1 CAP1616 Stage 2 Engagement Record: LCY-Airline Technical Meeting 7th Dec 2021

1.1 Attendees:

CFE: Flight Technical Services Manager
SWR: Pilot and Route Support Officer

LCY: Technical Operations Development
Head of Environment & Technical Ops
Air Traffic Control Design Lead
Airspace Change Expert

Please consider this record complete if accompanied by the slide pack PDF.

1.2 Agenda (extract from presentation):

Agenda

- Welcome and introductions
- UK Airspace Modernisation Programme
- LCY Airspace Change Process progress so far
- Recap on Stage 1
- Stage 2 overview, deliverables and timescales
- Items to be presented to support proposed design concepts:
  - Interactions with other airports
  - Most frequent destinations and directions
  - Tips on how to read and provide comments on proposed design concepts
  - Reference tables – aircraft types, numbers, noise information
- **Airspace design concepts: description of the proposed systems**
- Recap and input required from stakeholders
- Next steps

1.3 Summary of Notes

Welcome and introductions.

The presentation was given, as per the agenda, by the LCY Airspace Change Expert and ATC Design Lead.

The airspace design concept maps were of primary interest; these were explained in detail by the LCY ATC Design Lead.

The LCY Airspace Change Expert asked both operators to consider:
Navigation equipage for the LCY fleet (RNAV1 vs RNP) because RNP allows for additional flight procedure design tools, but RNAV1 is more common.
Airspeed – designing with 180KIAS allows tighter turns than e.g. 200KIAS, would there be performance issues, would you need flaps/slats (airframe noise) at slower speeds? How would *climb rate* be affected by slower airspeeds?

CFE and SWR agreed to provide feedback before mid-January 2022 in accordance with LCY's timeline request; a link to an online form will be provided as part of the email finalising these notes, as will a PDF of the presentation including the current set of design concept maps.

AOB: LCY Airspace Change Expert asked both operators to respond on behalf of their organisation, and not just from their role.

No date was set for a second meeting, however LCY encourages CFE and SWR to have further meetings before Mon 17 Jan 2022, and LCY may get in contact with both organisations.

Thanks and close

Actions:

1. LCY to distribute PDF of slide pack to CFE and SWR, including link to feedback form (Closed, sent 15Dec2021)

2. CFE and SWR to use the slide pack and feedback form to provide formal Stage 2 feedback to LCY **by Mon 17 Jan 2022,** with sketches and technical detail if necessary (Open, both operators to respond)
   (If any detail is relevant but confidential, we can find a way to ensure it is included without loss of confidentiality, also please consider another meeting if there is in-depth technical detail to discuss, we don't want to lose any of your context)

End of notes

1 CAP1616 Stage 2 Engagement Record: LCY-Airline Technical Meeting 11th January 2022

1.1 Attendees:

Airlines:	Chief of Flight Ops	Helvetic
	ATM Lead	KLM
	ATM Support	KLM
LCY:	Technical Operations Development	
	Air Traffic Control Design Lead	
	Head of Environment and Technical Operations	

Please consider this record complete if accompanied by the slide pack PDF.

1.2 Agenda (extract from presentation):

Agenda

- Welcome and introductions
- UK Airspace Modernisation Programme
- LCY Airspace Change Process progress so far
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  - Tips on how to read and provide comments on proposed design concepts
  - Reference tables – aircraft types, numbers, noise information
- **Airspace design concepts: description of the proposed systems**
- Recap and input required from stakeholders
- Next steps

1.3 Summary of Notes

Welcome and introductions.

The presentation was given, as per the agenda, by the ATC Design Lead.

The airspace design concept maps were of primary interest; these were explained in detail by the LCY ATC Design Lead.

KLM: Has LHR`s plans and its future Ops with a potential third runway been considered when the systems were developed?

LCY: At Stage 2 in the process individual airports largely develop their concept systems in isolation while engaging with adjacent airports, however, LHR is one of the key stakeholders and LCY continues to engage with them on a regular basis. LHR is behind LCY with its ACP at the moment (Stage 1) and therefore has little to share. LCY's designs have been kept as open as possible to allow scope for unknown variables, such as other Airports' design.

KLM: Has consideration been given to MoD flights within these designs?
LCY: We don`t expect greater interaction than we already have today, and at present we are not proposing any changes to the dimensions of our Airspace. NERL handles en-route traffic and therefore most of the military interactions. We have engaged with an MoD representative during the Stage 2 process.

KLM: Technical query on noise abatement measurement points.
LCY: This is not something we would investigate at this early stage in the process.

A general preference in terms of priorities was expressed by both Airlines towards continuous climb/descent, particularly in terms of faster climb on departure, even if this required extended track mileage, i.e. a direct route with stepped climb may be less desirable.

Thanks, and close

Actions:
Airlines to use the slide pack and feedback form to provide formal Stage 2 feedback to LCY by Mon 17 Jan 2022, with sketches and technical detail if necessary.

End of notes

1 CAP1616 Stage 2 Engagement Record: LCY-Airline (BA CityFlyer) Tech Meeting 12th Jan 2022

1.1 Attendees:

CFE: Head of Air Operations
Flight Technical and Safety Manager

LCY: Technical Operations Development
Air Traffic Control Design Lead

Please consider this record complete if accompanied by the slide pack PDF.

1.2 Agenda (extract from presentation):

Agenda

- Welcome and introductions
- UK Airspace Modernisation Programme
- LCY Airspace Change Process progress so far
- Recap on Stage 1
- Stage 2 overview, deliverables and timescales
- Items to be presented to support proposed design concepts:
  - Interactions with other airports
  - Most frequent destinations and directions
  - Tips on how to read and provide comments on proposed design concepts
  - Reference tables – aircraft types, numbers, noise information
- **Airspace design concepts: description of the proposed systems**
- Recap and input required from stakeholders
- Next steps

1.3 Summary of Notes

Welcome and introductions.
The presentation was given, as per the agenda, by the ATC Design Lead.

The airspace design concept maps were of primary interest; these were explained in detail by the LCY ATC Design Lead.

CFE: Will the RWY 09 Final Approach Turn In points remain the same?
LCY: Yes, at present it is not envisaged that the range at which turning on to 09 approach would change. This is primarily due to the proximity of the Heathrow Airspace which we do not think will change.

CFE: Queries on the fixed turning points; such as range of first turn after departure and climb gradients; to complete additional in-house aircraft performance assessments.
LCY: It is too early to determine these actual points, however, at present our models are based on maintaining the current minimum climb gradient for initial climb.

CFE: Is there any plan to introduce a levelling platform or will continuous climb be maintained up to 7,000 ft?
LCY: At this point we do not know, London City will likely aim to achieve the most continuous climb possible, however there dependencies on other Airports and the wider TC network which could prevent this.

CFE: Consideration needed around RWY27 speed control points and the descent points as steep Approach creates restrictions around being fully configured for final descent.
LCY: acknowledged.

CFE: we welcome System 5 and ask if the southern Rwy 27 departure system is similar to a reverse 09 arrival.
LCY: As currently illustrated, the northern of the designs shown approximately aligns with the current 09 downwind leg.

CFE: if stakeholders object to a system then would it be eliminated entirely from the process? Can aspects from one system be considered with another or are they tied as presented?
LCY: Although presented as systems that we believe can work as a whole, there is nothing preventing an amalgamation. If you have comments regarding combinations of system aspects please include this in your feedback.

Thanks, and close

Actions:

1. CFE to use the slide pack and feedback form to provide formal Stage 2 feedback to LCY **by Mon 17 Jan 2022,** with sketches and technical detail if necessary (Closed, Response Recieved)

End of notes

CAP1616 Stage 2 Engagement Feedback Form

Organisation Name BA CITYFLYER

Contact name and details

Date 06/01/2021

Engagement material supplied: Slide pack including map AND/OR links to videos.

Return this Word document to ourfutureskies@londoncityairport.com

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This feedback form is part of the initial stakeholder engagement for London City Airport's Airspace Change Programme (Stage 2 – Develop and Assess). Additional engagement material supplied includes a slide pack, video commentary and supporting maps.

This is initial engagement only (not full consultation which will follow later in the process); the proposed design options are draft and will be subject to changes and/or amendments as we move on through the process.

Please provide your comments and feedback by Mon 17th Jan 2022 on each of the proposed airspace designs presented in the supplied material by using the Design Principles (DPs) as a framework to evaluate the extent you think it complies with them. DPs are provided for your reference below.

We ask you to consider each Airspace Concept System, its pros and cons, and the extent you think it complies with the DPs. There is a final question for free text comments and sketches, if you prefer to add feedback not covered by the DP questions.

Ref Num	Tier 1 Design Principles	Priority
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

Ref Num		Tier 2 Design Principles	Priority
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

	Runway 09 System 1: Similar to today, with efficiencies
DP0	**Do you agree that this design would enhance safety?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 1 Would there be a risk of increased TCAS events with arrivals remaining higher underneath the Heathrow traffic?
DP1	**Do you agree that this design would comply with laws and regulations?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) No Comment
DP2	**Do you agree that this design would enhance navigation standards?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 1 Same to today with small routing efficiencies.
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) No comment. Hard to judge its impact in relation to the other London airspace modernisation plans.
DP4	**Do you agree that this design would limit aircraft noise?**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) 2 Comments on noise System 1 would impact a new area to the south of the airport. Alternation of northerly and southerly paths would provide some mitigation. Improved climb profiles would reduce noise further from the airport.
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) 3 Comments on fuel and CO_2: Removing step climbs and tactical routings to the NE would reduce both fuel and CO2 emissions. Higher arrival altitudes would be beneficial. We would need to assess whether our flight planning software has the capability to incorporate these changes.
DP6	**Do you agree that this design would minimise local air pollution?**

	Runway 09 System 1: Similar to today, with efficiencies
Tier 2 Priority B	To what extent? (1-least, 5-greatest) No comment. We would need further data to clarify this point.
DP7	**Do you agree that this design would improve operational resilience?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) 1 Similar to today's design.
DP8	**Do you agree that this design would promote optimal network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) 1 Similar to today's design.

	Runway 09 System 2: Mirror, Northern arrivals, Southern departures
DP0	**Do you agree that this design would enhance safety?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 1 Currently all emergency turns are to the north. With the departure planned to the south we may need to consider obstacle clearance areas with our performance provider Lufthansa.
DP1	**Do you agree that this design would comply with laws and regulations?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) No Comment.
DP2	**Do you agree that this design would enhance navigation standards?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 1 As per today.
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) No comment. Hard to judge its impact in relation to the other London airspace modernisation plans.
DP4	**Do you agree that this design would limit aircraft noise?**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) Comments on noise Routings along the Thames would reduce noise impact as would the improved climb profiles.
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) 2 Comments on fuel and CO_2: Routings to the south east are improved where the greatest proportion of traffic departs. If the sharp turn to BPK is not available there would be a fuel and CO2 penalty. We would need to assess whether our flight planning software has the capability to incorporate the improved climb profiles.
DP6	**Do you agree that this design would minimise local air pollution?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) No comment. We would need further data to clarify this point.

	Runway 09 System 2: Mirror, Northern arrivals, Southern departures
DP7	**Do you agree that this design would improve operational resilience?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) No comment
DP8	**Do you agree that this design would promote optimal network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) No comment

	Runway 09 System 3: Maximise departure efficiencies
DP0	**Do you agree that this design would enhance safety?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 1 Difficult to analyse safety benefit. Would bring another change to the arrival system changed in recent times.
DP1	**Do you agree that this design would comply with laws and regulations?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) No comment.
DP2	**Do you agree that this design would enhance navigation standards?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) As per today.
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) No comment. Hard to judge its impact in relation to the other London airspace modernisation plans.
DP4	**Do you agree that this design would limit aircraft noise?**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) 2 Comments on noise New area to the south affected by arrival flow pattern but with alternation this can be mitigated. Aircraft at higher altitudes on arrivals would reduce noise impact further from the airport.
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) 3 Comments on fuel and CO_2: Enhanced direct departure routings and climb profiles would minimise fuel use and CO2 emissions along with higher and more direct arrivals from the north if feasible.
DP6	**Do you agree that this design would minimise local air pollution?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) No comment. We would need further data to clarify this point.
DP7	**Do you agree that this design would improve operational resilience?**

	Runway 09 System 3: Maximise departure efficiencies
Tier 2 Priority B	To what extent? (1-least, 5-greatest) No comment
DP8	**Do you agree that this design would promote optimal network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) 3 Direct routings would reduce flight times and have the potential to improve network performance. The short arrival path from the north would be an advantage.

	Runway 27 System 4: Similar to today, with efficiencies
DP0	**Do you agree that this design would enhance safety?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 1 Similar to today's system.
DP1	**Do you agree that this design would comply with laws and regulations?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) No comment.
DP2	**Do you agree that this design would enhance navigation standards?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) As per day.
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) No comment. Hard to judge its impact in relation to the other London airspace modernisation plans.
DP4	**Do you agree that this design would limit aircraft noise?**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) More direct routings based on the current system. Planned climbs rather than tactical would reduce aircraft noise print.
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) 3 Short cut arrival paths and more direct departure paths at higher altitudes will reduce both.
DP6	**Do you agree that this design would minimise local air pollution?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) No comment. We would need further data to clarify this point.
DP7	**Do you agree that this design would improve operational resilience?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) 1 Similar to current system.

	Runway 27 System 4: Similar to today, with efficiencies
DP8	**Do you agree that this design would promote optimal network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) 2 Shorter arrival and more direct routings would reduce flight times.

	Runway 27 System 5: Left and Right departure turns
DP0	**Do you agree that this design would enhance safety?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 1 Currently all emergency turns are to the north. With the departure planned to the south we may need to consider obstacle clearance areas with our performance provider Lufthansa.
DP1	**Do you agree that this design would comply with laws and regulations?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) No Comment.
DP2	**Do you agree that this design would enhance navigation standards?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) As per today.
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) No comment. Hard to judge its impact in relation to the other London airspace modernisation plans.
DP4	**Do you agree that this design would limit aircraft noise?**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) 2 Traffic dispersal for departures south would reduce close in aircraft noise, but there may be more impact for residents located south of the LCY.
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) 2 Comments on fuel and CO_2: Route south has a more direct track and all departure climbs would be optimised.
DP6	**Do you agree that this design would minimise local air pollution?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) No comment. We would need further data to clarify this point.

	Runway 27 System 5: Left and Right departure turns
DP7	**Do you agree that this design would improve operational resilience?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) 2 Comments on resilience: With traffic dispersal on departure there maybe benefit.
DP8	**Do you agree that this design would promote optimal network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) 2 Comments on network performance as a shared resource: More direct routings.

General Q2	**Do you have comments on any aspect of the designs, or the process? Include sketches if you wish.**

Thank you for taking the time to provide feedback on behalf of those you represent.

It will be considered, and one or more of these airspace designs may be amended, or new design options may be created, based on the collated and combined feedback to Stage 2.

Documentation for each Stage of this airspace change proposal (ACP) can be found via the CAA's Airspace Change portal at this link.

1 CAP1616 Stage 2 Engagement Record: LCY-Biggin Hill Technical Meeting 15th Dec 2021

1.1 Attendees:

BIG: Ops Tech Support Manager
Principal Consultant Osprey Airports & Airspace
Airspace Modernisation Lead

LCY: Head of Environment & Technical Operations
Manager Air Traffic Services
Airspace Change Expert

Please consider this record complete if accompanied by the slide pack PDF and links.

1.2 Agenda (extract from presentation):

Agenda

- Welcome and introductions
- UK Airspace Modernisation Programme
- LCY Airspace Change Process progress so far
- Recap on Stage 1
- Stage 2 overview, deliverables and timescales
- Items to be presented to support proposed design concepts:
  - Interactions with other airports
  - Most frequent destinations and directions
  - Tips on how to read and provide comments on proposed design concepts
  - Reference tables – aircraft types, numbers, noise information
- **Airspace design concepts: description of the proposed systems**
- Recap and input required from stakeholders
- Next steps

1.3 Summary of Notes

Welcome and introductions.
The presentation was given, as per the agenda, by the LCY Airspace Change Expert and LCY Manager ATS. All parties being familiar with the process, and with the slide pack being supplied as an action, the intro and process slides were quickly progressed. The airspace design concept maps were of primary interest; these were explained in detail by the LCY ATC Design Lead. Potential LCY departure and arrival flows in the vicinity of Biggin Hill Airport were highlighted and briefly discussed, with further feedback to be supplied by BIG in due course, using the slide pack including the illustrative maps.

BIG asked how fixed were the lines and design envelopes, including if instrument flight procedure design (IFP) advice had been sought. LCY replied that all the maps were aspirational sketches, and ensured that relevant text in the presentation was included in the slide pack (relating to the widest possible combination of design envelope overlaps). However, some informal IFP advice on minimum turn radii had been acquired and the maps took that into account.
A discussion ensued on the potential advantages and disadvantages in combining arrival/departure flows to/from LCY and BIG, including the consideration of combined general flows that could be laterally separated into airport-dedicated routes. This would require negotiation between LCY, BIG and NERL from a network point of view. It was noted by both parties that we needed to consider the operational complexity of what is currently known as Thames Radar (the controlling authority for LCY and BIG), and the controller workload on that sector, over which neither LCY nor BIG have any influence. The overriding local influence of Heathrow on altitude limits was also noted.
A second discussion ensued on the relationship between some LTMA airports, NERL and ACOG, centring on the difficulty airports have in designing flows from/to an as-yet-unknown (or undisclosed) NERL network design concept. This could lead to difficulties attempting to explain to non-aviation-technical stakeholders (such as local communities) that overflight may occur anywhere within a large region, which itself may lead to difficulties re: Stage 2 feedback from these stakeholders.
BIG agreed to provide feedback before mid-January 2022 in accordance with LCY's timeline request; a link to an online form will be provided as part of the email finalising these notes, as will a PDF of the presentation including the current set of design concept maps.

AOB: None

DONM:
Another meeting may be necessary on BIG's request, likely 10-15 Jan 2022, in order for BIG to provide full feedback by Mon 17 Jan 2022. The date to be set as part of the actions for these minutes.

Thanks and close.

Actions:

1. LCY to distribute PDF of slide pack to LLA, including link to feedback form (Closed, as part of the email distribution of these minutes)

2. BIG to consider a date in January 2022 for another meeting (Open, BIG to progress before Xmas 2021)

3. BIG to use the supplied slide pack and feedback form to provide formal Stage 2 feedback to LCY by Mon 17 Jan 2022, with sketches and technical detail if necessary (Open)

End of notes

From: @bigginhillairport.com>
Sent: 23 December 2021 07:58
To:
Cc:
Subject: RE: LCY/BH Bilateral Stakeholder Engagement

Good Morning

Please accept this email as the response from BHAL regarding our recent stage 2 Engagement.

Due to there being an infinite number of options within the envelopes presented and acknowledgement from City that the boundaries of the envelopes are not hard but flexible, there are an awful lot of possible options. However, as no routes have been specifically identified, it is not possible to determine whether or not they have fully addressed all of the established Design Principles. In general terms, all options appear to have aligned with the requirements of DP 0 – 3. It is not possible to say the same of DP 4 – 8, which all require more specific details of the route being assessed. When analysing the specific route options, any which come closer to Biggin Hill than existing routes would require an interaction with Thames Radar to establish the impact on their workload along with the expected interaction with the higher airspace networks, which have yet to be established. Additionally, any option, which includes the previously mentioned aspects, could only be assessed when LBHA have Stage 2 options, which in turn can only be when Heathrow have shared their Stage 2 proposals and NATS have shared network information.

Regards,

BHAL Airspace Team

Regards,

Operations Technical Support Manager

LONDON
BIGGIN HILL
AIRPORT

T:

E: @bigginhillairport.com
W: bigginhillairport.com

1 CAP1616 Stage 2 Engagement Record: LCY-LGW Technical Meeting 6th Dec 2021

1.1 Attendees:

LGW: Airspace Change Manager
Head of Noise and Airspace Strategy

LCY: Technical Operations Development
Air Traffic Control Design Lead
Airspace Change Expert

Please consider this record complete if accompanied by the slide pack PDF.

1.2 Agenda (extract from presentation):

Agenda

- Welcome and introductions
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  - Tips on how to read and provide comments on proposed design concepts
  - Reference tables – aircraft types, numbers, noise information
- **Airspace design concepts: description of the proposed systems**
- Recap and input required from stakeholders
- Next steps

1.3 Summary of Notes

Welcome and introductions.

The presentation was given, as per the agenda, by the LCY Airspace Change Expert and ATC Design Lead. The airspace design concept maps were of primary interest to LGW; these were explained in detail by the LCY ATC Design Lead.

LCY departures directly to the south, and arrivals from the south, could lead to potential interactions with LGW depending on how Heathrow decides to proceed. Those LCY-LGW flow interactions may be similar to today, or they may be in different areas.

LGW asked about Heathrow (LHR) feedback. LHR is at CAP1616 Stage 1 and thus is not able to provide specific feedback on their own design concepts until that gateway assessment has been successfully passed.
LCY ATC Design Lead noted that the design concepts presented in this session are in swathe envelopes that have the potential to work with LHR's current general flows (albeit assuming they would be higher than today) and also should LHR's flows move away from today's.

LGW asked if consideration had been given to pausing LCY's airspace change in order to align with LHR. LCY responded that we will progress Stage 2 as per the timeline in the presentation, as we would not wait to synchronise timelines with LHR, likewise LHR has said they would not wish to delay others. LCY is considering the concepts as presented, with an un-modernised LHR operation keeping our traffic lower than ideal, and an expectation that greater altitude may be possible should LHR be able to raise some of their traffic flows. [NB this does not run contra to CAP1616 with LHR pre-Stage 2 – it constitutes a simple working assumption by LCY that all ATM concepts generally prefer to climb higher sooner, stay higher longer, and descend later, with trade-offs necessary as per ACOG guidance.]
Additionally, there was a brief discussion about the period post-Stage 2/pre-Stage 3 where additional design options/concepts previously unknown to a preceding sponsor may become possible, should a following sponsor subsequently pass the Stage 2 gateway while the preceding sponsor is 'between' Stages 2 and 3. Dependency on ACOG and Masterplan update adoption by the CAA would enhance CAP1616 process.

LGW committed to provide feedback before mid-January 2022 in accordance with LCY's timeline request; a link to an online form will be provided as part of the email finalising these notes, as will a PDF of the presentation including the current set of design concept maps.

No AOB.
No date was set for a second meeting, however LCY would be open to a request from LGW as long as it took place before Mon 17 Jan 2022.

Thanks and close

Actions:

1. LCY to distribute PDF of slide pack to LGW, including link to feedback form

2. LGW to use the slide pack and feedback form to provide formal Stage 2 feedback to LCY by Mon 17 Jan 2022, with sketches if necessary (Open, LGW to respond)

End of notes

Minutes

23rd September 2021

Meeting title/subject: London City & Heathrow airspace modernisation technical engagement bi lateral

Meeting location: TEAMS

Present: HAL: Airspace Noise and ATM Specialist, AMS ACP technical lead
London City: Director Aerodrome Operations, Hd environment & technical operations, technical & safeguarding SME, LCY ACP PM, LCY ACP lead, LCY ATC SME
ACOG : ATC technical consultant

Description:	*Action*
Welcome and Introductions The HAL AMS ACP technical lead opened the meeting and all attendees introduced themselves in their various organisational roles.	
Update on progress with the HAL SoN and associated CAP1616 indicative timeline. HAL gave an update, since starting its AMS ACP that the SoN had been placed on the CAA's portal, stage 1 assessment meeting had been held in August 2021, Design Principles engagement sessions are scheduled to commence 27th Sept through to end of Nov 2021 with CAP1616 Stage 1 gateway targeting the CAA's Feb 2022 meeting. HAL outlined that whilst the Expansion ACP stage 1 activity was termed "consultation, the AMS ACP would be termed "engagement". HAL outlined that whilst Q4 2023 (using experience from Expansion and other level 1 ACP's), is the current indicative stage 2 gateway target date, HAL is undertaking a piece of work which in circa 4-6 weeks time is anticipated to provide a more solid gateway 2 timeline estimate.	
Technical overview and construction metrics of HAL's 7000ft region The HAL AMS ACP technical lead provided an overview of the metrics used for the construction of the likely impacted area. The map	

Minutes

Description:	*Action*
provided under NDA to LCY and ACOG will be placed onto the CAA portal in the next few weeks.	
London City update London City are in stage 2 of CAP1616 and are actively working through from speculative design concepts into a more refined options list. In order to achieve the stage 2 gateway of 24th June 2022, London City aim to have completed all necessary documentation by March 2022 ready for submission to CAA. To ensure that HAL are able to provide meaningful stakeholder feedback to London City's stage 2 options, London City will engage with HAL in Nov 2021 as an interested stakeholder in its ACP. ACOG outlined that it is working with CAA to ascertain a mechanism whereby those sponsors that wish to proceed through stage 2 gateway are able to consider taking through additional options in the circumstances where near neighbouring FASI stakeholders are in a different part of the process and not due to reach stage 2 gateway for some time. ACOG acknowledged the challenge of a sponsor having to "freeze" design envelopes as part of stage 2 submission, however, this is a risk for each sponsor to consider as part of its ACP options progression and stage 2 submission pack. The expectation would be for such sponsors, to pause prior to the commencement of stage 3 and filter options once other stakeholders have passed stage 2 gateway. It is not anticipated within the London City work that there would be a meaningful effect on the published low-level helicopter operations within the London City zone as a result of the options currently within stage 2 of its ACP, however in response to a query from HAL, confirmed that all arrivals (including mechanisms) and departures remain in scope as part of the ACP	London City to propose stage 2 technical engagement workshop activity options in Nov 2021 for HAL consideration, in order that HAL can provide meaningful stakeholder feedback within the LCY Stage 2 timeline
AOB ACOG offered to brief the wider London City team on the updated workings for cumulative effect assessments in areas of common interest by FASI sponsors, and the wider assessment of overall AMS programmatical benefits realisation. LCY made clear that they are	London City to contact ACOG to arrange briefing.

Minutes

Description:	*Action*
willing participants in the AMS programme and that they are developing design concepts to optimise their operation. ACOG outlined that via its ACP expert, a workshop would be convened between FASI sponsor stakeholder environmental ACP experts in order to devise a tool/capability for collective FASI sponsor use to assist in these initial deliberations between sponsors. However, such a tool is unlikely to be operational in the timescales of LCY's Stage 2.	
DONM Captured within the London City update action.	

1 CAP1616 Stage 2 Engagement Record: LCY-LHR Technical Meeting 12th November 2021

1.1 Attendees:

HAL: Airspace Modernisation Programme, Technical Lead
Airspace, Noise & ATM Specialist
Airport Ops Duty Manager
Airspace Modernisation Programme, ACP Lead

ACOG: ATC Technical Consultant

LCY: Head of Environment & Technical Ops
Technical Ops Development
Director Aerodrome Operations
Air Traffic Control Design Lead
Airspace Change Expert

Please consider this record complete if accompanied by the slide pack PDF

1.2 Agenda (extract from presentation):

Agenda

- 1. Welcome, introductions
- 2. CAP1616 Stage timeline reminder LCY, (Stage 1, 2 update from HAL?)
- 3. Desired output
- 3a. ACOG Interactions, and Directional Service Proportions (additional item)
- 3b. LCY and LHR Current Overview (additional item)
- 4. Easterly arr/dep concept system 1
- 5. Easterly arr/dep concept system 2
- ==========Short Break ==========
- 6. Easterly arr/dep concept system 3
- 7. Westerly arr/dep concept system 1
- 8. Westerly arr/dep concept system 2
- 9. Recap, summarise feedback
- 10. AOB, thanks, close

1.3 Notes from the meeting, in accordance with agenda order

(A break was offered but not required, the meeting ran from 0900-1030)

LCY ACP This material was produced by LCY for the HAL technical audience, and was designed to illustrate the most likely interaction areas based upon current

operations into and out of Heathrow between the parties, with schematics instead of swathes. Engagement material with other parties would be similarly tailored, especially at the earliest engagements, and LCY would combine the feedback to ensure the wider picture was understood. Future technical engagement session to be organised by LCY with HAL (Mar 2022 TBC, see DONM below) would illustrate LCY's updated design concepts.

HAL 09 System 1 (and others) What confidence does LCY have that NERL can support alternate arrival flows?
LCY ACP This is to be explored with NERL and is an important topic for us

ACOG/HAL Feedback on map style offered (colours, arrows vs lines, precise direction to extant navaid rather than illustrative flow direction). LCY ACP acknowledges the feedback and the map styles have since been updated (latest version available to HAL/ACOG upon request).

HAL 09 System 3 –challenging to integrate arrival flows from opposite sides into an already complex and constrained region
LCY ACP Concepts such as this remain on the table, would require exploration with NERL and adjacent airports, may need a tech-based solution.

HAL 27 System 2 – consider obstacle clearance and IFP issues with a southbound turn, perhaps via CAA IFP Reg?
LCY ACP We have IFP experts available within the project team, Stage 2 is too early to go down that route especially with the CAA IFP Reg, however preliminary advice is that we expect this to be solvable should the concept progress.

HAL and LCY ACP What about progression of LCY ACP with LHR unchanged? (Evolved into brief discussion on deployment and opportunities pre/post-LHR Stage 2.)
LCY will progress Stage 2 as we would not wait to synchronise timelines with LHR, likewise LHR would not wish to delay others. LCY is considering the concepts as presented, with an un-modernised LHR operation keeping our traffic lower than ideal, and an expectation that greater altitude may be possible should LHR be able to raise some of their traffic flows. [NB this does not run contra to CAP1616 with LHR pre-Stage 2 – it constitutes a simple working assumption by LCY that all ATM concepts generally prefer to climb higher sooner, stay higher longer, and descend later, with trade-offs necessary as per ACOG guidance.]
Additionally, there was a brief discussion about the period post-Stage 2/pre-Stage 3 where additional design options/concepts previously unknown to a preceding sponsor may become possible, should a following sponsor subsequently pass the Stage 2 gateway while the preceding sponsor is 'between' Stages 2 and 3. Dependency on ACOG and Masterplan update adoption by the CAA would enhance CAP1616 process.

HAL How have SVFR/Heli Routes been considered, would there be impacts?
LCY ACP Only H4 is relevant to LCY ops, we do not expect there to be an impact, however there is a London Helicopter Routes Working Group on which LCY and HAL both sit, next meeting 1st Dec, HAL and LCY may consider aligning to ask questions re reviews of routes.
Re zone transits, LCY will ask NERL to confirm numbers, however we expect impacts to be manageable regardless of the design system.

HAL In the longer term, is LCY open to collaborative deployment assurance mechanisms?
LCY ACP At this time we are focussed on Stage 2, however LCY would be open to collaboration on the subject as the project progresses.

No AOB.

DATE OF NEXT MEETING DONM
LCY ACP, HAL discussed late Jan/early Feb 2022.
In principle, HAL would be able to update LCY on LHR's Stage 1 progress as they approach their Gateway Submission date, and LCY could briefly update on Stage 2 progress. School half term is noted as being mid/late Feb.
Assuming Heathrow's Stage 1 submission passes through the Gateway, HAL may be in a position to discuss design concepts in detail including potential mutual opportunities. It remains to be seen if any new design concepts/opportunities may arise in time to include with LCY's Stage 2 submission, but we would welcome the chance to discuss them.
LCY requests an hour's update on the morning of Weds 9 March 2022 between 0930 and 1230 if that can be accommodated by HAL.

Thanks and close

Actions:

1. LCY to distribute PDF of slide pack to HAL, ACOG
   (Closed LCY, 12/11/2021)

2. HAL to use that slide pack to provide formal Stage 2 feedback to LCY by Friday 10th December 2021
   (Open, HAL to respond)

3. LCY and HAL to agree DONM as per discussion above.
   LCY requests wk1 March 2022, post Gateway assessment outcome.
   (Closed, DONM set for Weds 09 March 0900)

End

1 CAP1616 Stage 2 Engagement Record: LCY-LLA Technical Meeting 8th Dec 2021

1.1 Attendees:

LLA: Airspace, Noise and Performance Manager
Airspace Performance Assessor

LCY: Technical Operations Development
Air Traffic Control Design Lead
Airspace Change Expert

Please consider this record complete if accompanied by the slide pack PDF.

1.2 Agenda (extract from presentation):

Agenda

- Welcome and introductions
- UK Airspace Modernisation Programme
- LCY Airspace Change Process progress so far
- Recap on Stage 1
- Stage 2 overview, deliverables and timescales
- Items to be presented to support proposed design concepts:
  - Interactions with other airports
  - Most frequent destinations and directions
  - Tips on how to read and provide comments on proposed design concepts
  - Reference tables – aircraft types, numbers, noise information
- **Airspace design concepts: description of the proposed systems**
- Recap and input required from stakeholders
- Next steps

1.3 Summary of Notes

Welcome and introductions.

The presentation was given, as per the agenda, by the LCY Airspace Change Expert and ATC Design Lead.

The airspace design concept maps were of primary interest; these were explained in detail by the LCY ATC Design Lead.

LLA considered that BPK area, as expected, may have interactions of interest for further discussion. These further discussions may involve confidential exchange of geographical GIS data such as KML files, to be agreed in due course.

LLA confirmed their target Stage 2 gateway assessment was in March 2022.

LLA agreed to provide feedback before mid-January 2022 in accordance with LCY's timeline request; a link to an online form will be provided as part of the email finalising these notes, as will a PDF of the presentation including the current set of design concept maps.

AOB: None

DONM:
A second meeting was agreed to be necessary, likely 10-15 Jan 2022 in order for LLA to provide full feedback by Mon 17 Jan 2022. The date to be set as part of the actions for these minutes.

Thanks and close

Actions:

1. LCY to distribute PDF of slide pack to LLA, including link to feedback form (Closed 15 Dec)

2. LCY and LLA to agree a date in January 2022 for another meeting to mutually discuss the BPK region
   (Closed, date agreed 12 Jan)

3. LLA to use the slide pack and feedback form to provide formal Stage 2 feedback to LCY by Mon 17 Jan 2022, with sketches and technical detail if necessary (Open)

End of notes

LONDON CITY AIRPORT

CAP1616 Stage 2 Engagement Feedback Form

Organisation Name London Luton Airport Operations Ltd

Contact name and details @ltn.aero,

Date 14/01/2022

Engagement material supplied: Slide pack including map AND/OR links to videos.

Return this Word document to ourfutureskies@londoncityairport.com

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This feedback form is part of the initial stakeholder engagement for London City Airport's Airspace Change Programme (Stage 2 – Develop and Assess). Additional engagement material supplied includes a slide pack, video commentary and supporting maps.

This is initial engagement only (not full consultation which will follow later in the process); the proposed design options are draft and will be subject to changes and/or amendments as we move on through the process.

Please provide your comments and feedback by Mon 17th Jan 2022 on each of the proposed airspace designs presented in the supplied material by using the Design Principles (DPs) as a framework to evaluate the extent you think it complies with them. DPs are provided for your reference below.

We ask you to consider each Airspace Concept System, its pros and cons, and the extent you think it complies with the DPs. There is a final question for free text comments and sketches, if you prefer to add feedback not covered by the DP questions.

Ref Num	Tier 1 Design Principles	Priority
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

Ref Num		Tier 2 Design Principles	Priority
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

	Runway 09 System 1: Similar to today, with efficiencies
DP0	**Do you agree that this design would enhance safety?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 3 Comments on safety **LLA likes the increase in altitude at BPK compared to the current levels. However, if the route could guarantee reaching 6,000ft by BPK this would be more preferable for LLA as this would have less interactions with our aircraft.**
DP1	**Do you agree that this design would comply with laws and regulations?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 3 Comments on regulatory compliance **Assuming this design has been drawn by an IFP designer, this should comply with design laws and regulations. LLA does not have the local knowledge of the communities which would be overflown at a lower level so cannot comment on whether this meets environmental regulation.**
DP2	**Do you agree that this design would enhance navigation standards?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 5 Comments on navigation standards **This system is proposing a more systemised airspace using the latest technology which will improve the navigation standards.**
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 3 Comments on AMS and capacity **Unless the departures to BPK can be guaranteed to reach at least 6000ft by BPK, this will not enable Free Flow between Luton and London City departures. In order to meet both of our DPs (LCY – DP4, LTN – DP 6) on avoiding overflying communities with multiple routes, ideally, London City BPK departures need to be FL100 by BPK so Luton departures could climb straight to FL90. We can't see how this is possible, as it is likely London City traffic is being held down by Heathrow RWY27 arrivals (although it is potentially more achievable when LC are on RWY09 operations). This needs to be balanced with the AMS to deliver more capacity, as this could limit capacity at both Luton and LCY.**
DP4	**Do you agree that this design would limit aircraft noise?**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) N/A Comments on noise *Consider referring to:* *Maximise altitude, respite routes, avoid multiple routes, minimise newly overflown, managed dispersal, minimise total population, avoid noise sensitive areas*

	Runway 09 System 1: Similar to today, with efficiencies
	LLA does not have the local knowledge of the communities which would be overflown at a lower level so cannot comment on whether this design would limit aircraft noise.
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) 3 Comments on fuel and CO_2: **It appears that the routes are broadly in similar places to today but with increased climb profiles, it would be good to see these climb profiles further enhanced for the reasons listed in DP3 feedback. Although an increase in climb profiles does minimise fuel and co2 emissions.**
DP6	**Do you agree that this design would minimise local air pollution?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) N/A Comments on aircraft local air pollution: **LLA does not have the local knowledge of the communities which would be overflown at a lower level so cannot comment on whether this design would minimise local air pollution.**
DP7	**Do you agree that this design would improve operational resilience?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) 3 Comments on resilience: **Unless the departures to BPK can be guaranteed to reach at least 6000ft by BPK, this will not enable Free Flow between Luton and London City departures. In order to meet both of our DPs (LCY – DP4, LTN – DP 6) on avoiding overflying communities with multiple routes, ideally, London City BPK departures need to be FL100 by BPK so Luton departures could climb straight to FL90. We can't see how this is possible, as it is likely London City traffic is being held down by Heathrow RWY27 arrivals (although it is potentially more achievable when LC are on RWY09 operations). This needs to be considered as if this system is implemented there will always be an interaction between Luton and London City which reduces the operations resilience.**
DP8	**Do you agree that this design would promote optimal network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) 2 Comments on network performance as a shared resource: **Unless the departures to BPK can be guaranteed to reach at least 6000ft by BPK, this will not enable Free Flow between Luton and London City departures. In order to meet both of our DPs (LCY – DP4, LTN – DP 6) on avoiding overflying communities with multiple routes, ideally, London City BPK departures need to be FL100 by BPK so Luton departures could climb straight to FL90. We can't see how this is possible, as it is likely London City traffic is being held down by Heathrow RWY27 arrivals (although it is potentially more achievable when LC are**

	Runway 09 System 1: Similar to today, with efficiencies
	on RWY09 operations). This needs to be considered as we believe this design can be further enhanced to increase the efficiencies compared to todays airspace.

	Runway 09 System 2: Mirror, Northern arrivals, Southern departures
DP0	**Do you agree that this design would enhance safety?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 5 Comments on safety **LLA believe this design to reduce the interactions between London City and Luton departures (via BPK) and therefore improves the safety in this area of airspace.**
DP1	**Do you agree that this design would comply with laws and regulations?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 3 Comments on regulatory compliance **Assuming this design has been drawn by an IFP designer, this should comply with design laws and regulations. LLA does not have the local knowledge of the communities which would be overflown at a lower level so cannot comment on whether this meets environmental regulation.**
DP2	**Do you agree that this design would enhance navigation standards?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 5 Comments on navigation standards **This system is proposing a more systemised airspace using the latest technology which will improve the navigation standards.**
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 5 Comments on AMS and capacity **This design will allow free flow between London City and Luton which is in line with the CAA's Airspace Modernisation Strategy.**
DP4	**Do you agree that this design would limit aircraft noise?**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) N/A Comments on noise *Consider referring to:* *Maximise altitude, respite routes, avoid multiple routes, minimise newly overflown, managed dispersal, minimise total population, avoid noise sensitive areas* **LLA does not have the local knowledge of the communities which would be overflown at a lower level so cannot comment on whether this design would limit aircraft noise.**
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) 3 Comments on fuel and CO_2: **There may be more fuel burn with this design due to the wrap around, but this is likely to be offset by Luton having a continuous climb and not held down at BPK. Also LCY departures are reaching a higher altitude sooner, which is better for CO2 emissions.**

	Runway 09 System 2: Mirror, Northern arrivals, Southern departures
DP6	**Do you agree that this design would minimise local air pollution?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) N/A Comments on aircraft local air pollution: **LLA does not have the local knowledge of the communities which would be overflown at a lower level so cannot comment on whether this design would minimise local air pollution.**
DP7	**Do you agree that this design would improve operational resilience?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) 5 Comments on resilience: **This design would remove the interdependencies between Luton and London City which would improve the operational resilience.**
DP8	**Do you agree that this design would promote optimal network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) 5 Comments on network performance as a shared resource: **This design would promote optimal network performance as it would mean both London City and Luton could climb, particularly around BPK where the interactions are currently.**

	Runway 09 System 3: Maximise departure efficiencies
DP0	**Do you agree that this design would enhance safety?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 3 Comments on safety **LLA likes the increase in altitude at BPK compared to the current levels. However, if the route could guarantee reaching 6,000ft by BPK this would be more preferable for LLA as this would have less interactions with our aircraft.** **We would request clarity on whether the arrivals are going beneath the departures or whether the departures are beneath the arrivals near BPK. Our preference would be arrivals below BPK departures to ensure climb for the departures.**
DP1	**Do you agree that this design would comply with laws and regulations?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 3 Comments on regulatory compliance **Assuming this design has been drawn by an IFP designer, this should comply with design laws and regulations. LLA does not have the local knowledge of the communities which would be overflown at a lower level so cannot comment on whether this meets environmental regulation.**
DP2	**Do you agree that this design would enhance navigation standards?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 3 Comments on navigation standards **This system is proposing a more systemised airspace using the latest technology which will improve the navigation standards.**
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 2 Comments on AMS and capacity **Unless the departures to BPK can be guaranteed to reach at least 6000ft by BPK, this will not enable Free Flow between Luton and London City departures. In order to meet both of our DPs (LCY – DP4, LTN – DP 6) on avoiding overflying communities with multiple routes, ideally, London City BPK departures need to be FL100 by BPK so Luton departures could climb straight to FL90. We can't see how this is possible, as it is likely London City traffic is being held down by Heathrow RWY27 arrivals (although it is potentially more achievable when LC are on RWY09 operations). This needs to be balanced with the AMS to deliver more capacity, as this could limit capacity at both Luton and LCY.** **This option has a CLN departure to the NE (east of Lambourne), we would ask LCY to investigate whether this could also be used for the BPK departures to then turn later back to heading NW but at a much higher altitude. We understand this could add track miles but should enable CCO for both Luton and LCY as well as free flow.**
DP4	**Do you agree that this design would limit aircraft noise?**

	Runway 09 System 3: Maximise departure efficiencies
Tier 2 Priority A	To what extent? (1-least, 5-greatest) N/A Comments on noise *Consider referring to:* *Maximise altitude, respite routes, avoid multiple routes, minimise newly overflown, managed dispersal, minimise total population, avoid noise sensitive areas* **LLA does not have the local knowledge of the communities which would be overflown at a lower level so cannot comment on whether this design would limit aircraft noise.**
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) 3 Comments on fuel and CO_2: **It appears that the routes are broadly in similar places to today but with increased climb profiles, it would be good to see these climb profiles further enhanced for the reasons listed in DP3 feedback. Although an increase in climb profiles does minimise fuel and co2 emissions.** **We would request clarity on whether the arrivals are going beneath the departures or whether the departures are beneath the arrivals near BPK. Our preference would be arrivals below BPK departures to ensure climb for the departures.**
DP6	**Do you agree that this design would minimise local air pollution?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) N/A Comments on aircraft local air pollution: **LLA does not have the local knowledge of the communities which would be overflown at a lower level so cannot comment on whether this design would minimise local air pollution.**
DP7	**Do you agree that this design would improve operational resilience?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) 2 Comments on resilience: **Unless the departures to BPK can be guaranteed to reach at least 6000ft by BPK, this will not enable Free Flow between Luton and London City departures. In order to meet both of our DPs (LCY – DP4, LTN – DP 6) on avoiding overflying communities with multiple routes, ideally, London City BPK departures need to be FL100 by BPK so Luton departures could climb straight to FL90. We can't see how this is possible, as it is likely London City traffic is being held down by Heathrow RWY27 arrivals (although it is potentially more achievable when LC are on RWY09 operations). This needs to be considered as if this system is implemented there will always be an interaction between Luton and London City which reduces the operations resilience.**
DP8	**Do you agree that this design would promote optimal network performance?**
Tier 2	To what extent? (1-least, 5-greatest)

	Runway 09 System 3: Maximise departure efficiencies
Priority B	2 Comments on network performance as a shared resource: **Unless the departures to BPK can be guaranteed to reach at least 6000ft by BPK, this will not enable Free Flow between Luton and London City departures. In order to meet both of our DPs (LCY – DP4, LTN – DP 6) on avoiding overflying communities with multiple routes, ideally, London City BPK departures need to be FL100 by BPK so Luton departures could climb straight to FL90. We can't see how this is possible, as it is likely London City traffic is being held down by Heathrow RWY27 arrivals (although it is potentially more achievable when LC are on RWY09 operations). This needs to be considered as we believe this design can be further enhanced to increase the efficiencies compared to todays airspace.** **We would request clarity on whether the arrivals are going beneath the departures or whether the departures are beneath the arrivals near BPK. Our preference would be arrivals below BPK departures to ensure climb for the departures.**

	Runway 27 System 4: Similar to today, with efficiencies
DP0	**Do you agree that this design would enhance safety?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 3 Comments on safety **LLA likes the increase in altitude at BPK compared to the current levels. However, if the route could guarantee reaching 6,000ft by BPK this would be more preferable for LLA as this would have less interactions with our aircraft.**
DP1	**Do you agree that this design would comply with laws and regulations?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 3 Comments on regulatory compliance **Assuming this design has been drawn by an IFP designer, this should comply with design laws and regulations. LLA does not have the local knowledge of the communities which would be overflown at a lower level so cannot comment on whether this meets environmental regulation.**
DP2	**Do you agree that this design would enhance navigation standards?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 5 Comments on navigation standards **This system is proposing a more systemised airspace using the latest technology which will improve the navigation standards.**
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 3 Comments on AMS and capacity

	Runway 27 System 4: Similar to today, with efficiencies
	Unless the departures to BPK can be guaranteed to reach at least 6000ft by BPK, this will not enable Free Flow between Luton and London City departures. In order to meet both of our DPs (LCY – DP4, LTN – DP 6) on avoiding overflying communities with multiple routes, ideally, London City BPK departures need to be FL100 by BPK so Luton departures could climb straight to FL90. We can't see how this is possible, as it is likely London City traffic is being held down by Heathrow RWY27 arrivals (although it is potentially more achievable when LC are on RWY09 operations). This needs to be balanced with the AMS to deliver more capacity, as this could limit capacity at both Luton and LCY.
DP4	**Do you agree that this design would limit aircraft noise?**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) N/A Comments on noise *Consider referring to:* *Maximise altitude, respite routes, avoid multiple routes, minimise newly overflown, managed dispersal, minimise total population, avoid noise sensitive areas* **LLA does not have the local knowledge of the communities which would be overflown at a lower level so cannot comment on whether this design would limit aircraft noise.**
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) 3 Comments on fuel and CO_2: **It appears that the routes are broadly in similar places to today but with increased climb profiles, it would be good to see these climb profiles further enhanced for the reasons listed in DP3 feedback. Although an increase in climb profiles does minimise fuel and co2 emissions.**
DP6	**Do you agree that this design would minimise local air pollution?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) N/A Comments on aircraft local air pollution: **LLA does not have the local knowledge of the communities which would be overflown at a lower level so cannot comment on whether this design would minimise local air pollution.**
DP7	**Do you agree that this design would improve operational resilience?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) 3 Comments on resilience: **Unless the departures to BPK can be guaranteed to reach at least 6000ft by BPK, this will not enable Free Flow between Luton and London City departures. In order to meet both of our DPs (LCY – DP4, LTN – DP 6) on avoiding overflying communities with multiple routes, ideally, London City BPK departures need to be FL100 by BPK so Luton departures could climb straight to FL90. We can't see how this is possible, as it is likely London City traffic is being held down by**

	Runway 27 System 4: Similar to today, with efficiencies
	Heathrow RWY27 arrivals (although it is potentially more achievable when LC are on RWY09 operations). This needs to be considered as if this system is implemented there will always be an interaction between Luton and London City which reduces the operations resilience.
DP8	**Do you agree that this design would promote optimal network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) 2 Comments on network performance as a shared resource: **Unless the departures to BPK can be guaranteed to reach at least 6000ft by BPK, this will not enable Free Flow between Luton and London City departures. In order to meet both of our DPs (LCY – DP4, LTN – DP 6) on avoiding overflying communities with multiple routes, ideally, London City BPK departures need to be FL100 by BPK so Luton departures could climb straight to FL90. We can't see how this is possible, as it is likely London City traffic is being held down by Heathrow RWY27 arrivals (although it is potentially more achievable when LC are on RWY09 operations). This needs to be considered as we believe this design can be further enhanced to increase the efficiencies compared to todays airspace.**

	Runway 27 System 5: Left and Right departure turns
DP0	**Do you agree that this design would enhance safety?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 3 Comments on safety **LLA likes the increase in altitude at BPK compared to the current levels. However, if the route could guarantee reaching 6,000ft by BPK this would be more preferable for LLA as this would have less interactions with our aircraft.**
DP1	**Do you agree that this design would comply with laws and regulations?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on regulatory compliance **Assuming this design has been drawn by an IFP designer, this should comply with design laws and regulations. LLA does not have the local knowledge of the communities which would be overflown at a lower level so cannot comment on whether this meets environmental regulation.**
DP2	**Do you agree that this design would enhance navigation standards?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 5 Comments on navigation standards **This system is proposing a more systemised airspace using the latest technology which will improve the navigation standards.**
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 3 Comments on AMS and capacity **Unless the departures to BPK can be guaranteed to reach at least 6000ft by BPK, this will not enable Free Flow between Luton and London City departures. In order to meet both of our DPs (LCY – DP4, LTN – DP 6) on avoiding overflying communities with multiple routes, ideally, London City BPK departures need to be FL100 by BPK so Luton departures could climb straight to FL90. We can't see how this is possible, as it is likely London City traffic is being held down by Heathrow RWY27 arrivals (although it is potentially more achievable when LC are on RWY09 operations). This needs to be balanced with the AMS to deliver more capacity, as this could limit capacity at both Luton and LCY.**
DP4	**Do you agree that this design would limit aircraft noise?**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) N/A Comments on noise *Consider referring to:* *Maximise altitude, respite routes, avoid multiple routes, minimise newly overflown, managed dispersal, minimise total population, avoid noise sensitive areas* **LLA does not have the local knowledge of the communities which would be overflown at a lower level so cannot comment on whether this design would limit aircraft noise.**

	Runway 27 System 5: Left and Right departure turns
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) 3 Comments on fuel and CO_2: **It appears that the routes are broadly in similar places to today but with increased climb profiles, it would be good to see these climb profiles further enhanced for the reasons listed in DP3 feedback. Although an increase in climb profiles does minimise fuel and co2 emissions.**
DP6	**Do you agree that this design would minimise local air pollution?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) N/A Comments on aircraft local air pollution: **LLA does not have the local knowledge of the communities which would be overflown at a lower level so cannot comment on whether this design would minimise local air pollution.**
DP7	**Do you agree that this design would improve operational resilience?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) 3 Comments on resilience: **Unless the departures to BPK can be guaranteed to reach at least 6000ft by BPK, this will not enable Free Flow between Luton and London City departures. In order to meet both of our DPs (LCY – DP4, LTN – DP 6) on avoiding overflying communities with multiple routes, ideally, London City BPK departures need to be FL100 by BPK so Luton departures could climb straight to FL90. We can't see how this is possible, as it is likely London City traffic is being held down by Heathrow RWY27 arrivals (although it is potentially more achievable when LC are on RWY09 operations). This needs to be considered as if this system is implemented there will always be an interaction between Luton and London City which reduces the operations resilience.**
DP8	**Do you agree that this design would promote optimal network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) 2 Comments on network performance as a shared resource: **Unless the departures to BPK can be guaranteed to reach at least 6000ft by BPK, this will not enable Free Flow between Luton and London City departures. In order to meet both of our DPs (LCY – DP4, LTN – DP 6) on avoiding overflying communities with multiple routes, ideally, London City BPK departures need to be FL100 by BPK so Luton departures could climb straight to FL90. We can't see how this is possible, as it is likely London City traffic is being held down by Heathrow RWY27 arrivals (although it is potentially more achievable when LC are on RWY09 operations). This needs to be considered as we believe this design can be further enhanced to increase the efficiencies compared to todays airspace.**

General Q2	**Do you have comments on any aspect of the designs, or the process? Include sketches if you wish.** LLA has concern that unless the departures to BPK can be guaranteed to reach at least 6000ft by BPK, this will not enable Free Flow between Luton and London City departures. In order to meet both of our DPs (LCY – DP4, LTN – DP 6) on avoiding overflying communities with multiple routes, ideally, London City BPK departures need to be FL100 by BPK so Luton departures could climb straight to FL90. We can't see how this is possible, as it is likely London City traffic is being held down by Heathrow RWY27 arrivals (although it is potentially more achievable when LC are on RWY09 operations). This needs to be balanced with the AMS to deliver more capacity, as this could limit capacity at both Luton and LCY. We would also ask LCY to consider whether the CLN departure to the NE (east of Lambourne) could also be used for the BPK departures to then turn later back to heading NW but at a much higher altitude. We understand this could add track miles but should enable CCO for both Luton and LCY as well as free flow.

Thank you for taking the time to provide feedback on behalf of those you represent.

It will be considered, and one or more of these airspace designs may be amended, or new design options may be created, based on the collated and combined feedback to Stage 2.

Documentation for each Stage of this airspace change proposal (ACP) can be found via the CAA's Airspace Change portal at this link.

1 CAP1616 Stage 2 Engagement Record: LCY-London Southend Airport (LSA) Technical Meeting 7th Dec 2021

1.1 Attendees:

LSA: Head of Air Traffic Services
Project Manager

LCY: Head of Environment & Technical Ops
Air Traffic Control Design Lead
Airspace Change Expert

Please consider this record complete if accompanied by the slide pack PDF.

1.2 Agenda (extract from presentation):

Agenda

- Welcome and introductions
- UK Airspace Modernisation Programme
- LCY Airspace Change Process progress so far
- Recap on Stage 1
- Stage 2 overview, deliverables and timescales
- Items to be presented to support proposed design concepts:
  - Interactions with other airports
  - Most frequent destinations and directions
  - Tips on how to read and provide comments on proposed design concepts
  - Reference tables – aircraft types, numbers, noise information
- **Airspace design concepts: description of the proposed systems**
- Recap and input required from stakeholders
- Next steps

1.3 Summary of Notes

Welcome and introductions.

The presentation was given, as per the agenda, by the LCY Airspace Change Expert and ATC Design Lead.

The airspace design concept maps were of primary interest; these were explained in detail by the LCY ATC Design Lead.

LSA brought up the subject of tactical interactions vs. a fully systemised solution; at this point there is no LCY commitment either way however in an ideal world a fully systemised solution would be preferred.

LCY arrivals from the north in the vicinity of LSA, with potential interactions to resolve, were present in four of the five design concepts. Potential interactions with Biggin Hill were also noted.

LSA agreed to provide feedback before mid-January 2022 in accordance with LCY's timeline request; a link to an online form will be provided as part of the email finalising these notes, as will a PDF of the presentation including the current set of design concept maps.

AOB: LCY asked LSA to confirm their FASI-S status, LSA stated they were working towards their Stage 1 gateway assessment in Jan 2022.

No date was set for a second meeting, however LCY encourages LSA to request a further meeting before Mon 17 Jan 2022, and LCY will respond.

Thanks and close

Actions:

1. LCY to distribute PDF of slide pack to LSA, including link to feedback form (closed 13 Dec)

2. LSA to use the slide pack and feedback form to provide formal Stage 2 feedback to LCY by Mon 17 Jan 2022, with sketches and technical detail if necessary (Open, LSA to respond)

End of notes

1 CAP1616 Stage 2 Engagement Record: LCY-STN Technical Meeting 6th Dec 2021

1.1 Attendees:

STN: Programme Lead Airspace Design
Future Airspace Consultation Manager
Airspace Change Programme Manager
Future Airspace Project Manager

LCY: Technical Operations Development
Air Traffic Control Design Lead
Airspace Change Expert

Please consider this record complete if accompanied by the slide pack PDF.

1.2 Agenda (extract from presentation):

Agenda

- Welcome and introductions
- UK Airspace Modernisation Programme
- LCY Airspace Change Process progress so far
- Recap on Stage 1
- Stage 2 overview, deliverables and timescales
- Items to be presented to support proposed design concepts:
  - Interactions with other airports
  - Most frequent destinations and directions
  - Tips on how to read and provide comments on proposed design concepts
  - Reference tables – aircraft types, numbers, noise information
- **Airspace design concepts: description of the proposed systems**
- Recap and input required from stakeholders
- Next steps

1.3 Summary of Notes

Welcome and introductions.

The presentation was given, as per the agenda, by the LCY Airspace Change Expert and ATC Design Lead. The airspace design concept maps were of primary interest to STN; these were explained in detail by the LCY ATC Design Lead.

LCY departures to the north, and arrivals via the north, could lead to potential interactions with STN depending on how Heathrow decides to proceed. Those LCY-STN flow interactions may be similar to today, or they may be in different areas. STN commented that an early understanding and engagement on interactions to their southbound departures would be helpful. In addition, an understanding of LCY departures to the NE will help discussions with NERL on arrival structure placement.

STN asked about Heathrow (LHR) feedback. LHR is at CAP1616 Stage 1 and thus is not able to provide specific feedback on their own design concepts until that gateway assessment has been successfully passed.
LCY ATC Design Lead noted that the design concepts presented in this session are in swathe envelopes that have the potential to work with LHR's current general flows (albeit assuming they would be higher than today) and also should LHR's flows move away from today's.

STN asked about LHR alignment. LCY responded that we will progress Stage 2 as per the timeline in the presentation, as we would not wait to synchronise timelines with LHR. LCY is considering the concepts as presented, with an un-modernised LHR operation keeping our traffic lower than ideal, and an expectation that greater altitude may be possible should LHR be able to raise some of their traffic flows. [NB this does not run contra to CAP1616 with LHR pre-Stage 2 – it constitutes a simple working assumption by LCY that all ATM concepts generally prefer to climb higher sooner, stay higher longer, and descend later, with trade-offs necessary as per ACOG guidance.]

Additionally, there was a brief discussion about the period post-Stage 2/pre-Stage 3 where additional design options/concepts previously unknown to a preceding sponsor may become possible, should a following sponsor subsequently pass the Stage 2 gateway while the preceding sponsor is 'between' Stages 2 and 3. Dependency on ACOG and Masterplan update adoption by the CAA would enhance CAP1616 process. STN commented that they have their gateway in March 2022, so clarification on this policy is important to future LCY/STN conversations and design options.

STN committed to provide feedback before mid-January 2022 in accordance with LCY's timeline request; a link to an online form will be provided as part of the email finalising these notes, as will a PDF of the presentation including the current set of design concept maps.

No AOB.
No date was set for a second meeting, however LCY would be open to a request from STN as long as it took place before Mon 17 Jan 2022.

Thanks and close

Actions:

1. LCY to distribute PDF of slide pack to STN, including link to feedback form (Closed)

2. STN to use the slide pack and feedback form to provide formal Stage 2 feedback to LCY by Mon 17 Jan 2022, with sketches if necessary (Open, STN to respond)

End of notes

1 CAP1616 Stage 2 Engagement Record: STN-LCY Technical Meeting 7th Feb 2022 1400-1530

1.1 Attendees:

STN:	Programme Lead Airspace Design
	Future Airspace Consultation Manager
ACOG:	Air Traffic Control Technical Consultant
LCY:	Head of Environment & Technical Operations
	Air Traffic Control Design Lead
	Air Traffic Control Tech Expert Thames Radar
	Airspace Change Expert

Consider this record complete if accompanied by Stansted's slide pack PDF which, at time of writing these notes (07/02/22), was not public.

1.2 Stansted Presentation: Summary of contents

Timeline (accurate for Stage 2, expected to change from Stage 3 onwards)
Design Principles
Design Considerations
Phase 1 Constraints
Initial Design Envelopes overview, and detail
Phase 2 Design Process
Process summary
Viability definitions
Departure options
Predicted STN-LCY interactions: 22NE, 22E, 22SE, 22S, 22SW, 04NE, 04E, 04SE, 04S (With details)
Arrival options
Process summary inc viability and application of Continuous Descent concept (With details)

1.3 Summary of Notes

Welcome and introductions. The presentation was given, as per the summary above, by the STN Airspace Change team.

STN departures listed above are expected to interact with LCY departures to the NW, NE and potential LCY arrival options from the NW.

STN and LCY agreed, having identified likely interdependence areas of the design concepts presented by both airports at Stage 2, that negotiations would be required

post-Stage 2 as part of Stage 3. This would also include NERL, Heathrow, Luton and other air navigation service providers as necessary.

Informal discussions on CAP1616 Stage 2 process.

No AOB.
No further Stage 2 meetings were considered necessary, however should either party have any questions, informal ad-hoc discussions could be arranged.

Thanks and close

Actions:

1. STN to distribute PDF of slide pack to LCY
   (Closed, PDF received by LCY)

2. Mutual commitment to negotiate on specific interactions at an appropriate time during Stage 3
   (Closed, STN and LCY committed to discuss and negotiate as appropriate).

End of notes

CAP1616 Stage 2 Engagement Feedback Form

Organisation Name MAG Stansted Airport

Contact name and details
Technical Lead – Airspace
Date 14 January 2022

Engagement material supplied: Slide pack including map AND/OR links to videos.

Return this Word document to ourfutureskies@londoncityairport.com

This feedback form is part of the initial stakeholder engagement for London City Airport's Airspace Change Programme (Stage 2 – Develop and Assess). Additional engagement material supplied includes a slide pack, video commentary and supporting maps.
This is initial engagement only (not full consultation which will follow later in the process); the proposed design options are draft and will be subject to changes and/or amendments as we move on through the process.

Please provide your comments and feedback by Mon 17th Jan 2022 on each of the proposed airspace designs presented in the supplied material by using the Design Principles (DPs) as a framework to evaluate the extent you think it complies with them. DPs are provided for your reference below.

We ask you to consider each Airspace Concept System, its pros and cons, and the extent you think it complies with the DPs. There is a final question for free text comments and sketches, if you prefer to add feedback not covered by the DP questions.

Ref Num	Tier 1 Design Principles	Priority
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

Ref Num	Tier 2 Design Principles		Priority
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

	Runway 09 System 1: Similar to today, with efficiencies
DP0	**Do you agree that this design would enhance safety?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 3 Comments on safety: It is not possible to comment objectively on safety without formal analysis against proposed Stansted routes.
DP1	**Do you agree that this design would comply with laws and regulations?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 3 Comments on regulatory compliance. It's not possible for Stansted Airport to fully answer at this stage but the options would appear to comply.
DP2	**Do you agree that this design would enhance navigation standards?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 5 Comments on navigation standards: It's not possible for Stansted Airport to fully answer at this stage without further analysis.
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on AMS and capacity: Both the arrivals from the North East and the proposed departure routes to the North west appear to have the potential to interact with current and future traffic from Stansted. Bilateral engagement between LCY and STN will be required to understand dependencies and, as necessary, to deconflict route options.
DP4	**Do you agree that this design would limit aircraft noise?**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) Comments on noise : Stansted Airport seeks to comment on other aspects of the proposals, with a particular focus on any dependencies. Noise impacts are best considered by other stakeholders.
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on fuel and CO_2: Stansted Airport seeks to comment on other aspects of the proposals, with a particular focus on any dependencies. Fuel and CO_2 impacts are best considered by other stakeholders.

	Runway 09 System 1: Similar to today, with efficiencies
DP6	**Do you agree that this design would minimise local air pollution?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on aircraft local air pollution: Stansted Airport seeks to comment on other aspects of the proposals, with a particular focus on any dependencies. these impacts are best considered by other stakeholders.
DP7	**Do you agree that this design would improve operational resilience?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on resilience: Stansted Airport seeks to comment on other aspects of the proposals, with a particular focus on any dependencies. these impacts are best considered by other stakeholders.
DP8	**Do you agree that this design would promote optimal Network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on Network performance as a shared resource: See also comments on DP3. Specific areas of concern for STN Airport would be: a) LCY departures to the NORTH EAST that may interact with proposed STN departures via to the south (via LAM) and the south East (via DET) b) The wider design envelope for LCY traffic to the NW that may interact with proposed STN departures to the SW (22 south west envelope) c) LCY arrivals from the NORTH EAST that transition from 7000ft in an area that may interact with STN arrivals routing to runway 04, and with departures to the South and South East. A later descent from 7,000ft may reduce this potential interaction.

	Runway 09 System 2: Mirror, Northern arrivals, Southern departures
DP0	**Do you agree that this design would enhance safety?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 3 Comments on safety : It is not possible to comment objectively on safety without formal analysis against proposed Stansted routes.
DP1	**Do you agree that this design would comply with laws and regulations?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on regulatory compliance: It's not possible for Stansted Airport to fully answer at this stage but the options would appear to comply.
DP2	**Do you agree that this design would enhance navigation standards?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on navigation standards: It's not possible for Stansted Airport to fully answer at this stage without further analysis.
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on AMS and capacity: Whilst the arrivals from the North East have the potential to interact with current and future traffic from Stansted, System 2 reduces the interaction with proposed STN departures. As such this represents a lower impact option although bilateral engagement between LCY and STN will still be required to understand dependencies and, as necessary, deconflict route options.
DP4	**Do you agree that this design would limit aircraft noise?**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) Comments on noise : Stansted Airport seeks to comment on other aspects of the proposals, with a particular focus on any dependencies. these impacts are best considered by other stakeholders.
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on fuel and CO_2: Stansted Airport seeks to comment on other aspects of the proposals, with a particular focus on any dependencies. these impacts are best considered by other stakeholders.

	Runway 09 System 2: Mirror, Northern arrivals, Southern departures
DP6	**Do you agree that this design would minimise local air pollution?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on aircraft local air pollution: Stansted Airport seeks to comment on other aspects of the proposals, with a particular focus on any dependencies. these impacts are best considered by other stakeholders.
DP7	**Do you agree that this design would improve operational resilience?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on resilience: Stansted Airport seeks to comment on other aspects of the proposals, with a particular focus on any dependencies. these impacts are best considered by other stakeholders.
DP8	**Do you agree that this design would promote optimal Network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on Network performance as a shared resource: See also comments on DP3. Specific areas of concern for STN Airport would be LCY arrivals from the NORTH EAST that a) transition from 7000ft in an area that may interact with STN arrivals routing to runway 04. b) transition in an area that may result in interactions with proposed STN departures to the South and South East. A later descent from 7,000ft may reduce this potential for interaction.

	Runway 09 System 3: Maximise departure efficiencies
DP0	**Do you agree that this design would enhance safety?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) 1 Comments on safety. It is not possible to comment objectively on safety without formal analysis against proposed Stansted routes.
DP1	**Do you agree that this design would comply with laws and regulations?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on regulatory compliance: It's not possible for Stansted Airport to fully answer at this stage but the options would appear to comply.
DP2	**Do you agree that this design would enhance navigation standards?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on navigation standards: It's not possible for Stansted Airport to fully answer at this stage without further analysis.
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on AMS and capacity: Both the arrivals from the North East and the proposed departure routes to the North west appear to have the potential to interact with current and future traffic from Stansted. Bilateral engagement between LCY and STN will be required to understand dependencies and, as necessary, deconflict route options.
DP4	**Do you agree that this design would limit aircraft noise?**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) Comments on noise: Stansted Airport seeks to comment on other aspects of the proposals, with a particular focus on any dependencies. these impacts are best considered by other stakeholders.
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest)

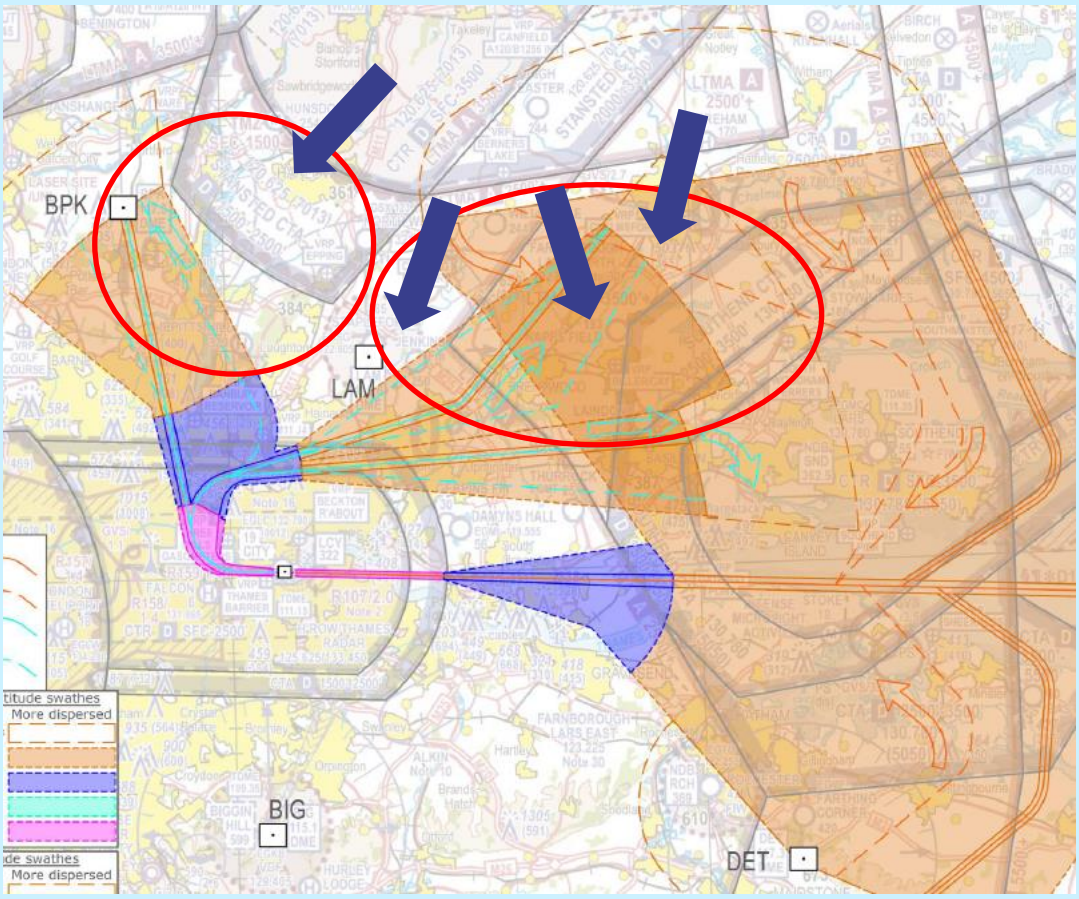
	Runway 09 System 3: Maximise departure efficiencies
	Comments on fuel and CO_2: Stansted Airport seeks to comment on other aspects of the proposals, with a particular focus on any dependencies. these impacts are best considered by other stakeholders.
DP6	**Do you agree that this design would minimise local air pollution?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on aircraft local air pollution: Stansted Airport seeks to comment on other aspects of the proposals, with a particular focus on any dependencies. these impacts are best considered by other stakeholders.
DP7	**Do you agree that this design would improve operational resilience?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on resilience: Stansted Airport seeks to comment on other aspects of the proposals, with a particular focus on any dependencies. these impacts are best considered by other stakeholders.
DP8	**Do you agree that this design would promote optimal Network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on Network performance as a shared resource: See also comments on DP3. Specific areas for discussion with STN Airport would be: a) LCY arrivals from the NORTH EAST that descend to the SW of Stansted in an area proposed for departure envelopes for STN traffic (R22SouthWest and R22south) . b) The wider design envelope for LCY departures to the NW that has potential to interact with proposed STN departures to the SW (22 south west envelope) c) LCY departures to the East which have the potential to interract with proposed STN departures to the south East. Routing to the south of the proposed design envelope would reduce this potential for interaction.

	Runway 27 System 4: Similar to today, with efficiencies
DP0	**Do you agree that this design would enhance safety?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on safety : It is not possible to comment objectively on safety without formal analysis against proposed Stansted routes.
DP1	**Do you agree that this design would comply with laws and regulations?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on regulatory compliance: It's not possible for Stansted Airport to fully answer at this stage but the options would appear to comply.
DP2	**Do you agree that this design would enhance navigation standards?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on navigation standards: It's not possible for Stansted Airport to fully answer at this stage without further analysis.
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on AMS and capacity: Both the arrivals from the North East and the proposed departure routes to the East, North East and North West appear to have the potential to interact with current and future traffic from Stansted. Bilateral engagement between LCY and STN will be required to understand dependencies and, as necessary, deconflict route options.
DP4	**Do you agree that this design would limit aircraft noise?**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) Comments on noise: Stansted Airport seeks to comment on other aspects of the proposals, with a particular focus on any dependencies. these impacts are best considered by other stakeholders.
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on fuel and CO_2: Stansted Airport seeks to comment on other aspects of the proposals, with a particular focus on any dependencies. these impacts are best considered by other stakeholders.

	Runway 27 System 4: Similar to today, with efficiencies
DP6	**Do you agree that this design would minimise local air pollution?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on aircraft local air pollution: Stansted Airport seeks to comment on other aspects of the proposals, with a particular focus on any dependencies. these impacts are best considered by other stakeholders.
DP7	**Do you agree that this design would improve operational resilience?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on resilience: Stansted Airport seeks to comment on other aspects of the proposals, with a particular focus on any dependencies. these impacts are best considered by other stakeholders.
DP8	**Do you agree that this design would promote optimal network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on network performance as a shared resource: See also comments on DP3. Specific areas of concern for STN Airport would be: a) LCY departures to the NORTH EAST and East that may interact with proposed STN departures via to the south (via LAM) and the south East (via DET) b) The wider design envelope for LCY traffic to the NW that may interact with proposed STN departures to the SW (22 south west envelope) c) LCY arrivals from the NORTH EAST that transition from 7000ft in an area that may interact with STN arrivals routing to runway 04, and with departures to the South and South East. A later descent from 7,000ft may reduce this potential interaction.

	Runway 27 System 5: Left and Right departure turns
DP0	**Do you agree that this design would enhance safety?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on safety : It is not possible to comment objectively on safety without formal analysis against proposed Stansted routes.
DP1	**Do you agree that this design would comply with laws and regulations?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on regulatory compliance It's not possible for Stansted Airport to fully answer at this stage but the options would appear to comply.
DP2	**Do you agree that this design would enhance navigation standards?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on navigation standards It's not possible for Stansted Airport to fully answer at this stage without further analysis.
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on AMS and capacity: Both the arrivals from the North East and the proposed departure routes to the North East and North West appear to have the potential to interact with current and future traffic from Stansted. Bilateral engagement between LCY and STN will be required to understand dependencies and, as necessary, deconflict route options.
DP4	**Do you agree that this design would limit aircraft noise?**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) Comments on noise : Stansted Airport seeks to comment on other aspects of the proposals, with a particular focus on any dependencies. these impacts are best considered by other stakeholders.
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on fuel and CO_2: Stansted Airport seeks to comment on other aspects of the proposals, with a particular focus on any dependencies. these impacts are best considered by other stakeholders.

	Runway 27 System 5: Left and Right departure turns
DP6	**Do you agree that this design would minimise local air pollution?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on aircraft local air pollution: Stansted Airport seeks to comment on other aspects of the proposals, with a particular focus on any dependencies. these impacts are best considered by other stakeholders.
DP7	**Do you agree that this design would improve operational resilience?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on resilience: Stansted Airport seeks to comment on other aspects of the proposals, with a particular focus on any dependencies. these impacts are best considered by other stakeholders.
DP8	**Do you agree that this design would promote optimal Network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on Network performance as a shared resource: See also comments on DP3. Specific areas for discussion with STN Airport would be: See also comments on DP3. Specific areas of concern for STN Airport would be: a) LCY departures to the NORTH EAST that may interact with proposed STN departures via to the south (via LAM) and the south East (via DET) b) The wider design envelope for LCY traffic to the NW that may interact with proposed STN departures to the SW (22 south west envelope) c) LCY arrivals from the NORTH EAST that transition from 7000ft in an area that may interact with STN arrivals routing to runway 04, and with departures to the South and South East. A later descent from 7,000ft may reduce this potential interaction.

General Q2	**Do you have comments on any aspect of the designs, or the process? Include sketches if you wish.** Areas where interaction with proposed Stansted Airport route options may occur (using LCY System 4 reference diagram) 

Thank you for taking the time to provide feedback on behalf of those you represent.

It will be considered, and one or more of these airspace designs may be amended, or new design options may be created, based on the collated and combined feedback to Stage 2.

Documentation for each Stage of this airspace change proposal (ACP) can be found via the CAA's Airspace Change portal at this link.

1 CAP1616 Stage 2 Engagement Record: LCY-NERL Bilateral 29th November 2021

1.1 Attendees:

NERL: Airspace Change Team

LCY: Airspace Change Team

Please consider this record complete if accompanied by the layered map PDF

1.2 Notes from the meeting

London City demonstrated the Layered PDF map explaining the concept of displaying concentrations and swathes via bold lines and shaded cones divided into altitude bands. Each proposed system was then presented in this manner and discussed.

09 System 1 – No primary concerns raised against presented departure flows, NERL like the use of swathes to allow scope for movement in later collaborative design stages (e.g. Stage 3) where more parties are involved.

The concept of additional arrival routes to shorten paths from the North/South was discussed, NERL appreciated the logic of formalising already frequently used shortcuts but noted that the current tramline as drawn clipped the nearby Danger Area and suggested that this be adjusted. NERL also passed on that some other Airfields concepts could impact the area of Airspace between Southend & Stansted both adding and/or removing Network obstacles. London City will consider expanding the Swathe in this area to keep options open.

09 System 2 – The question of what the perceived benefits of this system would be given its complexity and apparent penalties to N/NE departure routings.

London City stated that it was unlikely to be beneficial as a standalone system but could offer noise benefits as a respite system used on alternating days. This would require further analysis at a later stage to assess the extent of any benefit as largely the same populations impacted with only a switch between impact from Arrivals or Departures.

NERL raised safety concerns over switching between this Northerly Downwind System and a Southerly Downwind System given how radically different the operations would be.

09 System 3 – NERL enquired as to how we would look to achieve consistent spacing to realise the perceived capacity gains of this system given the late integration of arrivals from the S/E & those from the North. **SWrt** discussed the consideration of potentially utilising multiple point merge systems or implementing a tech based solution. It was also discussed that there was an option to integrate at an earlier point in the Southerly stream (more like in Sys 1/2,) however this would reduce the benefit to the Northerly arrivals and therefore the optimum was illustrated.

Feedback around the Departure concept of attempting to achieve a 45° split on all three routes was largely positive with a question over how we proposed to manage the crossover points between our Arrivals and Departures. London City stated that

the swathes were intended to give scope to 'proceduralise' a level split crossover, but consideration will be given to expanding the swathes.
27 System 4 – NERL largely supportive of the concept of increasing efficiency of current operation and programming in climbs that and routings that are currently regularly tactically utilised. NERL suggested that swathes be kept large to keep option as open as possible going into stage 3, with particular reference to the BPK 7000ft swathe potentially being extended due to the congested nature of the area potentially making our current concept of 7000ft by BPK unachievable. London City noted this but explained that we had chosen to indicate the desired outcome with the coloured swathe and the hollow outline beyond indicating scope to move if necessary.
27 System 5 – NERL largely supportive of the concept of a left hand turn out from the Westerly runway and stated that assuming we could achieve sufficient climb to cross KB traffic the swathe shown seemed logical given that we would potentially be integrating with the LL & KK dep flows towards Detling area. The suggestion was made to extend the blue and orange sections of our swathe further to the South (potentially over the Orpington area,) in order to keep options open.

SWrt enquired about work that had previously been done for Gatwick around 30° departure splits. NERL indicated that the work was overall successful and that a tool had been created to assist with departure split calculations but that there were issues around its utilisation post VR. NERL indicated that if we were interested in the tool the best contact would be Mike Hornby.

Question was asked around SIDs ending at different points. NERL stated that the Network cannot be runway-dependent however SID end points do not necessarily need to be the same. The departures off each end would have to have a common point not too far after the SID end and reasonably close to 7000ft. In order to do this there may need to be an additional safety mitigation such as providing a clearance with both the SID & first subsequent waypoint.
General NERL feedback, was to lean towards larger swathes to keep negotiating options open at Stage 3 where the process will be more collaborative.
NERL indicated that other Airfields plans vary from very similar to today to completely different. Therefore we should give consideration to fitting with the current network but also be careful not to tie ourselves to it.

Action: LCY
Consider expanding swathes and update map accordingly (**closed**, copy map available for download, link will be sent via email alongside these notes)
NB illustrative arrival route clipping Shoeburyness Danger Area complex remains, but alternative examples are now included, shown as long-dashed lines (for both arrival and departure, and potentially for respite purposes).

Post-meeting questions from LCY to NERL, and responses:

Q1. Do you expect LCY to be, essentially, glued to LHR's timeline?

A1. This will ultimately depend on the scope of change you are considering. That said we don't see how the changes you are planning are not intrinsically linked at this stage. ACOG are currently defining a deployment plan and it will be important that you understand your options and constraints feeding into this work. To be eligible for an early deployment (ie before Heathrow's deployment) you must demonstrate that your procedures are independent from other sponsors not involved in any early deployment. To demonstrate independence, the changes must not affect any other sponsors current procedures or influence future changes below 7,000ft. The 7,000ft delineation is in place as it's envisaged that the network above 7,000ft will change multiple times through the development of the FASI airspace and that stakeholders above 7,000ft will be more receptive and accommodating to the impact of change-on-change.

Q2. If so, what might be possible in advance of that – e.g. new lateral routes with 'old' altitudes, and when the 'LHR lid' is raised, LCY raises the arrs/deps?

A2. As per the above answer, if you are able to demonstrate that the changes are independent from other sponsors (be that they are phased with independent elements first) then this may be possible to accommodate dependent on the wider deployment plan. In fact some sponsors have approached NERL specifically to be consider as an early deployment option.

Q3. Do you have any sketches to share, or are you not really at that place yet?

A3. I unfortunately do not have anything to show at this stage. We plan to be able to show you some concepts at our meeting in February and will be conducting workshops somewhere between March-May with yourselves to work through the NERL long list of options

Q3 LCY response. Understood, though as previously discussed, LCY Stage 2 will be essentially complete by March.

1 CAP1616 Stage 2 Engagement Record: LCY-NERL Technical Meeting 10th Dec 2021

1.1 Attendees:

NERL: Airspace Implementation Manager
Manager, Airport Concepts
ATC Technical Expert

ACOG: ATC Technical Consultant

LCY: Technical Operations Development
Airspace Change Expert

1.2 Agenda:

Explore LCY's Stage 2 airspace design concepts, modified following previous feedback with NERL.

1.3 Summary of Notes

Welcome and introductions.
This being the second meeting and all parties being familiar with the process, the original presentation was not required to be repeated, and the LCY Airspace Change Expert presented the airspace design concept maps that had changed since the 29 November meeting (i.e. wider design envelope swathes as requested by NERL).

The primary feedback from NERL was that the design envelope swathes should be wider still, to enable maximum flexibility.

ACOG's feedback was similar; the recommendation was that there should be few hard-limiting boundaries to either the lateral design envelopes or the vertical statements as per the shading colours. This would be in order to avoid excluding potentially viable routes later in the process where greater structural clarity may be revealed as adjacent airports and NERL progress through the process and develop their own design concepts.

LCY Airspace Change Expert understood and appreciated the reasons for this feedback. LCYACE subsequently explained the difficulty this approach could have, from an engagement point of view, specifically when attempting to explain to non-aviation stakeholders where and how high aircraft might fly in different concepts – the wider the design envelope, the greater the design flexibility, the less certainty of overflight (or non-overflight) of any given location, the harder it may be to get relevant feedback from stakeholders in that location.

AOB: LCYACE asked ACOG to help set a meeting with ACOG's CAP1616 and engagement experts (Action 1)

DONM:
From a design engagement point of view, a third meeting is already set for Wed 16 Feb 2022 where NERL will be able to share their design concepts with LCY.

Thanks and close.

Actions:

1. ACOG ATC Technical Consultant to help arrange a meeting with other ACOG specialists (Meeting set for Wed 15 Dec 2021, action closed)

End of notes

CAP1616 Stage 2 Engagement Feedback Form

Organisation Name ORGANISATION

Contact name and details **KENT DOWNS AONB UNIT**
Planning Manager
@kentdowns.org.uk

Date **13/01/22**

Engagement material supplied: Slide pack including map AND/OR links to videos.

Return this Word document to ourfutureskies@londoncityairport.com

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This feedback form is part of the initial stakeholder engagement for London City Airport's Airspace Change Programme (Stage 2 – Develop and Assess). Additional engagement material supplied includes a slide pack, video commentary and supporting maps.

This is initial engagement only (not full consultation which will follow later in the process); the proposed design options are draft and will be subject to changes and/or amendments as we move on through the process.

Please provide your comments and feedback by Mon 17th Jan 2022 on each of the proposed airspace designs presented in the supplied material by using the Design Principles (DPs) as a framework to evaluate the extent you think it complies with them. DPs are provided for your reference below.

We ask you to consider each Airspace Concept System, its pros and cons, and the extent you think it complies with the DPs. There is a final question for free text comments and sketches, if you prefer to add feedback not covered by the DP questions.

Ref Num	Tier 1 Design Principles	Priority
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

Ref Num		Tier 2 Design Principles	Priority
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

	Runway 09 System 1: Similar to today, with efficiencies	
DP0	**Do you agree that this design would enhance safety?**	
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on safety	
DP1	**Do you agree that this design would comply with laws and regulations?**	
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on regulatory compliance	
DP2	**Do you agree that this design would enhance navigation standards?**	
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on navigation standards	
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**	
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on AMS and capacity	
DP4	**Do you agree that this design would limit aircraft noise?**	**No**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) 1 **1** **See comments provided to Q2**	
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**	
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on fuel and CO_2:	
DP6	**Do you agree that this design would minimise local air pollution?**	
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on aircraft local air pollution:	
DP7	**Do you agree that this design would improve operational resilience?**	
Tier 2 Priority B	To what extent? (1-least, 5-greatest)	

	Runway 09 System 1: Similar to today, with efficiencies
	Comments on resilience:
DP8	**Do you agree that this design would promote optimal network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on network performance as a shared resource:

	Runway 09 System 2: Mirror, Northern arrivals, Southern departures
DP0	**Do you agree that this design would enhance safety?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on safety
DP1	**Do you agree that this design would comply with laws and regulations?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on regulatory compliance
DP2	**Do you agree that this design would enhance navigation standards?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on navigation standards
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on AMS and capacity
DP4	**Do you agree that this design would limit aircraft noise?**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) Comments on noise *Consider referring to:* *Maximise altitude, respite routes, avoid multiple routes, minimise newly overflown, managed dispersal, minimise total population, avoid noise sensitive areas*
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on fuel and CO_2:
DP6	**Do you agree that this design would minimise local air pollution?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on aircraft local air pollution:

	Runway 09 System 2: Mirror, Northern arrivals, Southern departures
DP7	**Do you agree that this design would improve operational resilience?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on resilience:
DP8	**Do you agree that this design would promote optimal network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on network performance as a shared resource:

	Runway 09 System 3: Maximise departure efficiencies	
DP0	**Do you agree that this design would enhance safety?**	
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on safety	
DP1	**Do you agree that this design would comply with laws and regulations?**	
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on regulatory compliance	
DP2	**Do you agree that this design would enhance navigation standards?**	
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on navigation standards	
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**	
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on AMS and capacity	
DP4	**Do you agree that this design would limit aircraft noise?**	**No**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) **1** **See comments provided to Q2**	
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**	
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on fuel and CO_2:	
DP6	**Do you agree that this design would minimise local air pollution?**	
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on aircraft local air pollution:	
DP7	**Do you agree that this design would improve operational resilience?**	
Tier 2 Priority B	To what extent? (1-least, 5-greatest)	

	Runway 09 System 3: Maximise departure efficiencies
	Comments on resilience:
DP8	**Do you agree that this design would promote optimal network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on network performance as a shared resource:

	Runway 27 System 4: Similar to today, with efficiencies	
DP0	**Do you agree that this design would enhance safety?**	
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on safety	
DP1	**Do you agree that this design would comply with laws and regulations?**	
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on regulatory compliance	
DP2	**Do you agree that this design would enhance navigation standards?**	
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on navigation standards	
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**	
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on AMS and capacity	
DP4	**Do you agree that this design would limit aircraft noise?**	**No**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) **1** **See comments provided to Q2**	
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**	
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on fuel and CO_2:	
DP6	**Do you agree that this design would minimise local air pollution?**	
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on aircraft local air pollution:	
DP7	**Do you agree that this design would improve operational resilience?**	
Tier 2	To what extent? (1-least, 5-greatest)	

	Runway 27 System 4: Similar to today, with efficiencies
Priority B	Comments on resilience:
DP8	**Do you agree that this design would promote optimal network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on network performance as a shared resource:

	Runway 27 System 5: Left and Right departure turns	
DP0	**Do you agree that this design would enhance safety?**	
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on safety	
DP1	**Do you agree that this design would comply with laws and regulations?**	
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on regulatory compliance	
DP2	**Do you agree that this design would enhance navigation standards?**	
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on navigation standards	
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**	
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on AMS and capacity	
DP4	**Do you agree that this design would limit aircraft noise?**	**No**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) **1** **See comments provided to Q2**	
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**	
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on fuel and CO_2:	
DP6	**Do you agree that this design would minimise local air pollution?**	
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on aircraft local air pollution:	
DP7	**Do you agree that this design would improve operational resilience?**	
Tier 2	To what extent? (1-least, 5-greatest)	

	Runway 27 System 5: Left and Right departure turns
Priority B	Comments on resilience:
DP8	**Do you agree that this design would promote optimal network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on network performance as a shared resource:

General Q2	**Do you have comments on any aspect of the designs, or the process? Include sketches if you wish.**

National planning policies are very clear that highest priority should be given to the conservation and enhancement of Areas of Outstanding Natural Beauty and the National Planning Policy Framework confirms that AONBs are equivalent to National Parks in terms of their landscape quality, scenic beauty and their planning status. (Paragraph 11 footnote 7, and paragraphs 176 and 177).

The status of AONBs has been enhanced through measures introduced in the Countryside and Rights of Way (CROW) Act 2000, (the Act) which gave greater support to their planning and management. Section 85 of the Act places a duty on all public bodies and statutory undertakers to 'have regard' to the 'purpose of conserving and enhancing the natural beauty of the area of outstanding natural beauty.'

The Act also requires local authorities within an AONB to jointly prepare and publish an AONB Management Plan which must "formulate the policies for the management of the AONB and for carrying out their functions in relation to it". Accordingly, the first Kent Downs AONB Management Plan was published in April 2004. The Kent Downs AONB Management Plan, Third Revision 2021 to 2026 has subsequently been adopted.

The Management Plan sets out the policy for the conservation and enhancement of the AONB's natural beauty, landscape and scenic quality and tranquillity in a series of Principles. It also sets out the identified Special Characteristics and Qualities of the Kent Downs AONB which includes Tranquillity. Tranquillity covers noise, visual intrusion and inappropriate activity, and the loss of dark night skies. Aircraft activity impacts on all these elements but most particularly it is the noise impact that has potential to impact on tranquillity.

Central Government policy looks to 'limit and where possible reduce the number of people in the UK significantly affected by aircraft noise'. This has resulted in the routing of air traffic away from over-flying conurbations where they may have historically flown and over onto less populated areas, which in many cases are over protected landscapes of our National Parks and Areas of Outstanding Natural Beauty, designated, visited and
appreciated for their special qualities including tranquillity.

These areas are typically subject to much quieter background noise than existing urban areas, where the presence of overflying aircraft will therefore be more apparent than in areas where the existing ambient noise levels are higher. Increased concentration of flight paths, if overflying the AONB could negatively impact on tranquillity of the AONB as well as being disruptive for sleep and health and well-being of residents. The importance of tranquillity to the local economy – in particular on tourism, an important element of the Kent Downs rural economy - should also not be under estimated. Access and enjoyment and support for the rural economy is part of the sustainable management of the AONB, and is also addressed in the Management Plan.

At its closest point, the Kent Downs AONB lies approximately 12 km south of London City Airport and is currently not impacted by overflying on the dedicated approach and departure lines to/from the airport. Changes to the airspace design as proposed in the consultation could change this however and impact on the relative tranquillity of the AONB.

The current arrival and departure flight line routes avoid overflying the Kent Downs AONB. The following proposed routes would however introduce flight plans overflying the Kent Downs AONB:

	Easterly Runway **09 System 1** suggests an alternative or respite Arrival route to the south of the existing and proposed primary route which would involve overflying of the Kent Downs AONB at 3,000 to 3,999ft. **09 System 3** proposes a fundamental shift southwards of the arrival flightpath with both the primary route and respite route overflying a significant section of the Kent Downs AONB and heights of between 3,000 to 7,000 feet and the southerly departure line also proposing to introduce overflying of the Kent Downs AONB. **Westerly Runway** **27 System 4** introduces a primary arrival route into the Kent Downs AONB at 4,000 to 7000ft. **27 System 5** introduces both a primary and secondary/respite arrival routes into the Kent Downs AONB at 4,000 to 7000ft, as well as potentially dispersed and a respite departure routes into the AONB. In addition, it appears likely that these changes could also result in more LCY air traffic across the Kent Downs AONB, and at lower heights than at the present time and that changes to existing routes will be taking flight paths into currently relative tranquil areas. While we welcome the inclusion of Design principle 4 (to limit and where possible reduce aircraft noise, and in particular Group ii 'Avoiding overflying noise sensitive areas) within Priority Rating A, however we are concerned that the proposed changes detailed above fail to reflect this and that the proposed airspace change fails to adequately take into account impacts on the nationally protected Kent Downs AONB landscape.

Thank you for taking the time to provide feedback on behalf of those you represent.

It will be considered, and one or more of these airspace designs may be amended, or new design options may be created, based on the collated and combined feedback to Stage 2.

Documentation for each Stage of this airspace change proposal (ACP) can be found via the CAA's Airspace Change portal at this link.

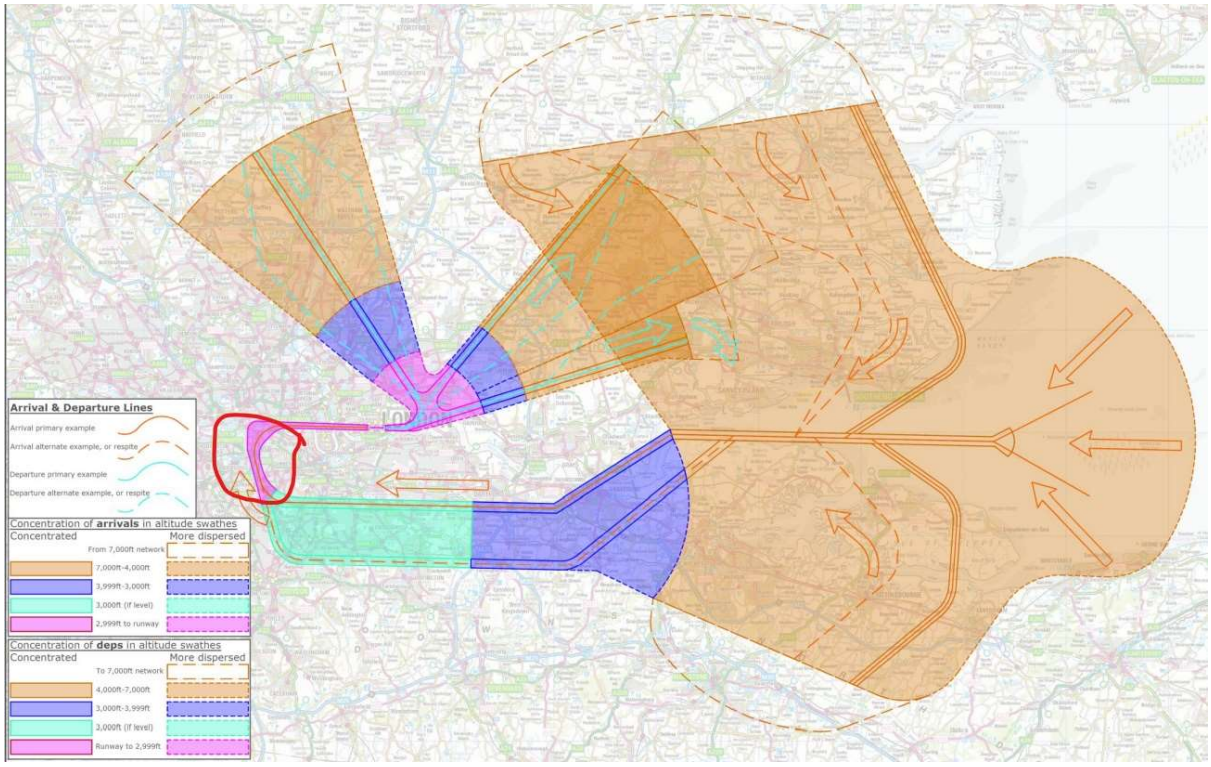
Comment on System 1 With relevance to S and SE London where the majority of PHASE supporters are based.

Despite the design principle of no double overflights the 5 systems appear to create double overflight routes (arrivals plus departures) by London City in several areas, and then you can add Heathrow as well, creating some communities with possibly three planes overhead at the same time. .

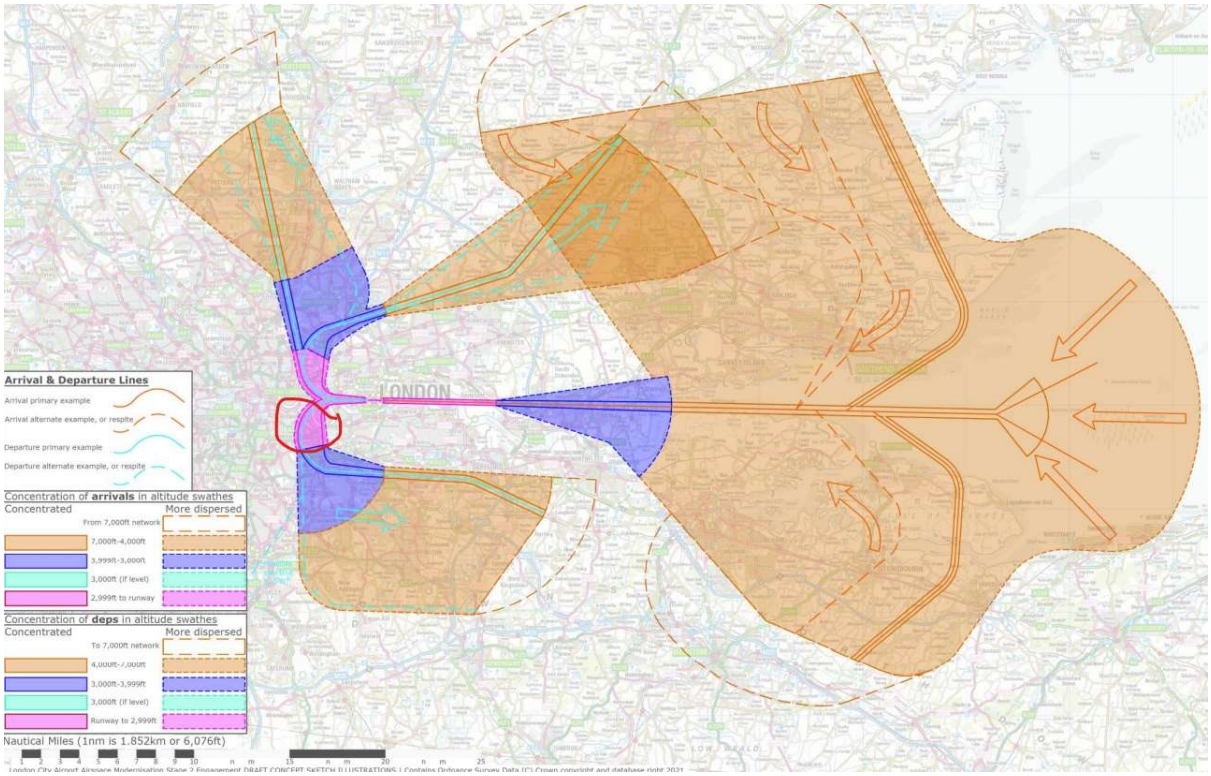
The slides provided in LCY's consultation documentation use a map that totally obscures the street view, therefore making it impossible to know where LCY have placed their design envelopes. No realistic comments can therefore be made.

We show 2 of the LCY consultation pack slides, edited with red rings, with reference to System 1. This System 1 still eventually channels all easterly arrivals into a single line even if a second path is offered further south.

1 The **easterly proposal 1 for arrivals** shows absolutely no assistance to the red-ringed area. Concentration is still inflicted in the pink approach and noise is made multi-fold by the fact that planes are banking to turn onto the final approach. All proposals have the same problem for the area in pink. Supporter comment 'My life was a misery under this'. It was introduced in 2016.



2 The **westerly proposal 1 for departures terrifyingly** shows a new departures option that could well start to bring planes over the same area inflicted in the easterly posposal: The pink area departing to the south. This would be a new horror for people already inflicted by easterly arrivals to LCY simultaneously with westerly arrivals to LHR. Culminating in absolutely no rest from planes overhead at 2000-3000 feet.



Whatever height increase is proposed or occurs looks unlikely to be present at the red-ringed pink routes. Dependent on LHR routes being high enough, which also seems unlikely to be enough of a change to make a difference for population in the red-ringed areas. These people are 'just to suffer' starting from 2016 without any respite.

As well as the pink routes being 'single-tracked', low and banking/turning, they additionally fall directly below Heathrow approach routes. This causes 2 enormous noise issues for the people living under and around the pink route(s):

- there is a huge noise infliction when Heathrow is operating on westerly preference and LCY is operating on easterly - "simultaneous overflight".
- there is the problem of 'airspace usage switching' as LHR moves to easterly and LCY starts its easterly: noise inflicted by LHR is replaced by noise inflicted by LCY - "switching overflight"

Therefore if LCY does not revert to a pre-2016, wider swathe for easterly arrivals where pink routes are marked, then it continues to inflict the same unbearable noise on residents around the pink route.

To:

From:

Feedback to UK Airspace Modernisation, London City Airport – deadline 17.1.22

Plane Hell Action SE (PHASE), represents those predominantly under Heathrow Airport **arrivals** paths in S and SE London. Many of our supporters are additionally negatively impacted by low-level arrivals to London City. PHASE supports a strategy for arrivals and departures operations that fairly considers those under flight paths. With relation to CAP1616 we highlight **Government's flawed policy to 'minimise impact'.** This 'minimise impact' policy needs to be translated to mean 'share the impact by reducing concentration, giving everyone a complete break from aviation noise, and at least 8 hours' sleep at night'. Minimising the impact does not equate to minimising the numbers impacted. This flawed approach by Government singles out communities who have no choice or say in the matter yet 'contribute to UKplc' (an expression much favoured by the CAA to excuse all its operations which cause communities to complain), as much as those who are not negatively impacted by these 'motorways in the sky'.

Noise

1. **No communities currently adversely impacted by aircraft noise should experience an increase in that noise as a result of the Airspace Change Process (ACP). ACP should lead to a decrease for those communities.**

2. **no community** should be affected by **overflight to more than one airport** below 10,000ft cf SE London is overflown by concentrated arrivals to both LHR (under 4,000ft) and LCY (under 2,000ft).

   We share with other communities giving feedback **the following concern**: London City **Systems 1-5** seem to be being **drafted independently of Heathrow**, in the process compressing London City paths into a vertical and geographical space that reduces options for London City, departure and arrivals routes and climbing and descent altitudes. We believe that a publicly transparent dialogue at an early stage with Heathrow on the joint problems to be solved will enhance public confidence in the processes, and enable fairer and smarter solutions to address the problems caused by past airspace design.

3. **Air Navigation Guidance 2017** (ANG17) requires that, after Safety, **Noise** and **Environment considerations** should take priority over all other considerations

4. The **adverse effects of aviation noise must be shared** - not concentrated on individuals or particular communities, as this will lead to significant blight and inequality issues. There is a legal requirement set out in the Air Navigation Guidance 2017 (ANG 17) (para 3.5) "that the total adverse effects on people as a result of aviation noise should be limited and, where possible, reduced, rather than the absolute number of people in any particular noise contour. Adverse effects are considered to be those related to health and quality of life." This has statutory force as a direction under section 70 Transport Act 2000.

5. Whilst the Principle concerning **'predictable respite'** is accepted London City has not established what this means nor how in practice it is to be achieved for all communities around the airport. This is an essential component of flight path design strategy, and it needs to be clarified how this will be achieved. Respite needs to be **effective** (with sufficient acoustic separation at ground level) and **not theoretical**.

6. A commitment should also be included in the Design Principles to the utilisation of a **range of noise metrics** (including numbers of noise events and total noise energy) in the development of an ACP. The metrics and thresholds should reflect the latest WHO (2018) and ICAO noise guidance (particularly in relation to non-acoustic factors).

7. It is important to **avoid the creation of highly concentrated flight paths** (referred by a former CEO of the CAA as 'noise sewers'- which based on US Next Gen are known to be highly injurious to health, well-being and quality of life). Can London City confirm that it is investigating relevant international examples? London City should commit to reporting in an open and transparent way how detrimental impacts caused by highly concentrated zones will be avoided around London City.

8. Generally it is unclear **what level of proposed benefits** might be delivered by the ACP and how these benefits would actually be delivered. Given that the Design Principles inform the CAA in their decision making on whether an ACP should be accepted, it seems crucial that key elements of how anticipated benefits are to be justified at this stage.

   For example:

   • What are the range of anticipated reductions in carbon emissions under consideration for the ACP?

   • What are the expected carbon emission savings from the introduction of PBN in each year of operation up to 2050?

   • What are the range of anticipated noise reductions achievable under the ACP?

   • What is the expected additional impact on a) fuel burn and b) carbon emissions if compliance to ANG17 is adhered to in terms of the prioritisation of noise below 7,000ft?

9. We understand the commercial and economic benefits that can arise from demand growth and improved airspace efficiency resulting in better resilience and punctuality, but it is essential given London City's location in the middle of a highly populated area that this is accompanied by a meaningful and continuous reduction in noise impact on its communities. A **reduction in noise needs to be explicitly recognised and accepted by all stakeholders at the outset of the design process**.

10. Avoiding uncertainty and long-term blight:

- Communities will be at substantial and ongoing risk that the **allocation of flight frequency** down each flight path can be changed significantly by the airlines as they wish. This would invalidate any final airspace design and noise environmental impact assessment because noise impact is so sensitive to flight frequency. **This risk and uncertainty must be avoided at the start of the airspace modernisation process**.
- We wish to see added for the avoidance of doubt that for ACP purposes this London City is designing for runway planning **capacity limited to 111,000 ATM** a year.

11. Solve noise problems at source:

- **fly less noisy aircraft**: the Embraer jet is known to be noisier for its size than other models of similar size
- ensure pilots **fly** their aircraft **to reduce noise** rather than to reduce engine wear and tear or emissions for all arrivals/departures under 10,000ft
- ensure aircraft **remain higher for longer** on arrivals, with a short time of discomfort for tens/a few hundred passengers (who occasionally fly) per plane as they land more steeply to the benefit of the hundreds of thousands overflown by an arriving plane on an hourly basis if not every 5 minutes for some.

We are in support of Forest Hill Society's feedback with a caveat on the Easterly (09) arrival routes – alternate/respite routes over SE London, System 1, which would compound the adverse impacts on Vauxhall communities, already affected by the 2016 concentration of arrivals flight paths to London City. Unless arrivals are widely dispersed within the illustrated swathe.

Our comments on System 1 are attached – see 'System 1 feedback from PHASE'

PHASE (Plane Hell Action SE)

14.1.22

Minutes of the meeting of the London City Airport Consultative Committee

held on 2 December 2021, at the Sunborn Yacht Hotel, London

Present: XXXX (Chair), XXXX (LB Newham), XXXX (Royal Docks Learning Activity Centre), XXXX (local resident), XXXX (LB Newham), XXXX (Kingsford School), XXXX (Passenger Rep), XXXX (British Airways), XXXX and XXXX (Forest Hill Society)

In attendance from LCY: XXXX, XXXX, XXXX, XXXX.

Also in attendance: XXXX (local resident), XXXX (LB Lewisham), XXXX (NATS LCY Air Traffic), XXXX (ACOG), XXXX (LB Lewisham), XXXX (NATS LCY Airspace Change Expert).

Apologies: XXXX (LB Newham), XXXX (LB Lewisham), XXXX (LB Newham), XXXX (Vice-Chair)

1. **Minutes of the meeting on 16 September 2021**

The minutes were agreed as an accurate record of the meeting.

Members asked for a review to ensure that all local stakeholders are represented in the Committee.

2. **CEO Update**

Link to the report can be found here.

The Chair invited [LCY] to update the Committee.

[LCY] advised that it had been a challenging year for the airport but that confidence in the aviation sector had built during the summer and into the autumn. The airport's best month was October, with 148,000 passengers using the airport. [LCY] advised that the airport had seen a surprising demand for business travel, with 50% of travel through the airport in October being for business purposes. Nevertheless, challenges continue with the new OMICRON variant causing the introduction of a cautionary approach to travel by the government – including through the re-introduction of measures such as the addition of various countries on the red list and the requirements for pre-travel testing and self-isolation.

[LCY] advised that the airport still had strong bookings over the festive period, with the 17th December being a particularly busy day. [LCY] advised that the airport was continuing to keep COVID safeguards in place for staff and passengers, while the 12 days of volunteering activity was due to begin next week.

[LCY] introduced both ACOG and NATS, stating that a new approach to airspace modernisation was crucial and would offer opportunities to make enhancements to flight paths which could see efficiencies which would impact the environment, noise and respite. [LCY] stated that this was an early stage in the airspace modernisation process, and was the first time that draft design concepts would be shown to the Committee. [LCY] stated that the concepts were not definitive and that the meeting would not be the sole opportunity to view and comment on them.

Members stated that the level of business travel was interesting and asked whether this was consistent with other airports. [LCY] advised that LCY was the bell weather for business travel in London, however, the airport would usually expect October to be more business

than leisure. Furthermore, given business travel at Heathrow was usually to the US, it had seen slower growth given travel to the US had been greatly impacted by COVID restrictions.

3. ACOG presentation

The Chair invited [ACOG] from the Airspace Change Organising Group (ACOG) to present to the Committee.

Presentation can be found here [link redacted].

[ACOG] advised that ACOG was established in 2019 to coordinate the delivery of elements of the UK's Airspace Modernisation Strategy. As a coordination body [ACOG] advised that ACOG was independent from NATS and from airports.

[ACOG] advised that airspace change was an important infrastructure project for the UK given no significant changes had been implemented since 1950. [ACOG] advised that there were lots of good reasons to modernise airspace, including but not limited to: capacity, the environment, reduce staking, and making efficient flight paths. [ACOG] stated that airports were responsible for flight paths up to 7,000ft.

[ACOG] advised that the Group had received government funding to keep the project going through the pandemic. This has led to work on the airspace masterplan with the first iteration approved by the CAA in July 2019 (the first iteration can be found here). The second iteration is expected to be submitted to the CAA in the following weeks, with the third iteration being produced in 2022. [ACOG] advised that there would be more consultation on the third iteration.

Members asked about the level of engagement thus far with local communities, and whether engagement on the first and second iterations of the strategy was exclusively with industry and airlines. [ACOG] advised that ACOG had followed the CAA approved process for engagement. The Chair stated that we are in the early stages of the process with community engagement now beginning.

4. NATS presentation

The Chair invited [NATS Airspace Change] and [NATS ATC] to brief members on LCY's Airspace Change Programme (Stage 2 – Develop and Assess).

Presentation can be found here [link redacted].

[NATS Airspace Change] advised that LCY are at stage 2 of the CAP1616 process (the seven stage process to implement airspace change), during each stage documentation is required for submission to the CAA for their review. During this stage, members were being asked for their feedback on concept designs which were to be presented during the meeting. [NATS Airspace Change] advised that this was initial engagement, with the proposed design options being draft and subject to change.

[NATS Airspace Change] invited [NATS ATC] to run through each of the airspace designs, with three potential systems for Runway 09 Easterly, and two systems for Runway 27 Westerly. [NATS ATC] ran through each of the options and stated that a video commentary and supporting maps would be distributed before Christmas. [NATS Airspace Change] stated that the design envelopes may change, become wider, or two envelopes with an intervening 'gap' may end up overlapping, or the indicated altitudes may become lower or

higher or further or nearer, as development continues. These maps remain the airport's best estimate at this early point in the airspace change process.

The video commentary alongside the feedback form will be distributed via email to Committee members.

[NATS Airspace Change] advised that feedback would need to be received by Monday 17th January, with the results presented to the Committee at the March 2022 meeting. [NATS Airspace Change] stated that updates on progress with airspace change would be shared with the Committee in due course, and encouraged the members to provide feedback on behalf of their organisations.

The Chair thanked both [NATS Airspace Change] and [NATS ATC] for their work on the presentation and the designs which were excellent, the only frustration being why small changes could not be made for reasons of efficiency now. Members stated that they were impressed with the creativity of the designs, with a key focus on respite being a welcome consideration.

Members noticed that a key stakeholder in the designs was Heathrow given the requirement to increase the height of aircraft arriving and leaving the airport.

[LCY] thanked members for their initial feedback, asked them to provide additional feedback using the form which would be distributed by the Secretary by mid-January, and reiterated that the designs were still very much in draft.

5. **Airport Reports**

The Chair advised that the Airport reports would not be read out in full during the meeting, rather they will be taken as read. The Chair would simply open the floor to questions.

Please see link to reports [link redacted].

- **Community**

[LCY] advised that the airport was continuing its 12 days of giving which would see airport staff volunteering in 13 different boroughs across London from next week. [LCY] advised that the community fund was open for applications with the deadline for applications being 31st December. [LCY] advised that the E16 magazine was being produced and would be sent out at the end of the month.

The Chair introduced [Kingsford School], who informed members of the RAF Cadet programme in Kingsford School, which was started 4 years ago, [Kingsford School] stated that there were 110 cadets in his programme who would benefit greatly from support from the airport.

- **Planning**

[LCY] advised that London Borough of Newham had reviewed the LCY 2020 Annual Report which was in full compliance with requirements. [LCY] advised that the airport had needed to defer some S106 payments due to COVID, which would be deferred by 12 months.

- **Airport Transport Forum**

[LCY] advised that 7 charging points had been placed in the airport carpark this month for use by visitors and staff.

6. UKACC AGM

The Chair advised that through the interactions of the UKACC Chair and Secretariat, the Department for Transport now better understand the importance of airport consultative committees. Through this they recognise that with the retirement of ICAAN and with significant issues such as airspace modernisation and the drive to net zero that it was the right time to review the guidelines for airport consultative committees that were originally drafted in 1982. Due to this, DfT will be conducting a survey of airport consultative committees in the first two months of 2022. The Chair stated that he would provide further details when he receives them.

7. AOB

Members advised that XXXX had written in to thank the airport for its support during the poppy appeal. Members also raised that XXXX, a long-time member of the committee was moving away from the area and had written to the committee, his letter was read out to the Committee.

8. Next meetings

The Committee will next meet on Thursday 10 March 2022 at 4pm, at a location to be confirmed.

The current scheduled meetings for 2022 will be:

- Thursday 10 March
- Thursday 9 June
- Thursday 8 September
- Thursday 8 December

The Secretary will send out placeholders for the meetings in the coming weeks. Reminders will be sent closer to the meetings.

Please note all papers can be found electronically on the LCACC website which can be found at www.lcacc.org.

CAP1616 Stage 2 Engagement Record:

LCY-LCA Consultative Committee - LCACC Non-technical Meeting (supplement to main December meeting) 12th Jan 2022

1.1 Attendees:

LCACC:	LB Newham
	LCACC Chairman
	London Chamber of Commerce
	Passenger representative
	Passenger representative
	Transport for London TfL
LCY:	Head of Sustainability
	Community Relations Manager
	Head of Corporate Affairs
	Director of Infrastructure and Planning
	Air Traffic Control Watch Manager and Airspace Design Lead

Please consider this record complete if accompanied by the slide pack PDF.

1.2 Agenda (extract from presentation):

Agenda

- Welcome and introductions
- UK Airspace Modernisation Programme
- LCY Airspace Change Process progress so far
- Recap on Stage 1
- Stage 2 overview, deliverables and timescales
- Items to be presented to support proposed design concepts:
  - Interactions with other airports
  - Most frequent destinations and directions
  - Tips on how to read and provide comments on proposed design concepts
  - Reference tables – aircraft types, numbers, noise information
- **Airspace design concepts: description of the proposed systems**
- Recap and input required from stakeholders
- Next steps

1.3 Summary of Notes

Welcome and introductions.
The presentation was given, as per the agenda, by the ATC Design Lead.

The airspace design concept maps were of primary interest; these were explained in detail by the LCY ATC Design Lead.

Q1- LCACC Chair asked clarification on how to provide feedback.
A1- ATC explained how to use the design principles as a framework and the opportunity to also provide sketches and more general feedback (not linked to design principles).

Q2- LB Newham asked which year was used as a baseline and reported for the existing routes in the slides?
A1 – It was confirmed that 2019 is used as a baseline and to produce the list of destinations directions used in the slides pack as a reference for comparing options.

Thanks, and close

Actions:

1. LCACC to use the slide pack and feedback form to provide formal Stage 2 feedback to LCY **by Mon 17 Jan 2022,** with sketches and technical detail if necessary (Closed, Response Received)

End of notes

London City Airport Consultative Committee
CAP1616 Stage 2. Response from the Forest Hill Society, January 2022.

1. Introduction

We write on behalf of the Forest Hill Society, representing an area in Lewisham, SE London, under the current arrivals flight paths of both London City and Heathrow aircraft. We appreciate being given sight of these early stage proposals.

We have separately filled in the response form, and would like to add the following comments to give context and information that we hope you will be able to take into account as the work continues.

We wrote to the LCACC in 2019 making several observations about the Design Principles the airport was then working through with the CAA. We said:-

'The Airport sets no objective that specifically says it has ambitions to, for example:-

Fly higher over urban populations
Give respite or relief from noise to the overflown by alternating flight paths
Fly a new, higher continuous descent approach over SE London
Reduce or eliminate crossing of flight paths with Heathrow'

These remain key issues for us and in the final approved Design Principles (Fig 9) there were signs that some, but not all, of the above may be addressed, with the most obvious omission being a clear commitment to CDA, continuous descent approaches, for easterly as well as westerly arrivals. Instead the airport adopted a vague term, to '*where possible*' use undefined '*noise effective operational practices*', which we believe enables too broad an interpretation to the advantage of the industry and disadvantage of the overflown while avoiding making and being held to specific commitments. By comparison Heathrow's proposed Design Principles (Fig 8) seem more specific.

When the airport devises its next phase of flight path proposals for comment we ask that they explain and clearly reference how each option/proposal complies with the DfT Air Navigation Guidance ANG17, which gives detailed requirements about considerations when overflying communities under 7000 feet, and in particular noise and environmental priorities under 4000 feet.

In these new early stage flight System proposals there are signs that the Airport is beginning to address these issues and we offer the following general observations to the detailed presentations on 2 December 2021 to the LCACC by NATS.

But our main concern is that the London City proposed Systems 1-5 seem to be being drafted independently of Heathrow, in the process compressing London City paths into a vertical and geographical space that reduces options for London City departure and arrivals routes and also climbing and descent angles. We believe that a publicly transparent dialogue at an early stage with Heathrow on the joint problems to be solved will enhance public confidence in the processes. It will enable fairer and smarter solutions to address the problems caused by the close proximity of two airports with runways facing each other and poor air space design over many years.

2. Dispersal of arrivals routes as well as departure routes.

The reshaping of flight paths in 2014 was styled by London City with the CAA, as a 'replication' of the previous system. According to the Airport's consultation documents held at the CAA there were six SIDs (Standard Instrument Departure), clearly defined RNAV

Departure routes. Allowing for an even distribution these departure routes each took around 17% of Departure aircraft.

But only two concentrated RNAV arrivals routes were designed at that time, causing a steep rise in complaints from the overflown under arrivals routes. The easterlies (09) route was concentrated at near-level low altitude over densely populated areas of SE London, and just two arrivals routes (09 and 27) took 100% of arrivals between them.

So six different routes for departures and only two concentrated paths for arrivals. This is a key problem that we need London City to resolve in this Airspace Design. The 5 new Systems all propose some changes to allow some respite in some areas, and we welcome this.

However we remain concerned about crossing of new PBN flight paths:

- some communities being under both a London City takeoff and arrivals flightpath
- some communities being under two different London City flight paths in different wind conditions,
- the same communities being under one or more London City and Heathrow arrivals paths.

3. Easterly (09) arrival routes – alternate/respite routes over SE London, System 1

Over Lewisham this two route suggestion (Fig 1) would be an improvement, and is probably something that should have been designed in 2016 in response to public and Local Authority representations.

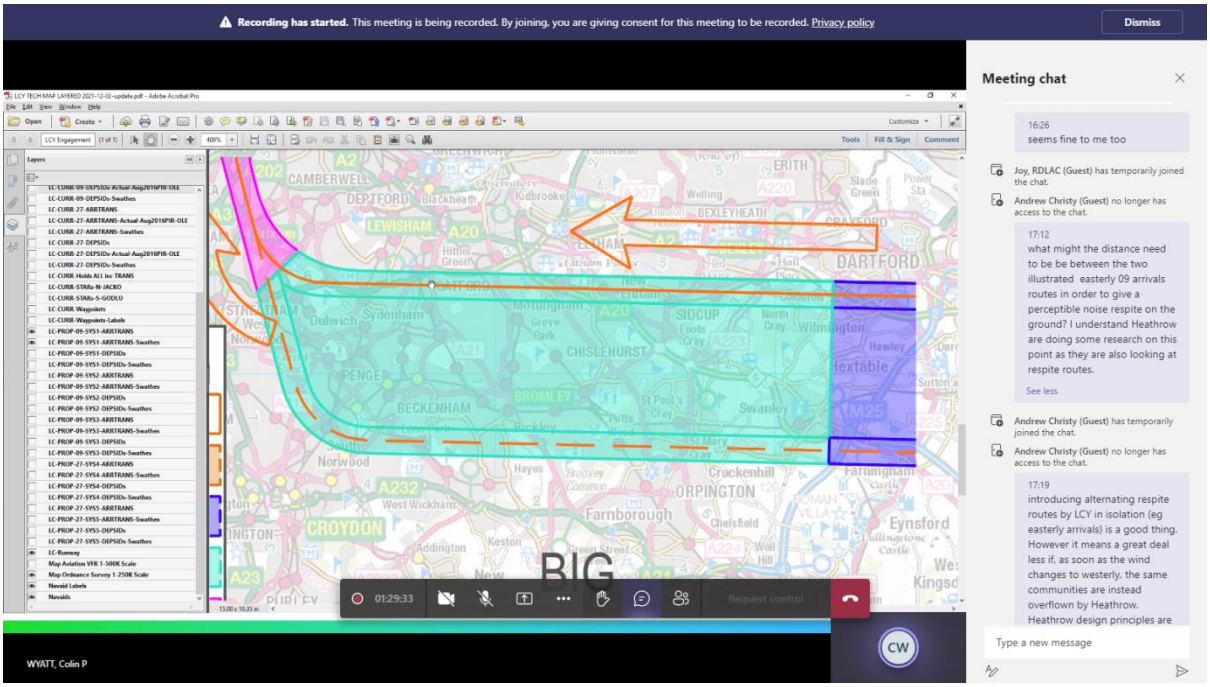


Fig 1. Possible easterly arrivals routes over SE London. Source LCACC meeting Dec 2021.

While we understand that this is indicative only, the distance between the two respite routes could be wider than shown. The airport decided in 2015 to take a central concentrated route down a previous widely dispersed route. It would appear that aircraft can be flown both further north and further south of the current route shown in solid line. The northerly route shown flies directly over Catford, while planes prior to 2016 (see below) are shown some 2 km further north as well as quite further south.

It would also appear from pre 2016 flight path data (Figs 2 and 3) that London City aircraft can be flown in both a tighter curve, keeping further east or west in a wider curve. This might give options for respite routes to continue wider further north than shown in pink in System 1 (Fig1) over, say, Dulwich to Vauxhall.

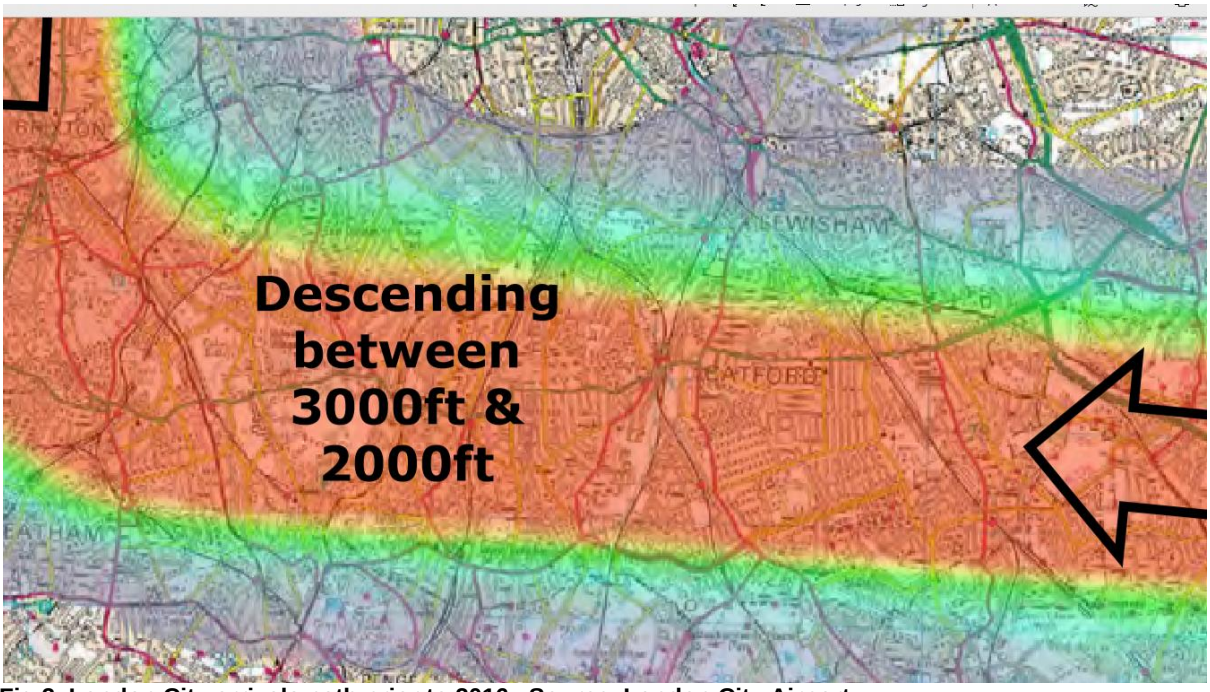


Fig 2. London City arrivals path prior to 2016. Source. London City Airport

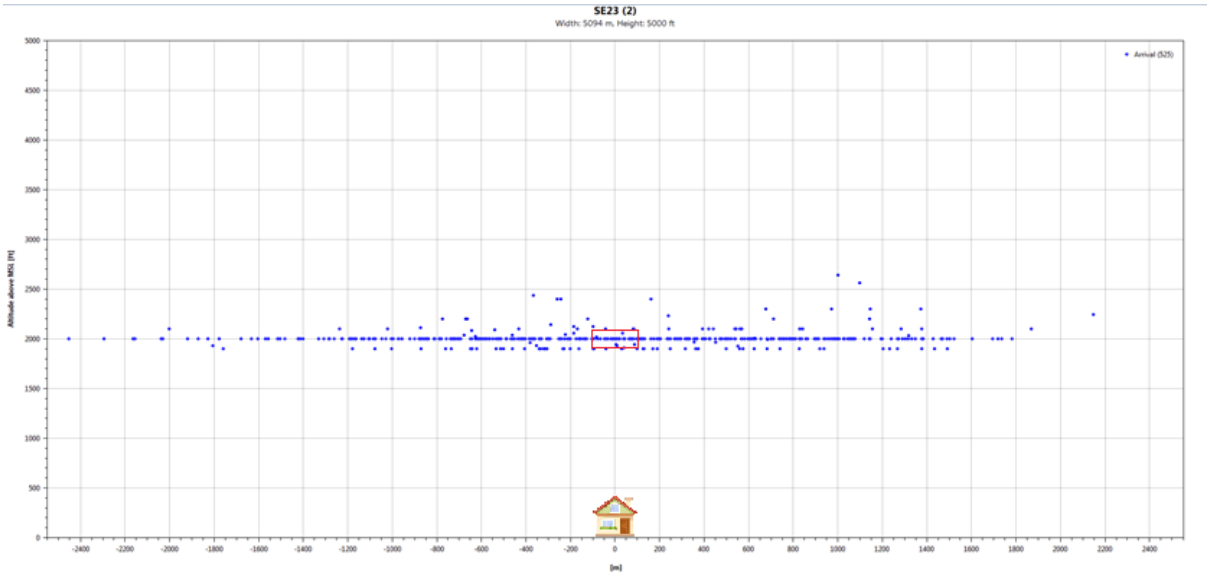


Fig 3. Dispersal of easterly arrivals over Forest Hill, London SE23 prior to 2016 and subsequent concentration (red box). Source London City airport.

4. Easterly (09) arrivals altitudes - Continuous Descent Approaches

As mentioned above, the airport has made no commitment in its Design Principles to adopt Continuous Descent Approaches (aka Continuous Descent Operations), and this is a core

problem for SE London communities. It is also a surprising omission in the light of the Air Navigation Guidance ANG17 requirement which says:-
'Consideration should therefore be given to how the use of CDO ... procedures can be promoted in the course of developing new procedures and when considering proposals for changes to existing airspace arrangements. Both procedures should be regarded as "best practice" for use at all airports'....

There are two main ways the airport can address the concentrated disturbance problems it has created in SE London; one is providing respite routes and the other is to fly higher for longer on approaches using CDA.

Below (Fig4) we show that still 32 km from landing, near Sidcup, aircraft are low and already only around 2000 feet above Mean Sea Level. The red and green lines show the typical heights of Heathrow aircraft as they cross over the concentrated London City flightpath at 6000 feet near Sidcup (32 km from landing), as low as 3000 feet from Forest Hill to Vauxhall.

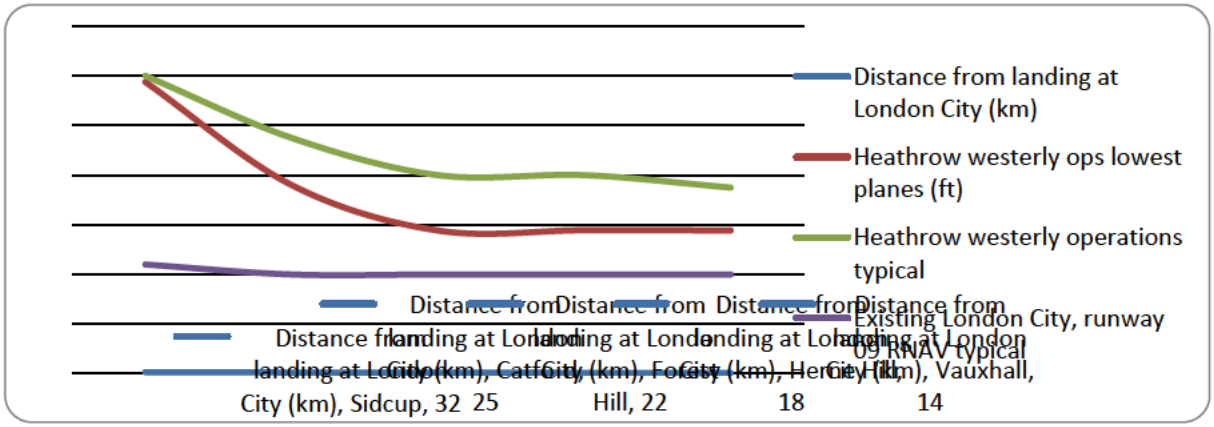


Fig 4. Heathrow arrivals crossing points over London City flight path in SE London – even 32km to landing, City fly low, just over 2000ft

As long as Heathrow and London City change runway direction independently of each other, then these paths operate simultaneously on some days. So, for London City to fly a much higher CDA similar to the one they fly over the Thames estuary on westerly (27) approaches, Heathrow must create paths avoiding the space above the City flight path

Alternatively, Heathrow must fly much higher for longer, but there is little evidence that they are able to do that with an older fleet of heavy planes – they have been experimenting with 'slightly steeper approaches' arriving at 3.2 degrees instead of 3.0 degrees, but the altitude difference over SE London will be marginal and not enough to allow a steeper CDA path for London City.
Slightly Steeper Approaches | Heathrow

Below (Fig 5) we see the much steeper and CDA London City profile over the Thames Estuary arriving from the east. 32 km from landing the aircraft is still at nearly 4000 ft, and does not reach 2000ft until about 8 km from landing.
We repeat, by comparison at 32 km from landing on easterly (09) approaches City aircraft are only just over 2000ft, creating a low and concentrated noise nuisance over a vast area of densely populated SE London. Even with addition of respite routes this kind of descent profile cannot be seen as acceptable in a major world city.

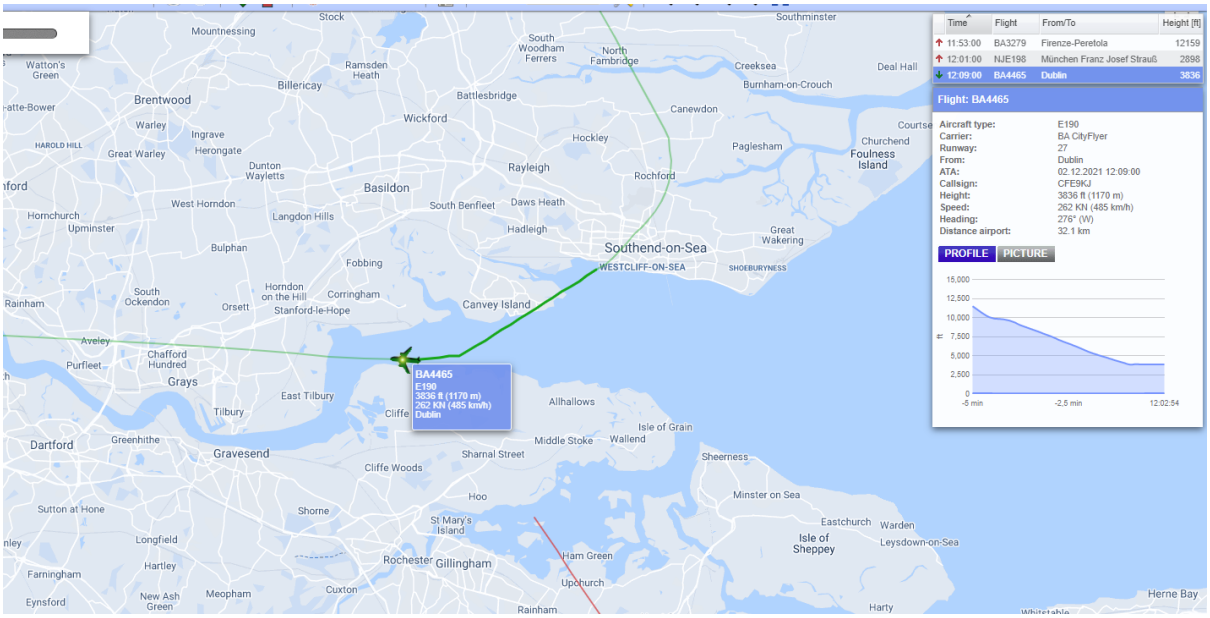


Fig 5. London City (runway 27) arrivals descend steeper, and fly much higher for far longer when landing from the east

5. Altitude generally over hilly regions

There is another problem to be solved in the SE London area. London City habitually fly at some 1800-2000 ft above mean sea level over Catford and Forest Hill. In practice they have been measured in level flight as low as 1600ft above MSL. Forest Hill's highest point is 345 ft, so planes often fly as low as 1255 ft overhead. Low flying creates greater noise and visual disturbance. The Air Navigation Guidance 2017 says the following about this:-

'*the CAA should ensure that the aviation industry takes account of the elevation (height) of the specific surface level involved when developing its airspace design proposals. This is particularly the case when such proposals may affect airspace at an altitude lower than 7,000 feet (amsl) and in circumstances where the actual height of the land directly beneath may be hundreds of feet above sea level*.'

There is no indication in Systems 1-5 that the designs are taking elevation of surface levels into account in the design of low and level flight paths, and in future proposals we would look to see NATS planners demonstrate and explain how they have taken into account London topography in order to comply with this requirement.

6. Crossing of Heathrow and London City paths over SE London

Both airports are committing to a similar Design Principle (Figs 8 and 9):

Heathrow: - *'avoid overflying the same communities with multiple routes including those to/from other airports' (draft Nov 2021)*

London City: - *'avoid overflying communities with multiple routes, including from other airports.' (approved Design Principle)*

Below (Figs 6 and 7) we illustrate the problem in SE London. Heathrow westerly arrivals fly in a wide series of curves over Lewisham from the south, while London City easterly concentrated arrivals curve over from the east. On light easterly conditions both occur at the same time. Barring very occasional east wind Saturday afternoons and Sunday mornings when City does not fly, this means there is no noise respite for these communities when combining the impacts of the two airports.

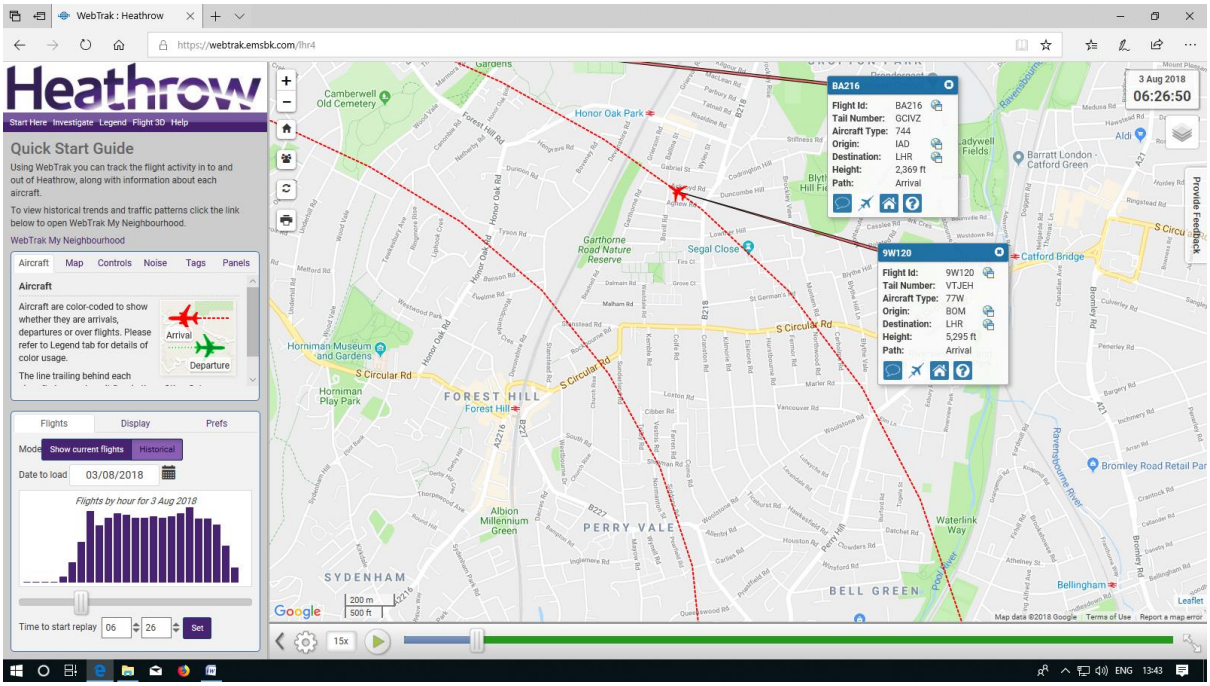


Fig 6. Heathrow westerly arrivals fly broad curves over SE London. Source Heathrow airport.

Fig 7. Heathrow westerly arrivals cross the London City concentrated flight path at multiple points over SE London, from Dulwich/Brixton in the west and at least as far as Eltham in the east. Source flightradar24

Rather than expect Heathrow to 'lift their lid' enough to make a difference in this area, which seems unrealistic, the two airports need to share airspace in such a way that CDA approaches and equivalent ascents, together with alternative respite routes can be flown by London City. For example, Heathrow arrivals could remain geographically West of the Brixton area, while City remains east, eliminating the crossing of flight paths and allowing a Continuous Descent Approach.

In the new proposed Systems 1-5, alternating London City arrivals routes with respite routes is good, but it is of limited benefit if the next day a wind change means Heathrow fly over the same communities with a new concentrated PBN route instead. Some communities could end up under two or 3 different concentrated paths.

For all of these reasons, we would like to see early and public evidence that the two Airports are collaborating with each other on three dimensional airspace design over London, and that they begin with a shared understanding of the impact not only of their individual but also their combined operations in different wind directions. Only a complex overlay and creation of a very clear explanation of the joint noise and environmental impact on the ground of proposed plans will enable meaningful respite route planning and enable those on the ground - Local Authorities and public - to respond to flight path consultations in an informed way.

Heathrow's Proposed Design Principles for Airspace Modernisation

	Proposed Design Principles
Our airspace design must	Be safe for all stakeholders
	Remain in accordance with the CAA's published Airspace Modernisation Strategy and any current or future plans associated with it and all other relevant UK Policy, Legislation and Regulatory Standards. This includes preventing any worsening of local air quality due to emissions from Heathrow's aircraft movements, to remain within local authorities' limits
	Use noise efficient operational practices to limit and, where possible, reduce adverse impacts from aircraft noise
	Reduce the contribution to climate change from CO_2 emissions, and other greenhouse gases emissions relating to Heathrow's aircraft activities* *ANG2017 states that noise is the priority below 7000ft. Providing some types of noise mitigation measures below 7000ft is likely to negatively impact CO_2 emissions of aircraft in flight. However, the airspace design must still enable overall CO_2 reductions for the Heathrow operation.
	Enable Heathrow to make the most operationally efficient and resilient use of its existing two runways, to maximise benefits to all stakeholders
And should also	Provide predictable and meaningful respite to those most affected by noise from Heathrow's movements
	Avoid overflying the same communities with multiple routes including those to/from other airports
	Minimise the negative impacts of night flights
	Keep the number of people who experience an increase in noise from the future airspace design to a minimum
	Keep the total number of people who experience noise from the future airspace design to a minimum
	Ensure the efficiency of other airspace users' operations
	Minimise the impact to all stakeholders from future changes

Fig 8. Heathrow proposed Design Principles at Nov 2021

OFFICIAL

Stage 1: Approved Design Principles

Design principles form a quality framework against which airspace change design will be developed and evaluated in future stages.

Draft design principles were circulated to a wide variety of stakeholders for feedback during Q3 2019. Eight design principles were approved by CAA for Stage 1 in Oct 2019.

LCY approved design principles encompass safety, regulatory, environmental, operational objectives.

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

LONDON CITY AIRPORT

Fig 9. London City Design Principles

Forest Hill Society, London SE23.

HACAN East gives a voice to residents impacted by London City Airport. Many of the residents are also impacted by Heathrow Airport.

Thank you for the opportunity to respond to this consultation. We have completed the online form but felt it would be useful to write this email in order to expand on our thoughts.

We would like to make the following points.

1. We welcome the work that has gone into the different options.

2. The current arrangements are unacceptable as they do not provide respite and, as you are aware, have met with considerable opposition since their introduction in February 2016.

3. The provision of respite to as many communities as it practical is critical.
We favour as much alternation as is possible, even though this may mean the introduction of flights to new areas.

3a. Removing Heathrow aircraft from the airspace would:

- Minimise the possibility of areas being overflown by planes from both airports
- Allow City aircraft to fly higher
- Increase the respite options

There are some scenarios in the Systems as shown where the same community could have a LCY departure, a LCY arrival and a Heathrow arrival all directly overhead at the same time (as Heathrow operates westerly preference and London City does not). This is the kind of thing that Heathrow and LCY need to design out at the earliest possible stage.

We understand that the complete removal of Heathrow aircraft may not be possible. What, therefore, is important is that Heathrow and City continue to work closely together**. Once Heathrow has published its proposals, we suggest that a joint invitation-only session is held with local authority representatives and other key stakeholders** so they can make suggestions having viewed both sets of plans. Biggin Hill Airport should also attend.

3b. The general need to avoid an area getting both arrivals and departures

We welcome the creativity of the options but the implementation of some of them could mean areas are overflown by arrivals and departures

In some of the options, this could be at the same time – for example in Option 09 System 2 (Page 8)

In other options it would mean arrivals when the wind is in one direction and departures when it is coming from the other - for example in Option 27 System 5 (page 13) the

respite route turning south could be very close to the arrivals routes in Option 5 System 1 (page 7).

We have deliberately talked about the 'general' need to avoid this as it would be less important if the total number of overflights was small or they were high; and maybe also if it was critical to providing respite to an area which would otherwise not get it.

4. Tight Turns
The tight turns which are proposed on easterly arrivals and westerly departures could prevent certain areas not getting respite.

We are thinking in particular of:

The Dulwich to Vauxhall corridor. If half the aircraft were able to turn further west and so join their final approach further west this area would get respite – so, for example, in 09 System 1 (page 7) planes on the more southerly respite route could make a less sharp turn and turn further to the west. This Dulwich to Vauxhall area is likely to get a lot of Heathrow arrivals, as it does today, so it would be important to give it some respite from London City aircraft.

The North East area around Leyton, Leytonstone and Wanstead – so, for example, in 27 System 4 (page 12) the three (welcome) respite routes turn too early to provide this area with much respite. **A wider, later and higher turn would deal with the problem.**

5. Continuous Descent Approach (CDA)
Westerly arrivals have CDA and arrive from far greater altitude with a steep glide path from far out, easterlies do not. This is a key noise mitigation problem to solve for areas from Dartford and all points west of there along the arrivals route(s).

6. Dilution of Flight Paths
Although we are not endorsing any one of the indicative schemes, we like the concept of the dilution of the routes in 09 System 3 (page 9).

7. Fuel savings and Noise
Fuel savings need to be balanced against noise. We would argue that at levels below 7,000ft noise should take priority.

8. Biggin Hill
At present there seems to be attempt to increase traffic to Biggin Hill from Unless descent paths for Biggin Hill started south of westerly approach for LCY if flying over south London, this would have a highly negative impact for the Dartford, Bexley, Sidcup, Bexleyheath, Chislehurst (and possibly further south) areas

Chair HACAN East
www.hacan.org.uk

On 17 Jan 2022, at 23:28, wrote:

Dear , thanks for the links to the pdf slides and the video regarding the proposals for the Airspace Modernisation Strategy.

I have had a good look through the materials. It is certainly a complex issue, thank you for the opportunity to comment.

There are a few brief thoughts that I would like to pass on:

A. Under proposal 09 it seems that incoming flights from the south will appear to cover a greater distance looping over larger areas of south east London.

B. Under proposal 27 5, I understand that departing southbound flights are directed south, after take-off, along the Isle of Dogs. This will spread a lot of noise and pollution over an already very densely populated area. This area, is now the subject of massive redevelopment proposals with already 56 new tall buildings being proposed in the Isle of Dogs area alone. This raises the issue of the noise impact for residents, and also the safety issue of newly flying planes over, or very close to very densely populated areas.

C. Reading about the industry issues, I notice that new 5G networks may have some issue with aircraft altimeters. Can I raise this as an issue to be considered as part of this process.

Regards

On Monday, 3 January 2022, 10:34:21 GMT,
wrote:

Dear All,

I hope you have all had a great festive break,

Please see below new links to the airspace change engagement material.

- **Engagement session slide deck video:**
- **NATS' video commentary of design concepts:**

From:
Sent: 17 December 2021 14:52
To:

Transport for London

Engagement Manager
CAP1616 Stage 2 Stakeholder Engagement
London City Airport

Transport for London
City Planning

8th Floor
5 Endeavour Square
Stratford
London E20 1JN

tfl.gov.uk

17 January 2022

Dear Engagement Manager,

London City Airport CAP1616 Stage 2 Stakeholder Engagement

I am writing on behalf of the Mayor in response to the latest round of engagement by London City Airport on its Airspace Change Programme. I am aware that a full public consultation is only to be held at a subsequent stage; that remains essential if the process is to have legitimacy, with a clear exposition of what the changes will mean for local communities.

Noise remains the key priority, given the impacts on public health and well-being. A series of flightpath swathes have been provided, but how the actual flightpaths are implemented within that will be key to understanding the likely noise impacts.

You will be aware that the Mayor, his deputies and his officers have made repeated representations about the impacts of the previous airspace change implemented by London City Airport which used the more precise Performance Based Navigation (PBN) to disproportionately concentrate the noise impacts on certain communities. It is a source of ongoing anguish for these communities that this still has not been addressed.

As any new flightpaths are developed, it is essential that they are done so mindful that PBN removes the natural dispersal of flights which was a feature of previous operations. In a densely populated area such as London, it is not possible to identify routes which avoid impacts on local communities. As such, a respite approach will be essential – but rather than just one or two routes within the identified flightpath cones, it is important to assess the noise benefit from using a range of dispersed routes which could potentially mirror the natural dispersal offered previously.

When the noise impacts of different options are assessed, it is important that the equitable distribution of noise is one of the key metrics used to determine the appropriateness of what is being proposed. London City Airport must act to undo the

harm caused by its previous changes and ensure the burden of noise does not disproportionately fall on certain communities.

In the face of the climate emergency, it is also important to revisit the second order priority given to carbon emissions in the airspace modernisation programme. It is the Mayor's ambition for London to be a net zero carbon city by 2030 and it is therefore critical that all decisions taken regarding the operation of London's airports give proper consideration to carbon emission reduction.

Yours faithfully

Aviation Strategy Lead
City Planning
Transport for London

1 CAP1616 Stage 2 Engagement Record: LCY-Non Technical Meeting with Political stakeholders Mon 13th and Fri 17th December 2021 Combined record of attendees

1.1 Attendees:

Political Stakeholders:

London Borough (LB) Bromley
LB Bromley
Sevenoaks District Council
MP for Eltham
LB Newham
LB Newham
London Assembly
Newark and Sherwood District Council
LB Havering
LB Havering
Kent County Council
Kent County Council
LB Barking and Dagenham,
MP for Mole Valley
LB Richmond upon Thames (Leader)
Watford Borough Council
LB Waltham Forest
Greater London Authority
Parliamentary assistant at the House of Commons
MP for Putney
LB Hammersmith & Fulham
Castle Point Borough Council
MP for Lewisham East
LB Lewisham
MP for Dulwich & West Norwood
RB Greenwich
MP South West Hertfordshire & DfT Minister
Medway Council
LB Southwark
MP for East Ham
[representation unknown]
[representation unknown]
[representation unknown]

LCA:
Community Relations Manager
Air Traffic Control Design Lead
Airspace Change Expert

Presented with the slide pack, agenda below.

1.2 Agenda (extract from presentation):

Agenda

- Welcome and introductions
- UK Airspace Modernisation Programme
- LCY Airspace Change Process progress so far
- Recap on Stage 1
- Stage 2 overview, deliverables and timescales
- Items to be presented to support proposed design concepts:
  - Interactions with other airports
  - Most frequent destinations and directions
  - Tips on how to read and provide comments on proposed design concepts
  - Reference tables – aircraft types, numbers, noise information
- **Airspace design concepts: description of the proposed systems**
- Recap and input required from stakeholders
- Next steps

1.3 Summary of Notes

Welcome and introductions.

The presentation was given, as per the agenda, by the LCA Airspace Change Expert and ATC Design Lead.

The airspace design concept maps were of primary interest; these were explained in detail by the LCA ATC Design Lead.

MP for Eltham expressed concerns about London City Airport (LCA) expansion and has seen concentrated flights at low altitude in his constituency during the summer period generating a lot of complaints. How is the airport going to ensure that the altitude changes include a relief factor to his constituency. MP for Eltham also emphasized that LCA should talk to Heathrow Airport so that his constituency can have a break from aircraft noise. LCA replied that it is everyone's benefit to stay high as long as possible, LCA are currently in conversations to see if other airports can fly higher so that noise can be mitigated. MP for Eltham also asked if this exercise was directly aimed at raising the cap on flights by LCA. LCA stated that this exercise is a requirement lead by the UK government to review the airspace.

Attendees were encouraged to return feedback forms framed around the design principles recapped in the presentation.

Thanks and close

End of notes

From: @gravesham.gov.uk>
Sent: 17 January 2022 14:41
To: ourfutureskies
Cc: Major Infrastructure
Subject: Gravesham Borough Council response

Follow Up Flag: Follow up
Flag Status: Flagged

This is the Gravesham Borough Council response to your consultation about airspace modernisation for London City Airport
Your form has not been used as the Borough Council is not in a position to make technical comments on many of the issues raised by the questions
The Council is aware that:

- The consultation is only talking about aircraft routes below 7,000 ft.
- Any proposals have to fit in 3D with air traffic flows in/out of Southend, Heathrow, Biggin Hill, Gatwick, etc.
- Modern navigation systems mean much more direct flight paths can be followed more precisely helping to save fuel and carbon emissions
- The routings currently being followed
- The balance of traffic to the NE, NW & SE as to ultimate origin/destination

Comments:

- For landings from the east and taking off the west - systems 4 & 5 – do not have any significant implications for Gravesham
- For landings from the west and take off to the east – again for Gravesham
    - System 1 – very similar to current but with an additional approach routing just east of Gravesend as well as to the west
    - System 2 – puts departures (noisier) over the river/Thurrock but just north of Gravesend
    - System 3 – puts departures crossing Dartford and then just south of the A2

Significant additional residential development is occurring throughout the Dartford/Gravesham urban area north of the A2, especially along the riverside and including Ebbsfleet Garden City, so it is important in looking at potential impacts to take this into account.
The Borough Council would be concerned about potential impacts under System 2 & System 3 but will await later stages of consultation before making further comment on more detailed proposals

Principal Transport and NSIP Project Manager
Planning & Regeneration Services
Address: Gravesham Borough Council, Civic Centre, Gravesend, Kent DA12 1AU
Telephone:

Please note I am working from home so please email or ring

By email

Kent County Council
Sessions House
Maidstone
ME14 1XQ

17th January 2022

Dear Sir/Madam,

London City Airport (LCY): Airspace Modernisation CAP1616 Stage 2 Engagement Feedback

Thank you for consulting Kent County Council (KCC) on Stage 2 (Develop and Assess) of the Airspace Change Programme for London City Airport.

KCC represents many communities negatively affected by overflight and aviation noise, in particular areas of West and North Kent which are affected by flights from Gatwick, Heathrow, Southend, London City, and even Luton Airport. Kent is at the convergence of routes for all these major airports, and more flights will inevitably cause more disturbance.

Government policy states that, where possible, over-flight of densely populated areas should be avoided to minimise the number of people affected by aircraft noise; and where possible over-flight of areas of tranquillity should also be avoided. North Kent has a number of large urban conurbations such as Dartford, Gravesend, the Medway towns, and Sittingbourne, along with parts of the Kent Downs Area of Outstanding Natural Beauty. In the case of London City Airport, it would be logical for the precision arrival route to follow the Thames Estuary as far as is possible to avoid flying over settlements; and as much as possible limit over-flight of protected landscape areas.

As our concerns primarily relate to aircraft noise, we have set out our comments on each Airspace Design System in relation to Design Principle 4 (Should limit and where possible reduce aircraft noise) below. We would defer comment on the remaining Design Principles to organisations who are more qualified to do so.

Runway 09 (Easterly) System 1

The current system sees all arrivals joining the Instrument Landing System (ILS) over the River Thames. However, Design System 1 would seek to introduce a new concentrated flight path for arrivals (between 4,000ft and 7,000ft) over the Swale Borough. Whilst we understand there is the proposal for an alternative arrival path to provide respite, this alternative path flies directly over the large urban area of Sittingbourne. It is currently unclear as to how often the alternative arrival flight path will be utilised and this information is imperative to determining the impacts on communities on the ground. Furthermore, KCC would encourage LCY to consult with the affected district and borough councils, which in this case would be Swale Borough Council.

Whilst Design System 1 also involves a larger area of overflight over areas of Dartford and Gravesham, the altitude of these aircraft will be higher than the current system meaning there is the potential to achieve a reduction and dispersal of noise impacts. KCC would

support this element of the Design System as it seeks to limit or reduce aircraft noise, however we would again encourage LCY to consult with the affected district and borough councils, which in this case would be Gravesham Borough Council and Dartford District Council.

Runway 09 (Easterly) System 2

Design System 2 would see all LCY flying over Kent at an altitude of between 4,000ft and 7,000ft. Whilst this is welcomed, the new concentrated flight path for arrivals over Swale remains, along with the alternative respite path over Sittingbourne. KCC would again need to understand the frequency of which these flight paths are used to determine the true impact on communities.

Further clarity is also needed as to the positioning of both arrival and departure paths over Kent, and the potential risk of confliction should aircraft be arriving and departing over the same areas. Not only are departing aircraft noisier than arriving aircraft, but KCC would also seek further information on the safety of this proposal.

Design System 2 also includes a small area of concentrated overflight over Hoo. Whilst this overflight is deemed to be between 4,000ft and 7,000ft, KCC would still encourage LCY to consult with Medway Council on the impact of this proposal on their residents.

Runway 09 (Easterly) System 3

Again, Design System 3 sees both arrival and departure paths over Kent, with three concentrated arrival flight paths and one concentrated departure flight paths over the County and a larger area of potential confliction at between 4,000ft and 7,000ft over areas of Gravesham and the Medway towns.

This Design Principle would result in a significant increase in the impact of overflight over Kent, and fails to utilise the logical route to follow the Thames Estuary as far as possible to avoid flying over settlements and protected landscape areas. Given that this area of Kent also suffers from overflight from a number of other airports in the South East, this Design System raises concern regarding the potential the Airspace Change Modernisation process has to limit and where possible reduce aircraft noise.

Furthermore, the overall area of overflight within this Design System is considerably greater and also covers areas of Tonbridge & Malling and Sevenoaks. Areas such as these in West Kent also suffer from overflight from arriving aircraft from Gatwick and Heathrow. KCC would encourage LCY to consult with both Tonbridge & Malling Borough Council and Sevenoaks District Council on these elements of the proposals that seek to further impact communities within these areas.

Runway 27 (Westerly) System 4

Design System 4 would make best use of the logical route of the Thames, and vastly reduce the areas of Kent that are overflown by aircraft at lower altitudes. However, this system would still introduce a new concentrated flight path over the Swale Borough, and an alternative respite route over the urban area of Sittingbourne. As with the other Design

Systems, KCC would need to understand the frequency of which these flight paths would be used to determine the true impact.

Runway 27 (Westerly) System 5

Whilst Design System 5 seeks to utilise the route of the Thames, overflight of the Borough of Swale will be intensified by the concentrated arrival path. Further assessment will also be required to determine the impact of both arriving and departing aircraft overflying areas of Kent and any possible confliction this risks.

We welcome the opportunity to comment at Stage 2 of London City Airport's Airspace Change process, and look forward to receiving further details within the consultation as part of Stage 3 that will enable us to further assess the impact in Kent.

Yours sincerely

Interim Director of Highways & Transportation
Kent County Council

CAP1616 Stage 2 Engagement Feedback Form

Organisation Name ORGANISATION

Contact name and details Principal Aviation Officer Newham Council

newham.gov.uk

Date 21/01/2022

Engagement material supplied: Slide pack including map AND/OR links to videos.

Return this Word document to ourfutureskies@londoncityairport.com

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This feedback form is part of the initial stakeholder engagement for London City Airport's Airspace Change Programme (Stage 2 – Develop and Assess). Additional engagement material supplied includes a slide pack, video commentary and supporting maps.

This is initial engagement only (not full consultation which will follow later in the process); the proposed design options are draft and will be subject to changes and/or amendments as we move on through the process.

Please provide your comments and feedback by Mon 17th Jan 2022 on each of the proposed airspace designs presented in the supplied material by using the Design Principles (DPs) as a framework to evaluate the extent you think it complies with them. DPs are provided for your reference below.

We ask you to consider each Airspace Concept System, its pros and cons, and the extent you think it complies with the DPs. There is a final question for free text comments and sketches, if you prefer to add feedback not covered by the DP questions.

Ref Num	Tier 1 Design Principles	Priority
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

Ref Num		Tier 2 Design Principles	Priority
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

	Runway 09 System 1: Similar to today, with efficiencies
DP0	**Do you agree that this design would enhance safety?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) **n/a** Newham Council is responding to this consultation in its role as the host Borough and Local Planning Authority for London City Airport. As such, it does not have technical capabilities or function to provide any comments in respect of aircraft safety.
DP1	**Do you agree that this design would comply with laws and regulations?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) **n/a** Newham Council is responding to this consultation in its role as the host Borough and Local Planning Authority for London City Airport. As such, it does not have technical capabilities or function to provide any comments in respect of aviation legislation and regulation.
DP2	**Do you agree that this design would enhance navigation standards?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) **n/a** Newham Council is responding to this consultation in its role as the host Borough and Local Planning Authority for London City Airport. As such, it does not have technical capabilities or function to provide any comments in respect of aviation navigation standards.
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) **n/a** As previously stated in its consultation response to the previous round of consultation, Newham Council does not accept the principle that airspace change should be focused on increasing aviation capacity. That being said, Newham Council does not have the technical capability or function to assess the proposed changes in terms of their impact on aviation capacity.
DP4	**Do you agree that this design would limit aircraft noise?**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) **4** In terms of arrivals, this option includes significant benefits through a later descent, significantly reducing the amount of flight below 3,000 fee which will provide noise benefits to overflown residents. However, the arrival track also shows a relatively large area shown in Cyan, indicating level flight at 3,000. It is questioned whether a large extent of level flight is necessary, or whether a more efficient descent slope could be achieved.

	Runway 09 System 1: Similar to today, with efficiencies
	The inclusion of a respite corridor in the arrivals route is a very welcome feature, as this mitigates against one of the key areas of concern associated with the 2016 modernisation, the concentration of flights over a narrow corridor in South-East London. Heathrow Airport have undertaken research looking at the issue of respite and how it could potentially be administered, this research should be referred to when developing the respite scheme in more detail.[1] The proposal would create some newly overflown communities in South-East London, albeit planes would be at a 3,000 feet or higher. This option would lead to an area of Essex, shown on the excerpt below, being overflown by both arrival and departure traffic. Although this should be seen as a negative aspect of option 1, both arrivals and departures would be above 4,000 feet, mitigating the amount of noise received by these communities to some extent. The distribution of the cone of both arrivals and departures in these areas could lend itself to effective respite option, so although introducing newly overflown areas, respite could mitigate these impacts.  Departure traffic does not change significantly from the existing concept, except for the inclusion of a steeper ascent which is supported.
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) **2** In line with its declaration of a climate emergency in 2019, Newham Council places the strongest emphasis on the reduction in fossil fuel and subsequent CO2 emissions.

[1] Anderson Acoustics/London Heathrow Airport *A Review on the State of the Art on Respite* <https://www.heathrow.com/company/local-community/noise/making-heathrow-quieter/respite-research>

	Runway 09 System 1: Similar to today, with efficiencies
	Although Newham Council does not have the technical capabilities to provide a detailed assessment of the impact of the various options on fuel burn, based on a high level assessment, Runway 09 System 1 would appear to provide relatively limited benefits in terms of carbon reduction, as planes heading toward Europe would still need to make a left turn before turning right over the arrivals. The shortening of flight path requirements for planes coming from north and south would reduce fuel use, although this would be offset by noise implications for those newly overflown. There does seem to be improvements with more consistent descent, which will have benefits on fuel use and therefore CO2 emissions. A more regular rapid climb would probably also have net benefits on fuel use, rather than staggering a climb. More detail should be provided in respect of the proposed ascents and descent in the formal statutory consultation stage.
DP6	**Do you agree that this design would minimise local air pollution?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) **4** This option would minimise air pollution through the inclusion of steeper ascents and descents. Lateral changes to the departures and arrivals track will have implications for the dispersal of air pollution, but based on the information it is difficult to provide an assessment on this issue. Further detailed air pollution modelling should be undertaken prior to the formal consultation stage.
DP7	**Do you agree that this design would improve operational resilience?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) **n/a** Newham Council is responding to this consultation in its role as the host Borough and Local Planning Authority for London City Airport. As such, it does not have technical capabilities or function to provide any comments in respect of operational resilience.
DP8	**Do you agree that this design would promote optimal network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) **n/a** Newham Council is responding to this consultation in its role as the host Borough and Local Planning Authority for London City Airport. As such, it does not have technical capabilities or function to provide any comments in respect of optimal network performance.

	Runway 09 System 2: Mirror, Northern arrivals, Southern departures
DP0	**Do you agree that this design would enhance safety?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) **n/a** Newham Council is responding to this consultation in its role as the host Borough and Local Planning Authority for London City Airport. As such, it does not have technical capabilities or function to provide any comments in respect of aircraft safety.
DP1	**Do you agree that this design would comply with laws and regulations?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) **n/a** Newham Council is responding to this consultation in its role as the host Borough and Local Planning Authority for London City Airport. As such, it does not have technical capabilities or function to provide any comments in respect of aviation legislation and regulation.
DP2	**Do you agree that this design would enhance navigation standards?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) **n/a** Newham Council is responding to this consultation in its role as the host Borough and Local Planning Authority for London City Airport. As such, it does not have technical capabilities or function to provide any comments in respect of aviation navigation standards.
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) **n/a** As previously stated in its consultation response to the previous round of consultation, Newham Council does not accept the principle that airspace change should be focused on increasing aviation capacity. That being said, Newham Council does not have the technical capability or function to assess the proposed changes in terms of their impact on aviation capacity.
DP4	**Do you agree that this design would limit aircraft noise?**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) **2** Option 2 includes many of the positive aspects of Option 1, including the later ascents and earlier descents, as well as the potential to include respite on arrivals. However, this option will lead to a significant newly overflown population in North London, with little justification provided. Option 2 also creates a concerning overlap of arrivals under 3,000 feet and departures around Rotherhithe/Wapping as shown on the excerpt below:

	Runway 09 System 2: Mirror, Northern arrivals, Southern departures
	 Given these two fundamental issues, this option is not considered favourable on noise grounds.
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest). **2** In line with its declaration of a climate emergency in 2019, Newham Council places strongest emphasis on the reduction in fossil fuel and subsequent CO2 emissions. Although Newham Council does not have the technical capabilities to provide a detailed assessment of the impact of the various options, based on a high level assessment Runway 09 System 2 would appear to provide relatively limited benefits in terms of carbon reduction. While this option would provide a more direct route for departures to Europe, this appears to be counteracted by the dis-benefits for domestic routes heading toward the North and West. There are also improvements, with more consistent descents, which will have benefits on fuel use and therefore CO2 emissions. A steadier, rapid climb would probably also have net benefits on fuel use, rather than staggering a climb, so efforts on providing this in this option are welcomed, however it is unclear what effect the tight turn north after take-off while climbing will have.
DP6	**Do you agree that this design would minimise local air pollution?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) **4**

	Runway 09 System 2: Mirror, Northern arrivals, Southern departures
	This option would minimise air pollution through the inclusion of steeper ascents and descents. Lateral changes to the departures and arrivals track will have implications for the dispersal of air pollution. Concern is raised regarding the congested arrival route being overflown by departures to the north west and occurring in close proximity to the airport. Further detailed air pollution modelling should be undertaken prior to the formal consultation stage.
DP7	**Do you agree that this design would improve operational resilience?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) **n/a** Newham Council is responding to this consultation in its role as the host Borough and Local Planning Authority for London City Airport. As such, it does not have technical capabilities or function to provide any comments in respect of operational resilience.
DP8	**Do you agree that this design would promote optimal network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) **n/a** Newham Council is responding to this consultation in its role as the host Borough and Local Planning Authority for London City Airport. As such, it does not have technical capabilities or function to provide any comments in respect of this option in terms of optimal network performance.

	Runway 09 System 3: Maximise departure efficiencies
DP0	**Do you agree that this design would enhance safety?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) **n/a** Newham Council is responding to this consultation in its role as the host Borough and Local Planning Authority for London City Airport. As such, it does not have technical capabilities or function to provide any comments in respect of aircraft safety.
DP1	**Do you agree that this design would comply with laws and regulations?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) **n/a** Newham Council is responding to this consultation in its role as the host Borough and Local Planning Authority for London City Airport. As such, it does not have technical capabilities or function to provide any comments in respect of aviation legislation and regulation.
DP2	**Do you agree that this design would enhance navigation standards?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) **n/a** Newham Council is responding to this consultation in its role as the host Borough and Local Planning Authority for London City Airport. As such, it does not have technical capabilities or function to provide any comments in respect of aviation navigation standards.
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) **n/a** As previously stated in its consultation response to the previous round of consultation, Newham Council does not accept the principle that airspace change should be focused on increasing aviation capacity. That being said, Newham Council does not have the technical capability or function to assess the proposed changes in terms of their impact on aviation capacity.
DP4	**Do you agree that this design would limit aircraft noise?**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) **3** This option includes some beneficial elements when viewed from an aircraft noise perspective, including the potential to include some limited respite routes in south-east London, albeit the respite routes are more limited in scope than the respite routes for options 1 and 2. The inclusion of separate northerly and southerly arrival tracks also provides some dispersal of flights which is welcome, however all arrival tracks introduce newly overflown populations compared to current operations and those proposed as Option 1. Finally, the proposal also

	Runway 09 System 3: Maximise departure efficiencies
	includes the later descents and earlier ascents, as in other schemes, which are beneficial in terms of aircraft noise. The key negative aspect of option 3 is the large increase in overflown communities in North and West London. Some concern is also raised in respect of the creation of multiple arrival and departure routes in North West London, and potential low-level mixing of the two operation (overlapping blue/purple), as shown on the excerpt below although there is considerable scope for respite within these distributions, which should be considered within the more detailed design: 
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) **4** In line with its declaration of a climate emergency in 2019, Newham Council places strongest emphasis on the reduction in fossil fuel and subsequent CO2 emissions. System 3 appears to provide significant benefits in terms of reducing fuel reduction and subsequent CO2 emissions as a result of the inclusion of separate arrival routes from the North and South which will shorten the vast majority of arrival routes. The creation of three departure routes towards the North-West, North-East and South-East also provide more efficient departure routes in these directions. As such this option appears to be the most beneficial easterly option in terms of fuel use and CO2.
DP6	**Do you agree that this design would minimise local air pollution?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) **3** Changes to the steepness of ascents and descents provide air pollution benefits as in other options. The inclusion of a separate northerly and southerly arrival

	Runway 09 System 3: Maximise departure efficiencies
	track, coupled with the provision of three departure tracks, are likely to provide some air quality benefits by dispersing flights over a larger geography. Further detailed air pollution modelling should be undertaken prior to the formal consultation stage.
DP7	**Do you agree that this design would improve operational resilience?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) **n/a** Newham Council is responding to this consultation in its role as the host Borough and Local Planning Authority for London City Airport. As such, it does not have technical capabilities or function to provide any comments in respect of operational resilience.
DP8	**Do you agree that this design would promote optimal network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) **n/a** Newham Council is responding to this consultation in its role as the host Borough and Local Planning Authority for London City Airport. As such, it does not have technical capabilities or function to provide any comments in respect of this option in terms of optimal network performance.

	Runway 27 System 4: Similar to today, with efficiencies
DP0	**Do you agree that this design would enhance safety?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) **n/a** Newham Council is responding to this consultation in its role as the host Borough and Local Planning Authority for London City Airport. As such, it does not have technical capabilities or function to provide any comments in respect of aircraft safety.
DP1	**Do you agree that this design would comply with laws and regulations?**
Tier 1 Priority A	**n/a** Newham Council is responding to this consultation in its role as the host Borough and Local Planning Authority for London City Airport. As such, it does not have technical capabilities or function to provide any comments in respect of aviation legislation and regulation.
DP2	**Do you agree that this design would enhance navigation standards?**
Tier 1 Priority A	**n/a** Newham Council is responding to this consultation in its role as the host Borough and Local Planning Authority for London City Airport. As such, it does not have technical capabilities or function to provide any comments in respect of aviation navigation standards.
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**
Tier 1 Priority A	**n/a** As previously stated in its consultation response to the previous round of consultation, Newham Council does not accept the principle that airspace change should be focused on increasing aviation capacity. That being said, Newham Council does not have the technical capability or function to assess the proposed changes in terms of their impact on aviation capacity.
DP4	**Do you agree that this design would limit aircraft noise?**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) **3** System 4 provides a relatively modest change to the existing operations, both in terms of arrivals and departures. Changes to the arrival swathes will introduce some newly overflown, however arrivals covers a very large area, potentially allowing for a large degree of dispersal and respite. The current arrival route, which is beneficial in terms of noise, is retained. Similarly, the departures tracks are given only relatively small changes to the existing operation.

	Runway 27 System 4: Similar to today, with efficiencies
	The proposed departure routes see a welcome change to ascents, with faster ascents removing heights of between 3,000 to 4,000 feet. This will reduce noise to overflown communities North of the airport.
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) **2** Comments on fuel and CO_2: In line with its declaration of a climate emergency in 2019, Newham Council places strongest emphasis on the reduction in fossil fuel and subsequent CO2 emissions. System 4 appears to provide relatively limited benefits in terms of fuel reduction and CO2. The proposal offers some refinements to the departure route to the north-west and create greater efficiencies through a faster ascent. The overall concept is not significantly changed from the existing.
DP6	**Do you agree that this design would minimise local air pollution?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) **3** Option 4 includes some welcome changes to the departures, with faster ascents providing air pollution mitigation, although these seem minimal. No significant changes to the arrival paths are proposed. Further detailed air pollution modelling should be undertaken prior to the formal consultation stage.
DP7	**Do you agree that this design would improve operational resilience?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) **n/a** Newham Council is responding to this consultation in its role as the host Borough and Local Planning Authority for London City Airport. As such, it does not have technical capabilities or function to provide any comments in respect of operational resilience.
DP8	**Do you agree that this design would promote optimal network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) **n/a** Newham Council is responding to this consultation in its role as the host Borough and Local Planning Authority for London City Airport. As such, it does not have technical capabilities or function to provide any comments in respect of this option in terms of optimal network performance.

	Runway 27 System 5: Left and Right departure turns
DP0	**Do you agree that this design would enhance safety?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) **n/a** Newham Council is responding to this consultation in its role as the host Borough and Local Planning Authority for London City Airport. As such, it does not have technical capabilities or function to provide any comments in respect of aircraft safety.
DP1	**Do you agree that this design would comply with laws and regulations?**
Tier 1 Priority A	**n/a** Newham Council is responding to this consultation in its role as the host Borough and Local Planning Authority for London City Airport. As such, it does not have technical capabilities or function to provide any comments in respect of aviation legislation and regulation.
DP2	**Do you agree that this design would enhance navigation standards?**
Tier 1 Priority A	**n/a** Newham Council is responding to this consultation in its role as the host Borough and Local Planning Authority for London City Airport. As such, it does not have technical capabilities or function to provide any comments in respect of aviation navigation standards.
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**
Tier 1 Priority A	**n/a** As previously stated in its consultation response to the previous round of consultation, Newham Council does not accept the principle that airspace change should be focused on increasing aviation capacity. That being said, Newham Council does not have the technical capability or function to assess the proposed changes in terms of their impact on aviation capacity.
DP4	**Do you agree that this design would limit aircraft noise?**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) **3** The key difference between options 4 and 5 relate to the inclusion of a left turn for departures heading toward the south. This option would provide a beneficial dispersal of departures over a larger area and opportunity for respite. This is counteracted by South-East London being newly overflown on westerly departures, there would be a benefit in terms of greater dispersal.
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) **4**

	Runway 27 System 5: Left and Right departure turns
	In line with its declaration of a climate emergency in 2019, Newham Council places strongest emphasis on the reduction in fossil fuel and subsequent CO2 emissions. System 5 appears to provide a substantial benefit to the efficiency of departures through the creation of a southerly and northerly routes for arrivals, which would reduce fuel bur and consequently carbon emissions for planes heading toward the south.
DP6	**Do you agree that this design would minimise local air pollution?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) **3** The fast ascents and greater dispersal in this option are considered to be beneficial in terms of air pollution. Further detailed air pollution modelling should be undertaken prior to the formal consultation stage.
DP7	**Do you agree that this design would improve operational resilience?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) **n/a** Newham Council is responding to this consultation in its role as the host Borough and Local Planning Authority for London City Airport. As such, it does not have technical capabilities or function to provide any comments in respect of operational resilience.
DP8	**Do you agree that this design would promote optimal network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) **n/a** Newham Council is responding to this consultation in its role as the host Borough and Local Planning Authority for London City Airport. As such, it does not have technical capabilities or function to provide any comments in respect of this option in terms of optimal network performance.

General Q2	Do you have comments on any aspect of the designs, or the process? Include sketches if you wish.
	All of the airspace modernisation options include faster ascents and later descents, aiming to keep aircraft at a higher altitude. This is strongly supported by Newham Council, as it would provide significant fuel and CO2 benefits, as well as mitigating against noise and air quality impacts on overflown communities. This aspect of airspace modernisation should be included whichever concept is chosen. Further detail on the profile of ascents and descents should be provided during the stage 3 'Consultation' Stage to allow a more detailed assessment of the impact on fuel burn and Carbon emissions. As mentioned in some of Newham Council's specific responses, Heathrow have undertaken useful research on the issue of airspace respite. This research should be referred to when determining the operation of any respite or planned dispersal scheme in order to ensure it provides real benefits for overflown communities.[2] It is clear that the proposed changes, particularly some of the most significant changes in South-East London are heavily reliant on changes being made to arrivals at Heathrow, in order to free up airspace for steeper ascents and descents. However, it is understood that Heathrow have not yet finalised Stage 1 of their airspace modernisation process. It is also understood that there are contingencies with the airspace modernisation planned at LCY and those at Biggin Hill, who are undertaking a fairly limited modernisation process that only aims to increase the approach angle. Given the lack of integration between the three sets of airspace modernisation processes, it is questioned how viable some of the proposed options are. Newham Council's 50 Steps to a Healthier Newham prioritises the improvement of air quality within the Borough. It is noted that the consultation material does not include any detailed modelling or information regarding air quality. More detailed air quality modelling should be undertaken following this engagement

[2] Anderson Acoustics/London Heathrow Airport *A Review on the State of the Art on Respite* <https://www.heathrow.com/company/local-community/noise/making-heathrow-quieter/respite-research>

	exercise and before the statutory consultation period. Newham Council would be happy to engage with the CAA, NATS and LCY in order to define the scope of any future air quality work. Newham Council also places a strong emphasis on the improvement of Biodiversity within the Borough. It is noted that biodiversity has not been considered as part of the airspace modernisation process to date. Some biodiversity input should be undertaken prior to the formal consultation process being undertaken.

Thank you for taking the time to provide feedback on behalf of those you represent.

It will be considered, and one or more of these airspace designs may be amended, or new design options may be created, based on the collated and combined feedback to Stage 2.

Documentation for each Stage of this airspace change proposal (ACP) can be found via the CAA's Airspace Change portal at this link.

From: @sutton.gov.uk>
Sent: 13 January 2022 11:43
To: ourfutureskies
Cc:
Subject: Re: FEEDBACK REQUEST – UK Airspace Modernisation, London City Airport

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Engagement response

Dear Sirs

Thank you for sharing your consultation with our Chief Executive

The London Borough of Sutton has also been approached by Heathrow and Gatwick Airports as part of the national CAP1616 Airspace Modernisation Strategy. We are presently directly engaged with Heathrow in their consultations, as of the three airports the existing flightpaths from Gatwick and London City do not pass over the borough, and at this time there appear to be no proposals for this to change.

As such, we have no comments on your draft design options at this time. However, I would welcome being kept up to date with your progress and would be grateful if you could keep me informed directly in future.

Kind Regards

Principal Policy Officer (Strategic Transport)

Environment, Housing and Neighbourhoods Directorate
London Borough of Sutton
Civic Offices, St Nicholas Way
Sutton SM1 1EA

T:
E: @sutton.gov.uk

www.sutton.gov.uk
Follow us on twitter **@SuttonCouncil**
Please note that I work remotely and will continue to do so for the foreseeable future.

Economic Growth & Housing Delivery
Strategic Director:

Waltham Forest Town Hall, Forest Road, London E17 4NX

By Email
ourfutureskies@londoncityairport.com

Contact:
Direct Line:
Reference:
E-mail: @walthamforest.gov.uk
Date: 17th January 2022

Dear Sir/Madam

Feedback Request – UK Airspace Modernisation, London City Airport

Thank you for the invitation for feedback on the proposed flightpath amendments as part of the UK Airspace Modernisation process.

The London Borough of Waltham Forest acknowledges the requirement for London City Airport (LCY) to look at different options to alter existing flightpaths to and from the airport; however, the Council would strongly oppose any option taken forward that would have the potential to increase air traffic in the airspace above the borough or have greater impact on its residents due to the height of flights.

Furthermore, the Council is keen to understand how the impact of the pandemic on the demand for air travel is being fully assessed in developing these options, as well as the importance of reducing environmental impacts as the air industry contributes to tackling the Climate Emergency.

Flights over Waltham Forest

Prior to the pandemic, Waltham Forest was the third most overflown borough in London because of our proximity to flightpaths from Heathrow Airport and London City Airport. Therefore, any changes to routes above the borough that increase traffic above would be contrary to Design Principle 4i *"Avoid overflying communities with multiple routes, including from other airports."*

The Council has reviewed the material provided and is particularly concerned that Easterly Options 2 and 3 could have significant additional impact on the borough with the potential introduction of arrival, as well as departure, routes over the borough; however, there is not sufficient information to be able to fully assess this impact.

While we acknowledge that this stage is prior to formal consultation on options, the Council requests that more detailed maps are provided that properly show the proposed changes to routes above Waltham Forest at a local level alongside information that accurately quantifies the potential impacts on the borough for each option.

Cumulative impact of flights

The Council has previously responded to consultations requesting that LCY should work with Heathrow Airport to raise the height of the LCY flightpath to reduce the impact on residents living underneath both flightpaths.

Specifically, LCY should work with Heathrow Airport to prioritise the reduction of flights below 5,000ft across Waltham Forest. Flights from LCY are particularly impactful due to their low height and designing operations to allow flights from LCY to fly above 5,000ft should be a priority for both Heathrow and LCY.

Any systems that result in the intensification of flights across the borough would have significant environmental, social and health impacts on borough residents and have a negative impact on our ability to meet UK, London, and local climate change targets.

Formal consultation

We continue to keep the Council's Leadership appraised of proposals for the Airport and its airspace. To support this, we request the opportunity to discuss the proposed options in further detail supported by additional information that adequately demonstrates the potential impact on the borough and its residents.

Furthermore, the Council is keen to ensure that Waltham Forest residents are fully engaged as any proposals are developed, including with promotion of the consultation and events held in the borough.

We trust this initial feedback will be taken on board and that LCY will commit to providing the further information requested and continued engagement.

Yours faithfully,

Director Area Regeneration Delivery
London Borough of Waltham Forest

CAP1616 Stage 2 Engagement Feedback Form

Organisation Name City Hall Greens

Contact name and details

Date 17 January 2022

Engagement material supplied: Slide pack including map AND/OR links to videos.

Return this Word document to ourfutureskies@londoncityairport.com

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This feedback form is part of the initial stakeholder engagement for London City Airport's Airspace Change Programme (Stage 2 – Develop and Assess). Additional engagement material supplied includes a slide pack, video commentary and supporting maps.

This is initial engagement only (not full consultation which will follow later in the process); the proposed design options are draft and will be subject to changes and/or amendments as we move on through the process.

Please provide your comments and feedback by Mon 17th Jan 2022 on each of the proposed airspace designs presented in the supplied material by using the Design Principles (DPs) as a framework to evaluate the extent you think it complies with them. DPs are provided for your reference below.

We ask you to consider each Airspace Concept System, its pros and cons, and the extent you think it complies with the DPs. There is a final question for free text comments and sketches, if you prefer to add feedback not covered by the DP questions.

Thank you for sharing details with me of your potential new systems for airspace management. It is important that changes to airspace are carefully managed and fully consulted as the impacts from aircraft noise are a serious impact on London's environment.

Campaigners have discussed their concerns both at the current situation with aircraft noise in London, and the potential changes from these proposals with me. Given that I represent a London-wide constituency I will focus my response on general points covering all Londoners.

Ref Num	Tier 1 Design Principles	Priority
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

Ref Num	Tier 2 Design Principles		Priority
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

	Runway 09 System 1: Similar to today, with efficiencies
DP0	**Do you agree that this design would enhance safety?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on safety
DP1	**Do you agree that this design would comply with laws and regulations?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on regulatory compliance
DP2	**Do you agree that this design would enhance navigation standards?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on navigation standards
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on AMS and capacity
DP4	**Do you agree that this design would limit aircraft noise?**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) Comments on noise *Consider referring to:* *Maximise altitude, respite routes, avoid multiple routes, minimise newly overflown, managed dispersal, minimise total population, avoid noise sensitive areas*
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on fuel and CO_2:
DP6	**Do you agree that this design would minimise local air pollution?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on aircraft local air pollution:

	Runway 09 System 1: Similar to today, with efficiencies
DP7	**Do you agree that this design would improve operational resilience?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on resilience:
DP8	**Do you agree that this design would promote optimal network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on network performance as a shared resource:

	Runway 09 System 2: Mirror, Northern arrivals, Southern departures
DP0	**Do you agree that this design would enhance safety?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on safety
DP1	**Do you agree that this design would comply with laws and regulations?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on regulatory compliance
DP2	**Do you agree that this design would enhance navigation standards?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on navigation standards
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on AMS and capacity
DP4	**Do you agree that this design would limit aircraft noise?**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) Comments on noise *Consider referring to:* *Maximise altitude, respite routes, avoid multiple routes, minimise newly overflown, managed dispersal, minimise total population, avoid noise sensitive areas*
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on fuel and CO_2:
DP6	**Do you agree that this design would minimise local air pollution?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on aircraft local air pollution:

	Runway 09 System 2: Mirror, Northern arrivals, Southern departures
DP7	**Do you agree that this design would improve operational resilience?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on resilience:
DP8	**Do you agree that this design would promote optimal network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on network performance as a shared resource:

	Runway 09 System 3: Maximise departure efficiencies
DP0	**Do you agree that this design would enhance safety?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on safety
DP1	**Do you agree that this design would comply with laws and regulations?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on regulatory compliance
DP2	**Do you agree that this design would enhance navigation standards?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on navigation standards
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on AMS and capacity
DP4	**Do you agree that this design would limit aircraft noise?**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) Comments on noise *Consider referring to:* *Maximise altitude, respite routes, avoid multiple routes, minimise newly overflown, managed dispersal, minimise total population, avoid noise sensitive areas*
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on fuel and CO_2:
DP6	**Do you agree that this design would minimise local air pollution?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on aircraft local air pollution:

	Runway 09 System 3: Maximise departure efficiencies
DP7	**Do you agree that this design would improve operational resilience?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on resilience:
DP8	**Do you agree that this design would promote optimal network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on network performance as a shared resource:

	Runway 27 System 4: Similar to today, with efficiencies
DP0	**Do you agree that this design would enhance safety?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on safety
DP1	**Do you agree that this design would comply with laws and regulations?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on regulatory compliance
DP2	**Do you agree that this design would enhance navigation standards?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on navigation standards
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on AMS and capacity
DP4	**Do you agree that this design would limit aircraft noise?**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) Comments on noise *Consider referring to:* *Maximise altitude, respite routes, avoid multiple routes, minimise newly overflown, managed dispersal, minimise total population, avoid noise sensitive areas*
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on fuel and CO_2:
DP6	**Do you agree that this design would minimise local air pollution?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on aircraft local air pollution:

	Runway 27 System 4: Similar to today, with efficiencies
DP7	**Do you agree that this design would improve operational resilience?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on resilience:
DP8	**Do you agree that this design would promote optimal network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on network performance as a shared resource:

	Runway 27 System 5: Left and Right departure turns
DP0	**Do you agree that this design would enhance safety?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on safety
DP1	**Do you agree that this design would comply with laws and regulations?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on regulatory compliance
DP2	**Do you agree that this design would enhance navigation standards?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on navigation standards
DP3	**Do you agree that this design is consistent with the CAA's Airspace Modernisation Strategy to deliver capacity?**
Tier 1 Priority A	To what extent? (1-least, 5-greatest) Comments on AMS and capacity
DP4	**Do you agree that this design would limit aircraft noise?**
Tier 2 Priority A	To what extent? (1-least, 5-greatest) Comments on noise *Consider referring to:* *Maximise altitude, respite routes, avoid multiple routes, minimise newly overflown, managed dispersal, minimise total population, avoid noise sensitive areas*
DP5	**Do you agree that this design would minimise fuel use and CO_2 emissions?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on fuel and CO_2:
DP6	**Do you agree that this design would minimise local air pollution?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on aircraft local air pollution:

	Runway 27 System 5: Left and Right departure turns
DP7	**Do you agree that this design would improve operational resilience?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on resilience:
DP8	**Do you agree that this design would promote optimal network performance?**
Tier 2 Priority B	To what extent? (1-least, 5-greatest) Comments on network performance as a shared resource:

General Q2	**Do you have comments on any aspect of the designs, or the process? Include sketches if you wish.** In January 2019, the London Assembly Environment Committee published a report on Aircraft noise[1], after concerns had been raised about aircraft noise in London – particularly in south-east, north-east and south-west London. The first two of these areas are particularly impacted by noise from London City Airport. The findings of that report were that: • The Independent Commission on Civil Aviation Noise should regulate noise disturbance more stringently, using lower thresholds for disturbance (taking into account WHO guidelines and the need for residents to keep windows open) and mapping the combined effect of all London's airports, especially Heathrow and City. The Mayor should support this work. • Air traffic using Heathrow and City airports should not increase, and the proposed third runway at Heathrow should not go ahead. • Flight paths should be rotated to give respite for those living under concentrated flight paths. Flight paths should be designed to minimise noise impacts: stacking, low-level overflying, and overlapping flight paths should be minimised. • There should be no night flights, and limits on early morning flights should be retained, and preferably strengthened. • The severe levels of noise disruption now being experienced by some of London's residents are not acceptable, and urgent, decisive action is needed across the board to alleviate it. The London Assembly has continued to hold a position that air traffic at City and Heathrow Airport should not increase. It is important that airspace management is focussed upon reducing aircraft noise for Londoners, not increasing capacity for airports and airlines. I would draw your attention particularly to the findings that there was a need for mapping to understand the combined impacts of aircraft noise from multiple airports. This is how Londoners experience aircraft noise – they are not bothered by planes from only one airport at a time – and it is how these impacts should be consulted. I strongly urge you to find a way that means that when public consultation is made on these plans it is absolutely clear what the combined impact of proposed systems for airspace will be. As your diagram of the overlap of airport airspace shows, there are lots of Londoners who are subject to the impacts of aviation from several airports, sometimes at the same time. It is vital that any changes to systems reduce these combined impacts to a minimum, and avoid any new ones.

[1] Aircraft Noise, London Assembly, January 2019 https://www.london.gov.uk/media-centre/london-assembly/aircraft-noise

	Campaigners have been clear that noise is the key issue from aviation, and they need action that reduces noise. This can also include changing the heights aircraft are at and the aircraft used. Quieter aircraft have not delivered on their claims for Londoners, so it seems important to continue to monitor to the real world impacts of new airspace changes. Previous changes that led aircraft to exactly follow paths led to increased impacts on many Londoners, including those affected by multiple areas of airspace and less dispersion of noise. There is a prioritisation being reached in the design of airspace between aircraft height and fuel consumption. Noise from aviation will have impacts on the ground, that will lead to changes in behaviour that can also lead to more use of energy, including fossil fuels. For example, flying planes lower with more noise may lead to more people closing windows and using air conditioning or fans. Therefore the presumption should always be that reducing noise is the best goal, and that can be achieved by operating fewer planes at a higher altitude for longer. I hope these principles are helpful, and I look forward to engaging further at later stages of this process.

Thank you for taking the time to provide feedback on behalf of those you represent.

It will be considered, and one or more of these airspace designs may be amended, or new design options may be created, based on the collated and combined feedback to Stage 2.

Documentation for each Stage of this airspace change proposal (ACP) can be found via the CAA's Airspace Change portal at this link.

LONDONASSEMBLY
Liberal Democrat Group

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14 January 2022

London City Airport Airspace Change Team and NATS

BY EMAIL

To Whom It May Concern:

Response to London City Airspace Modernisation Engagement Exercise

I write on behalf of the Liberal Democrat London Assembly Group at City Hall in response to the consultation document issued by London City Airport as part of a larger UK Government airspace modernisation programme.

As the proposal document makes clear, the scope of this engagement exercise is specifically limited in scope to flightpath design rather than the broader issues relating to the hours of operation of the airport and the daily number of flights. It is also noted that the present engagement exercise is a preliminary stage which will allow options to be developed for submission to the Civil Aviation Authority and then on to a full public consultation.

Initial Thoughts

In welcoming this consultation exercise, I want to stress that addressing the issues of flightpath design, whilst potentially of some benefit to London residents whose lives are directly disadvantaged by the current flightpaths, does not resolve the underlying concerns relating to the hours of use of London City Airport and the number of daily flights. The present engagement exercise should not therefore be used as a reason for London City Airport to avoid engagement with elected representatives and local communities on the broader issues.

Impact on Local Communities

From discussions with local community organisations, a key issue is that of respite – time periods where communities directly impacted by noise from flightpaths are given a break from flights overhead and the corresponding noise. The current flightpath arrangements at City Airport do not provide adequate respite and these flightpath arrangements have been consistently opposed by local communities and local organisations such as HACAN East. I fully endorse these concerns about the current arrangements and welcome the thinking that has been put into the development of some of the alternative proposals set out in the proposal documents.

Flightpath Redesign

A core principle for any future flightpath redesign should therefore be to incorporate respite for as many communities as possible. Whilst this is likely to mean flightpaths being extended over some parts of London that are currently not overflown, we believe that such an approach is the fairest solution for London as a whole. It is important to stress that extending flightpaths over wider geographical areas does not in any way provide a justification for increasing the number of flights.

A further key issue relates to the coordination of flightpaths between London City Airport and Heathrow. Removing Heathrow air traffic from the City Airport airspace would allow City aircraft to fly higher and would increase respite options. We recognise, however, that it may not be possible for entirely remove Heathrow aircraft from City airspace. It is therefore essential that Heathrow and London City Airport work closely together in the development of proposals for future flightpaths.

Striking the balance for a London-wide solution

Given the importance of London-wide coordination between Heathrow and London City Airport, it would seem to be appropriate to hold a meeting to consider this matter once Heathrow has published its proposals. Representatives from affected boroughs, London Councils and other key stakeholders could also be invited to attend.

In relation to the detailed proposals set out in the document, it is important to ensure that generally areas should avoid being overflown by both arrivals and departures. It would also appear that the tight turns proposed on easterly arrivals and westerly departures could prevent certain areas from receiving respite. There is also a balance that needs to be found between fuel savings and noise, but this issue requires more detailed study before conclusions can be reached.

Conclusion

The Liberal Democrat Group on the London Assembly welcome this consultation exercise, whilst recognising its limited scope. Further work is required by London City Airport to ensure that respite is incorporated in any proposals that are taken forwards, in relation to coordination between City and Heathrow airports, and on the balance between fuel savings and noise. Given that the results of this exercise might be the extension of flightpaths over wider geographical areas, it is essential that the planned full consultation exercise is designed to reach all the London communities who will be impacted by any proposals.

The issues raised in the engagement exercise have London-wide implications, particularly when the relationship between City Airport and Heathrow flightpaths is taken into account. I would therefore welcome the opportunity for further discussion with key stakeholders and representatives from City and Heathrow airports, particularly with regards to the coordination of flightpaths on a London-wide basis.

Yours sincerely,

Liberal Democrat London Assembly Member

1 CAP1616 Stage 2 Engagement Record: LCY-MoD via DAATM Technical Meeting 21st Dec 2021

1.1 Attendees:

DAATM: MoD Airspace Strategy

LCY: Technical Operations Development
Air Traffic Control Design Lead
NERL Air Traffic Control Advisor
Airspace Change Expert

Please consider this record complete if accompanied by the slide pack PDF.

1.2 Agenda (extract from presentation):

Agenda

- Welcome and introductions
- UK Airspace Modernisation Programme
- LCY Airspace Change Process progress so far
- Recap on Stage 1
- Stage 2 overview, deliverables and timescales
- Items to be presented to support proposed design concepts:
  - Interactions with other airports
  - Most frequent destinations and directions
  - Tips on how to read and provide comments on proposed design concepts
  - Reference tables – aircraft types, numbers, noise information
- **Airspace design concepts: description of the proposed systems**
- Recap and input required from stakeholders
- Next steps

1.3 Summary of Notes

Welcome and introductions.

The presentation was given, as per the agenda, by the LCY Airspace Change Expert and ATC Design Lead.

The airspace design concept maps were of primary interest; these were explained in detail by the LCY ATC Design Lead. During the presentation, RAF Northolt's operation was of interest to both parties.

DAATM explained that RAF Northolt was also progressing its FASI-S ACP and that the information provided in the presentation would be sent to the RAF Northolt team, to feed back to DAATM as part of DAATM's response to LCY on behalf of the MoD as a whole. The supplied PDF version of the slide pack, along with mapping-software data (Google Earth standard KMZ type) would suffice for DAATM to provide Stage 2 feedback in time for LCY's requested date of 17th Jan.

A feedback form will also be provided as part of the email finalising these notes.

AOB: None

DONM:
A second meeting was offered by LCY, and DAATM considered it unlikely to be necessary. However, should DAATM decide a meeting would be helpful, they will contact LCY and request a date to be set 11-15 Jan 2022.

Thanks and close

Actions:

1. LCY to distribute PDF of slide pack to LLA, including KMZ data and link to feedback form (Closed, with this email)

2. DAATM to decide whether another meeting is required in January 2022 (Open, DAATM)

3. DAATM to use the slide pack and feedback form to provide formal Stage 2 feedback to LCY by Mon 17 Jan 2022, with sketches and technical detail if necessary (Open, DAATM)

End of notes

1 CAP1616 Stage 2 Engagement Record: London City **LCY-NHT** RAF Northolt Bilateral Meeting 14th Feb 2022

1.1 Attendees:

NHT: ACP Lead RAF Northolt
Deputy ACP Lead RAF Northolt

ACOG: Airspace Change Technical Analyst

LCY: Head of Environment & Technical Operations
Air Traffic Control Design Lead
ATC Technical Advisor (Thames Radar)
ACP Lead Airspace Change Expert

Please consider this record complete if accompanied by the slide pack and layered map PDFs.

1.2 Agenda (extract from presentation):

Agenda

- Welcome and introductions
- UK Airspace Modernisation Programme
- LCY Airspace Change Process progress so far
- Recap on Stage 1
- Stage 2 overview, deliverables and timescales
- Items to be presented to support proposed design concepts:
  - Interactions with other airports
  - Most frequent destinations and directions
  - Tips on how to read and provide comments on proposed design concepts
  - Reference tables – aircraft types, numbers, noise information
- **Airspace design concepts: description of the proposed systems**
- Recap and input required from stakeholders
- Next steps

1.3 Summary of Notes

Welcome and introductions.
NHT made clear that the same presentation given to DAATM on 21st Dec 2021 was for their overview, and that this meeting was a bilateral between airports as per the Airspace Modernisation Strategy and Masterplan.

LCY understood. Clarification sought from LCY that feedback could be provided as soon as reasonably possible due to LCY Stage 2 documentation in progress, NHT stated they would oblige and provide feedback in this session and separately if required.

The presentation was given, as per the agenda, by the LCY ACP Lead and ATC Design Lead.

The airspace design concept maps were of primary interest; these were explained in detail by the LCY ATC Design Lead.

The presentation ended, NHT then provided an overview of their timeline, confirming their Stage 2 Gateway was planned for submission end Oct 2022 for the November assessment meeting.

NHT stated that they have many permutations of draft designs, and they are working with their ACP consultants to organise them into viable ways forward; until that point there is nothing to share. However, NHT will make appropriate arrangements for a bilateral meeting in due course, to discuss designs.

NHT provided feedback to LCY that the BPK area, as expected, will have interactions of interest for further discussion, however there was not enough detail available at this time to suggest specific design amendments.

NHT and LCY agreed that the mutual acknowledgement of this interaction was sufficient at this stage of the process. Flexibility of route design in the region was agreed to be key, and commitment remains on both sides to negotiate appropriate design solutions during Stage 3.

AOB:
None

DONM:
A second bilateral, for NHT to suggest dates in due course.

Thanks and close

Actions:

1. LCY to distribute PDF of slide pack and layered PDF map to NHT and ACOG, including feedback form (Closed)

2. NHT to use the slide pack and feedback form to provide additional Stage 2 feedback to LCY as soon as possible, preferably by Mon 21st Feb, with sketches and technical detail if necessary (Open)

End of notes

1 CAP1616 Stage 2 Engagement Record: LCY-NATMAC Organisations 1st Technical Meeting (21st Dec 2021)

1.1 Attendees:

National Air Traffic Management Advisory Committee (NATMAC) organisations:

Light Aircraft Association
EasyJet (rep. Low Fare Airlines)
UK Chief Pilot of EasyJet (rep. LFA)
CEO, British Helicopter Association

LCY: Technical Operations Development
NERL Air Traffic Control Advisor
Airspace Change Expert

Please consider this record complete if accompanied by the slide pack PDF.

1.2 Agenda (extract from presentation):

Agenda

- Welcome and introductions
- UK Airspace Modernisation Programme
- LCY Airspace Change Process progress so far
- Recap on Stage 1
- Stage 2 overview, deliverables and timescales
- Items to be presented to support proposed design concepts:
  - Interactions with other airports
  - Most frequent destinations and directions
  - Tips on how to read and provide comments on proposed design concepts
  - Reference tables – aircraft types, numbers, noise information
- **Airspace design concepts: description of the proposed systems**
- Recap and input required from stakeholders
- Next steps

1.3 Summary of Notes

Welcome and introductions.

The presentation was given, as per the agenda, by the LCY Airspace Change Expert and ATC Advisor. Due to technical difficulties, some individuals joined late and were welcomed into the discussion at an appropriate time; they were also assured that the slides would be supplied afterwards.
The airspace design concept maps were of primary interest; these were explained in detail by the LCY team.

During the presentation, LFA emphasized the importance of collaboration between all LTMA airports as the airspace change programme is complex and airport routes

interact with each other. LCY agreed, and clarified that ACOG (Airspace Change Organising Group) has an important role in this. LCY has already conducted several bilateral meetings with neighbouring airports, feedback from which will be addressed in LCY's Stage 2 documentation.

LAA asked about the impacts on EGML (Damyns Hall) airfield and if LCY seeks to use more airspace than before. LCY explained that LCY does not intend to need more airspace than it already uses, the intentions are to keep aircraft higher for longer subject to LHR`s airspace proposal, which are currently unknown.

BHA's main interests were potential impacts on the low level helicopter routes and associated rotary transits of London and the vicinity. LCY did not expect there to be any impacts on H4, the only heliroute within the LCY control zone, and also did not expect there to be any unmanageable zone transit impacts due to potential flightpath changes.

LCY reiterated that the slide pack would be supplied as a PDF after the meeting; and a link to an online feedback form will also be provided as part of the email finalising these notes.
LCY also asked attendees to mention/discuss/highlight this airspace change with colleague NATMAC organisations with whom they may be in touch over the Xmas period, and encourage their attendance at the second planned session.
Finally, LCY requested the parties to provide feedback by 17th January 2022 and LFA, BHA and LAA agreed to do so.

AOB: None

DONM:
A second NATMAC meeting has been set up by LCY for 11th Jan 2022, offered to all NATMAC representatives who were unable to attend this session (and for the same attendees, should they wish to attend again). Also, should an individual member organisation wish to have a 1-1 meeting, they will contact LCY and request a date to be set 11-15 Jan 2022.

Thanks and close

Actions:

1. LCY to distribute PDF of slide pack to attendees, including link to feedback form (Closed, with this email)

2. Member organisations to decide whether a 1-1 meeting is required in January 2022 (Open, NATMAC distribution)

3. Member organisations to use the slide pack and feedback form to provide formal Stage 2 feedback to LCY by Mon 17 Jan 2022, with sketches and technical detail if necessary (Open, NATMAC member organisations)

End of notes

1 CAP1616 Stage 2 Engagement Record: NATMAC Session 2 Meeting 11th January 2022

1.1 Attendees:

NATMAC: ARPAS
EasyJet (rep. Low Fare Airlines)
BALPA

LCY: Head of Sustainability
Air Traffic Control Design Lead

Please consider this record complete if accompanied by the slide pack PDF.

1.2 Agenda (extract from presentation):

Agenda

- Welcome and introductions
- UK Airspace Modernisation Programme
- LCY Airspace Change Process progress so far
- Recap on Stage 1
- Stage 2 overview, deliverables and timescales
- Items to be presented to support proposed design concepts:
  - Interactions with other airports
  - Most frequent destinations and directions
  - Tips on how to read and provide comments on proposed design concepts
  - Reference tables – aircraft types, numbers, noise information
- **Airspace design concepts: description of the proposed systems**
- Recap and input required from stakeholders
- Next steps

1.3 Summary of Notes

Welcome and introductions.

The presentation was given, as per the agenda, by the ATC Design Lead.

The airspace design concept maps were of primary interest; these were explained in detail by the LCY ATC Design Lead.

Q: Is any change anticipated at altitudes that would be likely to affect Unmanned Aircraft System Traffic Management (UTM) up to 400ft?

A: None anticipated at this stage; due to the proximity to the runway that these levels are flown it is unlikely that there will be any change.

Q: Proposed changes, especially re potential altitude gains, are likely to affect other airports' airspace. Were such proposals shared with them?
A: As per CAP1616, Stage 2 engagement includes communications with other airports in the form of bilateral meetings when each airport is offered the opportunity to share their current plans/draft options. Stage 3 is when airports ACP will need to align, and proposed solutions will be worked out together to maximise efficiencies.

Q: The current point merge has removed much of the need for holding. How this is accounted for in your proposal, particularly with regard to proposed additional arrival routes?
A: There would need to be some form of delay absorption for the additional routes. This could be achieved in a number of ways, however it is anticipated that this would take place above 7000ft and therefore is not directly a part of London City's ACP. Further assessment and engagement with NERL will be required in stage 3.

Q: The proposal to include respite routes for easterly arrivals is likely to impact more people than current routes. How is this considered in terms of env/noise impact?
A: These are currently only draft options and further assessment with the support of noise modelling will need to be carried out at Stage 3 to assess impacts and potential benefits to communities.

Thanks, and close

Actions:

1. Airlines to use the slide pack and feedback form to provide formal Stage 2 feedback to LCY **by Mon 17 Jan 2022,** with sketches and technical detail if necessary.

End of notes

Representative Type	Recorded in 2Ai, Duplicate or near-duplicate of other submission?	Do you have any comments with regards to Runway 09 System 1 ?	Do you have any comments with regards to Runway 09 System 2 ?	Do you have any comments with regards to Runway 09 System 3 ?	Do you have any comments with regards to Runway 27 System 1 ?	Do you have any comments with regards to Runway 27 System 2?	Do you have any futher comments in any aspect of the designs, or the process?
AIRLINE (SWISS)	Recorded	Minimization of fuel burn in arrival seems limited mostly to NW and S arrivals (least amount of traffic) (with shortcut) but not so much for E/NE arrivals (highest percentage of traffic). Noise distribution however seems to be fulfilled pretty good with the two downwind legs. Cannot comment if capacity is increased and on operational resilience.	The early turn for NW departures poses a slight safety hazard depending on how early it is required in order not to conflict with arrival traffic. Seems not to bring so much benefit over system 1 and the early right turn for NW departures seems like a con. Arrivals via north or south are maybe more a noise topic than bothering the airlines Cannot comment if capacity is increased and on operational resilience.	Is there a reason to route traffic from SE first via RAVSA (over the sea)to the north and then again southbound or would a more direct arrival with system 3 coming from the SE be feasable? Noisewise I could understand, routingwise coming from the SE it looks inefficient to fly that far north for a downwind south of the field to RW 09. Cannot comment if capacity is increased and on operational resilience. Generally this looks to me as the most efficient setup (if NW arrivals can be routed as intended).	Cannot comment if capacity is increased and on operational resilience.	Unsure if S bound departure in this system with left turn would increase capacity (otherwise DP4 would be a 3 as well). Cannot comment if capacity is increased and on operational resilience.	Thank you for your effort to achieve a more constant descent and more continuous climb with less track miles in the future. System 3 (RW09) and System 5 (RW27) look promising in terms of fuel, noise, pollution and time savings, within the given framework.
AIRPORT (GATWICK)	Recorded	The routeings to the south, close to BIG and DET VORs are of the interest to Gatwick as we can see potential interactions with our routeings northwards and east.	The routeings to the south, close to BIG and DET VORs are of the interest to Gatwick as we can see potential interactions with our routeings northwards and east. This option would force more LCY traffic southwards which could have negative impacts to airspace capacity in the sector, due to traffic from neighbouring airports. The proposal necessitates additional track miles for northerly traffic, which we think would result in additional fuel burn, CO2 emissions and noise impact.	The routeings to the south, close to BIG and DET VORs are of the interest to Gatwick as we can see potential interactions with our routeings northwards and east. This option would force more LCY traffic southwards which could have negative impact to airspace capacity in the sector, due to traffic from neighbouring airports.	The routeings to the south, close to DET VORs are of the interest to Gatwick as we can see potential interactions with our routeings northwards and east.	The routeings to the south, close to BIG and DET VORs are of the interest to Gatwick as we can see potential interactions with our routeings northwards and east. This option would force more LCY traffic southwards which could have negative impacts to airspace capacity in the sector, due to traffic from neighbouring airports.	The routeings to the south in both runway directions, close to BIG and DET VORs are of the interest to Gatwick as we can see potential interactions with our routeings northwards and east.
AIRPORT (SOUTHEND)	Recorded	Southend would welcome further bi-lateral meetings as part on the ongoing engagement process whereby the following operational technicalities may be discussed: - LCY CLN departures vs Southend BPK Departures; conflicts and delay mitigations. - Southend southerly departures; conflicts with point merge often necessitate climb restrictions to 3.0A. - LCY Shortcutting from the north vs Southend CLN and EVNAS departures; conflicts, delay and or climb restriction mitigation. - LCY arrivals from the north / north east vs Southend GEGMU arrivals; conflicts, delay and or descent restriction mitigation.	Southend would welcome further bi-lateral meetings as part on the ongoing engagement process whereby the following operational technicalities may be discussed: - LCY CLN departures vs Southend BPK Departures; conflicts and delay mitigations. - Southend southerly departures; conflicts with point merge often necessitate climb restrictions to 3.0A. - LCY Shortcutting from the north vs Southend CLN and EVNAS departures; conflicts, delay and or climb restriction mitigation. - LCY arrivals from the north / north east vs Southend GEGMU arrivals; conflicts, delay and or descent restriction mitigation.	Southend would welcome further bi-lateral meetings as part on the ongoing engagement process whereby the following operational technicalities may be discussed: - LCY CLN departures vs Southend BPK Departures; conflicts and delay mitigations. - Southend southerly departures; conflicts with point merge often necessitate climb restrictions to 3.0A. - LCY Southerly Departures vs Southend Southend DVR LYD departures; conflicts and delay mitigations. - LCY northern edge of the arrival route vs Southend CLN and BPK departures; conflicts, delay and or climb restriction mitigation.	Southend would welcome further bi-lateral meetings as part on the ongoing engagement process whereby the following operational technicalities may be discussed: - LCY CLN departures vs Southend BPK Departures; conflicts and delay mitigations. - Southend southerly departures; conflicts with point merge often necessitate climb restrictions to 3.0A. - LCY shortcutting from the north vs Southend CLN and EVNAS departures; conflicts, delay and or climb restriction mitigation. LCY arrivals from the north / north east vs Southend GEGMU arrivals; conflicts, delay and or descent restriction mitigation.	Southend would welcome further bi-lateral meetings as part on the ongoing engagement process whereby the following operational technicalities may be discussed: - LCY CLN departures vs Southend BPK Departures; conflicts and delay mitigations. - Southend southerly departures; conflicts with point merge often necessitate climb restrictions to 3.0A. - LCY shortcutting from the north vs Southend CLN and EVNAS departures; conflicts, delay and or climb restriction mitigation. LCY arrivals from the north / north east vs Southend GEGMU arrivals; conflicts, delay and or descent restriction mitigation.	As specified above.
LCACC	Near Duplicate (similar detail in separate submission)	The Dulwich to Vauxhall corridor. If half the aircraft were able to turn further west and so join their final approach further west this area would get respite – so, for example, planes on the more southerly respite route could make a less sharp turn and turn further to the west. This Dulwich to Vauxhall area is likely to get a lot of Heathrow arrivals, as it does today, so it would be important to give it some respite from London City aircraft.	This is a creative option but, without careful planning, it could result in a. some of the areas being overflown by arrivals and departues on the same day and b. some areas overflown under this option also overflown when a west wind is blowing.	Although we are not endorsing any one of the indicative schemes, we like the concept of the dilution of the routes in this scheme. As with the previous one, care would need to be taken that areas overflown on westerlies are not also overflown on easterlies. It would be improved if planes on the most southerly route could turn further west asnd so give the Dulwich - Vauxhall corridor more respite.	The North East area around Leyton, Leytonstone and Wanstead – the three (welcome) respite routes turn too early to provide this critical area with much respite. A wider, later and higher turn would deal with the problem.	As with the previous option, the turn is too tight to be of much benefit to the Leyton, Leytonstone and Wanstead areas, though the southern turn would provide some respite. Without careful planning, though, the southern turn could result in some areas south of the river getting London City planes on both easterlies and westerlies, as well as Heathrow aircraft.	We have three general comments below. We have also sent an email response, giving some more detail on these points and some others. It is best to read it in conjunction with this form. 1. Heathrow Airspace Removing Heathrow aircraft from the airspace would: Minimise the possibility of areas being overflown by planes from both airports Allow City aircraft to fly higher Increase the respite options There are some scenarios in the Systems as shown where the same community could have a LCY departure, a LCY arrival and a Heathrow arrival all directly overhead at the same time (as Heathrow operates westerly preference and London City does not). This is the kind of thing that
LCACC	Near Duplicate (more detail in separate submission)	DP0-3 we do not think you have provided information that would help community groups and non aviation specialists to make this assessment. In future consultations, perhaps you could provide references to evidence how the airport considers each System option has met these. DP4 - we have provided separate notes on the importance of Continuous Descent Approaches to the noise impact on the overflown. There appears to be a long approach stretch of level flight at 3000ft (shown in turquoise) which is not CDA. The respite approach route is an improvement on current system, but paths could be both further north and further south than shown (see our separate note), also flying a wider east-west curve to give alternatives in the area Dulwich to Vauxhall. If combined with 27 System 5 it creates double overflights by London City, against the DP 'avoid overflying communities with multiple routes including from other airports'. On the same principle, there is no mention that additional arrivals path crossing by Heathrow is being designed out, again see our separate note. DP5 and 6 - to minimise these, flights would need to land from and takeoff towards the the west as	DP0-3 we do not think you have provided information that would help community groups and non aviation specialists to make this assessment. In future consultations, perhaps you could provide references to evidence how the airport considers each System option has met these. DP4 - we have provided separate notes on the importance of Continuous Descent Approaches to the noise impact on the overflown. There appears to be a long approach stretch of level flight at 3000ft (shown in turquoise) which is not CDA. The respite approach route is an improvement on current system, but paths could be both further north and further south than shown (see our separate note), also flying a wider east-west curve to give alternatives in the tight low altitude curve NW of the airport. It appears to create double overflights by LCY for those communities under both an arrivals and a departure route. If combined with 27 System 4 or 5 it certainly creates double overflights by London City, against the DP 'avoid overflying communities with multiple routes including from other airports'. On the same principle, there is no mention that additional arrivals path crossing by Heathrow is	Wider dispersal of arrivals and departures looks in general to be a fairer way of spreading adverse environmental impact. DP0-3 we do not think you have provided information that would help community groups and non aviation specialists to make this assessment. In future consultations, perhaps you could provide references to evidence how the airport considers each System option has met these. DP4 - we have provided separate notes on the importance of Continuous Descent Approaches to the noise impact on the overflown. If CDA from both north and south is adopted this would be an improvement. The southerly respite approach route looks too small to be effective, the routes need to have wider separation to make a difference on the ground at these altitudes. Paths could be flying a wider east-west curve to give alternatives in the tight low altitude curve SW of the airport. Approach paths could come in from further NW and further SW than shown, to spread environmental impact wider and more fairly. It appears to create some double overflights by LCY for those communities under both an arrivals and a departure route. If combined with 27	DP0-3 we do not think you have provided information that would help community groups and non aviation specialists to make this assessment. In future consultations, perhaps you could provide references to evidence how the airport considers each System option has met these. DP4 arrival routes provide dispersal of environmental impact. Low level takeoff noise appears similar to today. We understand that tight turns spread noise over a wider area, and perhaps the takeoffs should be gaining more height in a straight line before initiating noisy turns to the east and south east. This would disperse takeoff noise more fairly and create wider gaps between routes, creating meaningful noise difference on the ground. It is notable how much steeper the CDA descent profile is to any of the 09 options. we are concerned about the design of double overflights by combined 09 and 27 options, and also about Heathrow paths above those. Against the design principle 'avoid overflying communities with multiple routes including from other airports'. DP5 and DP6 the tight climbing turns on takeoff cannot be seen to be minimising either air	DP0-3 we do not think you have provided information that would help community groups and non aviation specialists to make this assessment. In future consultations, perhaps you could provide references to evidence how the airport considers each System option has met these. DP4 In isolation this option disperses routes well. Low level takeoff noise appears similar to today. We understand that tight turns spread noise over a wider area, and perhaps the northerly takeoffs should be gaining more height in a straight line before initiating noisy turns to the east and south east. It is notable how much steeper the CDA descent profile is to any of the 09 options. we are very concerned about the designing in of of double arrival and departure overflights by combined 09 and this 27 options, and also about Heathrow paths above those. Against the design principle 'avoid overflying communities with multiple routes including from other airports'. DP5 and DP6 the tight climbing turns on takeoff cannot be seen to be minimising either air pollution or fuel/CO2 emissions.	The 09 and 27 Systems in isolation are easier to assess than the combination of any two. But it is already clear that consultations need to spell out the double impact of westerly and easterly operations in some way. The airport needs to explain clearly how, in both its proposed 09 and 27 operations, and by taking into account Heathrow arrival paths over the same communities. it meets the DP which it shares with Heathrow of 'avoid overflying communities with multiple routes including from other airports'.

LOCAL GOV	Recorded	No comment	No comment	No comment	No comment	No comment	No comment
LOCAL GOV (SEVENOAKS DC)	Recorded	None	None				Sevenoaks District Council would support changes that make the existing system more efficient. Anything that broadens the area affected by the noise and pollution of the planes, would impact more people and would not be supported.
MOD (DAATM)	Recorded	Where response is 'neither agree nor disagree', it is not clear from the presentation that/how the DP is met.	Where response is 'neither agree nor disagree', it is not clear from the presentation that/how the DP is met.	Where response is 'neither agree nor disagree', it is either not clear from the presentation that/how the DP is met, or the benefits to departures are offset by impact on arrivals.	Where response is 'neither agree nor disagree', it is not clear from the presentation that/how the DP is met. This was taken as system 4 from the presentation.	Where response is 'neither agree nor disagree', it is not clear from the presentation that/how the DP is met. This was taken as system 5 from the presentation.	I am assuming that all designs are at least as safe as current procedures and that they all comply with laws and regulations, but I cannot determine from the presentation that those assumptions are true. The MOD encourages continued engagement with DAATM and RAF Northolt throughout the process.
NATMAC (BRITISH HELI ASSOC)	Recorded	No	No	No	No	No	Apologies for giving the same answer to all options but I do not have the time to refresh myself on all the options. They all would not give helicopter operators any problems so it is best left to yourself and the users of LCY to decide what the optimum solution is