were concerned with seeing the impact of night noise reduced, as it has particular impact due to lower levels of ambient noise. Frankfurt Airport was mentioned by the South East community workshop as an example of an airport that has successfully banned flights from 11pm to 6am.

Delegates from all workshop groups voiced the need to **take into account areas that are not currently overflown.** EANAB gave the example of the new builds in Winchburgh and West Calder as areas where this had happened to people previously. The responsibility on part of EAL should be to demonstrate that any changes in airspace will not impact negatively on **areas being developed for housing.**

Delegates from all workshops identified **sensitive buildings and sites: Schools** were cited as buildings that should be avoided as noise can impinge on learning; **hospitals and care homes** were also placed on the sensitive building category because residents have no way to escape. EANAB said they realised is not always possible to completely avoid all sensitive buildings (for example, a new school is due to be built on Turnhouse Road), but they called for an understanding of what the issues are as a way of enabling the airport to plan interventions that could help mitigate effects.

Some claimed that **reducing flights** was the only legitimate way to reduce CO_2 emissions and noise. Others claimed that any increase in flights will also lead to an increase in traffic which would result in a negative effect. Turning aircraft and **holding over communities** were thought to increase noise and one of the design principles clearly articulated was **not to turn over communities.** A few called for **compensatory measures to help insulate houses** under flightpaths from noise. A few mentioned the need to **review flight corridors** in light of UK Government's Airspace Modernisation Strategy.

The stakeholder delegate from Historic Environment Scotland (HES) proposed a widely endorsed idea that the historic environment is not reliant solely on the visual landscape and that audio landscape is equally as important to some sites. The issue of rural versus urban came up as delegates discussed the pros and cons of both. The resulting design principle was **not to fly over rural areas** as a justification

for flying over fewer people because the impacts of noise in a rural setting is likely to be greater than in a setting where there are higher levels of ambient noise.

The Focus Groups

Those living nearer to Edinburgh suggested a design principle of **not flying over populated areas.** One respondent from Cramond expressed a very clear wish to have planes **fly the other side [west] of the River Almond,** thus avoiding populated areas.

Respondents had mixed views on whether planes should fly over rural areas with some saying this could affect livestock and others saying it was preferable as there are fewer people. There was a fairly strong sense in the group not overflown that all attempts should be made **not to fly over populated areas.**

There was some concern from those not overflown and living in the Scottish Borders about the prospect of holding areas changing and then finding themselves being overflown when they had bought their homes a long time ago without any thoughts of being under a flight path.

Some felt that the centre of Edinburgh as a UNESCO site should be avoided. In the interests of tourism, the castle should be avoided, and Edinburgh Zoo should be avoided to protect the animals.

Delegates and focus group members also noted the positive aspects of the airport /airport expansion for communities; in particular, the issue of maintaining access for families to see relatives instigated a lot of conversation. Access to the Islands was seen as being of particular importance, not just for communitarian reasons but for economic ones as well.

Health

Workshops

The discussions on health also linked into the subject of noise. Delegates referred to a body of research linking ill-health to noise. EANAB delegates claimed that noise, and constancy of noise, has a detrimental effect on health, particularly hypertension. Broken sleep, caused by night flying, was reported as being a contributory element to poor health. Respondents commented that being outdoors, sitting in the garden and relaxing, contributes to wellbeing. They claimed this is curtailed by the interruption of plane noise.

The WHO report from 2018 was quoted as having the most comprehensive set of guidelines on noise limits; as a consequence, delegates were concerned that noise be limited to a **maximum of 45 decibels.**

Many in the community workshops disputed the lowest-observed-adverse-effect level (LOAEL) measurements in place by the UK Government to measure noise. Delegates from Cramond said that an average of 51 decibels during the day and 45 at night did not give a true reflection of conditions when Cramond is exposed to 64 decibels, which is beyond being a nuisance.

It was also felt that disturbance also comes from shadows being cast by planes during the day and lights from planes at night. This translated into the design principle of **minimise light pollution.**

The stakeholders workshop also raised the issue about the need to support people who rely on sound to navigate. An example was given of blind people being unable to move safely when a plane is flying overhead, as they cannot hear traffic noises, etc.

Economy

Workshops

The economy prompted less discussion than environment and community across all the workshop sessions. Many delegates contested EAL's economic arguments that there is a need to increase the number of passengers and runway movements at Edinburgh Airport; some delegates said EAL's reasons for expansion were flawed as there has been a downturn in air-travel, with a few arguing there will be further decreases in the number of flights because of "flight shaming" and environmental conscientiousness. Some disputed the argument that EAL supports tourism in Scotland, referring back to the argument that the airport also facilitates tourism out of Scotland. Others argued against the need for an increase in business flights. This prompted a principle to **review the need for growth.**

There was a high level of agreement on the need to improve **surface access to the airport,** and to have an **integrated transport policy.** While these are out of scope for design principles, they are issues that were of great importance for all respondents to this engagement exercise. These issues were given more prominence than others under the heading of economy.

Transport: Community delegates argued there is a need for **improvement to transport links** to the airport and a need to take into account the current pressure on roads such as Queensferry Road and St John's Road. Stakeholder delegates emphasised that **integrated transport planning** was necessary – extending to East/West Lothian and Fife - and that just looking at the airport in isolation was not going to bring about an effective transport solution. Community delegates echoed these points, and also stressed the need for an **affordable public transport system.**

Housing: Community delegates argued there had been a **drop in the value of their homes** and sluggishness in sales in Broxburn due to aircraft noise. This was evidenced by the experience of an estate agent who was a member of the Broxburn & Uphall Traders' Association. Some commented there was a need to **reinsulate and re-glaze properties that had received compensation in 1996.** Delegates noted the need for developers to ensure homes near the airport are built to higher insulation standards; while those within the noise contours receive compensation, those just outside do not and developers have to foot the bill. This links to the perception that the noise contours do not accurately reflect the needs of communities around Edinburgh airport.

Tourism was an important issue to many both in terms of the need to support the Scottish tourism industry and the need to protect tourist sites in and around Edinburgh by protecting their acoustic and visual landscapes. Some felt that imposing a **"frequent flyer levy"** would reduce the number of flights overall and so could reduce traffic/transport congestion in the mornings (as many frequent flyers are likely to be business flyers leaving early in the morning). Some community delegates disputed tourism growth as an argument to support the airport's expansion, claiming that more money goes out of Scotland than comes in. Overall, this led to a call for a design principle relating to **consideration of wider tourism impacts.**

Recreational aviation: Some aviation delegates expressed a desire to protect the recreational aviation industry. They commented that they did not want to see any expansion of controlled airspace. This led to the design principle **ensure consideration of all airspace users.**

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Focus groups

For focus group participants, transport infrastructure was the single biggest issue in relation to the economy, with many saying the roads around the airport are already stretched to a breaking point. Concerns were raised about how roads would cope following further expansion.

The majority of other economic comments were positive. Many participants said that the airport and its expansion is making Edinburgh and Scotland more accessible. The airport is seen as a great supporter for tourism and business in general. It was also seen as an important employer. While these views are out of scope for design principles, they were commonly voiced opinions.

Other issues:

Equality

Workshops

Workshop delegates, particularly those in the community and stakeholder workshops, were concerned about the **differential impacts that noise has on people with particular needs** within the community. They highlighted concerns for:

- **Older people** who have their sleep broken claiming it has a greater effect on them because of their potential physical frailty and them potentially feeling unable to move. It was also noted that they may have limited mobility and may rely on the amenity of their gardens, which can be compromised by constant overflying. A number of areas, including Cramond and Barton, and Dalgety Bay and Aberdour, were reported as having a large population of older people, with many care homes located in these areas.
- **Children** were cited as vulnerable because of the effects of overflying schools. One delegate referred to the Rights of the Child, which linked to the previously outlined point about not overflying schools.
- **People with hidden disabilities** such as autism, and the need to take ill health and the needs of those who cannot cope or have a sensitivity with noise.

Comments were made that some people with particular needs require support at the in the airport; increasing the number of passengers will add to pressures on passenger assistance. Other comments were made about the complexities of greater numbers of people arriving in the country and the effect this might have on security for Edinburgh in the context of human trafficking and sex tourism. This was summarised as a need to think carefully about the interdependence of what happens in the sky and the infrastructure at the airport below and expressed in the issue of importance as **ensure true accessibility in design.**

Another dominant comment was that homes in populated areas that are overflown reduce in value and amenity, which leads to "ghettoization" of the poor who may be unable to afford to move. This led to the design principle of **recognise impact of flight paths on house prices and social migration.**

The inequality of not paying tax on aviation fuel when it is charged on road and rail fuel was also noted.

Focus Groups

Some felt that airplane noise might have a severe effect on those with autism and that the airport should take this into consideration. This was thought to be more of a problem in the areas closest to the airport than in outlying areas. This was the only equality issue raised in the focus groups.

Communication

Workshops

The workshops generated a lot of questions from delegates. One of the concerns that came out clearly was a need for more information: many wanted clarity on why planes have to fly certain routes; some wanted to hear more about EAL's policy on energy and renewables at the airport; and some wanted information on airport security. Delegates were particularly interested in receiving more information from EAL on issues such as the plans for integrated transport planning and on the community support work EAL currently undertakes.

EANAB felt that Airport reports are "being clever with words", that is, its reports can be read at face value but fail to give the whole picture. Respondents asked for more openness and accuracy.

Focus groups:

Participants were also keen to hear more from EAL and asked for effective communication: in particular, they requested explanations of decisions EAL has made in a clear and non-technical format; information about what the airport is doing in the community; and how it is developing as an airport. The channels for communicating also had to be accessible and effective: one respondent commented that EAL was good at communicating on social media, but that getting out into the community would be more effective.

Social benefits of efficient air travel

Workshops

Very few of the workshop delegates discussed the social benefits of air travel. One of the community workshops touched on it briefly, but the delegates were reticent to discuss the topic, claiming that social benefits, such as employment, should not be a reason to subject people being overflown 24/7.

Some commented that EAL doesn't benefit them in terms of air travel, because flights are cheaper out of English airports than out of Edinburgh, so they drive down to Newcastle. Others commented that technology was reducing the need to travel, and that people could communicate efficiently online negating the need to increase capacity for business users.

Focus Groups: The focus group participants thought there were many social benefits of airport expansion. These mirrored the comments made in response to the SON, and included supporting tourism - both incoming and outgoing, supporting employment, and connecting Edinburgh to the rest of the world more efficiently.

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Summary of the design principles generated across all workshops and focus groups

Comments and design principles suggestions were written onto post-it notes by delegates and participants. These were collected by Progressive, transcribed into Excel spreadsheet, and then analysed to determine common themes. The table below includes all the suggested design principles that were collected from the post-it note exercise and gleaned from the transcripts. In line with standard market research practice, the table omits issues mentioned by a single delegate/participant. The ordering within table broadly reflects the number of mentions across the sessions.

Summary of Design Principle Suggestions
Reduce night flights and early morning flights
Fly over the sea/fly down the Forth
Consider impact of aircraft type/penalise poor performers/old aircraft
Ensure decision making is evidence based (and evidence is appropriate/high quality)
Reduce flights over communities/fly over less populated areas
Minimise noise
Reduce emissions/pollution
Avoid overflying of schools
Do not fly over currently unaffected areas in planning
Adhere to WHO regulations
Ensure consideration of all airspace users
Ensure fully integrated airspace change
Restrict air craft holding areas over communities
Consider impact on mental health/wellbeing
Consider noise from take-off/ landing/turning
Take background noise into account
Consider/offset the impact on wildlife/the environment
Minimise noise/flights below 7,000ft
Avoid over flying rural areas
Cff set emissions
Consider other health impacts

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Consider needs of the elderly/ children/those with ill health/autism/sensory impairment
Recognise impact of flight paths on house prices and social migration
Restrict air craft turning over communities
Avoid overflying hospitals and care/retirement homes
Review need for growth
Prioritise safety
Do not concentrate flight paths over communities
Avoid overflying of historical sites
Consider impact on sleep
Redesign the terminal airspace
Reduce flights
Ensure consideration of wider tourism impacts
Ensure true accessibility in design
Minimise route deviations
Consider no change to flight paths
Take account of noise above 7,000ft
Minimise light pollution
Consider climate impact
Ensure access to airspace by general aviation
Consider impact on animal welfare
Considerations for specific routes
Concentrate flight paths during work hours
Review routes/flight corridors
Reduce impact on greenspaces
Avoid flying over the zoo
Make take off/landing gradients steeper
Take into account segregation of different plane types (e.g. turbo jet and prop)
Make routes as short as possible
Fly the west side of the River Almond

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Other issues mentioned

Delegates and participants also raised a number of other issues that were clearly recognised as falling outside the scope of design principles, but nonetheless were considered issues of great importance in the context of airport expansion. In particular, delegates and participants in many of the groups identified congestion around the airport, and the capacity of local infrastructure to cope with future/different ACP options.

The issues in the following table were not included in the design principle longlist but have been included in the report to Edinburgh Airport.

Ensure planning integration: transport infrastructure - surface access
Ensure planning integration: local authorities/other agencies
Ensure planning integration: transport infrastructure – general
Ensure planning integration: transport infrastructure - public transport

Noise and emissions were important to people and there was a lot of concern about carbon emissions and the idea that continued growth of the airport is counter to the Scottish Government's response to the Climate Change.

Monitor and report accurately on noise
Monitor air quality/emissions
Use technology to reduce noise/pollution impacts
Consider government targets on the environment
Consider risks of auditory damage
Take audio landscape into consideration
Support movement on ground for people who rely on auditory signifiers to navigate

Other issues of importance connected to economic issues, such as, mitigation for those overflown and making clear the business case for expansion were mentioned as being important.

Consider compensation/ mitigation for those overflown
Ensure business case is well documented/evidenced
Recognise flights are not used by all
Increase flight costs to reduce peak demand

Other comments were made about how EAL can support tourism and create jobs. Some claimed that EAL should communicate more and make its case for change known to more people. There was some concern that an expansion of flights would put pressure on the terminal building to the point that it would not be able to cope. This led them to suggest that efficiency and effectiveness needs to be addressed in the terminal.

Create more jobs
Support tourism/business
Ensure effective and clear communication

Ensure ejficiency and effectiveness through terminal

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3. Recall workshops

Edinburgh Airport's Programme Working Group, supported by the environmental and technical consultant experts, reviewed the longlist of design principles against the CAP1616's and other legislative, regulatory and statutory requirements. They determined if the design principles were accepted or rejected and provided reasoning behind the decision on each design principle. This created a shortlist of design principles.

'Recall workshops' were then convened, to enable the shortlist of design principles to be reviewed by a representative group of the stakeholders involved in the original design principles discussions. CAP1616 notes that smaller challenge groups are likely to be sufficient that stakeholder concerns have been properly understood and accounted for in designing options[7]. Consequently, two recall workshops were convened.

Delegates from the aviation industry are well informed about airspace change and have areas of interest that are different to those who represent community interests. Their interests often include their own use of airspace. A large workshop where ideas are exchanged at a high level of understanding with a large number of delegates is well suited to this group. For these reasons we opted to give them their own forum and run a workshop dedicated to Aviation delegates.

Members of community councils represent not just their own interest but those of people who reside in their area of residence. When considering community councils, we looked at guidance and information on their role in Scotland. As per Scottish Government description, they are the "most local tier of statutory representation in Scotland" and they "bridge the gap between local authorities and communities and help to make public bodies aware of the opinions and needs of the communities they represent." This helped inform our thinking when considering a wider invitation to the recall workshops as community councils would provide a wide range of views from those within their community, thus informing our thinking at a local level.

To further inform our thinking we invited a broader group of stakeholders that includes organisations that represent special interest groups such as: equality, disability, environmental issues, historic environment, local council officers (typically planning and environmental health), industry, property development and so forth. Delegates from these organisations represent views often from a national view point. A large workshop where ideas are exchanged at a high level of understanding with a large number of delegates is well suited to this group. For these reasons we opted to run one workshop dedicated to a wide range of stakeholders.

This section of the report covers the recall workshops held to review the shortlist of design principles for the Airspace Change Programme (ACP) 2019.

Methodology

The recall workshops allowed us to invite a varied selection of people, who had attended the original workshops, to represent a wide group of locations and interests. The first round comprised five

[7] CAP 1616, C27, P140

workshops and three focus groups; as recommended by CAP1616, the recall stage was much smaller and included only two workshops.

Workshop recruitment

A representative sample of attendees to the first round of workshops were sent an invitation to attend a recall workshop. This included: all of those who attended the aviation workshop; a representative sample of community stakeholders, to ensure each region was represented, those currently overflown within noise contours, currently overflown outwith noise contours and currently not overflown but could be were included; a representative from EANAB; and delegates from other stakeholders such as property developers, environmental groups, environmental activists, councils and equalities organisations. The invitation can be found in appendix A.

The approach to selecting the organisations invited to the community and stakeholder recall workshop was as follows:

- A database of organisations who attended the first round of community and general stakeholder workshops was compiled and randomised within group;
- A starting point was identified within the database at random;
- Organisations to the recall workshop were selected to ensure representation from each region, those currently overflown within noise contours, currently overflown outwith noise contours and currently not overflown but could be included; a representative from EANAB; and delegates from other stakeholders such as property developers, environmental groups,
- Given the limited space available in the workshop, priority was given to achieving a range of representation, therefore, opportunities for representation for more than one organisation within each group were limited. Places were strictly limited to one per organisation.

Because stakeholders were from a wide area and some distance from Edinburgh, many community representatives were reluctant to spend time and money travelling to attend workshops. To compensate and encourage engagement, an incentive of £40 was offered to all delegates of the community workshops. The stakeholder workshop was held on 5 November 2019.

The aviation workshop was originally arranged to be held on 31 October. All delegates from the initial aviation invitation list were emailed. In total 21 organisations were invited to attend. Initially 10 agreed to attend. The date for this workshop was moved because EAL asked for additional time to confirm the shortlist of design principles. A postponement email was sent to all 21 aviation organisations, including those who could not attend, stating the workshop would be held week commencing 11 November. See appendix B. An invitation confirming the revised date of 13 November was sent and eight agreed to attend the re-arranged workshop. See appendix C for the invitation.

Once all workshops were fully recruited, delegates were sent confirmation details, which included a copy of the draft shortlist, as well as a recording permission request. See the confirmation email in appendix D. Additionally, all delegates were contacted by telephone the evening before the workshop to confirm their attendance.

Principles of inclusion

Our methodology was designed to include a wide representation of views. We invited representatives from action groups, such as, EANAB and Extinction Rebellion, as well as community councils known to be opposed to the airport. People with protected characteristics and those representing equalities groups were included and supported.

Moderation

Each of the workshops was moderated by senior practitioners from Progressive and attended by representatives from Edinburgh Airport (EAL); Diversity Dynamics, equalities experts; WSP, environmental experts; and To70, technical experts. Attendees were sent a copy of the shortlist of design principles prior to attending the workshop. See Appendix E.

A short presentation was made to attendees which set out the shortlist of design principles, issues that respondents to the first wave of workshops thought important but were not design principles, and the longlist of design principles derived from the first wave workshops.

The stakeholder recall workshop identified some strong views on the wording of the shortlisted principles. It was decided to test the amendments proposed by the stakeholder recall workshop in the aviation recall workshop. A copy of the stimulus can be found in appendix F.

Collecting the views of those unable to attend the workshops

The recall phase was designed to be a test exercise so we did not collect views of those were not able to attend.

Analysis

Both workshops were recorded and transcribed. Delegates were asked for their permission to record. It was sought in the confirmation email that was sent to delegates and it was also sought on the day of the workshop in person. Full transcripts can be found in appendix F.

We conducted qualitative data analysis using a consultative process that began with listening to the recordings and agreeing on the key themes. Two of Progressive's senior project executives were involved at this stage to ensure that the data, although subjective, was of high quality. All members of the team conducting analysis documented the prevalence of themes and strength of feelings expressed. As analysis progressed, new themes emerged and the team had regular update meetings to ensure that everyone was up to speed on themes, relationships and ideas as they developed.

There were several stages to the analysis:

- The researcher examined transcripts of recorded workshops, noting the relative frequency with which different issues arise, as well as the intensity of their expression.
- Qualitative data often occur in embedded material, e.g. an important issue may be interspersed among a cluster of comments from a discussion. It is important to recognise that qualitative analysis is not a linear process, and to revisit the data to examine whether additional questions or new connections between the data emerge.
- When completing analysis, we looked for patterns, common themes, deviations from patterns and any factors that may explain these.

Objectives

The aim of this round of recall workshops was to review the shortlist of design principles and sense check the design principles shortlisted by Edinburgh Airport's project team.

The agenda for the engagement sessions was to:

- Recap on where we are with the process;
- Present the full list of draft design principles that were arrived at in round one;

- Gain a response to the contraction of 52 design principles to 16;
- Present the shortened list of proposed design principles;
- Have an understanding of responses to the shortened list.

Shortlist of design principles

The table below contains the shortlist of design principles that were tested at the workshops. It is noted that these had changed slightly from those draft design principles that were sent to delegates ahead of the workshop.

PDP1	Safety (Core)	The airspace design and its operation must be safe as or safer than it is today.
PDP2	Technical (Core)	The prioritised requirements of airspace users must be taken into account when designing flight paths.
PDP3	Technical (Core)	Flight paths must be flyable.
PDP4	Noise (Core)	Flight paths should be designed to minimise the total adverse effect on health and quality of life impacts created by aircraft noise and emissions.
PDP5	Economy	Flight paths should be designed to provide increased airspace capacity in order for Edinburgh Airport to support the Scottish Government's Economic Development agenda and the UK's wider aviation strategy. **Note:** wording issued to Delegates was *Flight paths should be designed to increase airspace capacity and meet Scotland's demand for connectivity*
PDP6	Environment	Flight paths should be designed to minimise CO2 emissions above an altitude of 7000ft and, where it doesn't have a detrimental effect on adverse noise impacts, also between 4000ft and 7000ft.
PDP7	Environment	Flight paths should be designed to minimise adverse local air quality impacts.
PDP8	Operational	Flight paths should be designed with cost effective routes that minimise track miles and fuel burn.
PDP9	Operational	Flight paths should be designed to ensure efficient and effective route management.
PDP10	Operational	Flight paths must be designed to accommodate PBN traffic in line with CAA's modernisation strategy.
PDP11	Health	Flight paths should be designed to minimise population overflown below 4000ft and, where possible, between 4000ft and 7000ft, taking into account any potential adverse impact, due to those overflown having protected characteristics, as defined by the Equalities Act 2010.
PDP12	Health	Flight paths should be designed, where possible, to minimise overflying sensitive locations and noise sensitive receptors (for example, the zoo, retirement complexes, green spaces, historic heritage sites, and others). **Note:** wording issued to at the Workshop was updated to include the examples of noise sensitive locations and receptors, i.e. to include: *(for example, the zoo, retirement complexes, green spaces, historic heritage sites, and others).*

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PDP13	Noise	Where possible, flight paths should be designed to include track concentration and/or track dispersal options to provide noise respite.
PDP14	Noise	The predictability of flight tracks must be maximised for consistency of operations.
PDP15	NERL (Core)	Collaborate with other Scottish airports and NATS to ensure that the airspace design options are compatible with the wider programme of lower altitude and network airspace changes being coordinated by the FASI North programme.
PDP16	GLA (Core)	Routes to/from Glasgow and Edinburgh airports should be procedurally deconflicted from the ground to a preferred level in coordination with NATS Prestwick.

Outcomes

Group dynamics

Stakeholders

In total, 50 representatives were invited. Recipients were offered two options in the email, (1) *would like to attend*, (2) *cannot attend*. Nineteen stakeholder respondents agreed to attend. Twenty could not attend and eleven did not respond. An Excel spreadsheet in appendix G identifies all three categories.

This workshop was held on 5 November 2019. It comprised 16 delegates from 16 different organisations. There were nine organisations representing the interests of communities from North, East, South and West of Edinburgh. This included communities overflown within contours, overflown outwith contours and not overflown. Delegates included representatives from property developers, noise groups, environmental groups, equalities and traders. A full list of attendees can be found in appendix H. The workshop lasted three hours.

The workshop was jointly moderated by [redacted] notes were taken by [redacted] and the workshop was observed by [redacted]

Some papers and suggestions were submitted to Progressive and EAL at the point of and after running the recall workshop. These include: a paper from Royal Burgh of Kinghorn CC, and some suggestions by email from [redacted] These papers were submitted outwith the process; however, all content has been noted and passed on to EAL.

Aviation

In total 20 organisations were emailed; these were all organisations who had attended or been involved in the first stage workshops, although in some cases the individual representing the organisation changed. Recipients were offered two options in the email, (1) *would like to attend*, (2) *Cannot attend*. Eight agreed to attend. Ten could not attend, one opted out and one did not respond.

This workshop was held on 13 November 2019. It comprised seven delegates from seven different organisations. A full list of attendees can be found in the appendix J. One delegate was late to arrive at the workshop but this did not interrupt the process. The workshop lasted two and a half hours.

The workshop was moderated by [redacted] supported by [redacted] The workshop was observed by [redacted]

Some papers and suggestions were submitted to Progressive and EAL at the point of and after running the recall workshop. These include: a paper from Light Aircraft Association (LAA) on principles for ACP consultations and the Lord Kirkhope inquiry of July 2019, which suggests that controlled airspace should be minimised. [redacted] from LAA requested that this be on record that that report exists and for it to be considered.

These papers were submitted out with this process, however, the documents are recognised and have been passed on to EAL.

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Overview of reactions to PDPs

There were some concerns expressed over the linguistic style. Some found the language in some of the Provisional Design Principles (PDP) too technical to understand, specifically PDP 15 and PDP 16, and those that use acronyms, such as, PBN and NATS. Some said this would be helped by having a glossary.

Some PDPs were thought to be too general as they used phrases such as *taking into account*, and *potential adverse impact*. There was a request for more specific and definite language. Some delegates did not like the use of caveats such as *where possible* as they thought this would give the opportunity to not apply the design principle. Some commented on the need to balance statements so that environment and operational issues are equally represented.

A comment made by one respondent, and agreed by many, was that there should be a design principle that clearly pointed to flying over the water. This may be a solution to a route design and not strictly be a design principle, but it was a dominant suggestion in the first round of workshops and one that delegates expected to be reflected in the shortlist of design principles.

The question of the need for expansion came up as a dominant theme in this recall workshop as it did in many of the previous workshops. Many saw PDP5 as inconsistent with the need to reduce carbon emissions. Others felt that the shortlist of design principles should include the idea that all flight options and emissions considerations should be compatible with the national carbon reduction targets.

A solution suggested by stakeholders to these misunderstandings may be to publish, alongside all design principles, an explanation of how they were arrived at and to translate them into simple language used by attendees of the first stage workshops.

Aviation

Very few comments were made on the overview of the design principles. One delegate commented that the airport appears not to be giving away any airspace which it currently does not use. This point was noted and EAL commented that, while it is not a point to be considered at this stage, it could be at a later stage of the process.

Another commented on the apparent lack of inclusion of the "clean sheet" principle that was mentioned in the first round of workshops. This was fully reported (in the report on the first wave of workshops) and was thought to be one of the most important points to this group. This is captured in PDP15.

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Detailed responses to PDPs

This sub-section of the report comments on delegates' responses to the PDPs as they were discussed.

PDP1 Safety (core)
The airspace design and its operation must be as safe, or safer than it is today.
There was no contest to this design principle. No one made any comments on how or if it should be improved, it was agreed and fully understood by both stakeholder and aviation workshops.

PDP2 Technical (core)
The prioritised requirements of airspace users must be taken into account when designing flight paths.
Many in the stakeholder workshop were unsure of what this means and questioned what an airspace user was. Many in this workshop felt it needed to be written in less jargonistic language.

Some community stakeholders read it as being a statement to give the aviation industry priority over those who are on the ground, which they did not consider to be a good idea.

Other community stakeholders picked up on the use of the word *must* and took that as a sign that this design principle would be considered more important than any with the word *should*. This prompted a lot of discussion around the suggestion that there would be value in using a Red-Amber-Green (RAG) system to prioritise principles, with some saying that all principles that include the word *must* would be given priority over *should*. Most community stakeholders felt PDP2 ought to read *should*. Other community stakeholders picked up on the word *core*. Both of these words were thought to give priority to the design principles that were important to the aviation industry, over the other design principles, and community stakeholders were not in favour of this.

Very few community stakeholders realised that this principle was designed with general aviation airspace users and many said it needed more explanation.

Removal of the words *the prioritised* was suggested in the stakeholder groups. This was not opposed when discussed with aviation stakeholders, but a more general point was that EAL's controlled airspace to take up the minimum amount of overall airspace it requires in order that some controlled airspace may be released for the use of general aviation.

The replacement of the word *must* with *should* was discussed by aviation, but this prompted a long discussion about the importance of the words and that *must* would take priority over *should* at design stage. At this point only one person asked for *must* to be kept. The word *should* was agreed by the majority.

PDP3 Technical (Core)
Flight paths must be flyable.
There was no contest to this design principle. Community stakeholders made no comments on how or if it should be improved, it was agreed and fully understood by them.

Delegates at the aviation workshop suggested it would be helpful if EAL were to investigate the legal position of using the terms 'must' and 'should' in the design principle.

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PDP4 Noise (core)
Flight paths should be designed to minimise the total adverse effect on health and quality of life impacts created by aircraft noise and emissions.
The use of the word *should* was contested by community stakeholders with many saying is has to be a *must*.

This was considered by some community stakeholders to be a catch-all principle that should list all the related principles from the long list.

The representative from Edinburgh Airport Watch was very keen to have the word *should* be replaced with *must*. Other aviation delegates were less convinced that it was necessary or that it is possible (as with PDP3, delegates suggested it would be helpful if EAL were to investigate the legal position of using the terms 'must' and 'should' in the design principles). Later in the aviation discussion it was thought that this could subsume PDP7 in which case it should be mandatory and adopt the word *must*.

PDP5 Economy
Flight paths should be designed to provide increased airspace capacity in order for Edinburgh Airport to support the Scottish Government's Economic Development agenda and the UK's wider aviation strategy.

This prompted a lot of discussion with community stakeholders around the need for expansion. Many delegates argued against the need for increased capacity. One of the contentious points in this principle was the word *provide*. Many community stakeholders felt it suggested that the sole purpose of this design principle was to increase capacity, and many argued against the need for this. Other community stakeholders argued that if the government's economic development agenda is to be cited, then its policy on the Climate Change should be given equal weight.

Some community stakeholders felt the statement was too restricted to supporting the aviation industry and should include reference to tourism and trade.

We tested the addition of the words *tourism* and *trade* to this statement with aviation stakeholders. This addition was agreed and understood by the group.

PDP6 Environment
Flight paths should be designed to minimise CO2 emissions above an altitude of 7000ft and, where it doesn't have a detrimental effect on adverse noise impacts, also between 4000ft and 7000ft.

Many felt that this statement placed emphasis on CO2 emissions over noise and it should be the other way around. The Air Navigation Guidance 2017 (ANG2017) has a different focus and this, and in some respondent's minds the following should be adopted:

> ***For flightpaths at or above 4,000 feet to below 7,000 feet, the environmental priority should continue to be minimising the impact of aviation noise in a manner consistent with the government's overall policy on aviation noise, unless this would disproportionately increase CO2 emissions.***

We tested this suggestion with aviation delegates and they preferred the ANG definition because they felt it was less confusing than the original version.

PDP7 Environment

Flight paths should be designed to minimise adverse local air quality impacts.

Many community stakeholders called for the wording of this to be *must* as opposed to *should* as they felt there should be an imperative on the airport to protect air quality. Others argued for the inclusion of the word *local communities of people* because people should be prioritised over animals, land and water.

As a result of stakeholder responses, we tested with aviation stakeholders the replacement of *should* with *must*. This prompted discussion with aviation delegates over the prioritisation of *musts* over *should* at design stage. The outcome of the discussion was that this principle is covered by PDP4 and the majority agreed that it could be deleted as long as PDP4 adopted the word *must*.

PDP8 Operational

Flight paths should be designed with cost effective routes that minimise track miles and fuel burn.

The words *cost effective* confused some community stakeholder delegates who made an assumption that this was tied into the commercial strategies of airlines. This led many to agree that all design principles must be easy to understand.

We discussed the removal of the words *cost effective* with both groups. There was a discussion amongst the aviation delegates about the difference in PDP8 and PDP9 and the correlation of less fuel burn with effective route management. After some discussion about the possibility of merging PDP8 with PDP9, the group agreed with the removal of the words *cost effective*. The group discussed the benefits of keeping PDP8 and PDP9 as separate design principles.

PDP9 Operational

Flight paths should be designed to ensure efficient and effective route management.

This was not immediately understood by community stakeholders and needed to be explained. It was explained by observers from the working group as being a way to get planes in as quickly as possible, minimising halt times as well, which helps reduce fuel burned, track miles and CO2. Some community stakeholders thought this was so close to PDP8 that it could be merged, but then conversation followed that highlighted the difference in emphasis of one being about the minimisation of track miles and the other being about route management. It was noted that by merging the two, the flexibility of efficient and effective route management may be lost. The final outcome was a suggestion to keep them separate.

Other community stakeholders reiterated the need to keep this as a *"should"* and not a *"must"* as it may be necessary to create curved routes to avoid overflying communities.

Aviation stakeholders agreed and did not challenge this design principle.

PDP10 Operational

Flight paths must be designed to accommodate PBN traffic in line with CAA's modernisation strategy.

This was not understood by the community stakeholders because not everyone knew what *PBN* means and the CAA modernisation strategy was not understood by the majority. It was agreed that these points need to be spelt out in a glossary in order for them to be understood.

A comment was made by community stakeholders that three operational design principles had been discussed that potentially could be merged into one. Having three operational principles was thought

to give the aviation industry a disproportional representation within the appraisal framework, as routes would have to be evaluated against three rather than one operational design principle.

Some aviation stakeholders felt there is a need to qualify PBN as "higher standard" or "modern" as not all PBN traffic is the same. Otherwise, they did not challenge this design principle and asked that PBN was listed in full.

PDP11 Health

Flight paths should be designed to minimise population overflown below 4000ft and, where possible, between 4000ft and 7000ft, taking into account any potential adverse impact due to those overflown having protected characteristics as defined by the Equalities Act 2010.

The first observation made by community stakeholders was the need to remove the phrase *where possible*, as they felt this opened the way for this design principle to be ignored.

The phrase *taken into account* was also thought to be too ambiguous by the community stakeholders. Some felt it should be strengthened: one way to do so would be to replace it with the word *meet the requirements of communities defined as having protected characteristics*.

A comment that was made in the community stakeholder workshop, was that a lot of the principles have been designed to protect larger communities but there is not enough to protect the needs of those with specific requirements.

Many community stakeholders were not aware of the definition of protected characteristics under the Equalities Act. This, combined with the suggestion that reference to it looks like a tick box exercise, led to the suggestion of removing the reference to the Equalities Act and placing more emphasis on those with specific requirements.

A point made in the community stakeholder workshop, by PPCA Ltd. on behalf of Winchburgh Developments, was that all statements from PDP1 to PDP11 have focused on the existing populations and that nothing has been said about the future populations.

One of the outcomes of the discussion by community stakeholders around PDP11 was that, once EAL has completed its mapping exercise of where communities are, where they might be and what should be avoided, they [EAL] should make that public so that members of the public can better understand the rationale for proposed flight paths.

A comment made by one delegate that adverse effects of flights above 7,000 feet should be recognised and that the principle should focus on flights up to 12,000 feet. The same person commented that this principle doesn't differentiate between flights taking off and landing and that the difference in noise is tangible.

The following version of this PDP was tested with the aviation delegates:

> ***Flight paths should be designed to minimise population overflown below 4000ft and, between 4000ft and 7000ft, taking into account any potential adverse impact, due to those overflown having protected characteristics, and special requirements.***

Most aviation delegates agreed with this principle even thought they were confused about how EAL could put this into effect.

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It was agreed that this design principle will need a fuller explanation.

PDP12 Health
Flight paths should be designed where possible to minimise overflying sensitive locations and noise sensitive receptors.
Community stakeholder delegates asked for more certainty in this principle and wanted the phrase *where possible* to be removed. Some argued that this PDP should be under the heading *health and wellbeing* as noise is not just a health issue and it can be intrusive and affect wellbeing.

The word *receptors* was not widely understood by community and aviation workshop delegates and needed to be explained in more detail. This was done by giving examples of the types of locations, such as Edinburgh Zoo, and including a reference to this in a glossary of terms.

PDP13 Noise
Where possible flight paths should be designed to include track concentration and/or track dispersal options to provide noise respite.
The phrase *where possible* was once more challenged by community stakeholders and its removal requested. This idea was tested and agreed with by aviation stakeholders. Otherwise this design principle went unchallenged

PDP14 Noise
The predictability of flight tracks must be maximised for consistency of operations.
There was a debate with community stakeholders as to whether this was an operational or noise design principle. Another point made by community stakeholders in relation to this PDP was that it is dependent on air traffic control and vectoring.

Some community stakeholders claimed that the principle should be about minimising vectoring to conditions where safety and weather require it and that it should explicitly state that *"we will work with air trajfic control to keep these flight paths as narrow as possible."*

Aviation delegates made agreed and made no challenge to this design principle.

PDP15 NERL (Core)
Collaborate with other Scottish airports and NATS to ensure that the airspace design options are compatible with the wider programme of lower altitude and network airspace changes being coordinated by the FASI North programme.
This design principle was welcomed by members of EANAB and other community stakeholders, who were pleased to see joined up thinking. *FASI North* was not universally understood.

This design principle was agreed by the aviation workshop delegates and no challenge was made to the wording.

PDP16 GLA (Core)
Routes to/from Glasgow and Edinburgh airports should be procedurally deconflicted from the ground to a preferred level in coordination with NATS Prestwick.
Many of the community stakeholders did not understand the term 'deconflicted'. Following a discussion, delegates within this group were content to accept the DPD, but noted the terminology is not user-friendly. The design principle was agreed with no challenge was made to the wording by aviation workshop delegates.

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4. Summary and conclusions

Summary responses to initial workshops and focus groups

Overview

This section summarises the issues discussed in the initial workshops (aviation, community stakeholders and other stakeholders) and the three focus groups, under each of the themes discussed in the workshops/focus groups.

Response to the Statement of Need

- Modernisation of EAL airspace needs to be undertaken as part of a more comprehensive review of wider airspace strategy so that constraints and opportunities can be more accurately assessed.
- Problems the airport is experiencing need to be identified more clearly to allow the principles for a new approach to be accepted.
- Consistency between the SON and Scottish and UK policy on emissions reduction has not been demonstrated.
- The relationship between runway capacity and airspace capacity needs to be clearly set out if a case is being made for greater runway capacity.
- Edinburgh Airport is in business to make a profit and pay the shareholders; that objective must be recognised when considering other design principles.

Environment

- The carbon footprint that people have as individuals, as communities, as countries, as the world, is growing, so airspace design needs to look to where policy priorities are going, not just where they are now.
- Older and/or more polluting aircraft, including freight planes, should face greater restrictions and higher charges.
- Offset adverse environmental impacts as locally as possible.
- Protect environmentally sensitive areas.
- Apply "polluter-pays" principle to airspace changes.
- Minimise light pollution from planes (low level of comment but important).

Community and health

- Monitor and report noise levels accurately and ensure compliance with airspace by airlines.
- Try not to overfly locations where there are expectations that residents are not on a flightpath.
- Conduct health impact assessments, including for schools, hospitals and care homes, to ensure compatibility with health and care aims.
- Fly over water, where possible, with new routes down the Forth.
- Ensure that timing and routing restrictions placed on air travel are consistert with latest understanding of health issues, including mental health and sleep.
- Ensure all effects on schools are effectively considered including: noise affecting playtimes, pollution meaning windows need to be closed and other factors that affect healthy development.
- Take account of the landscape in which noise occurs.

- The height and dispersal of flights, including above 7,000 feet, needs to be built into the options appraisal.
- Planned housing development is likely to be affected, so there is a need to understand the number of people affected with and without the new homes.
- Include the costs of community compensation and mitigation measures in plans.
- Include design options that minimise the level of change to flightpaths including no change.

Technical

- Prioritise safety.
- Reduce flightpaths with tighter turns, since these expose some people to almost continuous noise, i.e. by the time one aircraft has completed the turn, the next one was coming along.
- Restrict aircraft turning/holding areas over communities.
- Avoid overall expansion of controlled airspace.
- Enable flightpaths that are as short as possible.
- Design for aircraft that cannot operate Global Navigation Satellite Systems.
- Ensure access to airspace by general aviation.

Economy

- The capacity and co-ordination of the road and public transport infrastructure, delivering efficient and complementary transport services into the airport, needs to be included in any discussion about airport expansion.
- Tourism revenue flows in and out of Scotland so the contribution of aviation to the economy needs to be clear in considerations of air travel growth.
- Ensure that investment by the airport is sufficient to facilitate a joint approach to air travel, land transport and land use development that reflects the impacts of airspace changes.
- Demonstrate that plans at the airport are consistent with plans of public authorities at all levels.

Equality

- Consider who pays and who benefits, including opportunities to make taxation of air travel more progressive, recognising EAL's role in lobbying for policy change.
- Minimise adverse effects on those groups of people that suffer the greatest effects of noise and air pollution.
  Poorer people may fly less so, on equality grounds, should suffer less disbenefits from air travel.

Communication

- Ensure transparency of data, information and the decision-making process.
- Enable and support community pride in their local airport, supporting modernisation and supporting the ACP through community involvement and openness.
- Ensure all EAL's inputs in relation to plans for surface access to the airport are transparent.
- CAA must demonstrate their accountability to the population around Edinburgh Airport if they are making decisions about what happens.

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Summary response to PDPs

Overview
This section provides a summary of revisions suggested by delegates from both recall workshops; aviation and stakeholder. We have included the revised design principles, where appropriate, with the revisions suggested by delegates from both workshops. These feature in bold italics.

Respondents suggested the inclusion of a full glossary that spells out all acronyms and some of the thinking behind design principles, such as PDP4, which captures many of the principles at the top of the long list. They also asked for EAL to supply the longlist of design principles and illustrate where they have been merged into the short list. Aviation asked for an explanation of thinking behind the apparent lack of a "clean sheet" principle to be included in the glossary.

PDP1
Agreed with no challenge.
The airspace design and its operation must be as safe, or safer than it is today.

PDP2
Remove the words *the prioritised*, use the word *should*.
Requirements of airspace users should be taken into account when designing flight paths.

PDP3
Agreed but needs further explanation. .
Flight paths must be flyable.

PDP4
It could incorporate PDP7 in which case it should be mandatory and include the word *must*. (EAL to clarify the legal position of the terms 'must' and 'should': applies for all design principles)
Flight paths must be designed to minimise the total adverse effect on health and quality of life impacts created by aircraft noise and emissions.

PDP5
The word *provide* could be replaced with *enable*, it should also include reference to *tourism and trade*.
Flight paths should be designed to enable increased airspace capacity in order for Edinburgh Airport to support the Scottish Government's Economic Development agenda and the UK's wider aviation strategy, including tourism and trade.

PDP6
Revert to the Air Navigation Guidance 2017 (ANG2017) wording.
For flightpaths at or above 4,000 feet to below 7,000 feet, the environmental priority should continue to be minimising the impact of aviation noise in a manner consistent with the government's overall policy on aviation noise, unless this would disproportionately increase CO2 emissions.

PDP7
This could be deleted as long as PDP4 is mandatory and uses the word *must*.
Flight paths must be designed to minimise adverse local air quality impacts.

PDP8
Remove the words *cost effective*.
Flight paths should be designed to ensure efficient and effective route management.

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PDP9
Stakeholders suggested merging this with PDP8 but aviation wanted it to be kept separate.
Flight paths should be designed to ensure efficient and effective route management

PDP10
Spell out the acronym *PBN*.
Flight paths must be designed to accommodate modern performance based navigation (PBN) traffic in line with CAA's modernisation strategy.

PDP11
Use the revised version:
Flight paths should be designed to minimise population overflown below 4000ft and, between 4000ft and 7000ft, taking into account any potential adverse impact, due to those overflown having protected characteristics, and special requirements.
Give a fuller explanation.

PDP12
Remove the phrase '*where possible*'.
Flight paths should be designed to minimise overflying sensitive locations and noise sensitive receptors (for example, the zoo, retirement complexes, green spaces, historic heritage sites, and others).
Give a fuller explanation.

PDP13
Remove the phrase *where possible*.
Flight paths should be designed to include track concentration and/or track dispersal options to provide noise respite.

PDP14
Agreed with no challenge.
The predictability of flight tracks must be maximised for consistency of operations.
Give a fuller explanation.

PDP15
Agreed with no challenge.
Collaborate with other Scottish airports and NATS to ensure that the airspace design options are compatible with the wider programme of lower altitude and network airspace changes being coordinated by the FASI-North programme.

PDP16
This design principle was agreed by all and no challenge was made to the wording by the aviation stakeholders. Many of the community stakeholders did not understand the term 'deconflicted'. Following a discussion, delegates within this group were content to agree the PDP, but noted the terminology is not user-friendly. The design principle was agreed and no challenge was made to the wording by aviation workshop delegates.
Routes to/from Glasgow and Edinburgh airports should be procedurally deconflicted from the ground to a preferred level in coordination with NATS Prestwick.

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Appendices for the initial workshops

A. Project Initiation Document (PID) revised 2

10402 WP1 Design PrinciplesPIDrevised

B. Names of attendees

Workshop 1. Community stakeholders: North and West

Name	Organisation	Name	Organisation
[redacted]	North Queensferry Community Council	[redacted]	Linlithgow & Linlithgow Bridge Community Council
	North Queensferry Community Council		Low Valleyfield Community Council
	Dalgety Bay & Hillend Community Council		Kirknewton Community Council
	Dalgety Bay & Hillend Community Council		Charlestown, Limekilns and Pattiesmuir Community Council
	Bathgate Community Council		Murieston Community Council
	Blackness Community Council		Royal Burgh of Burntisland Community Council
	Royal Burgh of Kinghorn Community Council		Uphall Community Council
	Royal Burgh of Kinghorn Community Council		Lochgelly Community Council
	Elie &The Royal Burgh of Earlsferry Community Council		Fife College
	Murieston Community Council		

Workshop 2. Aviation

Name	Organisation	Name	Organisation
[redacted]	Scottish Gliding Centre	[redacted]	British International Freight Association (BIFA)
	British Helicopter Association (BHA)		National Air Traffic Control (NATS/NERL)
	East of Scotland Microlights		British Parachute Association (BPA)
	East of Scotland Microlights		West Atlantic Airlines

[redacted]	Royal Mail	[redacted]	Scottish Mountain Paragliding Club pp British Hang Gliding and Paragliding Association (BHPA)
	Airspace4All		Guild of Air Traffic Control Officers
	Royal Mail		Edinburgh Airport Watch
	Skydive St Andrews (Parachute Operation)		Tayside Aviation (Fife)

Workshop 3. Edinburgh Airport Noise Advisory Board (EANAB)

Name	Organisation
[redacted]	Blackness Area Community Council
	Cramond Association
	Ratho and District Community Council
	Co-opted Ecclesmachan resident
	Uphall Community Council
	Cramond and Barnton Community Council

Workshop 4. Stakeholders: general

Name	Organisation	Name	Organisation
[redacted]	Environmental Protection Scotland	[redacted]	Fife Centre for Equalities
	Disability and Equality Scotland		West Lothian Council
	Aberdour Community Council		Walker Group
	East Lothian Council Environmental Health Service		Extinction Rebellion
	Falkirk Council		Historic Environment Scotland (HES)
	Winchburgh Developments		Fife Council Environmental Health
	Royal National Institute of Blind People (RNIB)		Scottish Environmental Protection Agency (SEPA)
	PPCA Ltd.		

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Workshop 5. Community South and East

Name	Organisation	Name	Organisation
[redacted]	Broxburn & Uphall Traders' Association	[redacted]	Cramond and Barnton Community Council
	Ecclesmachan Community Council		Innerleithen Community Trust
	Colinton Community Council		Sighthill/Broomhouse & Parkhead Community Council
	Craigentinny/Meadowbank - Community Council		Pencaitland Community Council
	Cramond & Barton Community Council		Queensferry and District Community Council
	Midlothian Council		Ratho and District Community Council
	Dalkeith and District Community Council		Drum Brae Community Council
	Fairmilehead Community Council		Gullane Area Community Council

Focus Group Composition

Group 1 Currently overflown within noise contours	Group 2 Currently overflown outwith noise contours	Group 3 Not overflown but potentially could be
Pumpherston Newbridge Cramond Livingston	Queensferry South Queensferry North Davidsons Mains Newhaven	Clackmannan Alloa/Fife area Falkirk Penicuik/Borders area
Mix Social Group	Mix Social Group	Mix Social Group
6 were parents of children living at home across a range of ages 1 to 11yrs old	6 were parents of children living at home across an age range of 3 to 17yrs old	2 were parents of children living at home, across an age range of 1 - to 18 yrs old
4 males 7 females	4 males 7 females	3 male 3 female
Ages ranged from 20 to 66	Ages ranged from 34 to 66	Ages ranged from 38 to 66
4 with protected characteristics[8]	3 with protected characteristics	2 with protected characteristics
2 retired, 1 unemployed, 1 part time, 7 working full time	3 retired, 7 working full time, 2 working part time	2 working part time, 3 working full time 1 retired
11 respondents in total	11 respondents in total	6 respondents

[8] Age / disability / gender reassignment / marriage civil partnership / pregnancy-maternity / race / religion or belief / sexual orientation

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C. Invite to Attend

10402 Email script signed off 2908201

D. Confirmation of Attendance

10402 - Workshop 1 Confirmation Ema

E. Statement of Need

Statement of need.pdf

F. Topic Guide

10402 Topic guide 6 revised 250919 WSP

10402 Topic guide signed off 6 200915

G. Presentation

EDI - ACP presentation draft3

H. Online Questionnaire

10402 online Questionaire signed

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I. Listing of all emailed and response status

10402 - Email All Lists - Sent to client

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Appendices for recall workshops

A. Invite to attend


10402 Email script recall groupssigned

B. Confirmation of details


10402 - Recall Workshop Confirm

C. Shortlist of principles


EAL PDPs.docx

D. Stimulus


DP recall - aviation.pptx

E. Transcripts


10402 Aviation Recall Transcript.do


110402 Digi1_stakeholders

F. List of all stakeholders: invited/couldn't attend/didn't reply


10402 - Stakeholder Recall Workshop Ou

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G. Stakeholder attendees

Name	Organisation	Name	Organisation
[redacted]	Broxburn and Uphall Traders Association	[redacted]	Royal Burgh of Burntisland
	Edinburgh Airport Noise Advisory Board (EANAB)		Cramond and Barnton Community Council
	Uphall Community Council		PPCA Ltd.
	Environmental Protection Scotland		Extinction Rebellion
	North Queensferry Community Council		Environmental Health at Fife Council
	Kinghorn Community Council		Blackness Area Community Council
	Aberdour Community Council		Dalkeith and District Community Council
	Royal National Institute of Blind People (RNIB)		Drum Brae Community Council

I. List of aviation: invited/couldn't attend/didn't reply

10402 - Aviation Recall Workshop 01

j. Aviation attendees

Name	Organisation	Name	Organisation
[redacted]	Airspace4All	[redacted]	Edinburgh Airport Watch
	British Parachute Association		Guild of Air Traffic Control Officers
	Scottish Mountain Paragliding Club pp British Hang Gliding and Paragliding Association (BHPA)		Light Aircraft Association
	National Air Traffic Services/ NARS En Route Plc (NATS/NERL)		

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Technical Appendix: Initial workshops and focus groups

1. The data was collected using an agreed engagement approach.
2. The target group for this research study was communities overflown/potentially overflown by Edinburgh Airport and EAL stakeholders.
3. The sampling frame used for this study was EAL engagement and communications database, supplemented by study partner databases and Progressive research.
4. In total, 5 workshops and 3 focus groups were undertaken. 4 of the workshops contained approximately 20 people, the fifth workshop contained 6 people. The focus groups contained between 6 and 12 participants.
5. Fieldwork was undertaken between 23 September and 9 October 2019
6. Workshop respondents were contacted by telephone, following an initial contact by email, by Progressive's skilled in-house team of qualitative recruiters. These recruiters worked to ensure that the workshop composition reflects the requirements of the project.
   - An incentive of £40 was available to respondents in the community stakeholder groups to compensate them for their time, any out of pocket expenses and travelling expenses. (Note – a number of the delegates in the community stakeholder groups either refused to accept the incentive or asked that it be donated).
7. Focus group respondents were recruited face-to-face/by telephone by Progressive's skilled in-house team of qualitative recruiters. These recruiters work to predetermined quota controls to ensure that the final sample reflects the requirements of the project. All respondents are screened to ensure that they have not participated in a group discussion or depth interview relating to a similar subject in the last 6 months prior to recruitment.
   - An incentive of £40 (£50 those in outlying areas) compensated respondents for their time, any out of pocket expenses and travelling expenses.
8. All workshops were run by two moderators, all focus groups were run by a moderator and an assistant. In total, 5 moderators were involved in the fieldwork for this project. In addition, all workshops were supported by members of the project team, available to respond to technical questions where these arose. Support was provided from EAL, WSP, To70, and Diversity Dynamics.
9. Stimulus materials were used during the group discussions/depth interviews. These included copies of the Statement of Need circulated to workshop delegates prior to the session, and a presentation on the Airspace Change Progamme rationale/objectives/process during the workshop/focus group.
10. Each recruiter's work is validated as per the requirements of the international standard ISO 20252.
11. All focus group respondents were subject to validation, either between recruitment and the date of the group discussion/depth interview, or on the day of the group discussion/depth interview. Validation involves focus group respondents completing a short questionnaire

asking pertinent profiling questions and checking that they have not participated in similar research in the past 6 months.

12. All research projects undertaken by Progressive comply fully with the requirements of ISO 20252, the GDPR and the MRS Code of Conduct.
13. The engagement methodology was compliant with the requirements of CAP1616.

Technical Appendix: Recall workshops

1. The data was collected using an agreed engagement approach.
2. The target group for this research study was community stakeholders and aviation stakeholders.
3. The sampling frame used for this study was the database of all of those who were involved in initial workshops for design principle engagement.
4. 2 workshops were conducted. In total, the groups comprised 23 delegates.
5. Fieldwork was undertaken on 5 and 13 November 2019.
6. Workshop respondents were contacted by telephone, following an initial contact by email, by Progressive's skilled in-house team of qualitative recruiters. These recruiters worked to ensure that the profile of the workshop participation reflected the requirements of the project.
   - An incentive of £40 was available to respondents in the community stakeholder group to compensate them for their time, any out of pocket expenses and travelling expenses (Note – a number of the respondents in the community stakeholder groups either refused or asked that it be donated to charity).
7. Both workshops were run by two moderators. In total, 3 moderators were involved in the fieldwork for this project. In addition, all workshops were supported by members of the project team, available to respond to technical questions where these arose. Support was provided from: To70, EAL, WSP, and Diversity Dynamics.
8. Stimulus materials were used during the discussions. These included copies of the short list of PDPs circulated to workshop delegates prior to the session, and a presentation on the short and longlist of PDPs during the workshop.
9. All research projects undertaken by Progressive comply fully with the requirements of ISO 20252, the GDPR and the MRS Code of Conduct.
10. The engagement methodology was compliant with the requirements of CAP1616.

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