Future Airspace Strategy Implementation South (FASIS)

London City Airport

Gateway documentation:
Stage 1 Define

Step 1B Design Principles
Engagement Feedback
for stakeholder final review

Version 2

Version	Date	Description of changes
Version 1	8/10/19	
Version 2	28/10/19	Revised to amend DP3 as a result of a request from the CAA to include a reference to current and future plans associated with the Airspace Modernisation Strategy.

Contents

1. Introduction

The UK's airspace is an essential part of our national transport infrastructure, however it is currently outdated and struggling to keep pace with growing demand; resulting in delays, unnecessary carbon emissions and flight paths that are not optimised to minimise noise. The Government has therefore committed to airspace modernisation, with the objective to deliver quicker, quieter and cleaner journeys with more capacity for the benefit of both passengers and communities. London City Airport is working with NATS and other airports in the south as part of the Future Airspace Strategy Implementation South (FASI-South), a group that is part of the UK-wide airspace modernisation programme called 'Our Future Skies'.

The process that must be followed to deliver airspace change is defined by the CAA in "CAP1616: Airspace Design: Guidance on the regulatory process for changing airspace design including community engagement requirements". This document forms part of the requirements for CAP1616 airspace change process, Stage 1 Define Gateway, Step 1B Design Principles. Design principles form a qualitative framework against which airspace change design options will be developed and evaluated in the future stages of the CAP1616 process. They encompass safety, regulatory, environmental and operational criteria and strategic policy objectives.

In June 2019, London City Airport (LCA) distributed draft design principles to over 370 key stakeholders including local councils and MPs, London Assembly representatives, community groups, the airport consultative committee, business groups and aviation stakeholders for areas that could potentially be overflown below 7,000ft. LCA provided context as to the purpose of design principles, and requested feedback in order to inform their development. Stakeholders were contacted via email and given two months to provide feedback. During this engagement period workshops with several key stakeholders took place and questions were also answered via email. We made it clear that these proposed draft design principles were for discussion, and that they would be developed and finalised based on the feedback received.

The document that was distributed and the list of stakeholders contacted has been supplied as supporting documents.

We received responses and feedback from 73 stakeholders. In September 2019, London City Airport analysed the feedback and updated the design principles. The final draft of the design principles was then recirculated to those who engaged in the process prior to submission to the CAA to meet the October 2019 assessment gateway.

This document describes how stakeholders' feedback has influenced the evolution of the design principles.

Engagement on specific design concepts will happen in Stage 2 during 2020. A formal public consultation will then occur in Stage 3, which is currently anticipated to commence in 2021. The design concepts will be evaluated against the final design principles as presented herein. Full implementation of any airspace change is anticipated to be completed in 2025.

2. How this document is laid out

The Executive Summary lists the Design Principles (DPs), amended as a result of the feedback we received during the engagement process, including additional DPs added as a result of suggestions from stakeholders.

The next sections discuss each draft DP presented in the engagement material in turn:

We asked: The original discussion text of a potential DP (we sent this out, stakeholders provided feedback)

You said: A summary of the feedback and how this has influenced the DP

We did: Amended DP (unless original was agreed upon)

This is repeated for each DP.

Section 9 summarises feedback about additional DPs that should be considered.

Section 10 summarises the key stakeholders who were included in the engagement, the meetings held, and the numbers of responses received.

3. Executive Summary – List of Design Principles (DP)

The following list summarises the final design principles which have resulted from the engagement process. Feedback received during this process has influenced the evolution of these principles and also supported the development of the priority rating.

DPs are first split into two tiers and then prioritised within the tiers (A being the highest priority). Within DP4 there are a sub-set of mitigations that are also prioritised into two groups.

These priorities will be considered when the design principles are used to evaluate/ rank design options in the later stages of the airspace change process. How the DPs have evolved is described in detail in the next sections of the document.

Tier 1 (MUST) Design Principles			
Reference Number	**Design Principle**	**Priority Rating**	**Rationale**
DP0	**Must maintain (and ideally enhance) current safety standards**	A	Safety is at the forefront of anything London City Airport does, and it is crucial that a new airspace design maintains and where possible exceeds current safety standards.
DP1	**Must be in compliance with all laws and regulations**	A	To maintain safety and ensure effective integration with the wider airspace.
DP2	**Must enhance navigation standards by utilising modern navigation technology**	A	Aircraft capabilities have dramatically increased in the last few decades. Arrival and departure routes must be designed to make full use of modern navigation technology in order to realise and maximise the benefits this brings. Modern navigation technology improves predictability and accuracy of flight routes, which can facilitate improvements in noise mitigation and the possible introduction of respite routes.
DP3	**Must be consistent with the CAA's Airspace Modernisation Strategy (CAP1711) and any current or future plans associated with it, including the provision of sufficient airspace capacity**	A	Any airspace change made needs to be futureproof, ensuring delays or restrictions in flying are minimised as demand is anticipated to rise.

Tier 2 (SHOULD) Design Principles				
Reference Number	**Design Principle**		**Priority Rating**	**Rationale**
DP4	**Should limit and where possible reduce aircraft noise**		A	Aircraft noise should be limited and reduced where possible to minimise the impact on local communities.
	Group (i)	Use noise efficient operational practices		To operate in a way that minimises the noise impact e.g. maximising altitude wherever possible.
		Provide predictable respite routes		Operate multiple arrival and departure routes, and alternate between these routes at different times of the day or days of the week. This would allow communities to have predictable periods of respite.
		Avoid overflying communities with multiple routes, including from other airports		We realise this is occasionally an issue at present and we will take this opportunity to work with other airports to find a solution to this.
	Group (ii)	Minimise the number of people newly overflown		To avoid exposing areas to aircraft noise who are currently not exposed.
		Provide managed dispersal		Operate multiple arrival and departure routes, and direct aircraft along these different routes throughout the day. This would share the noise across a wider area, exposing more people to noise, but reduce the noise impact that any one area experiences.
		Minimise the total population overflown		Concentrating aircraft along defined routes to minimise the total number of people exposed to aircraft noise.
		Avoid overflying noise sensitive areas e.g. schools, hospitals, care homes		To minimise the exposure to aircraft noise for people in our community who are most sensitive.
DP5	**Should minimise the amount of fuel used and the CO_2 subsequently emitted**		B	Minimising fuel use (typically by flying a more direct route) lowers carbon emissions and thereby helps to mitigate the impacts of climate change.
DP6	**Should minimise air pollution in the local area from aircraft**		B	To maintain a healthy environment for local communities.
DP7	**Should improve resilience during abnormal operating conditions**		B	Maintaining operations in abnormal scenarios is vital to prevent delays and disruption. If one departure route was not operational for a short time (e.g. due to localised extreme weather events) then another may be used temporarily to enable the aircraft to depart. Its course will then be amended towards its final destination further down-route.
DP8	**Should promote optimal network performance in collaboration with other airspace users**		C	Airspace is a shared resource between numerous different categories of user.

4. Engagement Response

Prior to the full engagement period which commenced in June, a meeting was held on 29th May with key representatives from LCY's closest stakeholders (including members of our consultative committee) in order to gain initial input into what our design principles should be. The presentation and meeting minutes from this workshop have been provided as supporting documents. Draft design principles were presented to initiate discussion, following which two changes were made to the draft design principles circulated for wider engagement.

There was feedback in the meeting that the design principle regarding fuel burn and CO_2 emissions should not be prioritised above noise, as noise should be prioritised below 7,000ft. This design principle was therefore moved from tier 1 to tier 2. The wording relating to the design principle regarding air quality was also reworded, to make it clearer that this related solely to emissions from aircraft.

Following these changes, draft design principles were then circulated to all key stakeholders. In the engagement response form the first four DPs were referred to as Tier 1 Design Principles and stakeholders were asked "Do you agree that the following design principles *must* be achieved?" The responses are analysed below. Where stakeholders did not complete the response form but instead provided a response in the form of a letter, the content was reviewed and incorporated into the analysis as appropriate. The DP reference numbers relate to those used in the engagement document, and have been modified slightly in the final list.

4.1 DP0 Must maintain (and ideally enhance) current safety standards

4.1.1 Original discussion text

Safety is at the forefront of anything London City Airport does, and it is crucial that a new airspace design maintains and where possible exceeds current safety standards.

4.1.2 How has feedback influenced this DP?

The original wording of the DP was deliberately general.

Safety applies to all airspace users and those on the ground. All are implicitly included in the general statement.

Of those who answered, there was 97% agreement on the question "Do you agree that the design principle *must* be achieved?" Hence it remains as originally proposed. Priority A assigned, since safety is the highest priority.

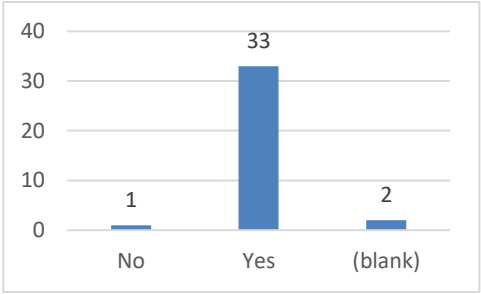


Figure 1 Responses[1] to question "Do you agree that DP0 must be achieved?"

[1] Note Graphs of responses are of those responses made via the online response questionnaire. Responses made by free text are not generally included in these figures since the stakeholders' intent cannot be categorised.

4.2 DP1 Must be in compliance with all laws and regulations

4.2.1 Original discussion text

Must be in compliance with all laws and regulations, to maintain safety and ensure effective integration with the wider airspace.

4.2.2 How has feedback influenced this DP?

Of those who answered, there was 100% agreement on the question "Do you agree that the design principle *must* be achieved?" Hence it remains as originally proposed. Priority A assigned, since compliance with the law is high priority.

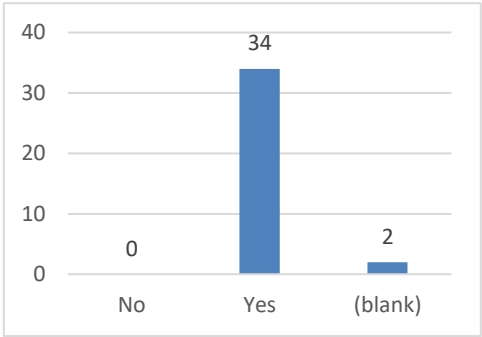


Figure 2 Responses to question "Do you agree that DP1 must be achieved?"

4.3 DP2 Must enhance navigation standards by utilising modern navigation technology

4.3.1 Original discussion text

Aircraft capabilities have dramatically increased in the last few decades. In order to release and maximise the benefits that this brings, arrival and departure routes must be designed to make full use of modern navigation technology.

4.3.2 How has feedback influenced this DP?

Of those who answered, there was 88% agreement on the question "Do you agree that the design principle *must* be achieved?" Hence it remains as originally proposed. Only by utilising modern navigation technology could many of the other DP options be achieved, hence stakeholder feedback supporting those DPs indirectly support this DP. Priority A assigned, since enhanced navigation capability is a high priority, is an enabler for facilitating the most efficient and innovative design options and is aligned with the CAA's Airspace Modernisation Strategy (AMS).

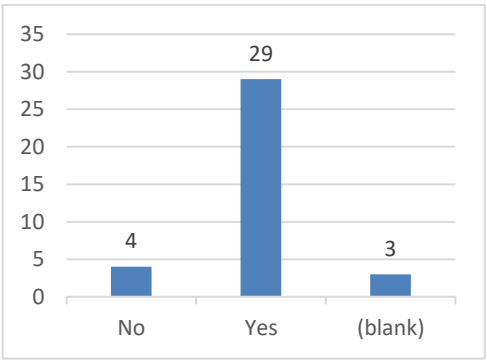


Figure 3 Responses to question "Do you agree that DP2 must be achieved?"

4.4 DP3 Must provide sufficient capacity to support future demand

4.4.1 Original discussion text

If the capacity is not increased, passengers will face increased delays or restrictions in flying as demand is anticipated to rise.

4.4.2 How has feedback influenced this DP?

There was feedback from some stakeholders that this DP would be better placed as a "should" rather than a "Must". However, this DP is in support of the CAA Airspace Modernisation Strategy (AMS) (CAP1711), and direction from the CAA during the engagement period has indicated that this should be given the highest priority. Relevant aims contained within the AMS include:

- The need to increase aviation capacity in the South East;

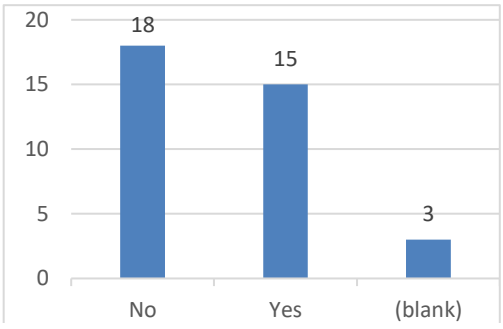


Figure 4 Responses to question "Do you agree that DP3 must be achieved?"

- For this growth to be sustainable; and
- For the need to make the best use of existing runways

It should also be noted that aircraft movement numbers are restricted by LCY's planning consent, and not controlled through the CAP1616 process.

The DP was therefore retained as a "must" and amended to explicitly reference and include the aims of the AMS and any current or future plans associated with it.

4.4.3 Proposed text

Must be consistent with the CAA's Airspace Modernisation Strategy (CAP1711) and any current or future plans associated with it, including the provision of sufficient airspace capacity.

4.5 Tier 2 Design Principles

In the engagement response form for DPs 4 to 7, stakeholders were asked to rank the DPs in order of priority where 1 is the highest and 4 the lowest priority. The rationale behind asking for a ranking, rather than a yes/no question, was that through engagement with the stakeholders we wanted to understand the relative priority of these potential "should" DPs, rather than offering a straight binary yes/no choice. The responses are analysed below. Where stakeholders did not complete the response form but instead provided a response in the form of a letter, the content was reviewed and incorporated into the analysis as appropriate.

4.6 DP4 Should minimise the amount of fuel used and the CO_2 subsequently emitted

4.5.1 Original discussion text

Minimising fuel use (typically by flying a more direct route with an efficient climb/descent profile) lowers carbon emissions and thereby helps to mitigate the impacts of climate change.

4.5.2 How has feedback influenced this DP?

The results for DP4 are shown in Figure 5. Of those who answered, 78% ranked this DP as priority 1 or 2.

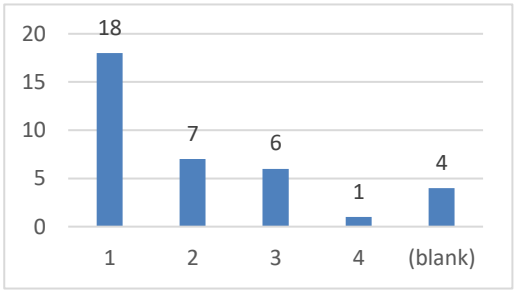


Figure 5 Responses to question: "In what order would you prioritise DP4?"

This was interpreted as agreement with this DP, hence it remains as originally proposed. LCY recognises that this is a very important issue, however the majority of feedback received was focused on noise, therefore priority B is assigned to this DP.

4.7 DP5 Should limit and where possible reduce aircraft noise

4.6.1 Original discussion text

Aircraft noise should be limited and reduced where possible to reduce the impact on local communities.

4.6.2 How has feedback influenced this DP?

The results of ranking for DP5 are shown in Figure 6. Of those who answered, 85% ranked this DP as priority 1 or 2. Feedback relating to noise impacts formed the most prevalent theme and this is a very important issue for local communities in the vicinity of the airport. Some feedback indicated this DP should be elevated into Tier 1 and must be achieved. LCY appreciates this issue is incredibly important, therefore priority A has been assigned. However it is not yet known which noise mitigation options will be possible, particularly when considering the interaction with routes from other airports. It has therefore been left as a tier 2 design principle.

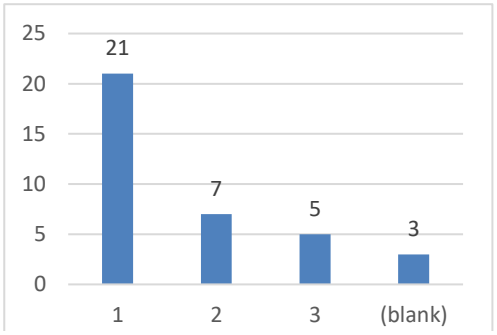


Figure 6 Responses to question: "In what order would you prioritise DP5?"

4.6.3 Proposed text

There was agreement on this DP hence it remains as originally proposed. However because this DP was given a higher priority than the DP relating to fuel use and CO_2, the order and DP reference number was amended in the final list.

Further feedback was requested on a sub-set of noise mitigations. These are discussed in paragraph 4.10.

4.8 DP6 Should minimise air pollution in the local area from aircraft

4.7.1 Original discussion text

Should minimise air pollution in the local area from aircraft, to maintain a healthy environment for local communities.

4.7.2 Proposed text

The results of ranking for DP6 are shown in Figure 7. Of those who answered, 34% ranked this as priority 1 and 69% as priority 1 or 2. There was agreement on the wording of this DP hence it remains as originally proposed. Priority B assigned, since minimising air pollution is a high priority.

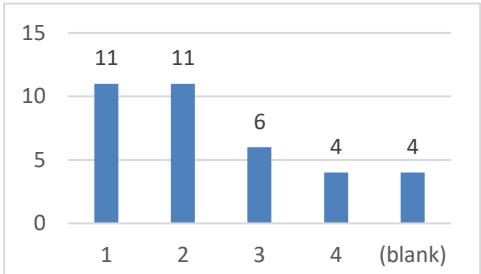


Figure 7 Responses to question: "In what order would you prioritise DP6?"

4.9 DP7 Should improve resilience during abnormal operating conditions

4.8.1 Original discussion text

Maintaining operations in abnormal scenarios is vital to prevent delays and disruption. If one departure route was not operational for a short time (e.g. due to localised extreme weather events) then another may be used temporarily to enable the aircraft to depart. Its course will then be amended towards its final destination further down-route.

4.8.2 How has feedback influenced this DP?

The results of ranking for DP7 are shown in Figure 8. Of those who answered, 27% ranked this as priority 1 and 43% as priority 1 or 2. There was agreement on the wording of this DP hence it remains as originally proposed. Priority B assigned, since whilst maintaining resilience is less important to local stakeholders it is

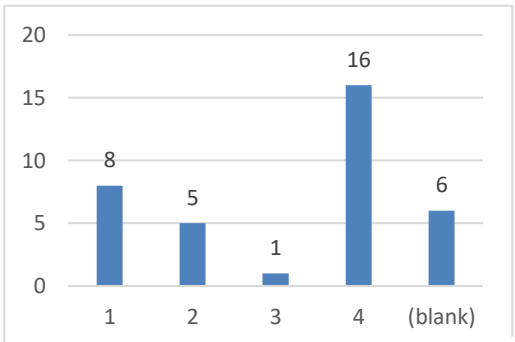
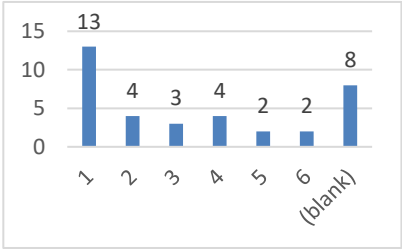
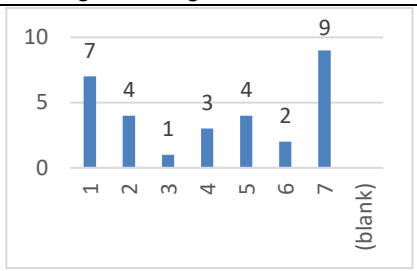
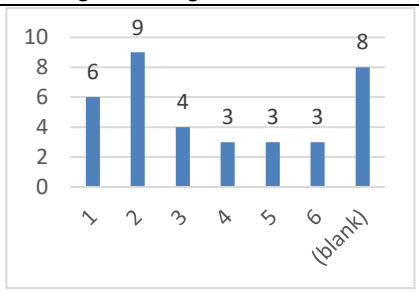
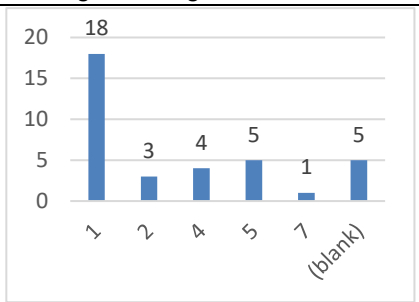


Figure 8 Responses to question: "In what order would you prioritise DP7?"

very important to efficient operations at the airport and the aviation stakeholders, in particular the airlines.

4.10 Noise Mitigation Choices DPs

Stakeholders were asked to prioritise the noise mitigation DP options. The results of this prioritisation are given in Table 1 below. Please note that stakeholders could give the same priority to multiple DPs for example in several cases stakeholders assigned priority 1 to all the options, hence there is not an even frequency of the priorities assigned.

Noise Mitigation DP	Description/ Feedback	Graph of Feedback
A. Use noise efficient operational practices.	To operate in a way that minimises the noise impact e.g. maximising altitude wherever possible. Generally supported.	 Average ranking 2.4
B. Minimise the number of people newly overflown.	To avoid exposing areas to aircraft noise who are currently not exposed. Binary split, supported by some (e.g. those who are not currently overflown), opposed by others (e.g.those currently under the flight path).	 Average ranking 4.0.
C. Maximise sharing through predictable respite routes.	Operate multiple arrival and departure routes, and alternate between these routes at different times of the day or days of the week. This would allow communities to have predictable periods of respite. Some support, but some ambivalence.	 Average ranking 2.9
D. Avoid overflying communities with multiple routes, including from other airports.	We realise this is occasionally an issue at present and we will take this opportunity to work with other airports to find a solution for this. Generally supported. Some felt this was more than an occasional issue.	 Average ranking 2.3

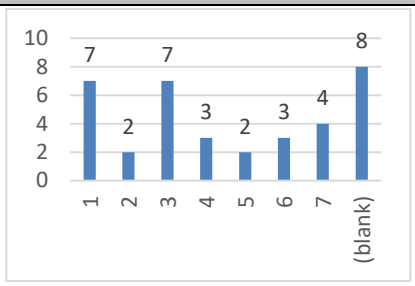
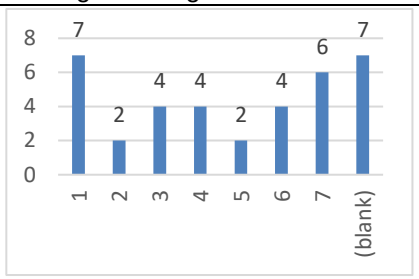
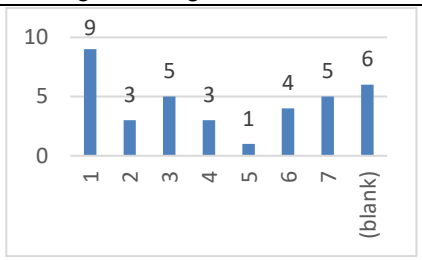
Noise Mitigation DP	Description/ Feedback	Graph of Feedback
E. Maximise sharing through managed dispersal.	Operate multiple arrival and departure routes, and direct aircraft along these different routes throughout the day. This would share the noise across a wider area, exposing more people to noise, but reduce the noise impact that any one area experiences. Mixed for/against.	 Average ranking 3.6
F. Minimise the total population overflown.	Concentrating aircraft along defined routes to minimise the total number of people exposed to aircraft noise. Split - supported by some (e.g. those who are not currently overflown), opposed by others (e.g.those currently under the flight path).	 Average ranking 4.0
G. Avoid overflying noise sensitive areas e.g. schools, hospitals, care homes.	To minimise the exposure to aircraft noise for people in our community who are most sensitive. Spread of responses.	 Average ranking 3.5

Table 1: Feedback on noise mitigation option DPs

4.9.1 Commentary on noise mitigation DPs.

Noise is a very sensitive matter to local communities, so LCY highly values the feedback received from stakeholders. Mitigations A, C, and D appeared to gain more overall support. Mitigations B and F were broadly split between the extremes which reflected diverging viewpoints. Mitigations E and G had a spread of responses.

These diverging viewpoints illustrate the need to find a balance between providing respite whilst not overflying a large number of new people. It was also noted that the majority of community respondents were from areas currently overflown, with few people responding that are currently not overflown. Feedback was also received suggesting that respite routes should be restricted to areas previously overflown before the change to RNAV made in 2016.

4.9.2 How has feedback influenced these DP?

The feedback on the noise mitigation DPs is summarised in Table 1. There was agreement with some DPs and some received a mixture of conflicting feedback. However all the noise mitigation DPs were considered useful in measuring the noise related impacts of the design, hence none were added or removed. The noise mitigations A-G have been split into the following two groups reflecting the priority afforded to these options ('i' being the higher priority).

- Group i: A, C and D
- Group ii: B E, F and G

The wording regarding DPs C and E were also slightly amended to reflect the feedback received. They have been reworded as follows:

Original Noise DP C: Maximise sharing through predictable respite routes.
Reworded Noise DP C: Provide predictable respite routes

Original Noise DP E: Maximise sharing through managed dispersal.
Reworded Noise DP E: Provide managed dispersal

4.11 Suggested Additional DPs

The following additional design principles were either suggested by stakeholders, or they have been inferred from stakeholder responses.

4.10.1 Economic - maximise benefit to UK economy

It was suggested that a DP should be added to capture the impact/benefit on the UK economy due to the benefits of having an efficient air transport infrastructure.

How has feedback influenced this DP?

UK-wide economic impact is difficult to measure quantifiably; however, it is related to resilience, capacity and delays which are captured by DPs 3, 4 & 7. The CAP1616 process also only requires the assessment of direct impacts. For these reasons this suggested DP is discounted.

4.10.2 Avoid level flight under 4000ft

It was suggested that a new noise mitigation DP be added to 'Avoid level flight under 4000ft, (for arrivals until final approach decent begins)'.

How has feedback influenced this DP?

We agree that avoiding level flight is a high priority, however the purposes of avoiding level flight is both to reduce noise and to reduce fuel used. Both of these aims are catered for in both DP4 and DP5. This would be directly covered by the noise mitigation included in Group (i) of DP5: 'Use noise efficient operational practices. Therefore this suggestion has not been included as a different standalone DP.

4.10.3 Achieve an overall reduction in noise

It was suggested that a DP be added to affect an overall reduction in noise. How this would be quantified was not suggested.

How has feedback influenced this DP?

This DP was suggested by stakeholders. However, since the reduction of noise impact is believed to be captured comprehensively by DP4 and its various mitigation options, it was not considered necessary to introduce a further metric/measure of total noise. Hence this suggested DP has not been adopted.

4.10.4 Minimise impact on other airspace users

Several stakeholders, primarily other airspace users in the vicinity of London City Airport, suggested the inclusion of a DP to take into account other airspace users' activities and minimise the impact upon them.

How has feedback influenced this DP?

We acknowledge the fact that airspace is a shared resource and numerous other groups have various uses for it, including other ANSPs, Airports, General Aviation, and the MOD to name a few. London City Airport is keen to work in partnership with all stakeholders throughout the CAP1616 process and is

happy to incorporate a Design Principle to promote optimal network performance in collaboration with other airspace users. This has been afforded priority (C).

4.10.5 Must not extend operating hours or increase movement numbers

Several stakeholders stated that LCY should not consider extending their hours of operation or increase the number of aircraft arriving or departing from the airport.

How has feedback influenced this DP?

LCY's operational hours and movement numbers are restricted through conditions applied under planning permission, and these could not be amended through the CAP1616 process for airspace change. Therefore this suggestion has not been included as a design principle.

4.10.6 Must improve the health and wellbeing of communities affected by aircraft

A number of stakeholders requested that a design principle is included to improve the health and wellbeing of neighbouring communities.

How has feedback influenced this DP?

We agree that this is a key priority, however the two key factors that have the potential to affect health and wellbeing are noise and air quality. Design principles have already been incorporated that cover these two issues and it is therefore not considered necessary to include an additional design principle.

5. Engagement Evidence

5.1 Summary of meetings with stakeholders held during period of DP engagement

Prior to the full engagement period which commenced in June, a meeting was held on 29th May with key representatives from LCY's closest stakeholders (including members of our consultative committee) in order to gain initial input into what our design principles should be.

Emails were then sent in June to over 370 representatives, along with an attached document fully explaining the need for airspace modernisation, the CAP1616 process, and the concept of design principles. Information was also made available on the website.

The following representatives were contacted, covering any area that could potentially be overflown below 7,000 ft, including from Southend to Hyde Park and Epping to Croydon.

- London Borough and district councils (x 55)
- Greater London Assembly
- Local constituency MPs (x 130)
- Hertfordshire County Council
- Kent County Council
- Gatwick Airport
- Heathrow Airport
- Stansted Airport
- Biggin Hill Airport
- Southend Airport
- Ministry of Defence
- NATS

London Chamber of Commerce
Airlines using London City Airport (x 22)
National Air Traffic Management Advisory Committee (NATMAC) representatives (x 40)
ICCAN
Plane Hell Action
HACAN East
Dulwich & Herne Hill Quiet Skies Campaign
London First
LCACC

All attendees were also encouraged to provide feedback via the website.

All key stakeholders were also invited to workshops which were held on 22nd and 24th July 2019. The purpose of these workshops was to provide an opportunity to discuss the draft design principles and answer any questions face-to-face.

5.2 Design principles slide pack

The slide pack presented at these stakeholder meetings is supplied separately along with the meeting minutes. This slide pack describes the background behind design principles, and provides the original DP list, which was used to provoke discussion.

5.3 Responses rate

Replies were received from 73 individuals/organisations, using either the web-based response form or other means. This represents a response rate of 22.5%.

It should be stressed for all stakeholders' benefit that this engagement was solely on design principles which help to set the priorities by which developing designs will be measured. This was not a consultation exercise on new routes, and was solely advertised to key stakeholders including local councils, local MPs, community groups, the airport consultative committee, business groups and aviation stakeholders. A full public consultation will be undertaken at a later stage when a mature set of route design options will be presented. This will be widely publicised and is currently anticipated to commence in 2021.

5.4 Feedback to stakeholders

Following the conclusion of the engagement period, and once the analysis had been completed, this document was produced and circulated to those stakeholders that responded in order to feedback the outcome. Stakeholders were also thanked for their input.

6. Conclusion

In this engagement exercise, we supplied stakeholders with a set of draft design principles, and encouraged discussion and feedback. The responses received were analysed and influenced the development and prioritisation of the draft design principles. This evolution has resulted in an amended list as detailed below.

Reference Number	Tier 1 Design Principles	Priority Rating
DP0	**Must maintain (and ideally enhance) current safety standards**	A
DP1	**Must be in compliance with all laws and regulations**	A
DP2	**Must enhance navigation standards by utilising modern navigation technology**	A
DP3	**Must be consistent with the CAA's Airspace Modernisation Strategy (CAP1711) and any current or future plans associated with it, including the provision of sufficient airspace capacity**	A

Reference Number	Tier 2 Design Principles		Priority Rating
DP4	**Should limit and where possible reduce aircraft noise**		A
	Group (i)	Use noise efficient operational practices	
		Provide predictable respite routes	
		Avoid overflying communities with multiple routes, including from other airports	
	Group (ii)	Minimise the number of people newly overflown	
		Provide managed dispersal	
		Minimise the total population overflown	
		Avoid overflying noise sensitive areas e.g. schools, hospitals, care homes	
DP5	**Should minimise the amount of fuel used and the CO_2 subsequently emitted**		B
DP6	**Should minimise air pollution in the local area from aircraft**		B
DP7	**Should improve resilience during abnormal operating conditions**		B
DP8	**Should promote optimal network performance in collaboration with other airspace users**		C