

Edinburgh Airport Airspace Change Programme 2019

Step 1B Design Principles – recall round of
engagement sessions

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Invitation to attend

Edinburgh Airport Airspace Change Programme

Dear X

Thank you so much for attending one of the workshops for Edinburgh Airport (EAL), Airspace Change Programme. The key output from this stage will be a longlist of Design Principles. From this EAL will determine a shortlist of principles to ensure they meet the legislative, safety, regulatory and statutory requirements.

As part of our approach to the CAP1616 Stage 1 step 1B process we will be holding a second workshop. The aim of this workshop will be to review and sanity check the Design Principles shortlisted by Edinburgh Airport's project team.

Invitation to attend a workshop

This will involve engagement from those who attended a previous workshop. We will endeavour to recruit a broad range of attendees who represent different interests. This will be a smaller workshop than the previous one and will take less time, we anticipate between 1 to 1.5 hours.

We will be holding a workshop on xxxxxxxxxxxxxxxxxxxx (*refer to time plan*) at 2pm in the afternoon in Edinburgh.

Please let us know if you are interested and we will contact you to give you all of the details you will need to take part. There are limited places on this workshop and so please respond as soon as you can.

(Click on appropriate link)

- Would like to attend
- Cannot attend this time

Kindest regards



Progressive operates in accordance with the Market Research Society Code of Conduct and GDPR if you want to be removed from this email list please [click here](#)

Email confirmation of attendance

Title of Email: **Edinburgh Airport Airspace Change Programme**

Dear XXX

Thank you for your continued involvement in Edinburgh Airport's Airspace Change Programme and specifically in this current stage (CAP1616, Stage 1). This is a note to confirm your attendance at the Design Principles recall workshop.

We will be holding the recall workshop on XXXXXXXX (date), at the InterContinental Edinburgh George Hotel, George Street, Edinburgh. The workshop will start at 2pm, and will run for approximately two hours. We will provide refreshments – please advise if you have any dietary requirements. We will also give you £40 to cover any costs of travel.

Stakeholders only, not aviation

At the session

The sessions starts at 2pm, please try and come 10 minutes early to allow you to meet one of the research team and check into the event. Please bring this letter with you as a form of formal identification to the host.

The sessions aim is to facilitate a conversation around work that has progressed since the last session you attended. The facilitators will ensure that the discussion covers all the key areas. There are no right or wrong answers – all we ask is that you contribute and share your views. If you do not say anything, the researcher may prompt you to speak up!

Mobile phones

We understand that everyone needs to be contactable, but we ask during the session if you could please switch off your mobile phone, so that we can chat, without distraction.

Finally

We will be audio recording the workshops and transcripts of recordings will be sent to the CAA as evidence of the design principle process. Workshop attendance is contingent on your agreement to be recorded and attendance will be taken as permission to provide feedback to the CAA in this way. The workshop will be moderated by Progressive. A representative from Edinburgh Airport will be present along with two other consultants who are helping with this process.

We hope that you will enjoy the session and hearing other people's views on the topic under discussion. If you have any questions about the session before coming along please call [REDACTED] at Progressive on [REDACTED].

If for any reason you are now unable to attend please do let me know.

Kind Regards

[REDACTED]

Shortlist of Design Principles (as provided to attendees of workshops)

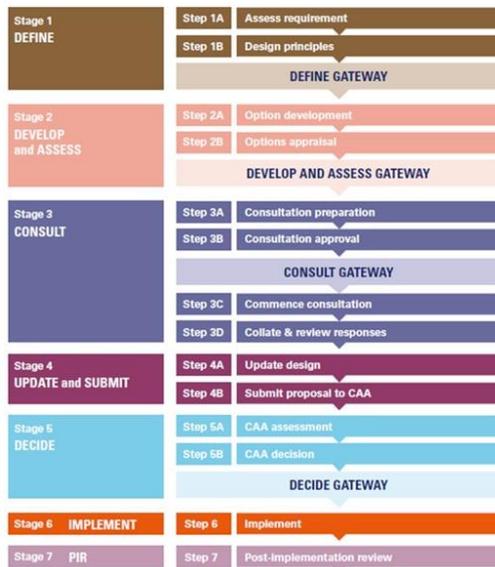
Proposed Design Principles (PDP)		
PDP1	Safety (Core)	The airspace design and its operation must be as safe or safer than it is today
PDP2	Technical (Core)	The prioritised requirements of airspace users must be taken into account when designing flight paths
PDP3	Technical (Core)	Flight paths must be 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 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
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.

The PowerPoint presentation used during the community stakeholder recall session



- **Welcome and introductions**
- **Aims and intentions of today**
 - To recap on where we are with the process
 - To present full list of draft design principles that were arrived at in round one
 - Present the shortened list of proposed design principles
 - To have an understanding of responses to the shortened list



CAP1616 – Where are we at?

CAP1616 involves a seven stage process and a number of 'gateways'.

Each stage has detailed requirements within the guidance that must be met.

The gateways are a CAA approval process that must be passed before moving to the next section.

The work we are doing today, is part of Stage 1, Step 1B design principles.

MODERNISING OUR SKIES

First stage of the engagement process



- 100 respondents
- Attendees from across Edinburgh, Fife and the Borders
- 8 recordings, fully transcribed
- Over 400 pages of transcripts
- 50 principles identified

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Introduction of issues that were deemed important but do not qualify as a design principle

Consider no change to flight paths.	R
This is not a design principle, and rejected as not an option. However, we will be considering the 'do nothing but modernise' approach alongside the 'clean sheet' and 'replicating existing routes' approach, as part of the design options process in stage 2. However this may not meet Edinburgh Airport's increase capacity objective as outlined in the SON. To cover these approaches, a new design principle covering safety and feasibility was created to ensure that flight paths must be flyable (PDP3).	
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.	R
These are not related to flight paths but ground transport infrastructure – a consultation regarding access roads to the airport will be taking place before Christmas and will address these issues.	
Monitor and report accurately on noise.	N
Noted and already done by the airport.	
Monitor air quality/emissions.	N
EAL already monitors air quality at the airport. EAL will look at this as part of the environmental impact assessment.	

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Use technology to reduce noise/pollution impacts.	N
EAL is doing an environmental impact assessment as part of ACP so will review the outcomes of this report and determine actions depending on the outcome.	
Consider government targets on the environment.	PDP7
Consider risks of auditory damage.	PDP4
Ensure business case is well documented/evidenced.	N
Recognise flights are not used by all.	N
Consider compensation/ mitigation for those overflown.	R
A potential outcome of ACP, not a design solution.	
Increase flight costs to reduce peak demand.	R
Airlines set flight costs and Edinburgh Airport can't influence this.	
Routes to/from Glasgow and Edinburgh airports should be procedurally deconflicted from the ground to Flight Level 90.	A
This was accepted and agreed wording with Glasgow has been included for both EDI and GLA.	

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Data, particularly forecasts, need to include details of any and all assumptions.	N
Create more jobs. EAL employs 700 people on campus and work with a further 100 employers to employ another 7000. Our business supports 25,000 jobs around Scotland.	N
Support tourism/business. EAL is a key contributor to Scottish tourism and economy and will continue to support the Scottish Government.	N
Ensure effective and clear communication.	N
Ensure efficiency and effectiveness through terminal.	N

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Introduction of long list of design principles by theme

Design Principles for Environment	
Minimise noise.	PDP4
Reduce emissions/pollution.	PDP7
Consider noise from take-off/ landing/turning.	PDP4
Take background noise into account.	PDP4
Consider/offset the impact on wildlife/the environment.	PDP12
Avoid over flying rural areas.	PDP4
Consider climate impact.	PDP6
Consider impact on animal welfare.	PDP12
Reduce impact on greenspaces.	PDP12
Avoid flying over the zoo.	PDP12

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Design Principles for Environment - rejected

Consider impact of aircraft type/penalise poor performers/old aircraft.

Decisions about what airplanes to fly are operational ones for the individual airlines. EAL has limited ability to impact this, however, we see this issue as an opportunity to reconsider our existing charging structures at the next review. With the introduction of the CAA's modernisation strategy encouraging more effective flight paths and efficient aircrafts, a design principle was created to ensure flight paths meet the CAA's modernisation strategy (PDP10).

Adhere to WHO regulations.

WHO Guidelines aren't adopted by the UK Government including the CAA. We will meet the noise guidelines as directed by CAA.

Minimise light pollution.

Aircraft lights are a feature to ensure safety of aircraft occupants and the wider general public. Therefore this DDP was rejected on the basis that it would impact the fundamental safety of operations.

Offset emissions.

Offsetting emissions isn't a design principle, it is an operational issue, however it is recognised as a concern from communities. A design principle has been developed to encourage minimising of emissions.

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Design Principles for Communities

Reduce night flights and early morning flights.	PDP4
Fly over the sea/fly down the Forth.	PDP4
Reduce flights over communities/fly over less populated areas.	PDP4
Avoid overflying of schools.	PDP11
Do not fly over currently unaffected areas in planning.	PDP4
Minimise noise/flights below 7,000ft.	PDP4
Restrict air craft turning over communities.	PDP4
Avoid overflying hospitals and care/retirement homes.	PDP11
Avoid overflying of historical sites.	PDP12
<i>Get people to accept noise.</i>	<i>Noted</i>

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Design Principles for Communities - rejected

Restrict aircraft holding areas over communities.

Edinburgh Airport's airspace goes to 7,000ft, with hold areas confirmed at higher altitudes, therefore this request regarding restricting aircraft holding areas over communities is rejected as out of scope.

Reduce flights.

Edinburgh Airport's business objectives were included in the Statement of Need which indicated growth as one of the objectives of this Airspace Change Programme, therefore this request to reduce flights is rejected as it contradicts the Statement of Need, already lodged and passed by the CAA.

Take account of noise above 7,000ft.

Edinburgh Airport's airspace goes to 7,000ft, therefore this request regarding taking into account of noise above 7,000ft is rejected as out of scope.

Concentrate flight paths during work hours.

It was felt that due to the change in the way people work, with an increase of flexible working and working from home, defining 'work hours' would be overly complex and impractical. This also doesn't take into account the non-working population.

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Design Principles for Communities – rejected (continued)

Review routes/flight corridors.

This is not a design principle, however it is what we are doing in our Airspace Change Programme.

Fly the west side of the River Almond.

Does not meet safety standards, specifically ICAO Doc 8168 Vol. 2 PANS-OPS because, a landing aircraft must be stabilised during the final descent to the runway. Stabilisation of this last and crucial part of the flight occurs around 5NM from the runway for aircraft operating at Edinburgh Airport. Making a last manoeuvre just before touchdown, to stay west of the River Almond would be unsafe, since this will de-stabilise the final and crucial part of the descent. Therefore, flying west of the River Almond for approaches is an unsafe operation.

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Design Principles for Technical	
Ensure fully integrated airspace change.	PDP15
Prioritise safety.	PDP1
Do not concentrate flight paths.	PDP13
Minimise route deviations.	PDP14
Make routes as short as possible.	PDP8
Ensure access to airspace by general aviation.	PDP2
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.	PDP15
Routes to/from Glasgow and Edinburgh airports should be procedurally deconflicted from the ground to a preferred level in coordination with NATS Prestwick.	PDP16

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Design Principles for Technical - rejected

Ensure decision making is evidence based (and evidence is appropriate/high quality).

This is not a design principle, but Edinburgh Airport notes this request.

Redesign the terminal/terminal airspace.

Not a design principle, however it is what EAL is doing in our airspace change programme.

Considerations for specific routes.

This is not a design principle, but an operational matter. However, Edinburgh Airport notes this point.

Make take off/landing gradients steeper.

This is not a design principle, but a potential solution to an issue regarding noise. PDP4 will cover this issue.

Take into account segregation(e.g. turbo jet and prop).

This is not a design principle, but a potential solution to an issue regarding noise. PDP4 will cover this issue.

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Design Principles for Economy	
Ensure consideration of all airspace users.	PDP2
Ensure consideration of wider tourism impacts.	PDP5

Design Principles for Economy - rejected

Review need for growth.

Edinburgh Airport's business objectives were included in the Statement of Need which indicated growth is one of the objectives of this Airspace Change Programme, therefore this request to reduce flights is rejected as it contradicts the Statement of Need, already lodged and passed by the CAA.

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Design Principles for Equalities	
Consider needs of the elderly/ children/those with ill health/autism/sensory impairment.	PDP11
Ensure true accessibility in design.	PDP11

Design Principles for Equalities - rejected

Recognise impact of flight paths on house prices and social migration.

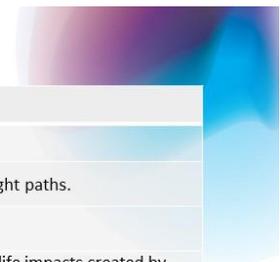
Recognising the impact of flight paths on house prices and social migration is not a design principle but we acknowledge that it is an important issue for our communities. EAL sees this as an opportunity to address in the post-implementation review stage of the project, with a detailed study on any impacts.

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Design Principles for Health	
Consider impact on mental health/wellbeing.	PDP11
Consider other health impacts.	PDP4
Consider impact on sleep.	PDP4

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Proposed Design Principles(PDPs)		
PDP1	Safety (Core)	The airspace design and its operation must be as safe 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.
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 overflight below 4000ft and, where possible, between 4000ft and 7000ft, taking into account any potential adverse impact, due to those overflight having protected characteristics, as defined by the Equalities Act 2010.

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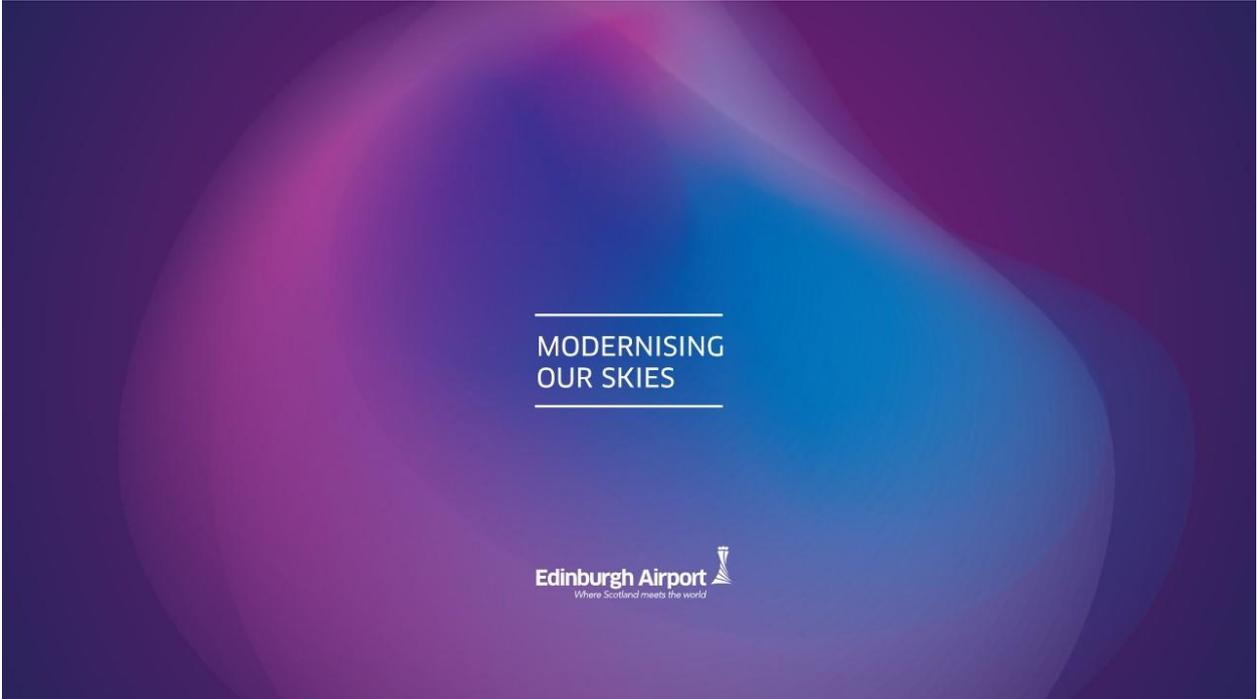
PDP12	Health	Flight paths should be designed, where possible, to minimise overflying sensitive locations and noise sensitive receptors (for example, the zoo, retirement complexes, green spaces, historic heritage sites, and others).
PDP13	Noise	Where possible, flight paths should be designed to include 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.

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Conclusions and close.

Thank you!

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The PowerPoint presentation used during the aviation recall session



- **Welcome and introductions**
- **Aims and intentions of today**
 - To recap on where we are with the process
 - Present the shortened list of proposed design principles
 - To have an understanding of responses to the shortened list
 - To present full list of draft design principles that were arrived at in round one



CAP1616 – Where are we at?

CAP1616 involves a seven stage process and a number of 'gateways'.

Each stage has detailed requirements within the guidance that must be met.

The gateways are a CAA approval process that must be passed before moving to the next section.

The work we are doing today, is part of Stage 1, Step 1B design principles.

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First stage of the engagement process



- 100 respondents
- Attendees from across Edinburgh, Fife and the Borders
- 8 recordings, fully transcribed
- Over 400 pages of transcripts
- 50 principles identified

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The shortlist of design principles

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Proposed Design Principles(PDPs) (Suggested changes after 1 st recall session in red)		
PDP1	Safety (Core)	The airspace design and its operation must be as safe or safer than it is today.
PDP2	Technical (Core)	The prioritised requirements of airspace users must be taken into account when designing flight paths.
		The prioritised requirements of airspace users should 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.
		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	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.
		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, including 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.
		[Change to ANG17 def] 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	Environment	Flight paths should be designed to minimise adverse local air quality impacts.
		Flight paths must be designed to minimise adverse local air quality impacts.

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PDP8	Operational	Flight paths should be designed with cost effective routes that minimise track miles and fuel burn.
		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.
		Flight paths must be designed to accommodate modern performance based navigation (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.
		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 and special requirements.
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).
		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).
PDP13	Noise	Where possible, flight paths should be designed to include track concentration and/or track dispersal options to provide noise respite.
		Where possible , Flight paths should be designed to include track concentration and/or track dispersal options to provide noise respite.

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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.

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Issues that were deemed important but do not qualify as a design principle

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Introduction of issues that were deemed important but do not qualify as a design principle

<p>Consider no change to flight paths.</p> <p>This is not a design principle, and rejected as not an option. However, we will be considering the 'do nothing but modernise' approach alongside the 'clean sheet' and 'replicating existing routes' approach, as part of the design options process in stage 2. However this may not meet Edinburgh Airport's increased capacity objective, as outlined in the SON.</p>	R
<p>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.</p> <p>These are not related to flight paths but ground transport infrastructure – a consultation regarding access roads to the airport will be taking place before Christmas and will address these issues.</p>	R
<p>Monitor and report accurately on noise.</p> <p>Noted and already done by the airport.</p>	N
<p>Monitor air quality/emissions.</p> <p>EAL already monitors air quality at the airport. EAL will look at this as part of the environmental impact assessment.</p>	N

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Use technology to reduce noise/pollution impacts.	N
EAL is doing an environmental impact assessment as part of ACP so will review the outcomes of this report and determine actions depending on the outcome.	
Consider government targets on the environment.	PDP7
Consider risks of auditory damage.	PDP4
Ensure business case is well documented/evidenced.	N
Recognise flights are not used by all.	N
Consider compensation/ mitigation for those overflown.	R
A potential outcome of ACP, not a design solution.	
Increase flight costs to reduce peak demand.	R
Airlines set flight costs and Edinburgh Airport can't influence this.	
Routes to/from Glasgow and Edinburgh airports should be procedurally deconflicted from the ground to Flight Level 90.	A
This was accepted and agreed wording with Glasgow has been included for both EDI and GLA.	

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Data, particularly forecasts, need to include details of any and all assumptions.	N
Create more jobs.	N
EAL employs 700 people on campus and work with a further 100 employers to employ another 7000. Our business supports 25,000 jobs around Scotland.	
Support tourism/business.	N
EAL is a key contributor to Scottish tourism and economy and will continue to support the Scottish Government.	
Ensure effective and clear communication.	N
Ensure efficiency and effectiveness through terminal.	N

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The long list of design principles

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Introduction of long list of design principles by theme

Design Principles for Environment	
Minimise noise.	PDP4
Reduce emissions/pollution.	PDP7
Consider noise from take-off/ landing/turning.	PDP4
Take background noise into account.	PDP4
Consider/offset the impact on wildlife/the environment.	PDP12
Avoid over flying rural areas.	PDP4
Consider climate impact.	PDP6
Consider impact on animal welfare.	PDP12
Reduce impact on greenspaces.	PDP12
Avoid flying over the zoo.	PDP12

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Design Principles for Environment - rejected

Consider impact of aircraft type/penalise poor performers/old aircraft.

Decisions about what airplanes to fly are operational ones for the individual airlines. EAL has limited ability to impact this, however, we see this issue as an opportunity to reconsider our existing charging structures at the next review. With the introduction of the CAA's modernisation strategy encouraging more effective flight paths and efficient aircrafts, a design principle was created to ensure flight paths meet the CAA's modernisation strategy (PDP10).

Adhere to WHO regulations.

WHO Guidelines aren't adopted by the UK Government including the CAA. We will meet the noise guidelines as directed by CAA.

Minimise light pollution.

Aircraft lights are a feature to ensure safety of aircraft occupants and the wider general public. Therefore this DDP was rejected on the basis that it would impact the fundamental safety of operations.

Offset emissions.

Offsetting emissions isn't a design principle, it is an operational issue, however it is recognised as a concern from communities. A design principle has been developed to encourage minimising of emissions.

MODERNISING OUR SKIES

Design Principles for Communities

Reduce night flights and early morning flights.	PDP4
Fly over the sea/fly down the Forth.	PDP4
Reduce flights over communities/fly over less populated areas.	PDP4
Avoid overflying of schools.	PDP11
Do not fly over currently unaffected areas in planning.	PDP4
Minimise noise/flights below 7,000ft.	PDP4
Restrict air craft turning over communities.	PDP4
Avoid overflying hospitals and care/retirement homes.	PDP11
Avoid overflying of historical sites.	PDP12
<i>Get people to accept noise.</i>	<i>Noted</i>

MODERNISING OUR SKIES

Design Principles for Communities - rejected

Restrict aircraft holding areas over communities.

Edinburgh Airport's airspace goes to 7,000ft, with hold areas confirmed at higher altitudes, therefore this request regarding restricting aircraft holding areas over communities is rejected as out of scope.

Reduce flights.

Edinburgh Airport's business objectives were included in the Statement of Need which indicated growth as one of the objectives of this Airspace Change Programme, therefore this request to reduce flights is rejected as it contradicts the Statement of Need, already lodged and passed by the CAA.

Take account of noise above 7,000ft.

Edinburgh Airport's airspace goes to 7,000ft, therefore this request regarding taking into account of noise above 7,000ft is rejected as out of scope.

Concentrate flight paths during work hours.

It was felt that due to the change in the way people work, with an increase of flexible working and working from home, defining 'work hours' would be overly complex and impractical. This also doesn't take into account the non-working population.

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Design Principles for Communities – rejected (continued)

Review routes/flight corridors.

This is not a design principle, however it is what we are doing in our Airspace Change Programme.

Fly the west side of the River Almond.

Does not meet safety standards, specifically ICAO Doc 8168 Vol. 2 PANS-OPS because, a landing aircraft must be stabilised during the final descent to the runway. Stabilisation of this last and crucial part of the flight occurs around 5NM from the runway for aircraft operating at Edinburgh Airport. Making a last manoeuvre just before touchdown, to stay west of the River Almond would be unsafe, since this will de-stabilise the final and crucial part of the descent. Therefore, flying west of the River Almond for approaches is an unsafe operation.

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Design Principles for Technical	
Ensure fully integrated airspace change.	PDP15
Prioritise safety.	PDP1
Do not concentrate flight paths.	PDP13
Minimise route deviations.	PDP14
Make routes as short as possible.	PDP8
Ensure access to airspace by general aviation.	PDP2
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.	PDP15
Routes to/from Glasgow and Edinburgh airports should be procedurally deconflicted from the ground to a preferred level in coordination with NATS Prestwick.	PDP16

MODERNISING OUR SKIES

Design Principles for Technical - rejected

Ensure decision making is evidence based (and evidence is appropriate/high quality).

This is not a design principle, but Edinburgh Airport notes this request.

Redesign the terminal/terminal airspace.

Not a design principle, however it is what EAL is doing in our airspace change programme.

Considerations for specific routes.

This is not a design principle, but an operational matter. However, Edinburgh Airport notes this point.

Make take off/landing gradients steeper.

This is not a design principle, but a potential solution to an issue regarding noise. PDP4 will cover this issue.

Take into account segregation(e.g. turbo jet and prop).

This is not a design principle, but a potential solution to an issue regarding noise. PDP4 will cover this issue.

MODERNISING OUR SKIES



Design Principles for Economy	
Ensure consideration of all airspace users.	PDP2
Ensure consideration of wider tourism impacts.	PDP5

Design Principles for Economy - rejected

Review need for growth.

Edinburgh Airport's business objectives were included in the Statement of Need which indicated growth is one of the objectives of this Airspace Change Programme, therefore this request to reduce flights is rejected as it contradicts the Statement of Need, already lodged and passed by the CAA.

MODERNISING OUR SKIES



Design Principles for Equalities	
Consider needs of the elderly/ children/those with ill health/autism/sensory impairment.	PDP11
Ensure true accessibility in design.	PDP11

Design Principles for Equalities - rejected

Recognise impact of flight paths on house prices and social migration.

Recognising the impact of flight paths on house prices and social migration is not a design principle but we acknowledge that it is an important issue for our communities. EAL sees this as an opportunity to address in the post-implementation review stage of the project, with a detailed study on any impacts.

MODERNISING OUR SKIES



Design Principles for Health	
Consider impact on mental health/wellbeing.	PDP11
Consider other health impacts.	PDP4
Consider impact on sleep.	PDP4

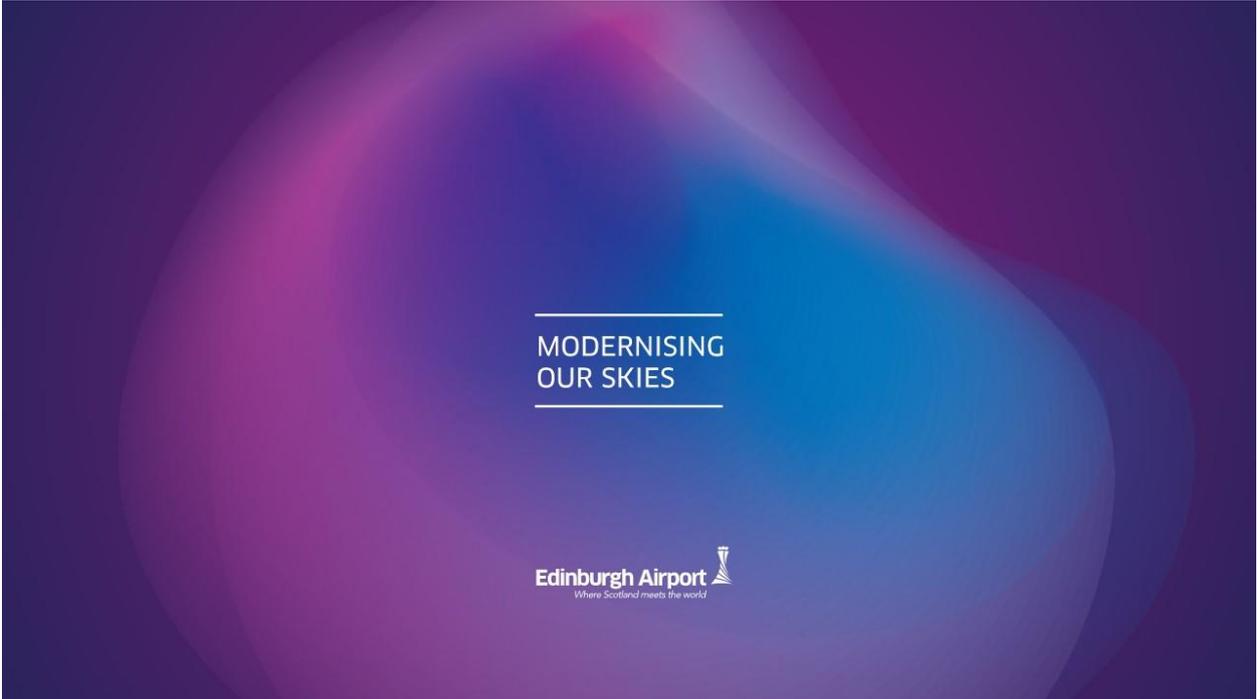
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Conclusions and close.

Thank you!

MODERNISING OUR SKIES



Transcripts of the recall sessions

Community stakeholders

Details: 5 November 2019 2.00 - 4.00 pm InterContinental Hotel Edinburgh

Moderated by: [REDACTED], Progressive Partnership

Attended by: [REDACTED] Broxburn and Uphall Traders Association
[REDACTED] Royal Burgh of Burntisland
[REDACTED] Edinburgh Airport Noise Advisory Board
[REDACTED] Cramond & Barnton Community Council
[REDACTED] Uphall Community Council
[REDACTED] PPCA
[REDACTED] Environmental Protection Scotland
[REDACTED] Extinction Rebellion
[REDACTED] North Queensferry Community Council
[REDACTED] Environmental Health at Fife Council
[REDACTED] Kinghorn Community Council
[REDACTED] Blackness Area Community Council
[REDACTED] Aberdour Community Council
[REDACTED] Dalkeith and District Community Council
[REDACTED] Royal National Institute of Blind People (RNIB)
[REDACTED] Drum Brae Community Council

Observed by: [REDACTED] WSP
[REDACTED] Diversity Dynamics
[REDACTED] Edinburgh Airport Limited
[REDACTED] Edinburgh Airport Limited
[REDACTED] Progressive Partnership

**110402 Digi1_stakeholders
Smart Verbatim Transcript
TauRho Transcribes
File Length: 154:09**

M Moderator

FR Female respondents

MR Male respondents

M Name, and your organisation. Let's start here.

MR Hi, I'm [REDACTED], I'm from Environmental Health at Fife Council.

MR [REDACTED], Environmental Protection Scotland.

MR [REDACTED] from North Queensferry Community Council.

M We just missed somebody, sorry!

MR Sorry I was just getting...

M Ah, [REDACTED] is it?

MR [REDACTED]. I'm a former University of Edinburgh Sustainability Advisor, but now I was invited to represent Extinction Rebellion.

M Thank you so much for coming. Next to [REDACTED] - [REDACTED]?

MR [REDACTED], from Blackness Area Community Council.

MR [REDACTED] from Dalkeith and district Community Council and also the Midlothian Federation Community Councils.

M Thanks [REDACTED].

MR Yeah. [REDACTED] from Kinghorn Community Council.

M Thanks [REDACTED]

MR [REDACTED], from RNIB.

M Hi [REDACTED].

FR [REDACTED] from Blackness Area Community Council.

MR [REDACTED] from (Ross...? 00:55) Pub Traders Association. Also representing (00:59) Community Council.

MR [REDACTED], sorry, can I rewind the tape, I'm actually representing ENAB not Blackness Area Community Council!

M Okay! We're good!

FR I'm [REDACTED] from (01:16) Community Council.

M Hi [REDACTED].

MR I'm [REDACTED] from Drum Brae Community Council.

MR I'm [REDACTED] from Crown Community Council and I'm representing Crownkirk Community Council as well.

M Thanks [REDACTED].

FR [REDACTED] from PPC Time Planning Consultancy, and we're here on behalf of Winchburgh Buildings Limited.

MR I'm [REDACTED] from Burntisland Community Council.

MR And I'm [REDACTED] from Aberdour Community Council.

M Wonderful. Thanks very much. What we want to do today, is a quick recap in terms of where we are with the process and also to have an understanding of your responses to the shortened list which we sent out on Friday. I'm assuming you all had that and read it? Anyway, we'll go through that in some detail. And then we're going to do a quick review of those ideas that came out during the research, that are important ideas but nonetheless don't qualify as design principles. And then, time allowing, we're going to go through the long list which is everything that came out of the research. We've got about 1 and a half, 2 hours – I think we can take it about as far as 4 if that's okay with everybody. Great. Once again, thanks for coming.

Shall we just start by recap. Okay. So we're coming to the close of 1B, where we pulled all of your ideas together through the research that you all helped us with – so the last previous workshops. We wrote a full report that we gave to the airport. And the airport, along with its consultants, have determined the short list of design principles that you've seen out of that. So now, we're just getting a response to those design principles and then we will start on stage 2. So that starts to look at a different process and starts to look at gateways. And then there'll be a full consultation later.

M Can I just butt in to say that we won't immediately go to stage 2, the step after 1B is to apply to the CAA for a defined gateway. So we then need to... all of our work from stage 1A and 1B to the CAA before they give us approval to move onto stage 2.

M Thank you. Sorry, I'm leaping ahead. Thanks [REDACTED]. And butt in again a bit more, by all means! So, that's where we are. What did we do last time? We ran workshops and you would have been part of those workshops. We ran workshops with aviation stakeholders, we talked to community stakeholders from north and west, community stakeholders from south and east, and other stakeholders, and also ran a group with ENAB.

MR [REDACTED], sorry to interrupt yet again. Would it be possible to get us (4:23), save us writing all of this and whatnot.

- M** I see no problem with that, I'll defer to my client...
- MR ██████, would it be possible to get the... Quite helpful just for our scribbling notes over.
- M** We can share it once the process is finished.
- MR What's the problem with it now?
- M** We still have another session to go, after this, that will be the same. So we just want to make sure that everyone has the same information.
- MR So after that session can you...
- M** After that one, yeah.
- MR When is that one being done?
- M** That session is on the 13th.
- MR So we can get it after the 13th.
- M** After the 13th.
- MR Thanks.
- M** And that session on the 13th is with the aviation group. As well as doing workshops with stakeholders, we also ran focus groups with residents from different areas. Residents who are overflow within the noise contours, residents who are overflow but out with the noise contours and residents who are not currently overflow but could possibly be in the future. So we spoke to quite a lot of people – 100 respondents – we had attendees from Edinburgh, Fife and across the borders. We had 4 recordings of all of those workshops and focus groups fully transcribed, so that was over 400 pages of transcripts that I read every single word of.
- MR Lucky you!
- M** It was really interesting, actually, a really great process. So out of that, we identified 50 principles. The airport has taken those principles and has merged some of them and pulled together from those 50 principles the 16 that you've seen.
- M** Can I butt in again, sorry? I knew that 50 design principles came from the community workshops, but there were 2 extra that the design workshop shortlisting considered, which came from (Nell? 06:25), which is (06:26) North. (There's been a whole selection ... Glasgow ...? 06:27-32) 2 were considered for the shortlist, not just the 50 that came from the community.
- M** Thank you. Good point. Thanks ██████. Let's have a look at all of those now. Before I put all of the design principles up on screen, you've read through them, you saw them last Friday, what are your views on them so far?
- MR PDP16, I have no idea what it's trying to say. (06:57)

- M** It's a technical one which moves to and from Glasgow and Edinburgh Airport. Should we procedurally deconflict it from the ground to a preferred level in co-ordination with NATS Prestwick.
- MR I haven't looked into that.
- M** It's one that [REDACTED] can help us with, and I'm sure [REDACTED] as well.
- M** Yeah, it's the one that came directly from Glasgow, and they have a similar one in their one. It just means we need to work together to make sure that none of our flight paths are going to conflict with each other.
- M** Yeah, that's right.
- MR It might be easier if it just said that!
- M** I'm sure there is. That sort of aviation speak.
- M** Thanks [REDACTED]. Right. Any other comments please. Just top of mind thoughts.
- MR Just to follow up on that one, the area where the conflict is likely is in the west, roundabout (shots? 07:51) because that's very close to (our homes? 07:53) for Glasgow, it's also very close to where aircraft arrive when they're coming into runway at 6 in Edinburgh. A more general point, that you asked at the beginning, these seem very, very general? So general that almost anything could be accommodated by them?
- M** Okay. Any other comments?
- MR Yeah, sorry, I'm not sure which PDP it was but there was taking into account noise issues for overflowed communities, taking into account those protected characteristics under the (08:29) 2010.
- MR Again, it's that same generality. "Taking into account of" – given that people with protected characteristics live all over the place, then one assumes that would happen anyway. So, I'm not sure what the added value of that phrase is.
- M** Right, okay.
- MR I'm presuming you're going to go through each one in turn, are we?
- M** Yes.
- MR So if we pick up something...
- M** Absolutely.
- MR Because I have got questions over that one too.
- M** Absolutely, of course. Top of mind thoughts, first of all, then we'll go through them one by one.

MR Just as a general question I had from that, this is the shortlist and because we had already input other questions and other principles at the earlier workshops, we're now seeing the whole of this (09:15) and what has been excluded for why. It's hard to actually comment on this list. Other than these ones specifically.

M Sure. Well we'll go onto the specifically. I will show you that we are going to go through the longlist during this process.

MR Wouldn't it be useful if this were to happen the other way around?

M Well, it's funny because we had lots of chats about which way to do it, which way round to do it, whether to do the longlist first or the shortlist. But given that we have a set amount of time, I thought it important that we get people's full views on the shortlist before we actually move on. But hopefully, if we can get through this within an hour then we can get through to a full examination.

MR Of the 16 PDPs, there are only 2 that had caveats, that's 11 and 12. It's very possible...

MR There's a third one.

MR And 13, sorry. 3 have got caveats. I think to allow the design principals to operate the way they're meant to be, so they're all (10:22) considered either of these caveats should be removed from these 3 or where possible should be added more caveats. I'm sorry to all these (10:32)

M Okay.

MR That's a point I was going to bring up – how's it actually going to be... Just remove them. Because otherwise you make them... Design Principle 1 that can be accepted by everyone. So I think you just remove them.

M Okay. Noted.

MR Just a general point about what's missing, from our perspective, in Kinghorn is the availability of the Firth of Forth. Airspace over water. We've now people living there. Okay, emissions may sink down into the water and kill the fish or something. But other than that, almost all these principles aren't needed, if you fly down the Forth. It almost needs to say, a flight path in and out of the east of the airport. And it doesn't apply to the west, which is much more complicated but down the east, we've got this massive open goal. A massive expanse of water, it's just there. And the planes don't really make use of it. And all of these principles seem to be suggesting ways we can carry on and not make use of it.

So I would prefer something very early on that says, a major principle would be to make maximum use of the Firth of Forth because it doesn't disturb people and it is an open space and a space to fly straight and then stop. All of these principles are then coming into play only on those routes where it's not possible at all to use the Forth.

M Sure. And that's a good point made. But flying down the Forth as a design principle was kept in the first place, and it is merged in one of these principles. [REDACTED]?

M What you've got to be careful of when evaluating criteria or flight paths options in the future, is not to pre-empt what those solutions are. So the point of the design

principles are to create criteria that can be evaluated against, and using the points as a solution. So the problem, I'm guessing from the question from you, is what's the problem with trying to answer flying over the Forth. Is it to minimise the impact on people overflown? Because that's the criteria we need to get to. A solution might be to fly over the Forth, but that's not criteria. So what is the reason to fly over the Forth?

MR The reason is multi-purpose. You can fly more directly and save trap miles on lots of routes and you're avoiding emissions over land. And you can avoid noise and disturbances to the people.

M So we have those as design principles anyway.

MR I know you have, but 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.

MR It just sounds like criteria...

MR This seems to be justifying flying over land, when we may have to do that for some of the routes but why start there? Start with the open space.

M [REDACTED].

M In PDP 4 is designed to provide flexibility over water or to fly over quieter parts or less populated parts of land. And we've already got 16 design principles, which is significantly greater than last time. And can potentially come up with (14:06). Looking at them, the flyover the Forth one will fall into that PDP 4, which is minimising impact on humans. So we're absolutely looking at (14:21)

MR There was another suggestion made at the workshop I was at. It was something like, flights should not fly over land when an alternative over water is available. As a criteria. Something like that.

MR Sound solution.

MR I just (14:43) when I read that, that was stunningly stating the obvious to me. All of them. When you go down (14:54) and I know that must be, as opposed to should be on a fair few of them. I'm a bit dubious. They should be to be honest.

M Okay. We'll pick up that detail when we go through them one by one. Sorry, [REDACTED].

MR It's good that we start with opening on the high level principles. I've been asked to represent Extinction Rebellion, but I could equally now be representing intergovernmental plan on climate change with the Scottish Government. I've got a wide variety of (15:36) bodies who are very clear that we are required in Scotland to reduce our carbon footprint and our carbon emissions over the next years. And so it would granted if we could record, somewhere, if you have a counter-view to, "It's fine to be expanding the airport to 20 million passenger movements by 2035". Because that's 5 years beyond the limit when Scotland's agreed, just on the 25th September, to accept a target of 75% reduction on our carbon emissions.

So this is conflicting with other policy objectives which are being taken not only in Scotland but globally. And I think it's very important that we do recognise this. Obviously everybody's wanting to jostle around it and minimise the impact, but I want to as a point of principle to remark that it's not compatible with this national objective.

MR Can I say, [REDACTED], that a lot of us around this table share your views when it comes to expansion. Alternative routes doesn't necessarily mean expansion. Some of us consider quite strongly Edinburgh don't have a case for expansion. And on that point of view, we would agree with you wholeheartedly. So don't assume, just because we're talking about different things, that we're talking about...

MR No, no, no. I wanted – before we enter the discussion – that the aviation authority in airports all over Britain are saying... Has anybody heard of Parkinson's Law? Does anybody remember the book about Parkinson's Law? That cars expand to fill the road, and so on. And it's a lovely book that my dad had. I think we're in a danger of being drawn by the nose to think that this is all fine. And I put a marker down that there are substantial numbers, including the Scottish government for whom this is a conflict with the expansion.

M Understood. Thank you.

MR Can I support that point? (17:52) a principle along that line that's just not in the shortlist, that all flight options and emissions considerations should be compatible with the national carbon reduction targets.

MR Well, I think that's very problematic. And I think that should be the first one!

M Noted! Right, let's go through them. Shall we start with number 1, safety at the core. The airspace designed and its operation must be a safe, or safer, than it is today. Any comments on that (18:44)

MR (18:45)

M Sorry, I didn't hear that.

MR If anyone's going to (18:51)

M So technical at the core. PDP 2. The prioritised requirements of airspace users must be taken into account when designing flight paths.

MR I wasn't quite clear what that actually meant.

FR Yeah.

MR What do you mean by airspace users?

MR Yeah.

MR What's aircraft?

MR What's aircraft?

MR The aviation industry must take precedent – seems a bit odd.

MR Is that things like gliding clubs, training areas, things like that?

M It could be, yeah.

MR It's very vague. I think it's too vague to be a principle.

MR And I think it tips it too close, the operators benefit.

FR Does that mean that the requirements of the airspace users are prioritised over the requirements of people on the ground, basically?

MR Yes!

MR It's not a good idea.

MR I took it as meaning that you can't have a new flight path that flies across where Kincardine gliding club will glide. I assumed it was that. That's how I interpreted it.

FR Yeah, it doesn't really come across like that.

MR And it's not clear.

MR It's not clear.

MR Yeah, there's military in that respect as well.

MR The language is a bit...

M The language is a bit?

MR I just think, try to avoid jargon, make things understandable. Maybe the language – if it was clearer – people might have a different view.

M Yeah

MR You can rate that how you want or how you don't want, really.

FR Yeah

MR Yeah

MR I think it's important to understand that the order which they come in this sheet does not indicate any aspect of priority. It's just the order in which they're structured. Obviously, somehow airspace users have to be included in the different airlines, or whatever, gliding clubs. All the things that [REDACTED] mentioned have to be included somehow. The question is, 'Is there a better wording that you think is clearer that, actually, would express the same thing that those people using the airspace must be taken account of?'. Which is clearly, as you say, such a basic principle. You would think, 'Yes, you have to take care who's going to use the airspace', but how can we word that in a way that...? Is there a better wording?

MR People using the airport...

MR You said it wasn't prioritised, but what is the word 'core' in brackets after the first four mean? Does that not imply that these are quite key symbols?

MR Yeah

MR I think that it does indicate that it is prioritised.

MR And the word 'prioritised' for instance.

[laughs]

MR A core principle or a priority? I mean, they're slightly different, erm... It's like saying, 'A car must be able to move is obviously a core principle', you know? It would say, 'It must have a good air conditioning system', it might be somewhere else. It doesn't mean that. What I'm saying is, they're all principles. They're all applied, they're all important. But what we're saying about the core principles are here, it's a functional principle as opposed to a...

MR Sure. What you're going to get is, out of this I would assume it is priorities by default. I took 'core' to be 'core priority' initially.

MR Yeah

MR That's what it says to me.

MR Yes

MR I think it's actually simpler than that. If I've understood this correctly, having had a look at some of it, seeing documentation on this – I think there may be a point that you picked up on earlier that interested me the first time round...

MR [REDACTED]

MR There you go, [REDACTED]. I'm [REDACTED]

MR I'm usually pissed.

[laughs]

MR That's okay. Anyway, this was between 'must' and 'should'.

MR Oh yes!

MR My understanding is that where 'must' is in a PDP, it means that it's definitely got to be considered seriously. Whereas, 'should' has got an element of choice. That's my understanding.

MR Exactly. So...

MR I thought I'd help to clarify it.

MR ...but these are the functional ones.

MR Sorry, to finish off the point – so that does make it, it's got a 'must' in there. It's not a question of 'Will we consider it an option?'. You must consider it. I think that's fundamental.

M [REDACTED]?

MR I think that's correct. The airspace has to be safe, which is number one. It has to meet the requirements of airspace users – so that's number two. I can understand that the wording might not be particularly clear, but that's designed to take into account the prime access for general aviation users; gliders. They were very strongly saying that they wanted as much space as they've got now, more if possible. It's about balancing airline use with general aviation. It needs to be flyable, which is number three. A bit like the ones before, but really you would like to do, but they weren't able to fly them. And number four is, the really important one, in that it's got to try and minimise adverse impacts; noise, health, cost of flying.

M **And [REDACTED], sorry...**

MR If it's important, why is it not 'must'? It says 'should'.

MR Yeah, I noticed that.

M **Excuse me...**

MR [laughs] That is fairly basic.

MR We'll talk about that.

M **Excuse me for one minute. Just for those who aren't reading this, I need to read out PDP Four, which is: 'Flight paths should be designed to minimise the total adverse effect on health and quality of life impact created by aircraft noise and emissions'.**

MR That's assured with [REDACTED] point.

M **Yes**

MR It's also rather than mandatory.

MR So, they're contesting that the aviation industry should have a right over the Commons. A for-profit organisation should have a right over the Commons. The Commons are our environment and it is not right. We do not agree with it, I think.

MR Mm

M **Mhm**

MR It's always been quite a big thing for me. 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'.

MR Must, must. You use 'must'.

MR Must. I beg your pardon.

MR [laughs]

M So, they're saying we do replacing 'should' with 'must'.

M Is everyone happy with the change to 'must' as an idea?

MR Yes

MR Yes

MR Yes

MR I would be far happier with that one being 'must', yes.

M Okay

MR But the question is, whether the second one should be 'should'?

MR Yeah

MR Because this is a supplement that the CAA and the airport is asking, if they can have right over our Commons?

FR No, that's...

MR It should be 'should'.

FR ...was number Two not actually just really badly worded? And instead of it meaning that the airspace users, i.e. the airport, has priority over the people in the ground. That, actually, it may be the casual users, like your gliding club and things, should be taken into account.

FR It's saying, all airspace users.

FR It should be taken into account, yeah.

FR Yes

MR Which was point he raised.

FR So, it's airlines and gliding clubs, and whatever are their requirements at other airports. The airport doesn't use their airspace.

FR Yes, it's just not worded very well.

MR It's just not worded very well.

MR It's just not worded clearly.

FR Okay.

MR But it's assured.

MR And it's effectively a status quo, because someone has already decided that so and so is more important than such and such. Or, you've got to balance these two, or whatever. It's just saying that this is... It's maintaining the rights of the gliding clubs to make sure they don't get bullied out of the way by the airlines. That's how I interpreted it and I'm happy with that.

MR It vague

MR I think it's too vague.

MR It's the wording that's...

MR Is there also a question on the PP Three and One? Are they not, for the sake of brevity, connectable? Now, they must be safer than they are and flyable. Therefore, you can eliminate two design principles into one.

MR Yes, I agree.

MR We did discuss that. I'd been meeting with air traffic control as well. From memory, they wanted to keep it separate, because we didn't discuss about combining those. Because you can have a safe flight path – it might not necessarily be flyable. Or, you could have flight path that might not be as safe. It's about the pilot and the air traffic control work load, and how much intervention they may need. It's designed to...

MR Will there not be safe flight paths that must be flyable?

MR [laughs] If they're not flyable, they're not exactly safe are they?

[laughs]

MR There is an argument to say, yeah, they might not be safe if they are flyable.

MR They can't be 'both' or 'must' though.

MR Mm

MR If you can have one or the other, they're not 'both' or 'must'.

MR Yeah

M Can I move to PDP Five? And let me read that one out. Flight paths...

MR You can skip it over. It's Four we're not... In terms... I know you read it out, but we didn't really... It was being discussed.

M Fine. Let's go back to number Four then. 'Flight paths should be designed to minimise the total adverse effect on health and quality of life impact created by aircraft noise and emissions'.

MR That is a real core, to the point. PDP Four is like a core principle.

MR Yes

MR Everything that more or less what we put out.

MR It should be a 'must'.

MR Yeah

FR I think from our point of view, it should be a 'must'.

MR Yeah

MR Yes

MR It's a must.

MR It must be a 'must'.

M Okay, that's fine.

MR Yes, I'm glad that I read that.

M So, I think we've replaced the 'should' with 'must'. We've got that. We've nailed that one.

[laughs]

MR Not only the 'must' verses 'should' on the rest of them. The rest follow... They're all going to be 'shoulds'. There might be an occasional 'must' in there. That's designed because there is a balance to be achieved. We could say, 'You must reduce track miles and CO2', but that might be detrimental to the adverse noise impact on people, which is a priority. That's why that it's 'should'. Given those four core ones, try and design flight paths that are shorter and emit less CO2, whilst making sure we don't cause a greater impact on people...

MR Yeah

MR So, it's that whole balance of... We mentioned trade-offs before in this workshop, so it's that balance.

MR Sorry. Can I show how these design principles were used in a previous ACP? You don't need to look at the detail, you can see it's all the colour on this. The principles were down the column there and for each option that was being considered, each option was graded with a green that meant that meets the design principle...

M But that was then and this is now.

MR It's a completely different thing, but what I'm showing is that there was this process here that not every option always got a green for every single one.

MR Correct

MR That it's going to be – as [REDACTED] has just said...

MR As trade-off somewhere.

MR ...a balance, a trade-off. So, we need to be aware of that. We can be quite definite and say, 'This must be the case', but when it comes to this it may get a red, it may get a yellow, it may get a green.

MR And therein lies some of the issues I had with the list. If you look at it in that respect – and I'm a bit used to greens, ambers and reds, if you like. If you look at that, the greens have a 'must' against them. Like, almost take care of themselves. Then we get into the minutia and start talking about the things that there's going to have to be trade-offs, or there may be a debate about trade-offs. We don't seem to have done that there. It seems, from my perspective in reading it, it seems that it's words for words sake on a lot of them. And I may be wrong, but it's not the way I would generally present something like that. I would, 'This must be done, that must be done, that must be done'. I think it's basic. We are not going to have worse off in this day and age. There will always be an aspiration to be better than we are at the moment. Then all the trade-off bits – and there will be a few – we then have to have these debates. There must. I always kind of think, take care of themselves.

MR Yeah, I appreciate that there's always this instinct to do this. But, multicriteria analysis, which is what we do as professionals all the time when doing transport appraisals and things like this, is about these trade-offs. It's all about these trade-offs to make sure that all the information... What we want to make sure is that, within those tables, absolutely everything you're really concerned about is included in the tables. The minute we start talking about, 'Oh it's all down to the BCR or the priority', or one individual thing, we're not going to make this process as effective as it could be. The key is to make sure that information is in the table, everything is taken account of, and that we achieve something that's both functional and achieving the goals of everybody, including all the community and users, and this sort of thing. Once we start talking about priorities, we're getting on a slippery slope, because you're undermining the basic... The entire philosophy of the MCA – multicriteria analysis – is not to do that.

MR But you started it. But you started it.

[laughs]

M Can I? Sorry, I've got two people I want to pull in. [REDACTED] and then [REDACTED], please.

FR I know that they've asked for a while, but I did want to ask that question, so I don't know if yours is similar?

FR I think, I know you're saying the 'musts' are kind of like hygiene factors; they should happen anyway. But, what they're there for is to help explain once we get to design optioneering, and there's certain communities that would like us to do certain things, but we need to be able to explain if it doesn't mean these basics – the fundamental basics, then that's not possible. I think that's why we need a set of 'core' in there, or 'musts', or whatever we call them, so that there's at least a guideline that we can then help explain and tell a narrative to people who are saying, 'Can't you turn this way and that way?' and 'Miss us and go around there'.

MR So, we'll have a core statement or a core aspiration. Yeah, I get that.

FR But it's design criteria against specific lines on maps. If you think the next stage is specific lines on a map, and that's going to look at lots of different options. But what we need to do is address each of those lines on the map against this criteria. So, if we don't have the basic core in there, some of them that don't meet that core can get through. That's the idea of having 'musts' and 'shoulds' to help get a better set of design options to go out to consultation on this.

MR I'm thinking of – from our advisers, or your advisers – words that, it's a done deal, that the expansion is obligatory. And I think this is what I'm wanting to question. I think it would be a flawed assessment if we didn't actually put that not as a 'must', because that really must be questioned. And the purpose of government, in the program for government, has just evolved. So, it's promoting the wellbeing of citizens in Scotland and sustainable, inclusive growth. That means improving the lives of those who are disadvantaged and this is not addressing those sort of criteria, which are a social criteria for Scotland and what we all ought to representing as a civil society.

M Thank you. Noted. And that was a point that did come out, and it is fully reported. We are going to touch on that again. [REDACTED], can I pick up with you?

MR Yeah. I just want to question the sort of egalitarianism of multicriteria analysis, because not all needs are the same. For example, if somebody is designing a shared space on the ground, where the principle is that people can see each other and, therefore, everybody sort of has equal access to that space. Now, the hierarchy in there has to be about saying, 'Those who cannot see what's coming have a higher need'. So, there is a hierarchy of principle. Surely – and this is coming out in the 'shoulds' and the 'musts' – there is a hierarchy here, we need to be honest about that hierarchy.

MR Correct

MR It's not realistic to say that they're of equal weight and equal value.

MR Yeah

MR For example, if we're talking about CO2 emissions, which is more important? Reducing noise or reducing CO2 emissions?

FR Mm

MR Functional issues. I mean, just say you're saying (35:40) was a shared space. That would have been a functional issue, and that's what you're saying. This is what we're trying to do. Our purpose is trying to do this. Now, [REDACTED] point is absolutely superb about the 'Oh, should the government's core purpose be a core purpose in here too?'. Well, actually, no because it's not the core purpose of redesigning airspace to implement some of the policy. It's a very important consideration in that process, which hopefully comes across, but I don't think there's anything in the core principles that says, 'Expansion of the airport must be part of this'. So, there's nothing in there. I think you're arguing, 'Non-expansion must not be part of it'. But, all I'm saying is that...

MR That's what I heard. That's what I heard the adviser saying.

MR And PDP Five basically does say that.

MR Yes

MR Yeah

MR It does.

MR Can you read PDP...?

M Right. Moving on to PDP Five now – 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...

MR So, it does say it.

M ...and the UK’s wider aviation strategy’.

FR That’s different to what we sent out of Friday, because there’s been a slight change.

M It is slightly different. Yes. These have been worked on over the weekend, so you have got very slight differences up onscreen.

MR Which is best?

M So, looking at the screens. This is the latest.

MR The screen is the latest, is it?

M The screen is the latest version. Should I read that out again?

MR Yes, please.

FR Yes, please.

M ‘PDP Five – 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’.

MR I would actually find that totally unacceptable without including what [REDACTED] already talked about. If [REDACTED] is putting in as a principle then I agree with him. Then that can stay in, but that can’t stay in on its own.

M Okay

MR Instead of ‘provide’, what’s about ‘enabled’?

MR No

MR Flight paths to enable an increased capacity? Which I think is a...

MR No

MR No

MR No?

MR I was going to recommend on the previous version that I was sent it's completely deleted, because I don't think that any case has been made to increase the capacity at Edinburgh Airport. However, the CAA does not consider increasing capacity as an issue as part of design principles, unfortunately. I think it should. But 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.

MR Commit it, yeah.

MR How would you suggest then the design principles take account of the Scottish Government's economic development agenda, which includes (38:43).

MR ...picked that up, the economic... The Scottish Government to actually put forward something.

MR 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.

MR Yeah

MR Because, otherwise...

MR You can't have one without the other.

FR Uh-huh

MR Absolutely! That's extremely sensible, yeah.

FR Yeah

MR And, by all accounts, unless one casts aside thousands of scientists work over the last twenty-five years. This is (39:39) twenty-five this year. That has a greater imperative than having more flights – the reduction in carbon emissions.

MR Yeah

MR I could be wrong, but you could have Five with Six, but you can't have Six with Five.

M Can I please read out Six? So, 'PDP Six – Environment...

MR [laughs]

- M** ...Flight paths should be designed to minimise CO2 emissions above the altitude of seven thousand feet and where it doesn't have a detrimental effect on adverse noise impact, also between four thousand and seven thousand feet'.
- MR** That principle is already spelled out in the Air Navigation requirements since 2017, and the wording of it is different from that I think.
- MR** Yes
- MR** If you're going to include that, then you should actually sort of be specifically aligning with those regulations.
- MR** Yeah. That is in the Air Nav Guidance. Corrected, it's a slightly different focus in the Air Nav Guidance.
- MR** Yes, it is a different focus.
- MR** I think that, actually, the one that we've got there is stronger. Because in the Air Nav Guidance it says, 'Prioritisation of noise below four thousand feet is critical. Between four thousand and seven thousand feet, it's important unless there is a detrimental impact on CO2'...
- MR** Mm
- MR** ...and what we're saying though, actually, we think we should still focus on noise unless you can deliver CO2 improvements between four and seven thousand feet. It's slightly differently worded. We can change the wording.
- MR** Can I read the actual one here? I've got the actual print-out here. '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. I would argue quite strongly that the ANG seventeenth, (42:22) seventeenth thing should be bothered.
- MR** I don't know that I necessarily agree with that judgement. What we've tried to say there is, where it doesn't have a detrimental impact on adverse noise. The Air Nav Guidance says, 'significant impact' I think? A significant impact on...
- MR** Disproportionately increased CO2 emissions.
- MR** So, we tried to... In my mind...
- MR** I would suggest that that's just taken them and just reworked into...
- MR** Yeah. We can do that.

FR We're just trying to prioritise noise over CO2 in certain situations, but we could put it back to what it is there.

MR It's just converting that from...

MR Yeah

MR We're fine. We'll do it.

MR We tried to make it slightly tighter for noise control, but that fine. We can change that.

M Yeah. Great!

MR This is accepting the most narrow minded, almost myopic thing, that the impact of aviation and the impact of expansion of this airport is only going to affect us here, which is really intrusive. It's not taking to account the radiated forcing of all those additional air movements in the atmosphere, which are contrary to undermining wellbeing and conflicting with the Scottish Government. Which I don't see here.

MR Yes

MR I'm not quite clear how we're going to introduce a proposed design principle which mitigates for carbon emissions and contributes to the seventy-five percent reduction against 1990 levels.

MR We actually did put forward a principle which, again, I can read out. 'There should be no change to the flight paths, which leads to increase in the number of flights in and out of Edinburgh, unless that change leads to a decrease in carbon emissions, together with a legally binding plan to sequester emissions resulting'. That's quite a long one, but...

MR That would appear to be of primary importance.

M Can we move onto PDP Seven and get a response to that? 'Flight paths should be designed to minimise adverse local air quality impacts'.

MR Must

MR [laughs]

MR Must, it's by law!

M Okay. Any other comments on that?

MR It just falls that the thing I've been thinking about all the time. It's words for words sake. It's either 'must' or it's 'should'.

M Yeah

MR And if it's a 'must', then it's a must. I'm still not sure where it would fit in with what my colleague said, because we're looking two ways here. We have two different pieces of Scottish Government Legislation, if you like. I think we need to look at that whole... There's sixteen of them with that in mind.

M Mhm

MR Yeah, civil society and members representing civil society.

FR Yeah

FR I would assume that if it's minimising adverse local air quality, then it's minimising... Am I making the wrong assumption? Global air quality... You know, air quality – whether it's global air quality or if it's minimising the local one, then it is, I mean, global impact. But I guess we're local groups, so that's why you've got the word 'local' in there?

MR Yeah

MR Local is in there because, I think it's the Air Nav Guidance states the key environment objectives of Government. Minimising local impact is one of the key things...

FR Right okay.

MR ...and that's typical.

MR And does it use the word 'local'?

MR Yeah

MR That's typically around a thousand feet from the ground.

MR Then we need to have a 'global' as well.

MR Yes

MR 'Global' as well, because let's face it, with wind that we get here, any CO2 emissions here are probably going to affect Norway more than they are us.

FR Mhm

MR Well, the majority won't. If we can understand your requirement, then it would be sensible for us to have as a design priority to minimise global air pollu... Er, er...

FR Air pollution.

MR Climate change emissions.

MR Local and global fuels.

MR ...greenhouse gas emissions is the term. Interestingly, aviation is particularly problematic because of the radiative forcing of the high levels of water vapour having a... Of contrails having a very...

MR Which is why she's asked this.

FR Yes

MR Yes. So, I think we would be asking for an additional principle.

FR Mm. Well, whether it's an additional principle or whether you handle...

MR Add 'local' and 'global'.

FR Don't the locals still add us to global though?

MR No

[laughs]

MR Is that the paraglide PDP Six (47:20)?

MR Can I help here?

FR Sorry?

MR Can I help here? I think I can help here.

FR Yes

MR 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 NO_x. 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?

MR Yes

MR Yes

MR Yes

MR So, it is an extra.

MR There is a local air quality management area on the A8 adjacent to the airport, which is why that is in there. So, we could assess whether they are choosing NO_x, for example – nitrous oxides – on that AQMA on Glasgow (49:08). And other emissions I thought would be kind of on PDP Six in terms of minimising CO₂...

MR Is there a flexibility in this? For example, in our neck of the woods they're talking about low emission zones in quite a big way – the Queen's Ferry Road and St John's Road, I feel like.

That arterial route out of Edinburgh, or into Edinburgh. If there were changes made to that, and I suspect there might be fairly soon, is this flexible enough to cope with that?

MR The guidance suggests that aircraft movements don't have an effect on local air quality once they're above one thousand feet.

MR Because of dispersal, essentially.

MR So, the local air quality impact is essentially assessed on the number of movements or times on the runway, and taxiing below one thousand feet. It's the proximity of the air quality management zone and the A8, from Newbridge Roundabout, nine-hundred-and-fifty metres into the airport terminal. That's the key driver of that issue, in terms of that. So, I don't think...

MR I'm not expert enough to...

MR I think that in the previous assessment it looked it as a very minor impact from the airport on that AQMA. So, I would suspect that ones that are further away from St John's Ferry, or whatever, will probably be unlikely to be significantly affected.

MR The rationale for asking is, we have asked it to be extended. That's the issue. People have suggested St. John's Road and Queen's Ferry Road, but there is a big push...

MR Yes

MR ...at West Edinburgh to extend it further out. Then it may become an issue that I've not got the expertise to understand.

MR Can I just? There's two points. One is that one of the purposes of this exercise is to narrow the routes on which planes fly using the computer technology and RNav, or whatever it all is. So, it is likely that with one plane after the other, after another, after another – all following an absolutely precise path under the future control arrangements – it's likely the pollutants will sink to ground in the more not dispersed. You can find, if it's up to a thousand feet at the moment, I think with the RNav and the narrower and narrower channels, one plan after another every minute, which is the plan, you could well find that the pollutants sink to the ground in certain areas where the planes are at three thousand or four thousand feet, because of the technology that's going to be applied to the whole process. So, I want the thousand feet to be elongated to a much higher level. Secondly, the wording of this is a bit weird. I am presuming when you talk about St. John's Road, or wherever, we're talking about local communities of people. But you could be talking about local teams of rabbits on the Pentlands. Because, wherever the planes fly, there will be pollutants and the air quality will drop. But I think the purpose of the principle is to try and avoid pollutants landing on people, or communities. So, it probably ought to say, 'Local communities of people' not just 'local'.

M Yeah, okay.

MR Because it could be local rabbits in the Pentlands, or wherever, if you don't specify.

FR Then somebody could argue that the rabbits are just not as important. But the local air quality for the entire environment – our areas and agricultural environment dropping whatever on our crops and eat.

- MR I agree, and we're proposing going down the Forth a lot more. The fish will suffer and seals will suffer on the Forth.
- FR Mm
- MR And that will feed into our environment, and we'll eat the fish, and so on. So, the overall global reduction of emissions is what is really important in the longer term. But in the short term, I'd rather they sailed down the Forth and that the water soaks up some of the emission and the NOX, rather than it going over individual communities and people, because that's immediate. That pollution is immediate.
- MR I'm really struggling with the fundamental concept here. I hope I'm not going to upset people by saying this, but I think we're starting in the wrong track. I don't think we're using the change in flight paths as a means of controlling environment in the right way. I think there's an opportunity to change the flight paths for Edinburgh Airport, potentially, to increase capacity. We don't have to use it, but we're missing our opportunity to do that. And who knows in five years' time – electric airplanes, electric engines... Perhaps airplanes will become much, much more efficient. I think we're using this in the wrong way. And I just struggle with that concept; 'Let's not let Edinburgh Airport grow because that will help us in our control of the environment'. Yes, I thoroughly approve of the concerns we're expressing about the environment, but I'm not sure we're doing it in the right way. That should be complementary to this process, I would suggest.
- MR If we have as one of the design principles that it is reducing the greenhouse gas emissions, I would support what you're saying absolutely.
- MR Okay
- MR I don't want to be anti-progress in any way at all, but we need to be clear where it's conflicting with other priorities.
- MR Yeah. I accept that.
- MR What the government are saying here... I'm making no assumptions at all about that the law will not be an increase in air traffic. I think it's foolish not to plan on the assumption that there will be an increase in air traffic. All the principles here will benefit from having (local? 55:05) traffic as well, and I think that's what we should be focussing on.
- M Okay. I'm going to move onto PDP Eight now. 'Flight paths should be designed with cost effective routes that minimise track miles and fuel burn'.**
- MR Guess where that came from!
- MR Can you define 'cost effective'?
- M Cost effective – burning less fuel I guess?**
- MR Yeah. Less time for engine running as well, hours of flight, hours of engine usage, affected maintenance costs, and things like that. So, that's all factored into that. And it's complementary to reducing CO2, because if you... Shorter tracks burn less fuel and you're generating less CO2.

MR 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.

MR I think that makes sense, because actually, it's an operational principle not an economic one. Therefore, yes, it's the wrong place for it.

MR This brings back in, if we have to define a principle then the words aren't right. If someone's asked, 'Can you define what cost effective means?', we've got a principle there – we want to have that principle. If someone's asking, 'Go and define what you're saying there' in a principle, then it's not worth the paper to tread on.

M Okay fine.

MR That's right. That's why we're all here [laughs]. You know? Let's get the wording right and everybody understanding it, yeah.

MR I think the reason it's come out like that is, because it's the one where we had merged two or three other design principles.

MR Yeah

MR One which was airlines wanted to be cost efficient. We also wanted to minimise track miles. It's probably just a merge to address those, but we can work that out.

MR Where does that principle cross-cut the others? Where does the principle that this is in here saying, 'Yes, this is a cost effective route', but it's actually at the detriment of the other four or five of these principles?

MR That's why it's a 'should' as well.

MR Yeah, it has to be a 'should'.

MR That's why the noise adverse impact is a 'must'. That's the priority...

MR Just take out 'cost effective' and that's fine.

MR ...and that part really is designed to reduce track miles and fuel burn, and CO2 where we can without having adverse impact on quality of life.

MR You need to try and avoid principles that then we get a second conversation about after it. Because that's exactly the point that my colleagues are raising there. We've got a principle, we've got a form of wording that we perhaps are happy with, and it's sort of, we're at mixed stages. Where does that cut across this one?

MR Yeah

- FR Leaving the 'cost effective' out, does that just negative what that...?
- MR Cost effective, is that... Cost effective, who?
- MR I observe that if we take economy; one, and operation, operation, operation; eight, nine and ten – we have four principles which are effectively safeguarding or advocating on behalf of the aviation industry...
- MR Mhm
- MR ...and there are only two which are safeguarding the environment. Not very balanced. And I think civil society's basis as neighbours, if you like, of this development – there should also be some better social and environmental balance. That's why we're interested in maybe reintroducing ones that have been previously described into to this shortlist.
- M We do have three on the following page that do address the community issues.**
- MR Could I also say though? I don't think we should be afraid of having two design principles that could potentially conflict with each other...
- MR No
- MR ...because that will be sorted out when we sort of get to that stage.
- M Yes**
- MR Yeah, you get the evaluations. But the same point is, one shouldn't be able to then...
- MR Negate the other one.
- MR Thank you, negate. And that always does... It allows the design of the flight paths to efficiency, or track miles, to over-write what's actually a routed form.
- MR Yeah
- M Can I come up on the efficiency element now and just read out PDP 9 "The flight path should be designed to ensure efficient and effective route management."**
- MR Could somebody explain to me what that means? [laughter]
- MR Yeah
- M I could try [laughter]**
- MR It's very similar to the previous one.
- MR Yeah, it is.
- M Efficiency is, the planes are basically going to be flying the routes themselves with minimal interaction with the controllers. That's the whole point of it. So if they're complex routes, lots of turns and things like that, that adds complexity. Maybe the**

aircraft can't manage and it interacts with other flight paths and things like that. So it's meant to be, from an operational perspective, efficient and effective. So you can get the planes in as quickly as possible, minimising halt times as well, which helps reduce fuel burned, track marks and CO2.

MR I suppose, could we consider merging eight and nine?

MR Mm

FR Mm

MR We have done some merging already.

MR Would it be too simplistic for me to just say that I have an expectation that we would do it in the most efficient way. And I sit there and wonder about words. We seem to be playing with words there. People have an expectation that you will do the right thing, and if we start off from that premise then maybe we wouldn't be having some of the conversations here. I just have an expectation that it would be in the most efficient manner anyway.

M I think there might be in different communities, there's different things. Each community thinks there's a different right thing as an answer.

MR Yeah, well maybe that's the debate we should be having then.

M Yes and I think that's partly what (01:02:08) and the reason why we've asked these groups to the workshops. So air traffic controllers would just get them straight into the airport. That's it. It's easy for them, so this is why it's a balance.

MR Well that's surely the starting principle, isn't it? Theirs is the most efficient route but it must be scared by these principles and therefore it has to...the line has to bend for this rule, for this rule, for this rule. And that's what we're trying to say here, is forget the principles, these straight lines must be curved.

M Yes, that's right and again, that's why it's a "should".

MR Yeah

MR So your ones are musts and then it's a balance between the others. How do you...do you put it over that part? It's going to have an effect on track miles, you're making sure. It's very complicated.

MR I don't think we're fair about these debates. I would have preferred if you'd said "Here's what we want. We want to do it this way because it's cheaper, it's more efficient for us bla, bla, bla. And then they can pick the knots in that, and have their input. And I think that would have been a far better conversation, to be honest.

MR Can we merge these two though, eight and nine?

MR Yeah I think so.

MR Oh yeah.

MR We'll talk to the air traffic controllers and see...

FR I think there's different points for reducing track miles versus what is effective route management. And I guess the route management is the bit that allows us to deviate from a straight line. So if it would deviate from a straight line to this community or to go down Firth of Forth.

MR Yeah, and that's the point here. I'm picking up on your point absolutely here about what are the terms of which you will bend and that's what needs to be as clear as possible in the design principle and I think that's, yeah...

FR If we merge it and we have a minimised track mile and fuel burn for effective route management it doesn't even control the straight line to get the quickest route there. And that doesn't allow for the flexibility to move it.

MR That was a hypothetical discussion. I wasn't actually...

FR Aye but if we merge two, there's two different things there, they're saying, I guess, and they become the same thing.

MR I understand this. There are different route management requirements when you hand off the CEA and (01:04:21). So there are different elements to that point. So largely they are working around the same point. It's maybe just an extension of the same principle with comma, and will look at the effective route management.

MR I would actually take [REDACTED] point that it does help keep two principles separate.

MR Right

MR And I'm not afraid of having maybe even a longer list than the one that we were supplied with because when you get to the thing I showed before, just looking at it the greens and the reds and stuff, yeah.

MR We'll come to it because we've got PBP 15 which is looking at the broader sort of where the planes are actually allowed to go at the moment and where they're encouraged to go compared with the space modernisation strategy that's happening. And this part fits in with that because at the moment we have routes which are constrained to almost double back on themselves to get to a final destination.

FR Yeah

MR And if we can actually consider this in the greater airspace discussion then that can be avoided and we can review submissions for a lot of the routes.

MR Yeah

MR But it has to be a larger discussion and then it has to bring in the issues that [REDACTED] has brought us, a baby Houston of space which is not currently being used.

M Yeah, noted. Where are we now?

MR Ten

- M** Ten, so “A flight path must be designed to accommodate PBN traffic in line with CA’s modernisation strategy.”
- MR What is that strategy?
- MR PBN, it’s called performance based navigation and I think to put it simply in laymen’s terms it’s like Sat Nav for aeroplanes.
- MR Right
- MR So instead of using those systems of flying from beacon to beacon.
- MR Yeah I get that.
- MR So there’s no argument there.
- MR So this is the issue about the whole airspace modernisation and the process, which it’s probably part of and it has to be designed so the aircraft can essentially fly themselves with minimal interaction from air traffic control. So pushing, I think, towards more modern day (01:06:52).
- MR But it is also, a UK-wide, every airport in UK is having to develop our systems to allow the next...
- MR That’s a good explanation, a Sat Nav for planes.
- MR That’ll do.
- FR Understood
- MR And just hope it’s not a 737 Max [laughter].
- FR You keep saying these aeroplanes are flying themselves. I’m sorry but I then have a mental image of driverless cars [laughter].
- MR They do. They are.
- MR Have you spoken to Michael O’Leary? [laughter]
- MR That’s why they’ve got no windows on the doors into...
- MR Stop it now.
- M** Okay so we’re happy with that. Let’s put a voice on the jargon the PBNs, spell it out, what it actually means.
- MR Yeah, that goes for a few of them actually. Like if we spell out and flourish out some of these things.
- M** Okay

MR I honestly observe that these are all slightly geeky operational things that are to do with optimising, which I've already been happy with. And in a way, all those three operational criteria could and should be merged into a single criteria which is that it is to be done well. By splitting them out it gives more weight to the aviation industry rather than other priorities.

M **Okay**

MR If they could be merged it would be great.

M **Noted, thank you. Can we move onto health? PDP 11. "Flight paths should be designed to minimise population overflow below four thousand feet and, where possible, between four thousand and seven thousand feet, taking into account any potential adverse impact due to those over flown having protected characteristics as defined by the Equalities Act 2010.**

MR Well, the point I made earlier on, I would want the "where possible" removed.

MR Yeah

M **Right, yeah**

MR And I'd like to have it explained to me, the last part. I've looked at the nine characteristics of those protected characteristics and I was struggling to see how that related to what we're talking about here.

M **Equalities expert in the background, please.**

M **I'll try and explain. The Equalities Act of 2010 actually encourages public bodies, as an example, because the airport is not, to do equality impact assessments on any policy decisions that they make. Because what we often don't do is think about other perspectives other than our own. So if I take as an example, we're all adults in the room, and whenever I've heard us talking about the impact of noise and sleeping, we tend to think about adults who go to bed at eleven o'clock. But children go to bed a lot earlier so by including reference to the protected characteristics, there's nine of them – you know, we can't start having nine different design principles come in every area. But it's that idea that in the next stage of this we kind of put ourselves in the shoes of different people who might be impacted differently because they happen to be of a different age group or have a certain kind of disability or condition and get their views, see it from their perspective and try and mitigate for adverse impact that's there.**

MR I fully accept the principle, it's just when I looked at the list of the nine categories in that I thought I wasn't quite sure how religion – does that mean you don't fly over a church, or something like that?

M **Well, in the previous ones we've been involved in, we've mapped where churches and places of worship were, for example.**

MR Right.

- M** And we've approached groups that represent different religious groups and said can you think of any potential adverse impact? Not a lot has come back. I mean I would say the areas are probably to do with, say if somebody had autism, for example and it's a spectrum and there's a whole range of ways it might impact, but sensitivity to noise could be heightened. So it really ends up becoming really individual.
- MR Yeah. I fully agree with the principle, it's just when I looked at the Act I thought...
- M** It's so hard to encapsulate it. [REDACTED] was making a point earlier, I think, linked to this when we were talking about designing air space.
- MR If you design the space then surely you have to have maps of all those different characteristics across the area and that might or might not even prove anything.
- M** Yeah we started doing a baseline equalities impact assessment of effected communities. So that's going to underline this.
- M** I just wanted to ask two other people: [REDACTED] and then [REDACTED].
- MR Yeah, you've probably guessed by now but 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.
- FR And I think the comment of removing where possible it's making there.
- MR Yeah, that was the secondary part of that particular one. I dislike intensely open doors, if you like, and someone's taken into account might be another person's "yeah, I'm just going to do what...okay, mate I've taken it into account but I'm going to do what I'm going to do" and that worries me.
- M** Sorry, I was just going to make a point to jump in there. When the auctioneering happens and we have to do...I don't fully understand how we would represent that yet, but it's that red, yellow, green suggestion on how the design principles have been met, if it's not been met it has to be explained and justified as to why it's not been met. So I guess the fact that that's in there is to say that it's been considered and if it isn't...
- MR But then by default you then get a secondary priority list forming.
- MR There's no strength in that by saying we're taking into account and saying something's been given serious consideration to make it stronger. I don't know.
- M** [REDACTED], sorry.
- MR Yeah, I think having, where possible, take account of, take out what's in between. It's a very, very unhelpful set of phrases. So we are presumably talking about minimising adverse effect or mitigating or whatever. But it's got to be stronger than...
- M** Yeah

- MR We don't have take account of the needs of airlines and whatever in there so those words already kind of make it feel like a tick box. You know, yes we're going to do impact assessments, equality impact assessments and as long as we've done those assessments, that's fine. But that is taking account of that it needs to be much stronger.
- MR What it appears to me, to be qualifying something which should be an absolute: all the population, each individual. The impact of each individual should be minimised and by qualifying it, it would appear to potentially a special plead for a particular thing here. And I suspect that it would potentially weaken it. That's my thought.
- MR Sorry [REDACTED] but I think actually that waters it down. 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.
- MR That's what I was thinking. So I think that just needs to be more worded.
- MR What we're saying here is the "take account of" and stuff like that- let's be specific in there, let's say minimise, we minimise and I don't think there's a problem with that. I think we can do that. These are the aims. There's going to have to be trade-offs, so although it won't necessarily be the minimum option that will ultimately be chosen, but the design principles I seeks to minimise. Is that what we're saying?
- MR You might want to refer to the mapping exercise, for example. If we have information, why are we not using it? If you're going through a mapping exercise and you say and here's how we got to this point, we used this information, we did this. There may be a debate to be had after that but you're not directing anybody to it there on that principle.
- MR That's the next step.
- MR Taking into account the most recent part of this discussion, I would suggest then take the words "taking into account any potential" are replaces by meet the requirement of not having. That summarises what's just been talked about.
- MR I mean this one, I think it's subtle. It's a merge of many different design principals that have been proposed, including over flying near schools, hospitals, care and retirement homes. It's taking background noise into account which is one we said, the noise environment. Those with ill health, autism and sensory impairment, accessibility issues, mental health and wellbeing. So they're trying to encompass what is very broad and putting it into one design. We've obviously not captured the right motion there.
- MR But can we also change the heading to health and wellbeing, rather than just health? Because it's quite a narrow...?
- MR Yeah
- M Okay health, noted. Thanks.**

- FR Sorry, just our main point- obviously I'm here from (PPCA) for Winchburgh Developments Limited and the whole way through the process when we've talked about population we've been keen to stress that it's not the existing population. There is a large amount of house building, not just in Winchburgh, but across the region.
- MR Yeah
- FR And 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...
- MR There's a primary school in (Campbell? 01:18:44). It's not built yet but it'll be there.
- FR It's the same idea, yeah.
- MR Existing and planned
- MR I was just bringing it back to my thing because presumably that information...
- FR Yeah, when the mapping is used it would be helpful to plot where the future communities may be.
- M We're going to have a big mapping exercise and then air traffic control...**
- MR You read all these marks and work out, which makes sense anyway.
- M When we did this as a workshop, that's when we were tracking. We need a big map and we need all these things on the map and actually coming up with this list we created a whole new set of work that we need done to move forward with this. So when said these are the proposals for design principals, what would we need to know to actually make them happen? And that is the work that is going away saying, we need this map, that and that.**
- M Finally then, before we move onto the next point. Okay, your point.**
- MR Two points: one is that this seems to link back to the minimum regulations of four thousand feet and seven thousand feet that are in different air traffic control interfaces and other aspects of regulations. And the four thousand feet and seven thousand feet as far I can tell were made up by some guy in the CAA in 1973 and they've just carried on and they've been embedded in regulations and they're in operating procedures. We don't need to stick to them, particularly since we're talking about minimising. 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 feet ought to be...so if it's, where possible, minimise population overflow and it ought to be twelve thousand feet. And then if you have to fall back, if the airport people have to fall back on the minimum regulations, well then you're back to four and seven because they're embedded in law and in regulation. But the objective should be to minimise population overflow below twelve thousand feet. And then secondly there is a bit of a distinction, until you get very close to the airport, there's a distinction between planes taking off and planes landing. If you're in the departure flight path they're roaring into the sky to the point where

they're at twelve, fifteen thousand feet and it's jolly noisy, at seven thousand feet, jolly noisy. So we ought to alter it to seven thousand where possible.

FR I thought that one of the first points was that we were taking out "where possible"

MR Yeah

MR Well, okay I would go for twelve thousand feet. I mean that should be it. Especially if you took new places, Winchburgh and places down the Forth and the overflow, particularly for departure planes.

FR Do they require to do that one in CAP 1616? Or does the wording from that comes back to make it (01:21:38)

MR Yeah, but you don't need to specify the minimum as the maximum, particularly in areas where you've got the Forth and you could do a lot better than the minimum. And I think I would want you to be ambitious and then fall back on the regulations at that you have to.

M But we also only control up to seven thousand feet.

MR Yeah, but this is a joint decision. 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.

M Why twelve thousand ?

MR Well I'd rather it be fifteen but [laughter] you do not need to overfly in many areas and why cut in a provision that allows you to do it at four thousand feet...

MR So if we say minimise population over flow particularly at four thousand, seven thousand and then we can debate the official...

MR No, it needs to be minimise population overflow between a much higher figure which I suggest is twelve thousand feet. And then, if you have to, you'll have to fall back on the regulations at four and seven. Sorry to be difficult but know, noise is noise.

M You're not being difficult, you're voicing an opinion and that's what we're here to hear. So I'm going to move onto the next health one now. "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.

MR Again, stuck record, remove where possible please.

MR Health and wellbeing.

M Health and wellbeing, heard.

MR Sorry to weigh into this semantics argument but why have we got three categories just for noise? Because noise is a health issue.

Also, while I'm on the subject [laughter] about noise, for a start, and air quality and air pollution, you've got things like some of your legislation out there or Scottish Government guidance and strategy but the things about noise and air quality and CO2 emissions are enshrined in law. It's not just a nice thing to do. This is the law and you have to minimise effects on all those different things. And that needs to be put there, as you know, the environment, the noise, the European Noise Directive, and it needs to be up there because that's an important thing that we're looking at. You know, the Environment Act needs to be up there, again the Green Air Strategy and the CO2.

MR It comes back to [REDACTED] point, doesn't it? Because, yes, as you say there are legal minimums and the minimum that's the law, it is the law and as [REDACTED] was sort of saying, by principle we should be aspiring o actually be better than that.

MR Yeah

MR Better than that, that's true.

MR So would the wording of that change then to be flight paths must be designed to minimise overflying sensitive locations?

MR Yes

MR I'm wondering, you mentioned schools.

MR Yeah, I mean schools. I think comes under eleven. And twelve was more about historical sites, so Inchcolm Abbey, the Castle, historic sites.

MR The zoo

MR Green spaces, impact on wildlife, animal welfare.

MR Schools are not protected, are they, in characteristics?

M Yeah, I think there's a whole section on education.

MR And I think it would be great to avoid flying over historic sites and things like that. There are a lot of them and anyway, we say must. It's just a strange opportunity. What we're trying to do is say a blank sheet approach to flight paths. And actually quite how do we come to that, to access this?

MR I don't know.

M Right, I'm going to pick up on [REDACTED] point now before we move to the next.

MR Yeah, the issue about noise being a health issue. 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 Incholm Abbey, which is a very peaceful environment. So it would great if it would be possible to capture that.

M And that's what we tried to capture in there, to minimise overflying, location and noise for different receptors.

MR What about receptors?

MR Sorry?

MR Can you explain what you mean by saying set to different receptors?

M Yeah, so historic sites is one of them, green spaces, the zoo was mentioned specifically.

MR So those are locations. The question is not what's a noise sensitive receptor?

M Well, we've looked at various locations and noise to those sites.

MR Oh, right.

MR Can I just clarify something before we go on? The point raise by my colleague over there about the law, the legislation criteria that we have, surely that should be, I thought we had agreed that earlier on, maybe I'm wrong, that we would place that where it should be placed in all of them. You have the law. It strikes me that's what we should be doing, or better and we don't seem to have that, sorry.

M CAP 1616 is the regulation that we need to meet that references all the relevant legislation that we need to meet. So by referencing CAP 1616 it does imply and refer to then, the necessary legislation that they have to be.

MR And are you then gaining implications now [laughs]. I've we're working to CAP 16 and it's working to the legislation then that probably covers the point. But I wouldn't be implying anything. It either does, or it doesn't.

M Well we have to meet CAP1616 in the aviation industry, because I think the WHO guidelines and adopted by CAA.

MR Yeah

M And that is referenced in CAP1616 of what we need to meet regarding noise. So while who regulations might be the guidelines it's not something we have to do. But then there's CAP1616 that says what we have to do. So I don't know what other legislation would apply.

MR And that..sorry but I have to say this as well. We have legislation and our politicians are awfully clever in changing legislation every so often and I'm worried about the flexibility of what we're trying to achieve here to fit in with them all the time, like that. So do we come back and revisit something, that principle for example if the legislation gets changed because it now no longer fits CAP 16, that's kind of where I'm trying to get at.

M If legislation changes then licence in aviation will already and CAP 1616 will change in regard to that.

MR Right

M So if we say then that we meet CAP 1616 we need to keep up with every iteration of CAP 1616 that is out there.

MR Yeah, there's a catch of paragraph in CAP 1616 that says that.

MR So I'm just going to say is the point about this and [REDACTED] point about sensitive, just to round off this point -have we defined sensitive adequately by putting, for example, the zoo, we're talking about green spaces there and others? Now the point is if we can be more specific. And it seems to me quite good, but if we can be clearer then that's the object of the defining principles. I'm not we've got to a better wording yet.

FR I think noise receptors might be confusing and I think that was meant to imply horse and cattle farms. So receptors might mean animals or people in those areas so if we just said locations, do you think that that makes it clearer to understand?

M I'm going to take on final point on this from [REDACTED] and then we're going to have to move on because of the others.

MR Just on that, I mean clearly EL's team have got some plotted information: maps, areas or lists. So where we have something like noise sensitive locations we've heard lists of things. So these areas of (01:31:30) if I can put it like that, are being raised here, could this simply have, but I don't know what it needs to be, but whatever these are could be some reference to a glossary of terms or something like that. So you actually see what you mean by i.e. this includes schools, whatever.

M Mm

MR because there's been several points as we've gone through the explanations of the various PDPs where I can see that you've tried to cram in three, four, five, six, seven principles into one. So to actually just have that spelled out, so this is what you refer to.

M That's a very good idea, I think.

MR So anyway, if that was somehow attached to this and circulated, that would be helpful.

M Okay, I'm going to move onto thirteen now, noise: "Where possible, flight paths should be designed track concentration and or track dispersal options to provide noise respite."

MR You know that I'm going to say [laughter].

M Yes, I do.

MR Right that's it [laughs].

M Noted. So apart from removing what I should, other comments on this please.

- MR Why does it say “where possible”? I mean would it not be better to say “flight paths should be designed”? Is there a reason why?
- MR We’re saying we’re taking “where possible” out, removing the term.
- MR Yeah
- MR I’m not sure what the difference is between thirteen and fourteen.
- MR Yeah
- MR There must be a particular flight path.
- M So I’m going to read fourteen out so we all know what we’re talking about here. So fourteen is “the predictability of flight tracks must be maximised for consistency of operations.”**
- M I think that was in reference to vectoring and route deviations. So the consistency of operations was that if there’s a flight path there then more than not, that would always be not flown.**
- FR Does that not conflict with thirteen though where it says that it should be dispersed to provide noise respite?
- M If that’s what the flight path is then how it’s flown, that would be, everyone would understand that as what was being (flown over? 01:33:40). Because I think one of the points that was made is that deviations, you just don’t know if that’s going to happen or not. So the idea of developing flight paths that are really flyable, that the airlines can fly that they agree with. And deviation’s always happened for weather and safety.**
- FR Yeah
- M But other than that, if it’s a well designed flight path it shouldn’t really happen.**
- FR Okay
- M It’s that kind of...**
- FR Okay
- MR PDP 14 appears to be an operational rather than a noise priority and should, perhaps be merged with the other operational ones which I’ve spoken about before merging. Otherwise it’s adding in industry imperatives which...
- M What I understood with that one was actually in response to people saying I’m not living near the flight path but suddenly planes are flying over me and they’re taking short cuts. So that wasn’t designed to be an industry one, it was actually a point raised. But I think you’re right we’ve got the medium is operational but it’s...**
- FR It’s noise but...
- FR So it’s both really, isn’t it?

FR Yeah

M Okay

M It's predictability, you know.

M One more point on this one.

FR Other noise issues.

MR Yeah, I would like to ask you generalise that into consistency of operations but how much are you going to be working with air traffic control on this? Because at the moment more and more recently the spread of aircraft above four thousand feet has gone like that – significant change. And every time I make a complaint I get told air traffic control, it's not the airport. So to me there should be a stronger emphasis here that you're going to be working closer with air traffic control to at least get closer to what the feedback, the people actually want you to do, if you have to go ahead with this. Because the spread, as the gentleman who's not in his chair right now, said earlier, the noise between four thousand feet and up to probably, I would say in my opinion with my ear, about ten thousand feet. It's quite significant for some communities that are particularly in a quiet area.

MR Can I just make one additional comment on that? Because here I agree. The consistency of them being able to predict the noise and predict where the planes are at the moment is a factor, or it's a function of the vectoring.

M Yeah

MR And that factoring as you sort of say is tendered over to air traffic control at the moment at four thousand feet. Should we actually be seeking it as a principle to have no vectoring before seven or ten thousand feet?

MR Mm, yeah

M I think if we design good flight paths...

MR Yeah

M Thanks, [REDACTED]

M If we design good flight paths then the vectoring is minimised to just safety and weather. And that's what I'm trying to get to, in that...

MR It conflicts with the present use. The flight paths at the moment are well defined but they are dispersing more and more.

MR Yeah

MR Because of vectoring.

MR Yeah

M But that flight path is something that we want to reduce and we want to be more accurate, so if we can actually get that accurate flight path there, the dispersal is...and vectoring off a more defined line, is the minimum.

MR Well, sorry but I think what I would have hoped to hear is we could add the words “and we will work with air traffic control to keep these flight paths as narrow as possible.”

M Number fourteen is aimed at air traffic control and we were discussing that. And for that reason it's operational.

MR It doesn't actually say that though, eh?

M No, it doesn't.

MR Yeah, so that's what I'm saying. I'm suggesting that that be added.

M Okay

MR What I'd just add to these two points, again if it's possible, given the slight confusion round the table and the fairly clear explanations we're getting from the airport advisors, again it would be helpful if that advice could be added to this glossary, just adding what we're referring to. Like vectoring, how that's going to be dealt with. Just literally the explanations we're being provided with now, if they could be added just to provide a list, that would help.

M Yeah

MR Actually, you know, this comes back to some of the other ones about efficient air management. They want to get away from air traffic control.

MR Yeah

MR Well again, that's thereby very helpful.

M Actually if you see the idea is that these will (re-flow? 01:38:58) and guide aircraft.

MR Yeah

MR It should be more concentrated.

MR Yeah

MR And in particular it's made even more vectoring at arrivals because the planes are coming from all sorts of different directions. They've all got to be lined up, you know set up far apart for landing but they're full and that's when they get vectored to fly a bit longer so they take a bit more time before they get in a queue.

M Okay, I'm going to move on to the last two now. This one was put forward by NERL and the second one from GLA. Let's read fifteen out now: “Collaborate with other Scottish airports and that's to ensure the airspace design options are compatible with the wider programme of lower altitude and network air space changes being coordinated by the FASI North programme.”

M **And that's just fitting into the bigger picture. So (01:39:52) FASI North is above and just making sure that we have a partnership that makes everything work together.**

MR Again, that's something that I would you expect you to do, that we should remember the audience that we've got here, and we should actually explain what that is to them.

M **Okay, okay.**

MR Because I look back to two as well, the priority of other airspace uses, is there.

M **Sorry, you bring back to the sound, more back to the point two, the PP2?**

FR It is quite a jigsaw puzzle but we have to fit in what is happening on a large scale for all of the UK and then fit for those users in Edinburgh..

MR Sarah, can I just say that behalf of the noise board that I'm representing that were delighted to see that principle. They think that's excellent.

M **Great.**

MR I think also that a point that came up on one of the board meetings was that somebody from another part of the aviation industry was at one of your things. And said at that point, "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 [REDACTED] said, 'I'm delighted to see that one in there. And I think it should really be...' "

FR 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. Quite a lot of others so...

M **And the final one route two from Glasgow to Edinburgh airport should be procedurally deconflicted from the ground to third level co-ordinated with NATS Prestwick, that's come from Glasgow.**

MR I agree. I don't want to bang into a flight from Glasgow in my flight.

MR Does it not...Aberdeen?

MR (1:42:10)

M **It does. I think it's specifically asked because their airspaces are quite near that we cross the flight paths really.**

[Group Talk]

MR ... Kind of expected.

MR You would hope.

MR Good height.

M Okay my...

MR So just hanging onto the sixteen, can I just for clarification, are we saying that there are three stands of environment, operations and health and wellbeing? Those are three stands that, each of these, obviously there's overlap with all of them but those are the three stands that we talk about?

M There's some technical as well.

MR So, technical one and safety.

MR And economy.

FR So, yeah environment. I guess technical being, you want to treat them as separately or want to treat them...

MR I would say noise is health and wellbeing but...

FR I think that every single community raised noise as an issue. I think that they should, I know that they fall under health and wellbeing but before it was a prominent issue enough to have its own category. But we're also quite happy to be characterised as having (01:43:27)...as health and wellbeing if everyone is happy with that.

M Final points before we move on, I'm going to have two more points. [REDACTED] first and then [REDACTED].

MR Just a general one since we seem to be getting towards the end of the session. I think it's being raised a few times. But I think there needs to be some sort of balance between the operational and environmental numbers of PDP's. Because if you end up with so, for example five or whatever it is, four or five technical as they say economy issues. And only two or three environmental ones, it's...the way it works as far as I can understand is you're instantly not going to get a balance from you, doing all the...

M Right.

MR I find all this air traffic, local air traffic control zone. It doesn't anywhere mention the need to review the perimeter of the air traffic control zone. In a few, in some cases with some routes that may be necessary to tweak the air traffic control zone wide to a narrow. And certainly down the Forth it needs... to the air traffic control zone, it needs to go down to the mouth of the Forth. And it does need to say, there does need to be a principle. It's operational. If you want to do certain routes, you're going to at the same time, have to look at the air traffic control from Edinburgh town.

FR I think the point 15 mentioned it where airspace which is co-ordinated by FASI which is that extra airspace. Although going further than airspace, so that, that talks about network airspace changes completed by the programme I think it was outside of that airspace...

MR I didn't read that...

M Okay. I'm going to have...

MR Just the very fact, if you could write the last two inside plainer English, it would be helpful. If you could unpack the acronym.

M Yes, understood, understood. [REDACTED], we clearly hit the most important stuff here. We got a bit of an extension on the room so, if there's anyone who wants to stay longer now, we can go through some of the issues...that think are very important. But don't actually qualify as design principles and we can wriggle through the long list and show you which design principles they have been marginally incorporated in with. Everyone copy that.

MR Yeah. Anybody want more coffee?

M Never thought a few weeks ago, would there?...Yes understood, understood. Sorry.

MR Just on the design principles that emerged from the first one, I noticed things...had a huge great big sheet, I expect hundreds and hundreds. Is it possible to get a copy of that?

MR I think they do eventually have to be published by the CAA anyway.

M It hasn't been sent out to the wider group just yet.

MR Sorry to interrupt.

FR Thank you very much.

FR Anyone want to get a quick coffee?

M Yeah, I do with milk.

FR Another coffee, tea?

[Comfort Break]

MR No, tea I do not drink.

FR What about water?

M Can I call the meeting back please? Okay, off we go...Because we still got a little bit to talk through. Now, is [REDACTED] said she will get this document once we finished the workshops so, you can refer to your...But I want to touch on now some of the ideas that came out. Now these ideas came out and they're not to do with airspace control. That doesn't mean to say that they're not really important. They absolutely are but so, that you know what went into the report, the progressive issues, some of the issues that didn't make the cut as design principles. So, the first one is, consider no change of aircrafts and you can see the rationale onto that. I will read this one out again when [REDACTED] returns and forgiveness for continuing but we are. We had several to talk about. So, consider that no change to flight paths, now this was not a design principle, this was rejected as an option. However Edinburgh airport is going to be considering the do nothing but modernise approach, alongside the clean sheet and replicating the system routes approach as part of designs option, of options process

in stage two. So, that's the main stage. That said, this may not meet the airport's objective for increased capacity.

MR But it would be a clear expectation though?

M Aw hah. The next one's were all about the infrastructure and these quotes came out so often in the, in...not the workshops but also the focus groups. Now, ensure planned integration in terms of transport, infrastructure, surface access but also in terms of, with authorities and other agencies. Transport infrastructure just in general, but also infrastructure in terms of public transport. And these were all pulled out as separate, important points to do with infrastructure. Now, they're not related to flight paths. Because they're not gone into trying to design principles. However, our consultation regarding access routes to the airport is going to be taking place before Christmas.

FR Specifically it's going to be on a new proposal which is an Eastern access route from Gogan roundabout to the airport to take some traffic away from the Eastfield road access with that. I think it starts on the eleventh of this month and that's a consultation, a public consultation that around the end of year about public transport and road access to the airport.

MR Can you say when they will be advertised or print? Would it be possible for this consultation route to be advised?

FR Yeah. There's a website which I can't remember off the top of my head, but I will pass that through to [REDACTED].

MR Is that the City council group or is that the city...? Is that Edinburgh city council? Or is that the (01:53:51)...Edinburgh Airport?

FR It's got its own website bit. (1:53:58)

M One point that came out was concern about monitoring of noises. So, one of the points that came out during the, during the workshop was the engagement process, was knowledge and report accurately on noise. And the airport is saying, absolutely noted. And that is something that the airport already does. And another one was about monitoring air quality and emissions, again that point is noted by the airport. And something that it already does. But more routes, also something that's been looking at, as this is part of the environmental impact assessment and that's where James and his guys come in. New technology to reduce new, reduce noise and pollution impacts. So, the airport is doing an environmental impact assessment as part of this airspace change programme. And so, it will be reviewing the outcomes of this part to determine actions, depending on the outcome. This point, we can see the government's targets on environment is considered to be included in PDP7. The second point, considering the auditory damage is considered to be incorporated into PDP4 which is the...

MR I contest that first one which you, in fact we had a very clear explanation about the legislation surrounding local air quality. That's fine but it does not take it into account other objectives.

M Heard, [REDACTED].

- FR They are now having a conversation about the difficulty we have around meeting all of the government's promises on many different topics and how we going to make sure that we reference government in the event of what we need to do. So, we got that interaction to go away and how we look at how we reference those throughout the right parts of...So, we can approach around the government expectations.
- M These are the points I noted so, ensure business cases well documented in evidence, absolutely. Recognise flights not used by (01:56:21)...Noted. Consider compensation of mitigation for those overflown. It's not necessarily a design principle in and of itself but it's a potential outcome of the airspace change programme. Increased flight costs to reduce peak demand, while this was rejected because this is something that is out with the control of the airport, airlines set flight costs...**
- MR Surely the airport does have some kind of play on that because the airport could adjust the landing fees or take off fees, to take account of peak demand like they do now at night time.
- M Okay.**
- MR Likewise they should try to fully appreciate that is out with Edinburgh Airport limited powers. But reduce...taking away the exemption of aviation fuel taxation, VAT on flight, on other aspects, I do appreciate that it's not, that it is something that could and should be noted, that the exceptional economic benefits accorded to airports as shopping destinations. And being VAT free etc. is a, could be considered anachronistic in the face of a climate and ecological emergency.
- M Yeah, yeah. And that point is noted.**
- MR Is that subsidised? ...we are subsidising that industry.
- M This last point in here, routes to and from Glasgow and Edinburgh unfortunately perceive already deconflicted. This is accepted and that is included.**
- FR We take the point there, make it.
- MR It would be lovely to be back in England, you're going to do that?
- M And I think that's debating from one of the technical aviation groups. So, forgive us. Fine, okay whilst here, data particularly forecasts need to be, need to include details of any airline functions. Absolutely noted. And they had people and these comments actually, create more jobs, support tourism and business. This came from residents in focus groups predominantly and so, in terms of creating more jobs, EA, the airport wants to state that it does employ seven hundred people on campus and about one hundred employers to employ another seven thousand in the business supports and five thousand jobs around Scotland. In terms of tourism, it's a key contributor to Scottish tourism and economy and will continue to support the Scottish government.**
- MR Just on that one, that's obviously a statement of fact but it doesn't look at the other side of the equation where you have the aviation industry exporting Scottish pound notes...to the cost of rather. So, it needs to be a balance. So, it sounds like it's all just the benefit. And I believe the balance is negative. It's negative. There's more going out than coming in.
- M Yeah.**

MR Quite a number of these points require integration with the transport strategy that the Scottish government are developing at the moment through Transport Scotland, and because of the peculiarities of the aviation industry, we're channelling through London and through the Civil Aviation Authority, and it's a reserve matter, there's a disconnect...

MR Yes.

MR Between the development of transport strategy in Scotland and this programme of development. I'd very much welcome an assurance that both the NATS and Edinburgh Airport and indeed Glasgow airport are integrating this planning and development work with the Transport Scotland work...

M Yeah.

MR On an integrated transport strategy. There's lots of good points in the transport strategy at the moment, because it was out in draft for consultation just recently: resilience, environmental impact, a number of other positives would come from greater integration.

MR So the risk to the expansion strategy, or whatever it's called, is if the ground rules in Scotland change.

MR Yes.

MR Could that be factored in?

M Yes. Sorry?

MR Yes, and I think the issue is design principles are very specific, at this point (2:01:22-2:01:24), because we've got to say, and the problem with government strategy is they say 'we'll do black and we'll do white'.

MR Yeah.

MR And if you look at... and our government policy is 'well, let me do', and we're trying to do something, government... what one group of people say is they'll do black and other people say they'll do white... well, which is it we're working to? And so we have to be very careful about the nature of policy that the government can say completely different things, and so it's... I mean, the point is very much taken that government says on the one hand it's going to be the greenest government in the world, and the other wants the lowest aviation tariffs in the world. We've got to look both ways, and the airports have got to work within that framework and...

MR Yeah.

MR Yeah.

M Sorry, was it [REDACTED]?

MR [REDACTED], yeah, that's right. I was just going to say, there was a bit of a negative, a bit of a negative regarding tourism and businesses, in terms of people were talking about pulling out of the city, through too much tourism, the increased prevalence of Airbnbs...

M **Yeah.**

MR People having to move out because they can't afford to stay, and people actually, finding people on my doorstep that are staying overnight in properties, and it's certainly (improving? 2:02:27) in a sense of community, so it is a bit of a negative. It's great to have tourism...

M **Yes.**

MR But we have to carefully think about the way things are going, it's very much an immediate headline for Airbnb as well.

M **I do remember the point about this, that is actually important but it's not a design principle...**

MR Yes, I know.

M **But it's a...**

MR It's a consideration.

M **Okay. Shall we go through the longlist now?**

MR Okay. Yeah.

M **And see... yeah, [REDACTED]. Okay, so here we go. So, now then, can... sorry, yes, [REDACTED]?**

M **I think I might have to leave, I'm really sorry, but I wanted to thank everyone for coming along, and I will be driving, so if there's any questions, I can't answer them on the phone. But thank you all very much.**

MR Bye-bye.

MR Can I just respond back to the board (2:03:13-2:03:15) stakeholders here.

M **Thank you, I appreciate the**

[People Leaving]

MR Just before you leave, in the same way that you say you can send us that...

M **Yes.**

MR Information on the longlist after the thirteenth, can we have this after the thirteenth as well? That would be helpful.

M **Yes.**

MR Okay, thank you.

MR Thank you.

M Thank you! Enjoy longlist everyone that has to stay.

M Right. Thank you. Thanks [REDACTED], absolutely fine. Can I just say now, this is the plain English, alright? These design principles are put down pretty much verbatim as people stated them, and this is how they appear in the report. So, these design principles, some have been merged and woven together to create the shortlist that you have just seen, and so you can see here that minimised noise is included in PDP4, reduced emissions, pollution is in 7, noise from take-off and landing, turning, is included in 4, taking background noise into account is in 4, considering offset... 'consider and offset the impact on wildlife or the environment' is in 12, 'avoid flying over rural areas' is in 4, which is again, tied up with noise, so there's a big argument about the impact of noise on rural areas being greater. 'Consider climate impact' is...

MR I think we felt that it may be appropriate to consider bringing a design principle into the shortlist on this issue...

M Yes.

MR About... because the reduced-emissions-stroke-pollution really only refers to local air pollution as our friend here described it.

M Uh-huh.

MR If there is for the airport... it needs to be factored in.

M Yeah.

MR As an example, the removal of the planned halving of air-passenger duty is something which had an impact subsequent to the starting of this process I think...

MR Could I have some water please? Thank you.

MR And that might be a harbinger of things to come.

M Yes.

M So we've talked about specific aviation, now, lots... CO₂ reduction in lots of places, is that the main climate impact? We've talked about aviation, is there stuff we've missed in terms of a take-off flight path that has specific to do with the way the emissions are, are put out in the atmosphere, because, you know, obviously in aviation there are these wider issues about high-level emissions, and things, but that's not particularly related to the take-off and landing patterns. I mean, is there something other than CO₂ that we've missed?

MR Well, it's CO₂ equivalent, it's all greenhouse gases, but it's just to do with the manner in which it expands the capacity, which I think they're airport limited and CAA need to take account of.

M Yeah.

- M** Yeah, capacity of the airport, but not necessarily more flights, but the airport must have the flexibility to have more flights or less flights, whatever, prevails, but it must design an airport that can cope with, you know, that's part of the statement of needs, that the airport must have the flexibility to cope with more. We might end up with less, but, you know, it's that... that's the statement of...
- MR It is the use of 'must' in that way, and that's what I said, the Society of Representatives, we're questioning, whether the airport must have the capacity to expand. That's really, I think...
- M** I think...
- MR What we question.
- M** Yeah, and I think...I do think that challenge is being made as well, and it most certainly has been recorded, and...
- MR Yes. Sorry.
- M** No, but thank you. Moving on, 'consider impact on animal welfare' is included in 12, 'reduce impact on green spaces' is in 12, 'avoid flying over the zoo', again that features in 12.
- MR Sorry.
- MR You stay in your seat.
- M** Now, these are some of the principles that we initially categorised under environment. 'Consider impact of aircraft type', 'penalise poor performance and old aircraft', this was a suggestion that was put by... through some respondents. The decision about airplanes to fly operational ones for the individual airlines, Edinburgh Airport has limited ability to impact this. However, they see the issue as an opportunity to reconsider their existing charging structures at the next review. With the introduction of CAA's modernisation strategy, encouraging more effective flight paths and efficient aircrafts, a design principle was created to ensure the flight paths meet the CAA's modernisation strategy. The next one that was put forward by fewer people, but nonetheless it was mentioned, was 'adhere to the WHO, World Health Organisation, regulations'. Well, those guidelines aren't adopted by the UK government, including the CAA, but airports will meet the noise guidelines as directed by the CAA.
- MR Going back to that point we were discussing earlier about the legal requirements, and actually aspirational requirement.
- M** Yeah. The next one there is 'minimise light pollution'. It was mentioned by far fewer people, but nonetheless, it was mentioned, so it's there. Aircraft lights are a feature – this was rejected by the way – aircraft lights are a feature to ensure safety of aircraft occupants and the wider general public, therefore this was rejected on the basis that it would impact the fundamental safety of operations. 'Offset emissions' was another one, it was put forward, and offsetting emissions isn't a design principle as such, it's an operational issue, however, it is recognised as a concern from communities, and a design principle has been developed to encourage minimising of emissions. We're

going to look at the longlist of design principles that were put forward for communities, as categorised by communities, by us, by professors in the report. 'Reduce night flights and early morning flights', that's considered in design principle 4. 'Fly over the sea, fly down the Forth', this was a commonly expressed design principle, and the airport feels that that is included in design principle 4. 'Reduce flights over communities, fly over less populated areas', again that falls into 4. 'Avoid over-flying schools', that falls into 11. 'Do not fly over currently unaffected areas in planning', 4. 'Minimise noise and flights below 7000 feet', again that's considered to fall into 4. 'Restrict aircraft turning over communities', a less-mentioned but nonetheless important design principle put forward during the engagement sessions, again that's included in 4. 'Avoid over-flying hospitals and care or retirement homes', that's included in 11, so encapsulated in 11. 'Avoid historical sites, avoid over-flying historical sites', that's in 12. And we had some people in the group, focus group discussions who say 'can't you just get people to accept noise? Can't you just do that?' Noted. Not really a design principle. These were rejected: 'restrict aircraft holding over communities', and the response to this is the airport's air space goes to 7000 feet, with hold areas confirmed at high altitude, so therefore this request regarding restricting aircraft holding over communities is out of scope. 'Reduce flights' was another suggestion. Edinburgh Airport's business objectives were included in the statement of need, which indicated growth as one of the objectives of this air space change programme, therefore this request to reduce flights is rejected as it contradicts the statement of need, already launched and passed by CAA.

MR Can I just point out it's not passed by CAA.

MR Yeah.

MR I've raised that at the airport previously, and I know others in the community have as well, so that should be deleted.

M Okay. Fine. Noted beta, delete, reissue please.

MR I was going to say, to make a civil point of that and to point out that the statement of need makes claims that are totally unsupported by the evidence, the factual evidence.

MR They're assertions.

MR They are...

M Yeah.

MR Fairy stories. I'll show you some of the data there...

MR (2:13:20)

MR It shows the opposite.

M Okay. And, again, that was a point that was made at the engagement sessions and it is absolutely reported as heard. 'Take account of noise above 7000 feet', Edinburgh Airport's air space goes to 7000 feet, therefore this request regarding taking into account noise is rejected as out of scope. And there was another suggestion made by fewer people that made, the suggestion was 'concentrate flight paths during work

hours'. Well, it was felt that due to the change in the way that people work, with the increase of lots of people working from home, you know, defining work hours is pretty much an impossible task.

MR Can I just say, the ones about not tackling air space above 7000 feet...

M Yes.

MR I know it's quite correct, but I think it's why we were so pleased to see PDP15 there, because I think you can't really make the changes below 7000 feet without taking account of the changes that need to be made above 7000 feet as well, and I think all the points that are made there, that have been rejected because they're just below 7000 feet, I think there's a real danger those might then sort of get swept under the carpet: 'oh, they don't really apply'.

M Yeah.

MR But I think they do apply.

M Yeah. I hear you. These were rejected: 'review routes' flight corridors', that's not really a design principle, however it is what's going to be happening during the air space change programme. And then this comment, the next one, 'fly the west side of the river Almond', in fact that was put forward by a couple of people who live in Cramond, and the idea is rejected because of safety issues, the flights have to stabilise before they get in line with the runway, and if they were to fly west of the Almond, you'd have to do a pretty quick zig and compromise your safety issues, so that's rejected.

MR That's landing only. Not take-off. Take-off you turn seventeen and a half degrees at the runway and go to the left-hand side on the west side of the Almond.

MR Good point, that's the (2:15:33)

M Good.

MR So that would departing aircraft?

MR Departing aircraft.

M Okay.

MR Could that... could you see which planning guidance it could be incorporated in, in the shortlist?

MR It happens already.

MR It's happened?

MR It happens already, it's...

MR (2:15:53)

MR Right, okay.

M Can we move onto the technical ones now? So, these are, as defined or as categorised as technical in the report. 'Ensure fully integrated air space change', that's included in 15. 'Prioritise safety', that's encapsulated in 1. 'Do not concentrate flight paths', that's in 13. 'Minimise route deviations', that's included in 14. 'Make routes as short as possible', captured in design principle 8. 'Ensure access to air space by general aviation', this was included in design principle 2. 'Collaborate with other Scottish airports and NATS', this is in 15, and 'routes departing from Edinburgh should be procedurally deconflicted', that's 16.

MR 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'.

MR Yes.

MR It says 'and/or dispersal'

MR I think there's also...

MR (2:17:05)

MR Route dispersal.

MR Route dispersal.

MR That's why I wasn't quite sure what it was saying.

M Yeah.

M Again, that provides the flexibility (2:17:15) rather than constraining options down to (2:17:18-2:17:19) versus dispersal.

MR One thing that really struck me during the workshops we had previously was there was very little discussion about that. Even when we raised it, you know, do you want dispersal or do you want concentration? And there was almost no response after that.

MR I think one problem with that is, whichever way you go...

MR Whichever way you go, yeah.

MR It's going to satisfy, whichever way you go, it's going to satisfy some communities and it is going to cost some communities.

MR Yeah.

MR So I think I get it, I can see why these are two options, but the question is it's going to be pitting one against the other.

MR Yes.

M And I think that...

MR Which is why it probably didn't get much discussion.

M Yeah.

MR Just explain...

MR Yeah. Okay, no, that's good.

M And that was the response that came through on the workshops...

MR Yeah.

M Is 'you're pitting one against the other'.

MR Letting the (2:18:03) appraisal table, is the place for it, and that's the time to make the decisions, so yeah, as [REDACTED] was saying, yeah.

MR I'm puzzled by PDP13, I had a big question, and I still wasn't totally satisfied, because it seems to say it's got to include concentration, it's got to include dispersion. It's almost saying, what, you can fly wherever you like! And the one way, it's concentration, if you go somewhere else, it's dispersion.

M Yeah, I think it's a really difficult balance.

MR Yeah.

M Number 4 was about reducing or minimising total adverse action on quality of life and health, and our guidance states that you need to reduce the impact on... total adverse impact of noise, that is to say, that that is not necessarily to reduce the number of people affected by noise. It can be disturbance or annoyance or health, so there may be options where, if you've kind of got the one sway, you could potentially put two more concentrated routes in, and swap aircraft every other day or every six hours, or whatever, versus concentrating them, so it's one of those really fiendishly difficult balancing acts, and I think... so we've got flexibility in there, so say we've got one flight path, but maybe at times of day, you do an early turn on one or a later turn to avoid certain communities, so I can understand why it's confusing.

MR (2:19:30) number 3.

M Can we look at the...

MR I'm trying to think of a situation that would fail that...

MR You can see (2:19:42)

M Can I wiggle through some of these technical suggestions that were rejected? 'Ensure decision making is evidence-based and evidence is appropriate and of high-quality'.

MR Thanks very much.

M I'm sure some of you will recognise that one. It's...

MR (2:20:04)

M It's ostensibly not a design principle, but Edinburgh Airport certainly notes that's the case. Redesign the terminal and the terminal air space, this is not really a design... well, it's not a design principle, however, it is what the airport is doing as part of this air space change programme. And the next one is 'considerations for specific routes', now that's not a design principle, but it's an operational matter, however the airport notes this point. Some also suggested 'make take-off and landing gradients steeper', this isn't a design principle, but a potential solution to an issue regarding noise and PDP4 will cover that issue. There was also a suggestion to take into account segregation, I think this came from the aviation workshop, again this is not a design principle but a solution to an issue regarding noise. There are some for economy, design... so, 'ensure consideration of airspace users', that's thought to be encapsulated in 2. 'Ensure consideration of wider tourism impacts', that's encapsulated in 5. One that was rejected was 'review the need for growth'. Edinburgh Airport's business objectives were included in the statement of need, which indicated growth is one of the objectives of this air space change programme, therefore this request to reduce flights was rejected as it contradicts this statement of need already lodged, and I'm going to put a line through 'and passed...'

MR Thank you.

M 'By the CAA'.

MR So the key point there, [REDACTED], is while it's been lodged and not been passed, it's still possibly open to some negotiation and discussion.

M **Totally.**

MR Rather than a completely done deal...

M **I completely...**

MR Where the door's shut.

M I hear you. Got it. Equalities! So these are issues that we categorise as under equalities. 'Consider the needs of elderly, children, those with ill health, autism or sensory impairment', this is considered in design principle 11. 'Ensure true accessibility in design', this is also included in 11. One that was rejected for equalities was 'recognise impact on flight paths on house prices and social migration.' 'Recognise the impact of flight paths on house prices and social migration' is not a design principle, but the airport acknowledges that it is an important issue for our communities. The airport sees this as an opportunity to address in the post-implementation review stage of the project with a detailed study of any impacts. And the final ones for health, so the design principle for health: 'consider the impact on mental health and wellbeing', that's regarded as encapsulated in 11. 'Consider other health impacts' falls under 4, and 'consider impact on sleep', which falls under 4. And that brings us to a close, unless anyone else would like to share any other points. Let's go!

MR I said at the very, very beginning that my initial reaction was of a very generalised design principles that are here. Going through the ones that you've got, and unfortunately I only started counting halfway through, but I've counted at least ten principles that were put forward that are said to be covered by PDP4, and I think there were a whole lot more before that that I missed because I didn't realise how many there were going to be.

M Yeah.

MR It means that PDP4 is now a huge blanket principle that covers lots of really important, specific issues, and while you can't agree 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.

MR (2:24:45) Yes.

MR Do you see what I mean?

M We'll come back to your...

MR That is a must.

M And it encapsulates, as you say, lots of things, and underpins the requirement to minimise the total adverse impact of aircraft noise on people, which we've added into quality of life and health, which is why it's a must, essentially, because it is very important, and it's a massive issue, you know? It covers all sorts of things that we discussed there, and, you know, we could have a list of thirty design principles, and it's a case of trying to make it manageable to deliver, but that one is freighted with a lot of importance, as you clearly stated. It...

MR I would still like to see maybe two or three teased out of it, even with what is there. Is it possible in this sort of explanation-stroke-glossary that's going to be done, to say that PDP4 includes the following issues, and all the ones that we've seen up there could be included in that?

M Could you just give me the key points that you'd like teased out on that one?

MR Well, I'd need to see the list of what you've just shown me, but we're not going to be allowed to see until the thirteenth.

M Oh, right, okay, I'm sorry. Okay. Well, right, noted, and this isn't the end of the engagement, obviously, more (2:26:10)

MR Yeah. Just on that [REDACTED], the... can I clarify something? How... what's going to happen once these potential design principles are set as the actual design principles? Say there are ten in the final list, is each design principle going to have an equal weighting on your deciding how these design principles affect various potential solutions?

M The core four, which is... will have a... well, they're musts, so they're already, I suppose, given a higher weighting, as we discussed earlier.

MR Mhm.

M The other ones that follow (assumes? 2:26:58), it'll be a balance. So, as [REDACTED] showed earlier, we'll have a matrix...

MR Yeah.

M For each of the options, it'll probably be red, green and amber.

MR Mhm.

M And the ones that are highest-scoring I suppose, most greens and most ambers, fewest reds pass forward to the next round of iterations, so yeah, the core four have to be green for each of them.

MR Yes.

M So then it's a balance of the others. So it'll be, probably yes, they'll probably be given equal weighting, but, you know, there's... that's why they're worded in...

MR Yes.

M So the CO₂ one is minimising above 7000, but if you can, minimise it (2:27:44)

MR Yes. Well, I can see it's horrendously complex, but...

M It is.

MR I'm delighted to see that PDP4 is now a must...

M Yeah.

MR So, that bit...

M Yeah. I missed that, to be honest.

MR (2:27:58)

M I don't know why...

MR That's good to hear then, but even acknowledging that, it sounds to me from the brief that [REDACTED] been doing that there's maybe ten key elements of PD4 that have been squeezed into one, and while it's a must... okay, you've got these four main ones that have to be green, you've maybe got some other ones that are... and I know they've all been squeezed in, but you may still have some operation ones that have only got a six rather than a ten, and if they end up having a similar weighting, it's... that's where the balance of the initial workshops and what we're doing now starts to become rather difficult.

M I can see...

MR You know, so...

M I can see what you're saying.

MR Without a weighting, it's...

M Yeah.

MR You know, communities can be very unkind, so communities might look at this exercise that's happening just now and say 'well, there's ten or twelve environmental ones being squashed into one', not understanding it's a must, so when we look at the balance of things, it's always going to be struggling against the other types of (concerns? 2:29:13).

MR Well, that is a must, so it will happen.

MR Yeah, but...

M But others...

MR But it's the variations within that must.

MR Yeah.

M There are.

MR Yes.

M I suspect what will happen at some point is... the next stage will be big maps on walls, you know, mapping schools, hospitals, age care homes, zoos, whatever else. It'll probably be fifteen, twenty people in there, and we'll look at what can we do? Can we squeeze it here?

MR Sorry, what was your name? I've forgotten.

M [REDACTED].

MR [REDACTED] I suppose what I'm getting to [REDACTED] is, I know it's not an exact science, but as I say, once we see [REDACTED] list, I know there are many rolled into one, it may be there needs to be at least two or maybe even three musts.

M And actually it often works the other way round. I mean, there are hundreds of these for all sorts of transport projects.

MR Yeah.

MR It often works out the other way round, and some of these principles, you know... well, once the data comes out on the tables, everyone looks at them, and some people find different bits of data more interesting than others, and also, often it comes down to you've got one principle that's like PP4, where it ends up being a crux for everybody, that actually the decisions can be made because it's home for so many design principles. It wasn't just that there were tens, there were hundreds, you know, when we ran through all this, and what we're trying to do is concentrate. You know, what we gave was a manageable list, and then I guess sorting them... but what I'm saying is that through the whole process actually that's when it gets unpacked again

into all these, because that's what the text and the framework tables show, and what really matters is the transparency of decision-making, but all that evidence is there, which I think we've captured, and it's open, and people understand what this stuff is. Not everyone's going to agree with every decision, but actually it doesn't necessarily... having loads of diluted principles... I'm just, as an observer of hundreds of these appraisals over the years, actually it often works the other way round, that there can be one overarching one that's more influential, but, you know, that... so I'm not sure that asking for more necessarily gives you more influence.

MR So under PDP4, I'd counted ten from about halfway through. Let's just say, for the sake of argument to make the numbers easy, suppose there's twenty altogether under PDP4, and suppose when you're looking into a particular option, you find that nineteen of the twenty are actually met, so obviously that would be a green. Okay. Suppose only fifteen were met, would that still be a green? Suppose only twelve were met, would that still be green or are we into amber now? Do you see what I mean?

M Yeah.

MR How do you make...

M I suspect that what we would do... we would have this with us when we're starting to put lines on the map, we would use this as a reference document, so, you know, does that effect communities, does it mean this, does it mean, does it go down the Forth? So I suspect what we will have probably is a sub... you know, bullet points essentially under that design principle, and there may well be twelve of them I think appears 12 times here in this table here, and so we'll say, tick, does it fly down the Forth, yes, that's great, and so that one might be actually, you know, some component of it, but it would be reported as one.

MR Yeah.

M So...

MR If it's fine...

M Am I talking out of turn?

MR No. Well, if that's the case, that has allayed my concern.

M It's certainly not designed to reduce the significance of those issues.

MR Right. That would be a worry (2:32:48)

M Okay, absolutely not. Everybody in that room is absolutely all over this.

MR No, I appreciate that how complex it is, but if that's the principle, taking the points to comply with, that addresses the issue. Thank you.

M Great. So thank you very much for your concentration, and that's taken a little longer than we had originally planned, but thank you for staying the extra time and seeing it through to the end. Are there any other comments on the outcomes or the process before we draw this to a close?

MR Can I just thank your local Co-Op for lasting it as long as they have?

M I think we might need to (2:33:36) and go home. Smashing. Thank you again for your very generous information and time, it's really appreciated. Thank you.

MR Thank you.

END

**10402Aviation Recall & Recall2
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M Moderator

FR Female Respondent

MR Male Respondent

M Thanks very much for coming. As with the last session, we record the session because otherwise it is impossible to make notes and keep track and so this gets transcribed. This also gets sent to the CAA just as part of the bank of evidence that we give. So if we could go round the room and start with introductions from the rest of you. So if you give me your first name and your organisation. Can I start here with you please?

MR **█**, representing the Light Aircrafts Association. And apologies I wasn't at the first meeting.

M Thanks █.

MR **█**, Airspace for All. Also not at the first meeting but I did get to the railway station.

M Ok, fantastic. And sorry, the organisation was Airspace for all?

MR Airspace for all. A4A, for short.

M Great, thanks █.

MR I am **█**. For the Local Paragliding Club but also the BHPA, which is the and hand gliding association generally.

M Great, thanks █. And next to █?

MR Sorry, **█**. I Manage the systemised Airspace for NATS at Prestwick Centre

M Great, thanks.

MR **█**. Gild of Air Traffic Control Officers

M Thanks █

MR My name is **█**. I am the Operator at Strathallan Airfield and I also represent the British Parachute Association.

M Fantastic. We will kick off, if our last person turns up then great but let's get the ball rolling. So remind ourselves of why we are here. What I am going to do within the next hour to two hours... I think we will get through it by then, does that suit everybody? Yep? All good. So just recap on the process where we are, but then I want to go through the shortened list of design principles. We did send you a version of that. Now we have got a version to go through today with some very slight suggestions of difference in wording, and we would really like to get your feedback on that. Then once we have done that, and we have got a full understanding of your response to that short list, then we will go through the draft principles that we

actually arrived at in Round One; where we came up with very many more. So, where are we exactly? Well, we are at Stage 1B. The CAA have given a pass at stage 1A, which gives us permission to move to 1B which is right where we are. EA and the airport will then apply to CAA for a defined gateway for a defined gateway submitting their work for 1A and 1B.

MR Is there a target date for that?

M We have currently booked in to submit that for the 31st of January. So they say the last thread of every month is the days that they run their assessment centre. So we will be submitting it in January for that assessment date.

MR Ok, thank you.

M Great, thanks. So what have we actually done? The first round of workshops we ran a workshop with Aviation, and some of you will recognise me. We also spoke to stakeholders from the North and West. We spoke to stakeholders from the South and East. So stakeholders, that's community representatives. Then we spoke to stakeholders from other areas. We also ran a dedicated group for EANAB.

M Just if you don't know, Edinburgh now has a separate body set up called a Noise Advisory Board. They are made up of community representatives who's focus is really on day-to-day noise within the community. But we run a separate workshop with them.

M As well as that, we spoke to residents in focus group discussions. So we spoke to those who were overflowing within noise contours, overflowing out with noise contours and those who are not overflowing currently but may be in the future. So, that was the first stage. During that stage we spoke to 100 people. We had attendees across Edinburgh, Fife, the borders. All of the workshops and recordings were fully recorded and transcribed. That was 400 pages of transcripts that I went through to produce the first report. Out of that, we had 50 principles identified, and a further 2 more were identified which came from Mel and Glasgow Airport. So, we have since then ran a recall workshop with stakeholders that was actually a much larger group than this. We did that last week. So this is the final workshop at this stage. We sent through to you, the short list of potential design principles. Before we actually get to look at those in detail, and there have been very slight tweaks since you have those, but before we get to talk about that in detail... what are your first thoughts on the list that we sent to you?

MR One question, Principle 15 you said to level out with other Scottish Airports, was there representatives for instance, from Glasgow at the last session?

M Um

MR Or wasn't there?

M I honestly can't remember. I do not think so. We had an online response from them.

MR Ok

M And also [REDACTED] had direct contact with them. So they were not represented in the group. Those who could not come in the first stage, we offered them to give us their views online as well.

MR Mhm.

M Any thoughts on the content of them?

MR You do not appear to have anything which gives away airspace which you don't currently use, and are not using as a result of the change

M Ok

MR Have you got any printed copies of them just so I can refresh my memory?

MR In fact [REDACTED] comment posed another question. I attended the Glasgow consultation as well and one of the starting points there was a clean sheet design.

M Yes

MR Is that intended here as well for instance?

M Well again, there is imbedded in here and that is one point that absolutely came up.

MR Ok, that is good.

M So, shall we start going through them and as I said, [REDACTED] is here as technical backup. So, the first one: the airspace design and its operation must be a safe or safer than it is today. Any thoughts on that? Any comments?

MR You can't say much else can you?

M No, fair enough that is absolutely fine. This may seem a little bit picky, but I am really interested in your response to the wording that we used here. So I am interested for you to look at this in detail and if you have any suggestions or thoughts on the phrasing or the particular words we've used then we are happy to hear your points.

MR 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.

M Ok.

M I think what that gets into is the end solution and pre-determining perhaps what space we would be using.

MR Yep.

M So we are saying it is probably not something we are considering right now in the design principle, but it could be an output of what the end product could be.

MR I was just trying to find a link into the principle and my earlier statement.

M Mhm, ok.

M **So, proposed design principle 2: The prioritised requirements of airspace users must be taken into account when designing flight paths.**

MR Can I suggest that that is worse perhaps considering people who are outside of the airspace as well. Following on from what [REDACTED] said, the airspace needs to consider those who are not using it.

M Yep

MR Because at the moment, for instance, it can channel people into, shall we say, less safe environments then might otherwise be the case.

M **Sorry I do not understand why, can you explain that?**

MR 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.

M **If you see the second PDP that takes into account some feedback that we had from another focus group. They thought that prioritising airspace users that better for the communities was having read that, they asked us to take out prioritised, and change 'must' to 'should'. Does that help you...?**

MR Which one are you...

M **Sorry, this is how it has been changed. I mis-read that.**

M **This is the proposed change based on what we heard last week which we wanted to test with you guys and have that chat as well. If we were to change it to something like 'requirements of airspace users should be taken into account in designing flightpaths'. Does that give you enough flexibility to cover your point?**

MR [Under breath] That is fairly obvious

MR If it is referring to airspace in general then definitely, if it is referring specifically to controlled airspace, then I am saying it needs to look outside as well.

M **So they reference control, so the airspace...**

MR If that is general, that is fine

M **Ok.**

MR I understand that 'airspace users' as general as well. I guess there will be an increase on the load of the airport from drone operators and the like.

M **Ok, hi. [REDACTED]?**

FR Yes, [REDACTED].

M [REDACTED], from Edinburgh Airport Watch.

FR Apologies that I did not get here in time

M **So, for the third one: flight paths must be flyable**

MR [laughs] Well...

MR I think that has probably come from me. That is a very simple way to say it, which is true. But there is a lot of bits behind that; but that is essentially what we are saying but that is basically an underlying parts...

M **Because we do have a further design principle... no, I was going to reference 15 and 16 which are around deconfliction and Glasgow and Edinburgh Airport?**

MR The thing with that is that you are right; it is you and it was the airlines as well, specifically on the sit and the stars. They have to be flyable within the archaic requirements for BBM. There are two on the (12:11) that are just not possible. And there are a combination that, in terms of workload, are difficult to justify. Human factor wise. Because safer controls as well. If everyone is doing tight, continuous turns to avoid this, to avoid that, to avoid the other... it will fail on the flyability of the issue. In the sense that ATC has lost where the aircraft are.

MR It would not be safe either would it?

M **Sorry?**

MR Flyable and safe come very close together in the end.

MR Can I through in something else in that came from Glasgow from the commercial guys? They were looking for predictability as well. They could plan earlier, predict what they were going to have to do. It gave them an increase in efficiency, I think that was their motivation.

M **That is, if you look at 14, 'predictability of flightpaths must be maximised for consistency of operations'. So that is probably listed under...**

MR Can I say we combine them?

MR Well the predictability one was also to do with people on the ground. So predictability of the flightpath and noise impacts.

M **We think they are two separate points as well. The Airline (13:25-13:28) encompasses the community. We probably do not want to lose the ability to report on both, which is why we kept them separate.**

MR Ok

MR I may be saying something similar (13:39-13:43) From an ATC, from my perspective, the ATC systems point of view, as well as, taking out the (13:51)

MR Things like?

MR (13:56) and changing your understanding of what we do. Today, everything goes to the same altitude and they seem to be available all the time. That was the bit, from an ATC systems point of view, we have to be able to be supported technically, by flight management systems, flight planning systems and we need to protect all systems in the background to support the routes. So, whilst that is true and I understand why it is written like that, because it won't go into the detail necessarily, that is...

M There is another proposal, 9. Which says; 'flight paths should be efficient and effective route management' and I believe that came out of the discussions that we were talking about around air traffic control. Not having to take 3 different changes on a flight path in a day, which makes it unsafe or gives it a creation of...

MR One of the issues we found is that it is very hard at the moment to have 6 switch on and off

M Yes

MR There is ways to do it, and there are ways you can't do it. That is what we need to make sure that that is in the head of those designing, and that we talk about it and make sure they know what it was

M So with that all around effective route management, in our last workshop, the stakeholder group suggested that PDP 3, for them to be flyable, and PDP 9 were merged. But on consideration we also thought they were separate topics. To keep them separated because they are trying to cover separate points. But if it does mean that they would be more meaningful at this workshop as well to combine them; then we would also consider that.

MR Doesn't 10 also come into that as well? Because it is talking about accommodating PB and traffic in line with the modernisation strategy. Are these not all interlinked?

M If we make a very generic one it doesn't really represent all of the elements we need it to represent. Then, if we write a 4 sectioned one, it is quite complex to say yes it met that or it doesn't. But I am totally open to merging if we think that that is the best way to do it.

M So could we just get opinions from around the room there; would you merge PDP 3 with 9?

M 3 with 9, so about flyability and route management. That was one that we thought keeping them separate was making sure the community reported on it, if it was...

MR Mine was also pilot workload, as well as ATC workload.

MR Yeah...

MR Because I guess you could have something that is flyable, it meets 3...

MR Yes

MR ...but it could have a very high workload...

MR Unable to be supported by (16:37)

MR ...the other way around... it looks incredible efficient but it is not flyable

MR Yes, exactly.

MR I think the final design must be able to be supported by the aircraft and ATC technical systems or something of that... if it is the file for 'flyability' as can the aircraft fly safely...

MR But, I know I am just talking about basic design principles, but surely all these things are in the remit of the designer. He must be taking those into account otherwise it would get thrown out

MR Yes and no. Because it could be an Edinburgh design but the NATS systems that can't support it.

MR Ah, you have brought up another issue... yes alright

MR So they have got to interlink the design principle

MR Can I add something...

M I was going to say, because PDP 3 is the one that is prompting this conversation. If that is not meaningful enough do we need to change the words in that to make it more meaningful to still stand alone...

MR It is just because it is under the technical... it is very simplistic really, it needs to have more detail

MR It is inconsistent with NATD systems and the processes

MR BTC and their (17:55-17:58) I am just trying to get that into the route of these design principles because I don't want it to go missing

M I am missing some of what you are saying ...?

MR I am just trying to get that in to everybody's design principles because lots of people have been through this process just now, so that we don't get to the end of and you've got a beautiful design and then we test it and it doesn't work. That is what we are trying to avoid early.

M Sure

MR By work, I mean it can be technically supported by the systems. So it just about being...

M flyable and...

M Can be technically supported?

MR Yes.

M is that technical supported by ATC systems, does that...

MR That would be what my intention would be of it

M How does everyone else feel about that?

M ATC...

MR An airport systems isn't it?

M Yep

FR We have had issues previously as you know, where designs have come out which has been subsequently found that they are not flyable. From a community standpoint, communities find it really difficult to understand how it could've got to that stage. It transpires that it doesn't meet the criteria because you say it is not relevant

M I think that is the great thing about this process, it makes you tick those boxes before you go out to the community and present it in that order. There is almost this design principle that helps make sure that everything that is then presented, that is doable. That is a great design principle.

FR I think you are talking about sequencing aren't you? From an ATC point of view. We do not want stuff to go out to the community and then find that without testing it, and it just isn't compatible with your systems

M This process won't allow us to do that

MR Yeah. It is just about the designers understanding and group to understand 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

M We can add that in if that helps everyone else understand what 'flyable' means, even in the design principle or some explanatory text underneath it if that...

MR If you can do some explanatory text for the future...I think it needs some explanatory text for the future. Definitely it's got to be technically manageable, you'll want it manageable.

M Ok.

MR And this is partly designed as well for the kind of situation where you've got a very complex flight path trying to avoid every single stakeholder on the ground. But it isn't viable, so it needs to bring in that (20:21). We'll do whatever we can to minimise the impact, but it must be viable.

M Ok, cool. We might be coming back to you with a definition of that, and then we'll come back through...if that suits.

MR Yes, ok.

FR Just on that point, it's a really, really good point, but I think communities does have an expectation that PBN, while it can be used very well to simplify the airspace from a technical standpoint. I think communities see PBN as absolutely an opportunity to avoid sensitive

communities. So, don't jettison it, don't...you know, flyability has got to trump everything. Well I think when you're looking at it through that end of the telescope you then think, well actually, communities don't matter quite so much. Well, the safety of the community is equally as important as the safety of the people up in the air, and if you're only looking at the technical viability of the flightpath...and that means that you don't have extra turns on whatever is required to try and avoid sensitive communities. From a communities standpoint you're then completely removing the potential advantage to them of PBN. Its' a really important point to understand.

MR I understand and I agree and what I said there wasn't to state that's to the detriment of communities and something that I'll come onto in a minute is all about the communities.

M Yes.

MR Before we leave the core element, having been at the last meeting, one of the earliest things that came up, one that gliders themselves are quite anxious about, was that airspace should be at the minimum required, controlled airspace should be at the minimum level required for your operations. Now, that came up quite strongly in all of those points and to be honest, having been through this, I don't actually see that mentioned, has it been subsumed into something else? Or is it not being reflected?

MR I think that's probably because we had fifty and we're trying to categorise and plan for a more manageable number, that's probably gone into two, where it recognises that there are different airspace users and that there needs to be prioritisation where...

MR Well, prioritisation has just been taken out so...or proposed to be taken out.

M It is proposed to be taken out, and that was based on our community feedback that they thought that meant that airspace users would be prioritised over community. So, when we were talking about...that's why we were talking about requirements instead of prioritised reforms. But, we'll look at all of them.

MR But still, present airspace users and (Blundell? 22:59), so that's general aviation (23:02) airspace and that's...

MR Sure, but it's rather missing the point of saying well we should have a minimal amount of airspace as required, which sounds like a more generally designed point which could generally be reflected, I would have thought. There's no reason to take more space than you need for your operation, so why not stick to that principle?

M Ok.

MR I think that came down to an original discussion that the statement of need starts with modernisation of the current (23:35), to modernise the current (23:35), based on what they are today, doesn't change the values of the airspace.

MR To change the boundaries of airspace we have to go and look it up. Can we just give back Class G airspace to someone? Under regime 1616, I'm not sure we can just give it back and say, we don't need it. But our starting point was, we are looking at the existing conventional roots, trying to improve those under PBN, while considering the number of noise issues.

MR As I said, that doesn't actually move the boundaries of controlled airspace as it stands today.

MR Surely it should do if it's taking advantage of aviation performance?

M That was exactly what came out wasn't it?

MR Everyone asked for a clean sheet but of the issues that comes up is that if we go to a completely clean sheet, we need a number of parallel airspace change programmes to be started and to run, if I understand correctly, because we will, for example, let's move down. Stick it twenty miles closer to Edinburgh, thirty miles south of Edinburgh, I don't mind. That doesn't match the original statement to me.

MR Perhaps, from my background, I've run two given back, controlled airspace, airspace change proposals. One was part of the Solent City Eight, 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.

M Ok, thanks.

FR There is a related point. It's not just about giving back last year's space. The expansion generally of the TME would be supported by some communities for, as we talked about in our first workshop, flying directly down the Forth from runway six, and actually aircraft reaching a height of at least 10,000 feet before they actually cross any land to make less noise. That would absolutely be supported by a number of communities, and you were saying that it's not in the statement of need, that's a real pity because that would be a win for a lot of communities in terms of noise reductions. And I think we mentioned it, somebody actually said at the previous workshop, I remember it clearly, I would love not to fly over (26:58), why can't we fly down the Forth? So, if we could find some way of looking at that within this ACP, that would be very widely welcomed.

M I think that is something to look at but actually at this point in the design principles is about setting criteria and not finding solutions, and actually saying flying over the Forth is getting into the solution mode.

FR But we've been told we can't have that because it means expanding the TMA. What we're saying here is it's not about specific solutions, it's about can we look at very creatively the actual size and shape of the TMA, and we did ask at the previous workshop, and we all said we want a clean sheet, because that seem like a good place to start from.

MR So the TMA can get bigger?

FR Mmhm

- MR But there's all airspace users, and I don't mean GA, I mean (27:46), (the Clyde? 27:48) does a big city east of Edinburgh as well, and it's not part of this ACP because it's not part of Edinburgh's airspace.
- FR But it's all part of the same conversation, organising airspace for the future.
- MR So we went through to Kinghorn a couple of weeks ago, and we spoke to some of the gentlemen from Kinghorn Community Council, [REDACTED] and...anyway, we explained that from our perspective there isn't a clean sheet, we don't have a clean sheet. There may have been in 1942 but there isn't now. Our ACP in support of Edinburgh's ACP can, and may well look at, airspace to the east of Edinburgh, if that allays your...but it's not in Edinburgh's gift to...
- MR That's the thing, Edinburgh doesn't have the mandate to do that, so they can't ask us go and absorb it. So I have to be a little wishy-washy in my response, but certainly down the water it's absolutely an option that's just staring everyone in the face. But to my mind that's slightly separate from a clean sheet, and looking at bits at the edge of controlled airspaces, ah we can have that bit back, we can have that bit back.
- MR I'm not looking for specific items, I'm looking for a general principle of not to have more outstanding airspace than is necessary for our...that's a principle, that's not a solution for anything.
- MR But is that not a requirement of J users? That you would like less controlled airspace, is it not covered in that principle?
- MR As long as it doesn't get overlooked and lost in the process, certainly. That was the strong one that we would have wanted, and it seems to have disappeared and fallen out.
- MR And that was the intention of number two. We wanted to take GA into account as well.
- FR Ok
- FR And has (29:39) been taken out of number two or is that just...
- MR Yes.
- M It's a suggestion. So, and this was the suggestion based on the first stakeholder recall workshop that we held.**
- FR It's just in their communities, they thought that promise to airspace users meant that they were prioritised over communities, they wanted that priority removed, and it should be should instead of must, so it was more equal.
- M Yes. Can we move onto number four now? Initially it was flight paths should be designed to minimise the total adverse effect on health and quality of life impacts created by aircraft noise and emissions. It was suggested that we suggested the word should to must. Views on that?**
- MR Must might be taken to override something else in the list. Should is fairly strong.
- M Ok**

MR Must, taken to the extreme, means you don't do any of the other things really.

M Ok

FR Not surprisingly I think absolutely it should be must, I support that completely. And I think that the issue is that potentially within all this great big process, the voices of the communities are very, very concerned their voice will be lost. I think that's why we asked for must.

M Can I have views from this side of the room on that please?

MR I don't think must is as possible in that context. I mean it's desirable but it's not possible, if you need to put the full sentence.

FR The this is there's a risk if it's anything other than must, what then happens is that the health and safety of people in the air is prioritised over the many, many more numbers of people on the ground who are affected on a daily business. And that's the issue, it's the size of the effects and impact that it has on people on the ground, from a community standpoint. Now, I appreciate from an aviation standpoint it might be slightly difficult, but from a community standpoint the adverse effect on health and quality of life is very, very important.

MR How would you measure that?

MR Yes, yes.

FR Well that's not for me to say

MR So if you say must or should, and the airport says we've done that, how would you know they've done it?

MR How would you know, yes.

MR What is the proof that says it's been minimised?

FR Well we'll need something won't we?

MR It needs to be measurable, doesn't it?

FR Well exactly, it needs to be measurable, but it isn't easy to measure it, and the problem is the airport isn't currently monitoring the noise levels or the emissions levels outside of the airport.

MR So you couldn't prove that they've minimised it? What I mean is there's no point writing it just as...you have to be able to stand by what has to be done.

FR Ok, so it must be designed to minimise the measured total adverse effect, add in measured. It is up to the airport to measure the before and the after.

MR I just don't know how you...you can say we have minimised it but that's not measurable.

- MR Measuring the adverse impact on health, I mean, that's not a possibility as well.
- MR Absolutely
- MR Well, as a designer you have to take on board the points and do the best you can. As low as regionally practical when it comes to safety. You can measure that better and measuring the impact on a mass volume of people, I think everybody is aware of the potential impacts but physically, or even tentatively trying to measure and I think that's an impossibility, frankly.
- FR It is possible to measure it. What you do is you look at the 51 LEQ limit and you actually measure where that's been exceeded. Now, that's the new regulations and requirements coming in, and we measured a lower limit for night-time flying. If you don't design in impact on health, then you end up with people like myself and many tens of thousands of others who have their quality of life ruined.
- MR If you're talking specifically around noise, that's one aspect that, yes that's easier to measure, it's also partially known from the footprints. If you're talking about health in the wider sense, I mean, where do you stop? You see, that's a potential problem.
- FR Well it's actually not that difficult if you do your proper health research study. It's just been done with (Rossmoran? 34:12), in fact. The actual health impact on people of the increased noise of the flying that's happening, and it's a similar health study that could be done. What I think is missing, I absolutely agree with you, is the measured total adverse health effect, and I think that possibly should be added in if that assists in actually working out what the actual effect has been.
- FR Can I double check something? I think that wording is wrong.
- MR That reflects the air navigation guidance 2017 and the altitude-based priorities, which essentially states that we need to look at minimising the total adverse effect of aircraft noise and emissions on health and quality of life
- MR And how would you aim to do that in a general sense? Maybe it would help the discussion.
- MR So, the next stage of the work will be to draw lines on maps and try and work out how we can get flights past that meet and tick as many of these as possible, certainly ticking the ones that it much and then it's a balance between those. So, we'll be developing very large-scale maps using an address-based data package. That will then be converted into population density maps, based on the average number of people per type of dwelling, so that will give sort of a heat-map of population density. And then there's going to be other maps that will have on schools, hospitals and things like that. We're all going to sit down for a day and try and work out which lines on the map have the least impact on people. It's going to be quite a task.
- MR There's a half step in advance of that, before anyone is allowed to put a line on a piece of paper. I keep taking pens off my design colleagues and tell them to stop drawing stuff, because we're talking principles here, and principles don't have lines on maps. And the sorts of principles, just to drag in an example, at least where our thinking is, if a turn is going to commence past a community, the community should never be downwind if possible. Your preference will be to turn in front of that community, with the minimum amount of turning operations. The general rule, we are taking off into wind, our turns are

before we pass the community, to reduce the period of time at which noise is being created in a community. Turns are particularly sensitive because of course the time over the target is greater. That for us is a translation of the design principle. It's not measured in the sense of I don't have a metric to say that one is better than that one, which is why I have some concerns about the word measures, because I know how to translate these principles into measurements. But that's the sort of thinking that we are doing. There are some things that, if it's unavoidable it's completely unavoidable. But, where we have the possibility to minimise, we do so. Track miles is one of the other ones for emissions, for example. And there's a contrary thing, do we fly five miles further to avoid a community?

FR Yes, please.

MR Or, do we fly five miles less and reduce emissions. There's a principle in there and once we've got some of those ideas firmed up and debating what you're talking about is essential to creating ideas as to where we don't wish to be, rather than where we do want to go. So then and only then do we start...do I give my designers their pens back.

MR And I think the question then is can [REDACTED] be happy that those are being addressed by should or do they really need must.

MR We do our work as diligently whether it's should or must to be honest, it's a legal issue I think in my mind, more towards...a governance issue more towards Edinburgh and the proposers of this proposal.

MR You'll be given back a number of options and they'll say this is the least we've minimised....

FR Yes.

MR And there will be a big matrix of each of the flight paths and they will need to be assessed against the final design principles, probably on red, amber, green scale, it's not defined yet. And I guess the ones that are most green will be probably the most favoured. And we've got the cause there, with noise being a must because that it really critical, and [REDACTED] was mentioning about the balance between noise and Co2, the Co2 one is a should, to give the flexibility that actually noise is more important below 7,000 feet, and then Co2 is nice to have if you can reduce it at the same time as minimising noise.

M Ok, I'm going to move on because we've got quite a few of these to get through. Can we look at five, the one for economy? Initially we started with flight paths should be designed to provide increased airspace capacity for the airport to support the Scottish Government's Economic Development Agenda and the UK's wider aviation strategy. It was suggested in our first workshop that we include the words including tourism and trade.

M It was...the discussion around that was that the design principle should cover more than just aviation as opposed to the Scottish government's economic development. And people were talking about the attitudes towards tourism and how that's choosing between...whether up in Edinburgh or not. So it should not just reflect the aviation economic development. However, it should include tourism and trade as part of that. Which is why we've just added those words on. We thought that kind of captured it all in one design principle without stepping it out towards a separate design principle.

MR Personally I think demand for connectivity is succinct and covers it anyway. Bearing in mind also that demand can go down as well as up.

FR Absolutely.

FR I have a real issue with seeing the principle is 'to increase airspace capacity'. Because that predisposes that we don't already have enough and we probably already do. Potentially, when you compare it to very crowded skies elsewhere in for instance, other parts of the UK. So I have an issue with seeing that presupposed principle should be 'to increase airspace capacity'.

M That's one of the concept...

MR (41:07)

FR ...when we can't increase it anymore! And also, there are other issues which are not part of this discussion, but obviously we're facing a climate emergency. The climate emergency is being faced up to. One of the things we won't do is increase the thing that is causing...that is partly causing the climate emergency!

MR On that point, is it not technically correct to say that you're trying 'to increase the airport capacity', rather than 'the airspace capacity'? You might be able to do that by using rather less airspace. If you design the things properly.

M It is about airport capacity...

MR But that's not the same thing. Capacity's different to the actual size of airspace, isn't it.

MR Mmm. If that's proposing that the airspace should be bigger then I think it might be wrong.

MR Well I don't think it says that, does it? It just says 'capacity'. So you have more efficient routings.

M Mhm. It doesn't say anything about the size of it, however the capacity is (in the size? 41:54).

MR Anyway, it's one of the SESAR principles.

FR It's (perhaps used? 41:59)

MR Mmm. If you lost 'to provide increased airspace capacity'...

M But that's one of the...

M I think that's connected with the statement of...need

M Edinburgh airport's objective for this programme is to increase capacity. Airspace capacity. So modernisation and increase capacity.

FR Where's the evidence that you're required to do that?

MR SESAR. It's European.

M It's part of our future plan.

FR It's part of your future plan, but is there actually any evidence that you couldn't meet your future aspirations for the use of airspace within the existing capacity?

M That'll come out...there is work being done on that, but that comes out as part of the Stage 3 consultation. When all the evidence gets put forward in the community.

FR Because I think communities at the moment are struggling to understand why Edinburgh is currently asking for extra capacity when it's not currently using it. We also said this in our first workshop, that it seems strange that an airport that is not currently at capacity is requiring an increase in capacity.

M I think we've covered it before, but it's to do with the different times of the day where we are at an increase or hitting capacity or have projections to hit capacity, regarding times within 6 or 7 o' clock in the morning, 2 or 3 o' clock in the afternoon. So it's not capacity throughout the overall day. Because if we could get flights to fly at midnight, then we'd reach aircraft capacity. (43:22) in our communities.

FR Yeah, but...

M So it's really just about making sure that we look at that capacity and times that we need it during the day. So it's about capacity in targeted areas.

FR Mmm. My understanding is that the current runway capacity is 42 movements an hour, is that correct?

M Mixed movements, yes.

FR Mixed movements an hour. When did you actually ever hit 42 movements an hour?

M I don't know the answer off the top of my head. That's not what we're here to discuss.

FR (43:46)

M But that, [REDACTED], sorry but we are here to discuss the design principles and that kind of goes back to the first stage workshops that we had. Are we content that the inclusion of 'including tourism and trade' opens up that economic design principle? ...Can we move on...?

FR Sorry, is that a design principle issue according to the CAA guidance? We're not...I'm not clear about that. This...is that...bringing in economic requirements...is that part of the design principles according to the CAA?

M The CAA doesn't dictate what we need to have in our design principles. That's what we do these workshops for, to help us develop those. But the Scottish government has an economic development agenda, so what we're trying to do is balance a whole group of people's wishes for us as an airport. And being in Scotland, that's something we want to contribute to as well.

M Um...environment. So we started with: 'Flight paths should be designed to minimise CO2 emissions above an altitude of 7,000 feet and where it doesn't have detrimental effect or adverse noise impacts, also between 4 and 7,000.' And there was some argument, or some concerns in the last workshop that that was...that the priority was not quite right there. And so, this is the change that's suggested which reflects the ANG17 definition. 'For flight paths at or above 4,000 feet, 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.' I can see some nodding heads there. What do we feel about the...?

MR I prefer that one because the one that says 'above an altitude of 7,000 feet' wouldn't be Edinburgh's airspace again.

MR No, it's not, they do...(45:54)

MR That should say 'below'.

MR Oh, ok.

MR Below 4,000 feet...

MR So in the first one, it says...

FR ...above 7,000 feet...

FR It's the wrong way round I think.

MR It says...

MR There's a typo in there, you're right.

MR Yeah, it's a typo.

MR But the new one...

MR But the new one's fine.

M **Sorry...**

MR The new one's fine, yeah.

MR But that's one of the things I just...just mentioned. We can add miles and miles going all over the countryside...

M **Yep.**

MR ...but that...you want to restrict that in terms of fuel burn. And fuel burn is directly related to CO2 emissions.

MR Mhm.

M So the...

M Yeah.

M ...the intention of one, of the first part of that, was to actually put more weight on reduction in noise impacts. (46:42) CO2 reductions. But the community we were talking to last time didn't see it quite that way. And so they asked us to revert it back to the actual air navigation guarding statement. Which we've done there. But I think that almost weakens what we were trying to achieve.

FR Mmm.

MR I think...when you come to heat maps, do you weight the various aspects in any way? For instance, CO2 outweighs noise or vice versa?

M Well, we'll do it in terms of noise, PDP4 being a 'must' versus CO2 being 'should'. So we would look at the total population affected overflow, things like that first, I would imagine. And then we would consider track miles, and CO2. And balance that.

MR Mmm. Ok. Thanks.

M Sorry, just double checking. The one in red is the one you're happy to move to?

FR Happiest to move to that one, yeah.

M Ok. Let's have a look at 7. 'Flight paths should be designed to minimise adverse local air quality impact.' The suggestion in the last workshop was that with that...'should' should be replaced with 'must'.

M This is another one of those things where we are struggling with lots of 'must's and what comes first. So there are always...needs to be a tradeoff. We wanted to make noise, and impact of noise on the community as the 'must'. And then have air quality and CO2 emissions as the 'should's. As in, they're potentially the tradeoffs on communities. And I don't know what you think about that, because it's a hard tradeoff, when everything is important.

FR Yeah.

M Views on that? Must, should?

MR As a designer in another field, I go for 'should' all the time.

M Yeah.

MR Because it's my expertise in balancing the (48:40), so...

MR Sorry, can I just make this clear? If you've got a difference between 'must' and 'should', are you saying that 'must's are going to be prioritised over 'should's'?

MR Yeah.

M Yes.

MR Hmm. Not so happy about 2, then! After all. It was 'must' and now it's been 'should' so it's been downgraded.

M Yep. And that was based on community feedback. They thought that communities' wishes would be put below (49:02) wishes.

MR Well on behalf of the other part of the (49:02) I'd rather have back 'must' please!

M Ok.

MR (49:10)

FR A different kind of (49:11)!

MR Does that mean therefore that you have to prioritise local air quality over noise? Because that's what that would...that would demand...

MR Yeah.

MR ...that that's what you do, all the time.

M Yeah.

M And that's a tradeoff, that would...

MR And is that...

M Is it reconcilable?

MR Yeah.

MR (49:26)

MR They should all be 'should', shouldn't they really?

MR Is that...

MR Well that's what they're saying. About weighting, because...

MR Yeah.

MR ...the responsible designing the weighting of it appropriately, may end up with a calculated end result that's demonstrably the right one. That's the point.

M And for the 'must', it just means they have to justify it as to which 'must' won out in that argument. Where that means that local air quality could win out over noise on communities. What we wanted to make sure was that noise was a major issue that was considered. That's why we had it as 'should'.

MR What's the navigation guidance saying?

M It says that noise is the priority below 4,000 feet.

MR So that would go against that.

M Between 4,000 and 7,000 feet noise is also a priority unless it's going to have a detrimental impact...a significant...disproportionate increase in CO2. It's silent on an excess between noise and air quality. But if you look...and I spent some time yesterday, looking at the various guidance and the implications. If you're going to have a steeper flight path, to minimise the overflow of population, for example, that is likely to increase air quality emissions because you're taking off harder and faster. Is that right? Approximately. So if they're both 'musts', you've got an irreconcilable conflict there between the two. And because the community's principle concern is noise, noise I think should take priority over local air quality emissions. And local air emissions...local impact on local air quality is thought only to be really significant below a flight's...1,000 feet. So in quite a small area. And above that, dispersion and wind means that it's dispersed rather than causing a local issue.

MR Mmm. But if you look at the aircraft profile on departure, which is of most concern, if it takes off at take off thrust, until it reaches thrust reduction altitude which is 1,000 feet or 1,500 feet in Edinburgh? I don't know. And then the aeroplane automatically goes to climb power. So it's maintaining that en-...that output profile until it gets to about 1,500 or 2,000 feet at the end of the flat retraction phase. It's only when it gets into the navigation climb phase that the flight control...the flight computer will manage the thrust to whatever...wherever it needs to get to next. So it will climb more slowly if that's appropriate or at max climb if it's not. So actually in the lower levels, in the 2,000 feet and below, it's not going to have any difference at all. Because that's just the way the aeroplanes work.

MR And for safety as well, of course.

MR Erm, yeah. Ok. Yes you need to get fast and high.

MR You need to get there quick!

MR Yeah. But that first part of the profile is not variable by the pilots.

FR (52:25-52:26) correct in terms of what we mean (52:28). The reason noise is so important to communities is because they experience that. And they're aware of it. They may also be experiencing quite serious impacts in terms of air quality. They won't realise it necessarily at the time. Because obviously the impact of noise is much more immediate. So it's finding some way of striking a balance. Although it's regarded as no longer an issue, air quality above 1,000 feet, some people are sceptical about that. I think your...the concern about communities is if these are not written in as design principles at the very beginning, actually (beeped? 53:02) in, they may well become diluted. That in a nutshell is the concern of the community.

MR Can I just...we're reading it just now. Number 4, which was titled as 'Noise Qual', also mentions emissions.

M Mhm.

MR Could that not be subsumed into 4? Number 7. As we're talking about air quality.

M Originally, I think that was just about noise, I think emissions was added.

MR Just because it's noise...it doesn't strike me as environment...I guess noise is...environment is noise and emissions.

M Do you think we could take it off in 4? So it just says 'Noise'. And then that improvises...

MR I think it's just...it's covered in 4.

M Shall we just delete it?

M So delete 7?

MR Yeah and just leave yourself with 'Emissions' generally.

M Ok.

M Hmm.

FR I'd be careful about removing that from our community standpoint. It...it would look like Edinburgh airport doesn't care that you're...

MR Mmm.

MR It's covered in emissions.

FR Yeah but you don't have to put in emissions and local air quality impact. You put an 'and air quality impact' above PDP4 and change PDP4 to 'must', that might well be acceptable.

M What does ANG say about local air quality?

FR Not very much.

MR It says that it's...

FR It doesn't get that much...

MR ...not highly affected by flights above 1,000 feet and there could be examples. Well, you need to take into effect local continuations and concerns.

FR Mmm.

MR ...and there could be that tradeoff of course. It's definitely not a strong air quality...

MR Doesn't air quality affect a limited number of people? Because obviously, aircraft leaving an airport or coming into an airport are only going to be going at 2,000 feet either on the way out or on the way in. You're talking about maybe a 3 or 4 mile radius at the airport. So in those terms there's only a few people as compared to the effect of noise on a much larger community.

MR Yes.

MR So I mean, do you prioritise it that way?

M Does that mean it'd be better to have them as separate? So that you would (notice? 55:31).

MR (55:33-55:34) Depends how it's interpreted by the designers.

M Can we move onto some of the operational issues here? So initially we started with 'Flightpaths should be designed with cost-effective routes that minimise track miles and fuel burn'. You can see that word 'cost-effective' has been taken out and this again is a result of the first workshop that we...of the first recall workshop that we held.

FR So are we going to be (56:13) in these?

M Well these are...at the minute, these are just drafts and the words can change anyway. But yes when the process is finished we'll be doing a wrap-up report that comes back to all the participants that says 'Thank you for participating. This is what you said and this is what we got to.'

FR This is a copy I got the other day. I don't know if I have that in it or not.

M No this is the changes that we've been using in the workshop. So we wanted to give everyone the same information to start with and then present some other changes that we took on board from the last workshop to test those with you.

FR But that means potentially we could be overriding what people in that workshop wanted?

M Well it's all about getting all the feedback. And looking at all the feedback as opposed to what one workshop wants and the other workshop overrides it. So what we're saying here is not the be-all-and-end-all, we're going to go away and look at everybody's comments together. And then look at that as a collective. As opposed to one workshop versus another.

FR But we won't have another opportunity to look at the final one?

M Correct.

M So, can I have views on this one?

M Which one, sorry, [REDACTED]?

M Sorry, 8.

MR 8, 9 and 10 look together...

MR 8 and 9...

MR 8 and 9 are virtually the same, aren't they?

M So I think what...the 'cost-effective' came out because communities were like...minimising track miles and fuel burn isn't that much more cost-effective anyway.

MR Yeah.

FR It was...

M They also thought it was kind of like...

FR (57.42)

M So we were ok, with potentially taking that out. But the 'effective group management' was also around the air traffic control, and making sure that it's not...saying you turn it on between 7 and 8, and then you turn it to 9 and 10, and then you change it to 11 and 12. So it was just that bit of..

MR It can be extended by 'consistent with effective route management', and it covers both of them.

M I think...we don't want to have any

MR There's a separate...there are two separate issues there.

FR Mhm.

MR It has to do with a number. In one respect, which routes do you actually have? And those routes that you do have, are they efficient? In terms of my understanding.

MR Mhm.

MR Miles and fuel go together. Yes, 'cost-effective'...there's three things in there...you could ditch two if you really want to make it the most simple. Because if you minimise track miles with fuel burn...that's not wholly true. Track miles and fuel burn are very much related to each other. Other than power settings. So cost...to my mind, as a design principle, it doesn't matter...there'd be no objection to removing 'cost-effective'. But there is a slight difference in...whereas 8 refers to an individual track, 9 refers to the system as a whole. For example if you're looking at using...let's not do the whole design now, but if you go into (PANZALTS? 59.07) and (PANSATM? 59.09) and you look at reducing the take-off separations that you're required to have no...is it...within 5 miles of the end of the runway. 45 degrees left and right. How do you do that, relate to route management?

MR Mhm.

MR Whereas the actual track that then comes off those two spurs...

MR Yeah but that's why I said consistent with the effective route management...

MR Yeah, so you could merge the two, but that's two separate ideas put into one.

MR Yeah.

FR Can I ask...?

MR Design is balancing those.

MR Doesn't matter where it is. There are more or less principles.

M We have more principles though. I'm not trying to get them down to 7, because that's the perfect number or something like that, so...if we're trying to reduce it, just so we don't have a lot...I'm ok with having more.

MR Ok.

M But if they are the same thing, I don't want to double up on the same thing.

MR Another quite...8 and 9 are not the same thing. And I think also in some of the comments [REDACTED] has made... at the end of this it would be correct of us to be able to say that this addresses that one, and this element addresses the other... rather than just saying oh no it's all efficient... it provides some transparency.

FR It hold us more to account I think.

M So the question I just want to get some indication on is: do you think the words cost effective are necessary in that... or not?

MR ...No.

M Great ok. So now we can move to nine which we have already started talking about... thoughts on that one?

MR ...Like it

MR ...Yeah I think we (01:00:55) got it.

M Yep, all good. Right. Ten, this started out using an acronym so flight paths (1:01:08) to accommodate PVN, in line with CAA's modernisation. There is a lot of talk about spelling things out and making things clear and getting rid of jargon

MR Correct

M in the first stakeholder group so...

MR It's not the whole purpose behind the exercise really?

M Yes

MR Ok... it's not a design principle it's an objective

MR It's about the... (01:01:31-01:01:33) navigational performance of the actual routes I think it was that's leaning towards.

- MR It was also towards reducing the number of older aircraft and encouraging airlines to use more modern aircraft that can fly the PBNS... which will help noise emissions and CO2 and everything...
- MR Have any problems with that at Edinburgh for instance... Logan here I think told us that Glasgow 2025 was the only stakeholder compliant...
- FR It wouldn't be exclusive it would just be a multi-purpose, if that's the right word, so that it's not just exclusive to PBN but it is designed so that it accommodates that in the future if that makes sense... but I guess it's up to each airline which aircraft they're using so we can't really dictate... (01:02:22)
- MR Logan Air is surprisingly modern.
- MR (01:02:27-01:02:30)... he said he couldn't do it.
- MR I think there is something... they said they have got lots of it because they needed it (01:02:04).
- MR I think it's when they retired the (01:02:36) they became compliant with PBN.
- MR There are other operators that are the same... who recognise this and this is not an issue unique to Edinburgh.
- MR Yeah
- MR This is all across anywhere in Europe and North America.
- M Ok**
- MR Sorry, from an efficiency point of view... getting rid of the ILS and any inefficiency that comes from that must potentially be an objective as well in that... medium I assume to longer term...
- FR Do we need the word modern in there?
- MR I think so because PBN is generic... and you can see that some of the routes that exist today are already PBN but not the... highest standard of PBN.
- FR So should it say the higher standard of PBN then, rather than modern?
- MR You don't want to go higher standard because, you go higher standard, you do have an issue with...
- MR So there's a happy medium
- FR (01:03:37-01:03:42)
- MR What do we call modern traffic? I mean it's referring to traffic isn't it, modern traffic? What do we mean by modern traffic?

MR I think (01:03:48-01:03:53) that's the... documents that have been used to design the airspace just now

MR Yep.

MR (01:03:57-01:04:00)... too specific then...

FR I guess we can say (01:04:03) as long as there has to be some explanatory legalese to understand. But I guess, is Performance-Based Navigation easier to understand than (01:04:11)

MR Because it could be (01:04:12) but yeah.

MR (01:04:14-01:04:18)

FR PBN is generic and there are various things that sit underneath that which are navigation systems.

MR If I can quote Glasgow they are saying... should be (01:04:23).

MR ... or better, I think.

M Ok

FR Well there's another way of putting it... the standard (01:04:28-01:04:31)

M Ok. Let's go to health... So flight paths should be designed to (1:04:39) population overflow below four thousand feet... and where possible between four thousand and seven thousand feet... taking into account any potential adverse impact due to overflow... having protected characteristics as defined by the Equalities Act.

FR There was a big discussion about this in the last group because the group felt like (01:05:01) it felt like a tick-box exercise... we were trying to put a concept in there to help explain what we meant by protected characteristics because I think some people might not know all of what that encompasses... so we thought we were being more specific by putting that in there, however some people thought we were being 'tick-boxey' and it wasn't as meaningful because we referenced an act... so we were playing around with the words and then we thought we will just put it out to the group and say, 'what does the original one mean to you? How does that land, if we reference the Equality Act?

FR Do you know what is meant by protected characteristics?

[silence]

FR Is that a no?

MR No... it's a no.

MR (01:05:43-01:05:47)... special requirements, that means nothing, it is utterly meaningless... (01:05:51-01:05:55)... it means whatever anyone wants it to mean.

- FR So to reemphasise is that (01:05:58-01:06:01) it was just feedback on the last group and that's what we wanted to float here to say: what does that mean to you? The special requirements is... who knows what that means right?
- FR My question really is why is it only important for those having protected (01:06:13)?
- FR (01:06:13-01:06:16)
- FR It's not because PDP4 is for everybody, but PDP11 is to make sure that the people that might have... another disability, on the autism spectrum, or something that has actual additional requirements that they're also concerns...
- FR Yeah so if you think about it... if you have a particular house that's flown over... they've all got the same level of noise, the same frequency of flights, the same emissions... but the people within that house may experience it differently... and that may come from their own personal circumstances, it could be a protected characteristic that, as you said... someone has a disability, but they might have more sensitivity to noise... they've got hearing (01:07:04). People of different age groups might experience noise in different ways because they are staying on location for longer, they don't go away for work...
- FR So that would kind of cover skills, or age/care homes, or that (01:07:19-01:07:22). So it's not to exclude everybody else but it's to make sure that these other people are also considered...
- MR Adequately represented.
- FR Yeah adequately represented.
- FR But I think that's important for people with these special characteristics... it will be important for everyone whether they actually have protected characteristics, potentially more sensitive to noise or whatever... that's equally important for (01:07:48) population
- MR And that doesn't exclude that... it's saying... should be designed to minimise population overflow, so it's the entirety of the population
- FR Yeah
- MR It's also taking into account those that have protected care through (01:08:03)
- FR It's not one or the other
- MR It's just padding anyway because you're saying it's any potential adverse impacts so you're covering it.
- MR Yes... I think part of it was we had a chap hear from the Royal National Institute, blind, and he was explaining that, if he is trying to cross a road, and there's low-flying aircraft, it makes it very hard for him to do that because he doesn't have the auditory signals of vehicles and maybe even the signals of... road crossings aren't audible... So it's trying to address issues like that where people may have special requirements even though that's a fuzzy phrase.
- FR But, not down to that individual level, but if there was an RNIB school, and there were a number of people that had that kind of requirement... it's about making sure that we look at

anything we can really do to minimise that adverse impact... and... PDP4 says that... to minimise the total adverse effect on health and quality of life created by aircraft noise, we could merge that with (01:09:13) and say including those with protected characteristics under the Equalities Act so that the 1 PDP covers everybody... but what we wanted to do was make the point that a lot of people said don't fly over schools, don't fly over aged homes, don't fly over all these things we didn't want to forget or have those people think they were forgotten...

M **So, the point that I picked up there is that special requirements doesn't really mean anything...?**

FR ... Just in a response back to that though because... we don't want to alienate people who may have special, protected characteristics... but we don't want to forget them so we want to make sure it covers both... in fact combining them.

FR I'm not keen on combining them at all actually. My concern here is not with people with protected characteristics, it's the entire population that doesn't know what's coming... and they're not going to know until these planes are flying over them.

FR (1:10:16)

FR And that's partly my issue here... is how on earth you can design... saving those people from the worst impacts of what is going to come.

FR It's about mitigating our customer... and giving design principles that allow... to do that, or explaining why we're turning here or banking here to potentially miss a high school that's a special high school or something like that for people with additional needs.

FR You should be actually avoiding all schools and all schools to be fair.

MR And that's what PDP is... PDP 11 is about... so we had fifty-odd design principles... so some of those are wrapped up (01:10:57-01:11:08)... so quite broad... whereas others... take background noise if you can, that was the guy from the Royal National Institute, blind. There's a hospital for blind servicemen I think... just south of Ratho. Consider the needs of the elderly, children, those with ill health, autism and sensory impairment.

FR So we're trying to do something...

FR A catch-all.

MR A possible health role... Mental health well being.

FR There's a lot that sits below that principle and it's about

MR Totally impossible.

FR keeping that practice... but I think the important thing about it... what it's saying is that the airport won't just think of the population as an amorphous mass... it will all have the same kind of impact, because that's not the truth... things impact different because of what age you had to be, how older you are, any conditions you might have... it also impacts you if you don't have a condition, but it's about being really inclusive...

- FR But you are not going to know necessarily where these people are until you start flying over them... that's what I'm trying to say... for instance there are communities where there are a lot of elderly people who spend a lot of time at home. They may or may not be upset at aircraft noise – some are, some aren't. But you are not going to know when you're actually designing in where these people actually are. You only know that there's people there, you don't know what special characteristics they have.
- FR It's not that individual... people's requirements, because we couldn't care for all of Scotland's individual requirements... what it is about is where we can, so if it is special institutions or... and that's about minimising population overflow, so it's...
- FR That's not what that says... it doesn't say where we can it just says we will avoid people with special characteristics, not institutions with people with special characteristics.
- MR I think that's actually a moving target that you're never going to be able to meet, frankly. It's impossible. I think if you address the other points, particularly if you carry on to twelve, then you should cover eleven in the process of the other points. Trying to hit specific groups or... down to individual potential houses from what we're hearing... it's going to change anyway.
- FR It's not individual
- MR Schools, care homes, hospitals... is it better just defining... that group as opposed to (01:13:42)
- MR It might well be.
- MR If they are included in the noise-sensitive locations... that will meet the objective in eleven anyway surely... if those are identified and incorporated in the heat maps... yeah?
- MR I guess there's a distinction there... if you fly over two areas and one of them has a school and a hospital... that would then kick in wouldn't it... Well, I have to overfly somebody, I've got a principle that says I shouldn't not fly over people with special needs... then that would then make the decision justifiable.
- FR I think young people and schools came up quite a lot during this process but we also know (01:14:18) consultation that's a really big concern... which is why we're trying to not just put it in with everyone else and actually put it out to make sure that we are accountable for looking after different types of people...
- FR If you think about... young people go to bed earlier than everywhere else in the grid.
- MR You must be joking
- MR Do they?
- [laughter]
- FR Depends what you define by young. I suppose if we only think from the adult perspective, we're not going to be looking at the needs of younger people, they get completely side lined in the process. So what that principle is about is about taking different perspectives and thinking about... how is the impact different for different groups in society and how can we

mitigate for that and... even something like airspace being used in a more predictable way which is one of the things that we're aiming for... would actually have a positive impact on some people, because it is the unpredictability that causes more of an issue. So it's not always an adverse effect... what we're trying to achieve could actually have a positive impact too.

MR I think we're getting hung up on point eleven... the Equalities Act, special requirements, that sort of phrasing... when it's broader than that. It's schools and (01:15:41-01:15:48) hospitals and age care facilities and trying to bring a guide between them all... so I wondered whether we could take it back to the tighter definition of those... the Equalities Act... (01:15:58)

M The list was quite broad though in the first stage. It included care homes, schools... The list actually got very long... It's very difficult to list all of those different institutions out.

MR Are they listed in the Equalities Act?

FR The Equalities Act has got nine protected characteristics so... it includes things like gender, disability, (01:16:24) and religious belief. And in previous consultations one of the things that we have done behind the scenes is that we've looked at where the flight paths were intended, who was under that... We have collected demographic data from people responding to consultation, to look at the degrees that we've (01:16:43). For example something like religion and belief very very rarely got mentioned, but children's bedtimes or disability got mentioned more... so there are differences.

MR There will be a health qualities impact assessment as well which will look at all those characteristics and start at the baseline, reporting for that on all of the different local government areas that are likely to be affected, so there are differences in between those areas...

FR So do we think it's important enough to have its own or do we think it is important that everybody is looked at because everyone is important or... is there any thought on that...?

[silence]

FR No?

MR Nothing... if there's more vulnerable people (01:17:34) then it's a good principle to have to look out for them generally so... I quite like having that in there but that's just a personal opinion.

FR It makes it harder for us.

FR There is research out there finding (01:17:50)... a reduction in reading age of about a month in children so... the issue here is, and this is tied in with number four in terms of the health and quality of life impact... but I do think everybody's important and... some people more important than others, that's a tricky one.

FR That is what we're balancing.

M **Ok I'm going to move on and this one is so very closely aligned to this... so number twelve, flight path designed to minimise overflying sensitive locations and noise sensitive receptors, by which we mean...**

FR There was a lot of, don't fly over the zoo, don't fly over the green spaces, don't fly over this part, don't fly over that island... so lots of don't fly anywhere really.

M **Did morality come into this as well?**

MR I think that's going to come into four in terms of the (01:18:57)

M **Right, so anyway... I'm very conscious of the amount we've got to get through. So... the phrase where possible... it was suggested that we lose that phrase where possible. So, views on this one?**

MR If you fly over a green space you don't affect the population.

FR What about the people that are using the green space?

MR They won't be there all the time will they?

FR Yeah but they use that to get some respite from the planes that are flying over their houses.

MR Well I suggest close the airport then.

FR It's not the first time I've heard that

M **Any more views on that or shall we move thirteen?**

FR Does that mean we don't think it should be a design principle?

MR We don't think...?

M **... it should be a design principle.**

MR I think it's in every sense a design principle.

MR Yeah.

M **Okay.**

MR And it doesn't need 'where possible' in there because you either can do it or you can't.

M **Perfect.**

MR It may be balanced if you had... where for example you might be able to fly over a village or a historic site, for example.

M **(1:20:18) historic site in it?**

MR (1:20:21) historic site, which is why 'where possible' is in there, is to provide a flexibility to have a balanced view of flight paths, but...

MR 'Should' as well, isn't it?

MR Yeah.

M Okay. So, thirteen: where possible, flight paths should be designed to include track concentration and/or track dispersal options to provide night respite. The suggestion was that we remove the phrase 'where possible' from this one.

MR It doesn't add anything because you've got both options in there, exactly.

M Mm.

M I think there were suggestions from the one group that we do track concentration during business hours so that people aren't impacted, and, you know, what are business hours and who doesn't work from home, so we could... and then others,, dispersal to provide respite, so we're like, right, 'well, does that design principle give us enough flexibility to actually look at providing respite in the design?' In calling out respite, because we haven't done that yet, which is why it mentions both, because if you're just stuck on one... so yeah. It does mention both but that's the idea behind it.

M No one got any views?

MR As we discussed, for instance in Glasgow, track concentration is going to happen...

M Mm.

MR And respite may therefore be needed to mitigate the other impacts, so it's a perfectly reasonable principle to adopt as it stands, I think.

M Great.

MR We were looking at some theoretical ideas about a spread of concentrations.

MR Mhm.

MR Go down a track and turn two miles earlier. I can turn two miles earlier, I can turn two miles later, to create a dispersion.

MR Mhm.

MR I think some of us... driving some of that thought on that particular point, because you're right, there will be a concentration if we're all flying (1:22:34).

MR Yeah.

MR And especially... well, it depends on the local topography and so on, how much you will need to do that to meet the requirements.

MR Yeah. Exactly, that's exactly right.

MR Again, design principles...

MR As I say, they're not guides on paper, where planes and ideas and other things should be, you should be able to create some spread that controllers can use that means that whilst concentrated along that track, there are some options...

MR Yeah.

MR That can be applied.

MR Yeah.

FR What do you mean by respite, are we talking about time-based respite in terms of you're getting this in the morning or the afternoon, you don't get it both, that sort of thing?

MR That's one.

FR Or do you say one goes one track, then the other one goes the (1:23:20) track, and down the...

MR It's both of those in theory.

M They're both options available in... they're going into the pile of tools that we're hoping to be able to apply in the situations where they do best service to the design, but the complexity... in the end, if it's half an hour here and half an hour there and a dozen different tracks set down the controls will say 'that's not going to work'.

FR People (1:23:51), but then that wouldn't be night respite.

M That's another interesting point. I said two miles between, maybe it's five miles between and anything less than that is just not going to do the trick.

MR Because it's here, my front garden or they fly over back garden.

[Group Talks 1:24:14-1:24:15]

M It's not, I just wanted to clarify where we are with that one, taking out the 'where possible', they are taking out it.

M Great, okay. (1:24:36) number 14: now, the predictability of flight paths must be maximised for consistency of operations.

MR Well, when I mentioned predictability earlier, it wasn't specifically for noise...

M Okay.

MR It was actually for operation efficiency...

MR And it was raised by the commercial guys in Glasgow, and it will then potentially have benefits or disadvantages, noise etcetera, but as far as (1:25:03-1:25:04) etcetera, predictability and being able to plan for a particular approach or a particular detail routing is what they're after as early as possible, and I think that has... basically, I think that has efficiency benefits for everyone. You know, minimise holding, etcetera, etcetera.

- M** Yeah. Any other points to add on that one? And then we come to the final two, so this is the (1:25:39) one 15: collaborate with other Scottish airports, and that's to ensure the air space design option are compatible with the wider programme of lower altitude and network air space changes being co-ordinated by the FASI North programme.
- MR Network air space means higher. Higher airspace.
- MR Yeah.
- MR Yeah.
- MR So that's...
- MR Going back to [REDACTED] I think mentioning reaching down the Forth and so on, is that something that would be covered by FASI North, and has it been ranged there as well?
- MR One thing I was going to raise was, the one thing that's come out of our organisation recently anyway – and mainly by NATS controllers, I might add – there is great concern about the relationship between the airport designers and the impact upon how it integrates with the NATS design, and there's a wider concern about whether it actually will take place in an efficient manner. Having associated with some of my colleagues, it's an organisation's comment, but there is concern about it, as there is concern about the 16 process as it is. It's very bureaucratic. Just a point.
- M** Can I check? Because I think in the previous workshop, the 15 wording was challenged and it wasn't (1:27:13).
- M** This... sorry?
- M** Was not easily understood by a lot of people in the room, didn't you think?
- MR Then 16, I mean... procedurally (1:27:22) from the ground: you don't do that, the airplanes crash. Does it actually mean below 7000 feet?
- MR Do they... does that not mean a deconflicting below 7000 feet, by being the transition point, if you like...
- MR Within the airspace programme?
- MR Yeah.
- MR Is that... (1:27:46-1:27:47) of Edinburgh, and they're much more successful, since we made... since the (1:27:54) of 7000 feet, so even though they've got Edinburgh and Glasgow's designs, they went above 7000 feet to deconflict them and get them above hold.
- MR Yeah.
- MR As long as you know...
- MR Yeah.

MR This principle is a direct reflection of the Glasgow one?

MR Same wording.

M And they've included for us.

MR Yes. Just from the ground, it sounds a bit strange.

M I think to your point, to laypeople this doesn't make any sense at all. You have to have a certain degree of knowledge of what's actually happening, and the ordinary person in the street does not know what (1:28:27) is.

MR Yeah.

M What the future air space strategy is, they don't know nothing about it, they know if a plane is flying on top of them, but they won't understand this, so actually asking them to be a reason judgment on this at this stage (1:28:43) I'm not being in any way condescending, but they can't do it because they don't have the sufficient level of knowledge and understanding at this stage to be able to make informed...

M An informed response, yeah.

MR I think this is a... quite a technical request from two, I guess, quite large stakeholders that are not necessarily set up to the jargon, and all they have is jargon so a lot of it... so, we get acronyms upon acronyms upon acronyms. Yeah, (1:29:21)

MR I'm trying... other than having a glossary...

MR If you were just to say that the routing from Glasgow and Edinburgh airport should be deconflicting, I would have thought it's a clearly understandable statement by a layperson.

M Deconflicted... I think people would have an issue with what it actually is, what is deconflicted? I get it, you get it.

MR Separated?

M Separated, yes. I mean, people understand that planes have to be separated from each other, but that isn't necessarily what they understand from deconflicted.

MR And they won't necessarily be separated.

M I think we could include some definitions, and what does 'deconflicted' mean, and then we'll ask for...

MR Yes.

M All the relevant suggestion from the last workshop I've got through will be provided.

MR In regards to the technical stuff they want, either you've got a simplified solution or they have to be done to understand all the... because you cannot do a complex system by briefly

putting two or three words and saying 'that's what that means', it just doesn't work. I mean, it's my job explaining law to people every day, so...

M Okay, well that pretty much brings us to... yeah, please, yes.

MR I've got one thing. I'm curious that when all of them were done, I'm not sure if it's just (1:30:45), which comes quite frequently but there seems to be, to me, just from a (1:30:50) lawyer, haphazard use between 'should' and 'must'.

M Okay.

MR There doesn't seem to be very particular reasoning for some of these 'musts' and some of these 'shoulds'. I'd guess it was just the adjustor being bored and she didn't want to use the same word all the time. If, however, it's going to be read as being 'must' takes priority, then you want to have a look at that a bit harder...

M I think...

MR Because you're (1:31:11), okay, instead of having an order, you're saying your 1, 6, 5 and 9 are 'must', they have priority first, and then you look at the rest, and that's a priority system, so you've built in a hierarchy into your design system.

M And I think that 'must' and 'should' have been chosen specifically and have been debated, and I think that's why they're out of order.

MR (1:31:30)

M (1:31:31) big conversations around those, but we would be looking to sort of get something more easily read so that 'musts' are together and 'shoulds' are too, but...

MR Can I... I can see the point that if there's a statute requirement under the (1:31:47), something must comply with that, I get that, but if there's a value judgment placed on some of these, you're not required to but you're attaching a different value to these, we 'should' respite air users apparently, for whichever ones we're talking about in those cases, whether it's commercial traffic or GA, then is it 'must' or 'should'. You're... that's then putting a value judgment on it, so I think 'should' is something that's a desirable characteristic you're agreeing to build in for everything including environmental issues and the rest of it, but it's... unless it's a statutory requirement that says 'this is obligatory' then it shouldn't be a 'must' because then you're putting a value judgment on it, to be consistent.

MR To take it from 'should' to 'must' may make it...

MR Not achievable.

MR Not achievable, because...

MR If it helps, in the Glasgow design principles, they use 'should' occasionally and 'must' never.

MR Yeah.

MR Yeah.

MR Joys of English as well.

M What did I say when [REDACTED] asked? They...

M I think a primary issue, from a community standpoint again, is because of the previous experience of... previous consultations, a lot of trust was lost between the communities and the airport, and I think the key that's coming through this, the threads going through this is 'how do we know we can trust the airport? Oh yeah, put 'must' in and then they'll know that they must look at that, and must take cognisance of that' and that's where this is coming from I think. By way of explanation, I'm not saying whether you're right or wrong, it's just that I think is where this is coming from.

MR But the thing is I think is, their assumption is their point of view is going to take priority over everyone else's, which is great for them, but not anyone else.

MR (1:33:30) wanting the word 'must' (1:33:33)

MR Are we looking for consistency?

MR 'Must' followed by a verb is different to 'must consider'.

MR Absolutely.

M Careful.

M So (1:33:53) was saying that a way to explain the use of 'must' and 'should' is 'must' is a statutory must, and 'should' is a desire.

MR That's the way I would read it.

MR Yeah.

MR And that's what would be preferable.

MR And that's (1:34:04) does it as well.

MR Because...

MR If it's a 'must', you have to be able to say you've done it, you have to prove it.

M A 'must' test. Could I just mention where it says, you know, 'must' is because (1:34:14)

MR Then it's 'should', because everything else is... you've still got to do it.

M Yeah.

MR I guess the concern is if you're having design principles and you've got a design which doesn't do one of your 'musts', they go, they say... it said you must do this, otherwise it's (1:34:29-1:34:31)

MR I understand that, but you can take into account local considerations.

MR I'm not saying disregard those.

MR No.

MR I'm just saying they don't get prioritised, which is basically what you're doing by changing the wording.

M But then that is 'must consider', isn't it? If you're saying we're considering what the local impact is on that 'must'.

MR Yeah.

MR The household.

M I mean, the intention was safety, that's a must.

MR Absolutely.

M (1:34:56) that's a must. We had... what is it? Health impacts, we've got things in 'should' that should have been a 'must', you know, we need to prioritise and minimise that (1:35:05)

MR Just to revisit, so you may have clarity between the (1:35:13) that you have a choice.

MR Go back and...

M (1:35:15) legislation for it.

M And we didn't hear the answer to the question, if Glasgow are not using 'should', what are they using instead?

MR No. No, they are using 'should'...

M They're using 'should' not 'must'.

MR They are not using 'must'.

M They're not using 'must'.

MR No.

M Okay.

M Okay. Even when it is statutory?

MR Yes, it does.

M Okay.

MR 'Air space design must be as safe as today.'

MR Oh, okay. Sorry.

MR That's probably fair.

MR The discussion, I think... being a community near Glasgow, I'm on the air path, 'must' is obviously statutory, regulatory and so on, but with the adjusting from the designer, I mean designer in another field, we balance the requirements to end up with a reasonable solution, some alternatives, and then you'd make a decision.

M You'd say 'had'.

MR Yeah.

M We had quite an experience with the trust issues unfortunately, it's been really, really difficult.

MR Yeah.

M Very extended period of time, and communities are still very, very sensitive about it.

MR Mhm.

M And it's an issue, and I think, again, the airport needs to take a look at, if it takes this stuff out again, how does that look? How does that appear to those same communities? I'm not saying we're really (1:36:27), because we're actually not...

FR I just think...

M I think it's something we need to say, we need to be very mindful of this.

MR The perception is, unfortunately, if you allow them to 'must', the perception by the general public is that that will definitely happen.

M Right.

MR They think they've got their corner bagged, skewered and protected against forthcomers and that's not necessarily the case, unless you're saying this person can take priority over everything else.

M I think it's back-to-back thinking, you know, not thinking of that, of communities and that side of things. There might be some element of distrust, but I mean, the experience of the community workshops was actually there was some real positives.

M But they asked for a 'must' instead of 'should'.

M Anyway, I'm going to have to...

M (1:37:12-1:37:14) They've given us a room for our discussion, and I...

MR I was actually going to say...

M Lack of trust, that's different, it's not the same thing.

MR Communication is the key, and what we're doing now is part of that, obviously.

M Exactly.

MR The communication, the reasons for the decision at the end of the day, and actually, maybe what appears to be not necessarily the best actually is when you look at the detail. It's important.

M Thank you.

M Thank you.

MR Sorry.

M No, thanks very much, and I'm sorry to have to move you on. I want to look at some of the issues that came in the first wave as important but aren't qualifying as design principles and then just very quickly wiggle through the full list of design principles so that we can demonstrate where they've been encapsulated in these provisional design principles. Does anybody want to grab a quick cup of coffee before we go, before we move on?

[Group Talks 1:38:22]

MR I'm good thanks.

MR I shall be leaving at 4 o'clock to get my train.

MR (1:38:39) still going on.

MR I'll just sneak out of here.

M Yeah, that's fine, thanks.

M It's extra-ordinary how much conversation...

MR Mm!

M Can be generated.

MR Yeah, sorry, we should be (1:38:57-1:38:59) to be able to...

M Yeah, I think that's... representatives of other representatives.

MR Do you have a list of who has been? (1:39:08)

M I have... yeah, I do, but not on me. Yeah, obviously.

MR Are you sure? Okay. (1:39:13)

M In the previous... well, I will be sharing all of the documents.

MR One reason is that obviously I've been talking to people for Glasgow.

M Yeah.

MR It's slightly different over here, but it helps to gather and to feed back the information of what's happening. We've also got a talk on the 27th of November. (1:39:35)

MR Sorry, who am I speaking to? I missed a call from...

MR (1:39:38) gather any more feedback.

MR Alright. Okay, yeah, yeah.

MR It used to be, at the end of the 90s...

MR Can I ask you a question?

M Yeah.

MR One of the ones that came up in Glasgow which was quite important to us actually is reduce (complexity? 1:40:07) bottlenecks in controlled and uncontrolled air space. It follows on from the issues they had down at Farnborough, they've created a funnel which, once you get into it, you actually can't get out, and it's (1:40:22-1:40:23)

M And that is (1:40:27) even in the longest, you know (1:40:28)

MR (1:40:28) it could be (1:40:29) Glasgow.

M Right.

MR It's not the same issue here, but I think it's worth thinking about discussing.

M The very best thing to do would be to grab [REDACTED], that's... I want to pick your brains about reducin complexity.

MR (1:40:50) in Farnborough.

MR Oh, yes. Yes, in Farnborough. Yes.

MR Well, we've put it to the Glasgow, (1:41:08) not the same issue (1:41:12)

MR Yeah, yeah.

MR (1:41:14-1:41:20)

MR It was raised at the first (1:41:24) I think it didn't make it on the basis of (1:41:28-1:41:33) the shape of the air space (1:41:35)

MR Mhm.

- M** These ideas are recorded pretty much verbatim... this is what people said to us. One of the comments that was made by many people was to consider no change to flight paths. This isn't the design principle; it's rejected as an option. It doesn't meet the airports statement of need... or the airports need to increase the capacity, which is a core objective. Transport...
- FR Can I just go back to that... consider no change to flight paths. It's not a design principle... when we are talking about how [REDACTED] team will start drawing lines on the maps, we considered it as part of the approach. So, no change in flight paths would be investigated, as would the team sheet as would... what's the third one, [REDACTED]?
- MR Do nothing.
- FR Do nothing... (apologise? 1:05) for modernising, maybe?
- MR Just replicate.
- FR Just replicate... so it was looking at the approach on how they would start to draw those lines on maps. They would start with existing... and how do you go forward. It wasn't seen as a design principle, but it was going to be considered as part of the approach to drawing lines... on that map.
- M** I just wanted to recall the fact that we heard an awful lot about surface access infrastructure, transport infrastructure in general... planning integration with local authorities, integration with transport in and around Edinburgh... and also planning integration of transport infrastructure with public transport. Now, whilst these aren't related to flight paths, these are points are all noted, and consultation is going to be taking place before Christmas.
- FR Edinburgh airport is going out with the planning applications and part of the planning application is a consultation on an Eastern access road from the (Go-Go? 02:16) roundabout following the same line to Edinburgh to take some congestion off of Eastfield Road. A consultation around those sorts of issues will kick off sometime this month.
- MR (02:33)
- M** A few. People actually said monitor and report accurately on noise and again this is noted by the airport and it's something that they do currently do.
- FR 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.
- FR I think that's why we have an airport noise advisory board... that's something we can do on a day-to-day basis.
- FR Are you saying that it is the noise advisory boards remit to ensure that monitoring and reporting...
- FR I though we had noise handlers?

- FR No, the noise advisory boards remit is to advise Edinburgh airport on how best to...
- FR So, the noise board should actually be advising Edinburgh airport on where they want noise monitors?
- FR Yeah and that is currently done through (03:33) not the noise advisory board.
- M Monitoring air quality emissions was also mentioned. Again, Edinburgh airport already monitors air quality. Moreover, we will look at this as part of an environmental assessment, which I guess is where you come in, [REDACTED].**
- MR That's right, yes.
- M Use technology to reduce noise and pollution impact... well Edinburgh airport is doing an environmental assessment as part of this airspace change programme. It will be reviewing the outcomes of this report to determine actions depending on that. Another comment that was made was to consider government targets on the environment... well that's been encapsulated in the design principle put forward as number seven... and to consider risks of auditory damage came out as a specific point, which is encapsulated in PDP-four. These other points are noted: ensure business cases are well documented and... evidence and to recognise that flights are not used by all. So, two points there that are noted... consider compensation mitigation for those overflow... this is an interesting point, but it doesn't actually fall within the remit or design principles. Increase flight cost to reduce peak demand... well that's out with Edinburgh airport's influence.**
- FR I don't think that's working for (05:23). I've not seen that before, but my gut feeling is people will be talking about landing charges, not flight costs.
- M Well they were actually talking about specifically... especially in some of the focus group discussions where we were talking to residents.**
- FR Cost of tickets, do you mean? Flight tickets, is that what you mean?
- M Actual cost of a ticket, yeah.**
- FR Not the actual cost to the airline of flying to Edinburgh airport?
- M No... routes to and from Glasgow and Edinburgh airport should be procedurally deconflicted... that is accepted. Data, particularly forecasting to include details of all assumptions noted... in the focus group discussions that we have with the residents the comment was made was to create more jobs. A lot of people in the focus group discussions... residents... were very much in favour of expansion of flights and...**
- MR Where did you get the twenty-five thousand from?
- FR Absolutely, really good question.
- FR So, that's to do with expansion and bringing in (06:44) and any other construction companies that potentially come in. So, seven thousand are direct employees who work every day in the airport...

- MR I think that's too low. I use air travel to go abroad for my work and bring money back into Scotland.
- FR That's not saying that this is all... the Chief Executive of Edinburgh airport will tell you that. Bed and Breakfast on the Isle of Skye and Inverness depend on Edinburgh airport... that's not quite what people would understand as being supported by Edinburgh airport. I think that twenty-five thousand figure... be careful about banding that about because a lot of won't believe it.
- FR We have (07:34) and [REDACTED] decided he was in favour so that is why we put it up there...
- M Those who are very much in favour of the expansion said it was great to continue to support tourism and business. Ensure effective and clear communication came through and ensure efficiency and effectiveness through the terminal... again not design principles but noted. Now we come to the list of design principles... again from the first engagement sessions... these qualified as design principles but this illustrates where they have been encapsulated in those that we have just gone through. I don't think I need to read all of those out... everyone happy with the visibility of those?**
- MR PDP-four: avoid overflying rural areas... seems conflicting with avoid built-up areas.
- MR And that's the balance... PDP-four is about reducing the total adverse impact on health and quality of life. It's a balance between affecting more people in built-up areas with higher background noise... so maybe less affected... versus fewer in rural areas.
- M Yes, so various things... bring (09:19) noise down to avoid flying over zoos... PDP-four captures those points. Consider the impact of aircraft type and penalise poor performance in old aircrafts... this is a point that came out. There are issues about what aeroplanes can fly... operational ones for the individual airlines. Again, this is something that the airport has limited control over. Adhere to WHO regulations... WHO regulations aren't adopted by the UK government but nonetheless, the airport will meet noise guidelines as directed by CAA. There was also a comment about... fewer people made this comment but nonetheless is was made... minimise light pollution. If memory serves... it came from people living in... they said even if you've got your earplugs on, if you've got your curtains open and you've got light coming in then it wakes you up... anyway it was mentioned. The response to that is that aircraft lights are a feature to ensure safety. Offset emissions... again, this isn't a design principle, more of an operational issue. It is recognised as a concern for communities. A design principle encouraging minimising of emissions has actually been put forward. These are, as originally themed, design principles for communities. So, reduce night flights, fly over the sea... this was considered by quite a few people and is encapsulated in PDP-four.**
- MR (11:40)
- M Avoid flying over schools... another one that was commonly made and that's captured in eleven.**
- MR Sorry, [REDACTED]... for accuracy can you... flying over the sea is four and fifteen together...

M Right, OK. Four and fifteen...

MR It's not our final decision.

MR Do you know if (12:13) are affected areas in planning? Is that not a straitjacket for the designer?

MR Yeah, isn't that a constraint?

MR The areas that we know are going to be built on (12:23)...

MR ...habitation areas?

MR Exactly.

MR Ah, that's not what I understood from that.

MR Oh, I see what you mean... don't fly over houses, don't fly over no houses. Is that what you think?

MR Well it appears to be a straitjacket. You can't fly over anywhere other than where you are now... but what it means is that can't (breach? 12:43) habitation... that's fair enough.

M The final one there... in a couple of the group discussions we held... groups just said, "well can't you just get people to accept noise, it's part of life. If you're going to live somewhere that's close to and has the convenience of the airport, people should get used to the noise."

FR The point actually is that all of these people will not be near the airport, as you can normally understand...

M The people that said that actually lived in Cramond.

FR Well, exactly. A lot of people who live near airports are (13:22) whether they've chosen that... but a lot of people who are going to be effected by this won't have chosen that because the noise will actually appear in an area where flight paths were not there when they brought their house... that's not the point I'm making. A lot of them... ten-miles-plus from the airport... you won't normally think there was ever going to be a flight path over your head.

M And that's a different point. The point that was made here was that people who live in, and around, us... they were recruited on that basis... that's what they were saying. So, these are some of the design principles for the communities that were rejected... restrict aircraft holding areas over communities... Edinburgh airports airspace goes to seven-thousand feet, with hold areas confirmed at high altitudes. This request is rejected because it is out of scope.

MR One of the things we discussed at Glasgow was to minimise holding... and to do that by regulating flow back into the system... and this fed into predictability via the airline and their operations coming straight in. It is a little bit more complicated regulating between Glasgow and Edinburgh but minimise holding surely has to be an overall objective.

M I'm going to defer that back...

MR That's not within your remit.

M My ECP?

MR Yeah.

M Possibly. That's where the (tight end? 15:19) and doing in co-ordination with the FASI North Programme...

MR Yeah, exactly.

M Because that's... I was hoping...

MR That needs a co-ordination executive to make it happen.

M I don't think it's part of Edinburgh's ACP.

M Because of the high levels of...

M The (holds, the styles? 15:33) et cetera, belong to (15:35) in Edinburgh. EIP-section, we have (15:39) and the holding's done in their airspace.

MR But if Edinburgh sets that as an objection, to feed it back into...

M So, that can be a design principle on our ACP

MR Yeah, exactly.

M Because our set-up, we (revert to the design principle? 15:53) about FASI North, so you're saying that we were working with that group, it's in mind.

MR But again, it will keep communities happy and obviously the airlines as well! That can be achieved.

M We can't.

M So I guess that's part of... It is the right objective it just needs to set my ACP as opposed to Edinburgh Airport's ACP.

MR No, no, I understand that. But if it's going from Edinburgh, back up the line...

MR Possibly something that can be better captured than the heading rejected.

M So (16:25) that it is something that will fall under...

MR It's not projected as it is out of scope. It's something we can't...

MR We can't control it.

MR ... We can't control it, we are actively influencing...

M We're working with...

M Interestingly, the proficiency of the Edinburgh design may help.

MR That's what I was going to say. Increasing capacity should help with that.

MR (16:50) communication, again, with the communities by setting that as a "nice to have", as we say...

M (16:54)

MR It will reduce the bottleneck at Edinburgh (17:01) or not. Flows back into the system. In a simplistic way.

M I can only do that by referring to the previous design – that's all I can do.

MR Yeah.

M But, yeah. Parts of Edinburgh's design detail is reducing holding in the system with better development. But...

MR The primary responsibility isn't Edinburgh, it's...

MR Exactly. I think that's... That would be a better...

MR Something along those lines. That would be a better discussion.

M I think (for today's ... rather than just the word 'rejected'? 17:33)

M Yeah, yeah, yeah.

M Because there is going to be a...

MR It's also very recent, isn't it, the fact that we know it's going to co-ordinate multiple ACPs.

M We'll update that.

MR Thanks.

M Reduce flights, again...

MR Sorry, just before. The revisions of PDP 5 – flight paths should be designed by increasing airspace capacity. So Edinburgh supports the economic development of (18:03) and the UK's wider aviation strategy. That sort of fits with that, does it not?

M Not specifically. I think you'll find that it will reduce the hold over community.

M I think the 'holding over communities' bit is correct. Because that's not in the scope of...

MR Exactly.

M ... in the (gift? 18:26) of airspace change to Edinburgh.

MR Correct.

M They'd have to move hold.

M If it's already (over? 18:31) in the meeting, then actually, technically speaking, (18:34) we'd have to move hold because I'd have to speak to people on the ground from 7000 feet. Although we do take that into consideration. So I don't think it's in the scope of Edinburgh's.

FR The point that you're making – which is absolutely valid – is... (18:50) seems like the perfectly sensible thing to do, but you won't know that people want this unless it's fed into you somehow officially and formally.

M When it gets to... I'm trying to think of a way that doesn't sound terrible to say this. When it goes into the network airspace, where everything's knit together in the same place, making the system work will come before people on the ground. Does that make sense?

MR Thank you for...

M Safety first, absolutely. If I can move a hold on something and it makes everything better and keeps everybody on the ground then I'll do it, but we've got such an – I know it doesn't look like it on the map – but we've got such a small bit of airspace to deliver traffic to 2, reasonably busy, airports that it hasn't any scope, really, to put the holding rather than where it is just now. I know it's... I'm not sure you could (19:42) bothered to come and hold, I don't know.

MR How much flexibility do you have on the speed? Speed. You actually need space in the (ira? 19:50)

M So the issue is more controlled airspace bases. But they're all very high and restricted by (19:57) et cetera. So the aircraft are high and lift off at a high speed to get the height off.

MR Yeah.

M So they go into the hold high, or they've gone very fast. If it's busy, it's just even more complex because things are going faster together and not coming down like they should, so that's... My task is to sort that bit out, which should hopefully reduce holding and all those benefits that Edinburgh can't address within their ACP, but that's my ACP role. That's the whole goal of it, for me.

MR Okay.

M To sort that side of the airspace.

M Thanks. And 'reduce flights' – again, this harps back to a point that was made earlier, actually, it contradicts the statement of need that's already launched, which is one of the objectives of the airspace change program, is growth for the airport.

MR Can I just throw something in there.

M Yep.

MR (20:59-21:02) 10% reduction in the number of flights from Edinburgh.

M Okay. Noted. 'Take account of noise above 7000 feet'. This is the same thing that we've just been talking about. 'Concentrate flight paths during work hours' – this is the point that [REDACTED] was talking about earlier on.

FR You can't define work hours.

M '(review? 21:39) flight corridors' – this is not a design principle. That will happen at some point, but this is further down the line. Fly the west-side of the River Almond. Well the key points here is that it doesn't meet safety standards. And that's about turning and proximity to flight path. Does that read okay, [REDACTED]?

M Yeah. I'm just trying to get more context, because I don't know where that is! I'm trying to figure out what the request was in the first place.

[overlapping conversation 22:16-22:19]

M So it's the top of...

M Very close to...

M Yeah, yeah. So it's just that land is not populated whereas...

MR (... stabilise? 22:29)

M Okay. Thanks.

M (tencol? 22:36) So all of these points are being captured for the Integrated Airspace Change (program? 22:40) and safety – don't concentrate flight paths, minimise route deviations and so forth. And that's where they're caught. The next set were considered and are rejected for the following reasons. 'Ensure decision making is evidence-based, and evidence is appropriate and high-quality'. That doesn't fall into the remit of a design principle. We decided...

MR It's a design objective. Surely.

FR Yeah. It's the fundamental of the...

MR Exactly.

M Yes. But not a principle as such. And people went on to talk about redesigning the terminal and terminal airspace, but again, it's not a design principle. That said, it is something that Edinburgh Airport is doing within the program. There were various comments about... Suggestions for specific routes. Again, that's an operational matter it's not a design principle. That's something that's further on down the road. We talked about landing and take off gradients being steeper and again, it's not a design

principle, potential solution to noise is actually covered in PDP 4, and that should cover that issue because that's what that was related to.

MR Can I throw in the Glasgow equivalent?

M Yep.

MR Which was that 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.

MR I think the discussion around that was that the aircraft should use the maximum reasonable performance so they're clear of the ground at the earliest opportunity and therefore impacting residents or any other vicinity.

M At which altitude?

MR 7000.

M 7000, okay.

MR To or from 7000. And the descent, one of the underlying said in theory we could (drop the throttles? 25:20) at 37 000 feet and then glide in the rest of the way. I'm not a commercial pilot to know how practical that actually is.

MR It happens. I wouldn't say it happens all the time, but...

MR That was the most economical offering, basically.

FR The issue with continuous climb and continuous descent is that, yeah, in some ways it will make the noise better for some people but it will probably displace it somewhere else.

MR A continuous climb, agreed, but descent, not.

MR If you can give me an introduction to 20-30 000 feet as a target point, to intercept, I will use very little engine power. But the climb is the issue.

MR The climb is a noise and...

FR And it's displacing the noise somewhere else.

MR There, you absolutely have to (26:12). But it's something that will come up. It's unavoidable to discuss the issue.

MR Good luck with (26:19) the public for the engines to be switched off 100 miles out of the airport!

M Switched off is possibly not a word I'd use!

MR Throttle back!

- M** It makes an awful lot more noise! If you've got displaced noise, that's moving the noise right to the point (26:34)! (26:36) crashing.
- M** And while taking into account segregation, e.g. turbo jet and prop engines – may not be a design principle, but a solution to the issue regarding that might be encapsulated in PDP 4.
- MR Certainly.
- M** So finally, we come onto design principles that were suggested for economy. So, 'sure consideration of all airspace users and sure consideration of wider tourism impacts' – very capsulated in 2 and 5. One for economy that was rejected was, 'review the need for growth' – again, this doesn't align with the objectives outlined in the statement of need. Equalities is our next set. So first one, under equalities, was 'consider the needs of the elderly, children, those with ill health, autism, sensory impairments' – the list starts to grow, that was commonly made comments. And both of these, actually, 'ensure true accessibility in design', are encapsulated in 11. The one that was rejected was 'recognise the impact of flight paths on house prices and social migration' – it's a point that's noted, it's not a design principle. However, the airport does see this as an opportunity to address the post-implementation review stage of the project with a detailed study on any impacts. So this will be considered.
- And the final ones I've got there, are for health. So, 'consider the mental health impact and wellbeing' and 'consider other health impacts', and 'consider the impact on sleep' – so they're captured in 11 and 4. And that brings us to the end, so that's the long list of 50 that came out of the first workshops. Any comments or any thoughts on that? Okay! Well, that pretty much draws this to a close. Thank you, again, so much, for taking part in this.
- MR Can I just say one other thing?
- M** Yes, please do.
- MR I've passed [REDACTED] a copy of the report by Lord Coco. This is commissioned by the General Aviation Alliance. And, amongst other things, it's suggesting that airspace... Controlled airspace should be minimised, and so on. I'd like to place that on record that that report exists and to be considered, please.
- FR Could you send that to us, as well?
- MR Yeah, sure. It's available for download, but no problem. I'll give you a link if I can get your email address.
- FR Thank you.
- M** Which report was it?
- MR By Lord Coco? It was commissioned by the General Aviation Alliance. It followed on from problems down south, particularly around Farnborough and the issues there which was critical of the CA as well. It's suggesting some changes. The chief executive of the Light Aircraft Association is actually wanting significant numbers of consultations connected to it as well.

Also, I gather from [REDACTED], who I met for the first time today but I've been emailing, he tells me there's also a 25-man – rather than 1-man, as it used to be – in the General Aviation unit at the CA now, which is, for us, good news. The General Aviation is a key part of the aviation strategy for the UK.

M Thank you. Any other comments, before we close? Wonderful. Great. Thanks again. Very much appreciated.

MR Thank you.

END

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