

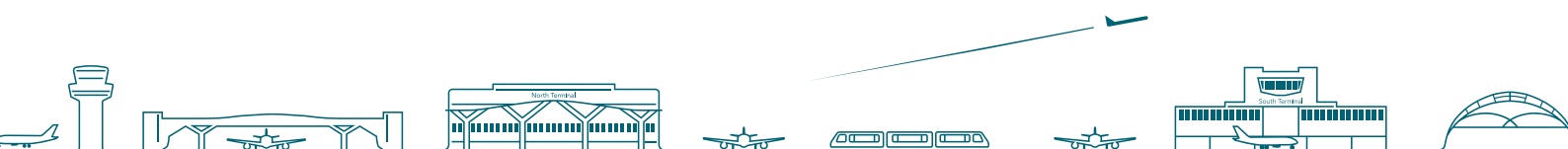
Appendix 2-1

Consolidated Stakeholder Feedback DPv0-2

Aviation Industry-Ref 1-47

1 Kenley - Design Principle Development - Part 2 EGTO - 20190429

I am the Aerodrome Operator and represent RAF Kenley, which is just to the North (but inside the M25) of Gatwicks controlled airspace. Whilst I haven't yet seen the actual changes to routes and actual airspace dimensions, I am concerned about any expansion to the North. The areas around Biggin Hill and RAF Kenley are already very congested as it is for GA traffic, and I would wish to avoid any increase in controlled airspace to the North below 2500ft AMSL.



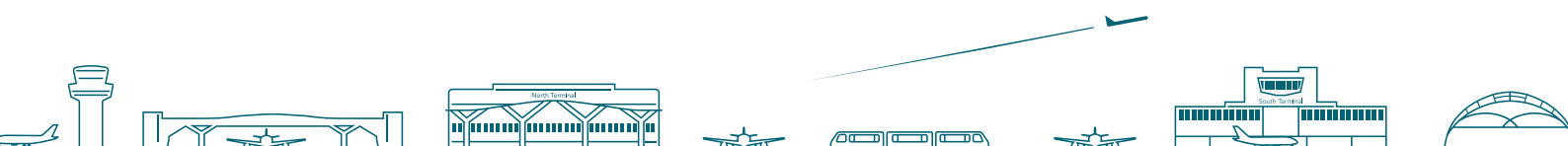
6 Franborough Feedback - Outline Design Principles - V0-2-1A - Public - 20190516

Section 4 - Feedback Question Summary

As part two of our engagement on design principles we are asking for specific feedback on the following questions:

1	<p>Should Gatwick include a principle that seeks to create an airspace design that aims to limit and where possible seek to reduce the adverse impacts of aircraft noise?</p> <p>Additional comments: _____</p>	<p>YES <input type="checkbox"/> / NO <input type="checkbox"/></p>
2	<p>Should Gatwick adopt the design principle to limit adverse noise impacts as a core principle?</p> <p>Additional comments: _____</p>	<p>YES <input type="checkbox"/> / NO <input type="checkbox"/></p>
3	<p>Do you agree with the adjustments to the following design principles:</p> <ul style="list-style-type: none"> a. Safer by Design b. Long-term Predictability & Adaptation c. Optimise Use of Aircraft Capabilities d. Deconfliction by Design <p>Additional comments: _____</p>	<p>YES <input type="checkbox"/> / NO <input type="checkbox"/></p> <p>YES <input type="checkbox"/> / NO <input type="checkbox"/></p> <p>YES <input type="checkbox"/> / NO <input type="checkbox"/></p> <p>YES <input type="checkbox"/> / NO <input type="checkbox"/></p>
4	<p>Should Gatwick adopt a principle to 'Build in Resilience' where practical?</p> <p>Additional comments: _____</p>	<p>YES <input type="checkbox"/> / NO <input type="checkbox"/></p>
5	<p>Should Gatwick adopt a principle of 'Locally Tailored Designs'?</p> <p>Additional comments: _____</p>	<p>YES <input type="checkbox"/> / NO <input type="checkbox"/></p>
6	<p>Do you believe any of the six non-core design principles warrant a higher relative priority?</p> <p>Please explain why: _____</p> <p>_____</p> <p>_____</p>	<p>YES <input type="checkbox"/> / NO <input checked="" type="checkbox"/></p>

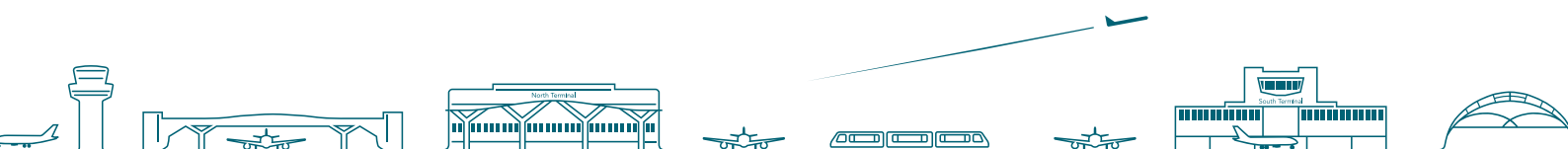
Please provide your responses to these questions by **18:00** on **17 May** by emailing: LGWairspace.FASIS@gatwickairport.com



8 Rochester - Design Principle Development - Part 2 EGTO - 20190429

Please find Rochester Airport's response below:

- 1 Should Gatwick include a principle that seeks to create an airspace design that aims to limit and where possible seek to reduce the adverse impacts of aircraft noise? Y E S
 - 2 Should Gatwick adopt the design principle to limit adverse noise impacts as a core principle? YES
 - 3 Do you agree with the adjustments to the following design principles:
 - a. Safer by Design? Y E S
 - b. Long-term Predictability & Adaptation? Y E S
 - c. Optimise Use of Aircraft Capabilities? Y E S
 - d. Deconfliction by Design? Y E S
 - 4 Should Gatwick adopt a principle to 'Build in Resilience' where practical? YES
 - 5 Should Gatwick adopt a principle of 'Locally Tailored Designs'? YES
- Additional comments: With the awareness of not impacting on GA below 2,500.
- 6 Do you believe any of the six non-core design principles warrant a higher relative priority? NO



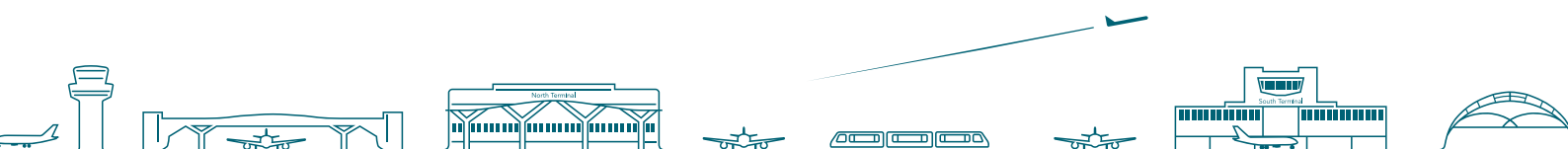
15 BA-IAG Airspace Principles Engagement Feedback _IAG Response 20190517

Introduction

1. International Airlines Group (IAG) is pleased to submit further comments to Gatwick Airport Limited (GAL) in response to the proposed shortlist of key design principles and priorities for how Gatwick designs its future airspace.
2. In March 2019, GAL published an initial list of proposed design principles (DPs) to engage and elicit feedback from the industry. IAG responded on 5th April 2019, providing a company overview, general views on the urgent need for air-space modernisation and feedback on each of the example DPs. This response now focusses on GAL's refined DPs but for the avoidance of doubt, IAG still stands by all comments submitted in its original response.

Executive Summary

3. IAG appreciates that many of the comments submitted in its original response have been considered. Notwithstanding further observations contained in this response, we are broadly in favour of GAL's refined DP's and prioritisations which are set out very clearly.
4. **IAG must stress the importance of maximising airspace capacity, efficiency and resilience** across all TMA airports and at a network level. We consider this to be a core requirement second only to safety principles when it comes to modernising UK airspace. IAG is pleased that GAL have included a specific principle to 'Build in Resilience' but we believe that **maximising airspace capacity and safeguarding enough headroom capacity and redundancy in the system warrants more emphasis and a higher relative priority**. This is the key to unlocking everything else, including resilience and other operational efficiencies, enhanced safety/technical standards, reduced noise, acceptable day-to-day levels of performance and minimal delays, improved environmental/economic performance, and reduced impacts on other users. This is also linked to our recommendation to consider a DP that **maximises benefits for consumers**.
5. IAG proposed a standalone principle related to minimising noise and meeting any noise policy tests. This was based on having an equivalent standalone principle sitting within or alongside (at an equivalent priority level) related to **optimising fuel performance and minimising carbon and greenhouse gas emissions**. Whilst the former has been incorporated, we are not sufficiently convinced by GAL's claim that the latter is explicit in the other DP's. The 'Optimise Use of Aircraft Capabilities' principle talks of improving environmental performance. This is fine, but it does not adequately single out the need to mitigate the impact of aircraft emissions on local air quality, or therefore deal with the **balanced approach needed when trading between fuel burn and noise**. Similarly, the 'Locally Tailored Design' principle focuses on noise over other environmental impacts. The 'Deconfliction by Design' principle at least considers airline concerns related to unreasonably long flight tracks but is only focussed on departures.
6. Regular interfaces between NATS, airports and aircraft operators will be a key element of the design process. Importantly, the **Gatwick ACP must encompass collaborative engagement links with LAMP2 and sponsors of other low-level airspace changes**, with gateways/milestones agreed with industry to ensure delivery. We will be reliant on a strong governance framework and Government enforcement mechanisms to secure the commitment required by all stakeholders to manage all the programme risks in a more expedient, dynamic and focussed way, with full integration across a variety of technical disciplines and full alignment of ACP's across different organisations.



15 BA-IAG Airspace Principles Engagement Feedback _IAG Response 20190517

Feedback Questions

Qu 1: Should Gatwick include a principle that seeks to create an airspace design that aims to limit and where possible seek to reduce the adverse impacts of aircraft noise?

7. **YES:** IAG suggested that a principle related to minimising noise and meeting noise policy tests should be considered in its response of 5th April. We therefore agree with the inclusion of this principle.
8. However, IAG suggested this on the basis of optimising environmental performance and therefore this principle should sit alongside an explicit standalone principle related to minimising emissions and meeting local air quality tests (at an equivalent priority level). Alternatively, a principle covering both noise and emissions could be combined under a single 'environmental performance' banner. The other DP's all work fine, but they do not adequately single out the need to mitigate the impact of aircraft emissions on local air quality. They therefore do not draw out the balanced approach that needs to be applied when trading between fuel burn and noise.

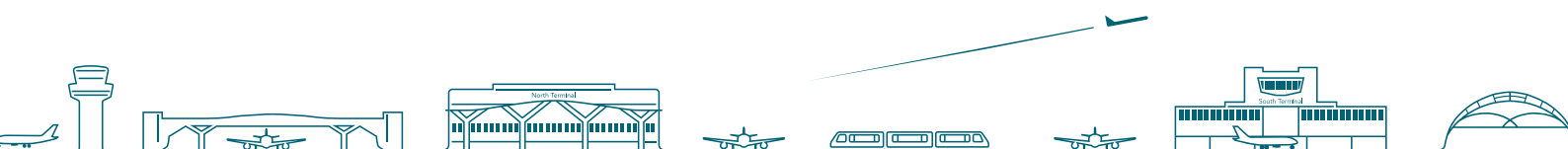
Qu 2: Should Gatwick adopt the design principle to limit adverse noise impacts as a core principle?

9. **MAYBE:** If there is a need to meet noise policy tests then this should be a core principle. If there is a need to meet local air quality tests, then this too should be a core principle (**See Para 8**).
10. If this principle is purely about limiting adverse noise impacts, then it could sit as high priority item amongst the other DP's. The same could be said for the suggested equivalent principle on limiting adverse air quality impacts (**See Para 8**).

Qu 3: Do you agree with the adjustments to the following design principles?

- Safer by Design
- Long-term Predictability & Adaption
- Optimise Use of Aircraft Capabilities
- Deconfliction by Design

11. **Safer by Design – YES MOSTLY:** IAG strongly agrees that safety is a fundamental requirement of the industry. We agree that enhancements should not have a disproportionately detrimental impact on other benefits, provided that safety is never compromised by any restraints toward the application of enhancements. Any design must be able to handle the anticipated growth in UK air traffic levels with levels of safety that are at least equivalent to today.
12. **Long-term Predictability & Adaption – YES:** IAG supports the adjustment to this principle.



15 BA-IAG Airspace Principles Engagement Feedback _IAG Response 20190517

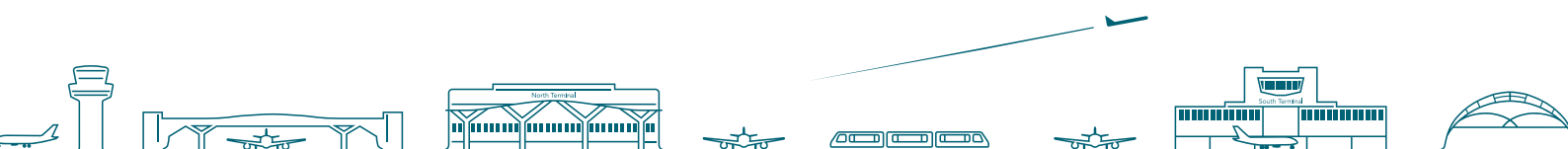
13. **Optimise Use of Aircraft Capabilities – YES MOSTLY:** IAG supports the adjustment to this principle however, we are concerned that across all the proposed DP's, there is nothing which adequately singles out the need to mitigate the impact of aircraft emissions on local air quality and therefore deal with the balanced approach needed when trading between fuel burn and noise (See Para 8).
14. **Deconfliction by Design – YES MOSTLY:** IAG supports the adjustment to this principle however, this DP should recognise the potential adverse impact of significantly longer departure and arrival routes. As it stands, this principle only focuses on departure routes as currently stated.

Qu 4: Should Gatwick adopt a principle to 'Build in Resilience' where practical?

15. **YES:** IAG welcomes the inclusion of a principle based on building in resilience. It is vital to safeguard headroom capacity and redundancy in the system to cope with anticipated growth in traffic, with the same levels of safety and increased operational resilience.
16. IAG believes that maximising capacity and safeguarding sufficient headroom capacity and redundancy across all TMA airports and at a network level is the key to unlocking everything else. This therefore warrants more emphasis and should be second only to safety principles in terms of relative priority levels.
17. We must stress that the need for resilience is not only be about ensuring airspace is designed to enable recovery from disruption on a bad day (as implied in the stated 'Resilience Built In' principle). It should also be about managing day-to-day traffic with minimal ATM related delays and cancellations.

Qu 5: Should Gatwick adopt a principle of 'Locally Tailored Designs'?

18. **YES:** IAG agrees with the inclusion of a principle based on locally tailored designs, although a degree of balance is also required here in delivering an improved system for consumers in terms of minimising delays and maximising safety, operational efficiency and resilience on a sustainable basis.
19. As mentioned in our feedback of 5th April 2019, IAG carriers are prepared to operate airspace as informed by local circumstances, providing it does not limit or constrain throughput or compromise trajectories and entry/exit point links with upper airspace. In the interests of efficient operations, this should not result in unreasonably long flight tracks or steep turns and climb gradients, especially as this often has detrimental consequences for noise and emissions. Whilst Government policy prioritises noise over carbon emissions below 7,000ft this DP should also reflect that there is a provision for CAA intervention to address disproportionate increases in carbon emissions, and that there are international obligations and commitments made by both Governments and industry to mitigate against climate change issues.
20. Safety and the capability of aircraft must also be considered here, with the technology road map required to meet performance and navigational needs for the LTMA identified, e.g. the equipage and crew training needed to meet potential long-term technical, design and airspace change deployment mandates. Whilst we believe current equipage levels should be sufficient to deliver an 'appropriate standard of PBN', we would be somewhat wary of the proposals for multiple flight paths. We would hope the number of options would be limited both to simplify flight planning,

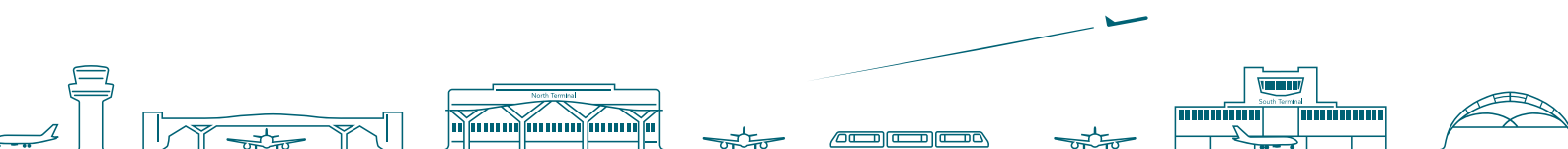


15 BA-IAG Airspace Principles Engagement Feedback _IAG Response 20190517

Flight Management System management and crew issues and to minimise conflict (and a reduction in capacity) at LTMA airfields, including LGW. Engagement and involvement of NATS and other sponsors of airspace change below 7,000ft is essential for avoiding sub-optimal designs here.

Qu 6: Do you believe any of the six design principles warrants a higher relative priority?

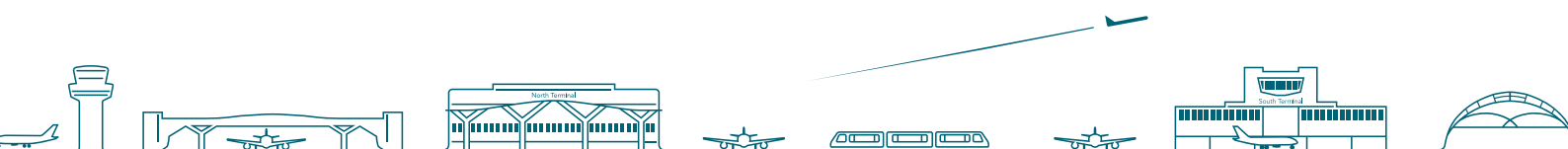
21. **YES:** Please refer to the IAG response to Question 12 in or original response. We believe that all principles related to maximising capacity, operational efficiency and operational resilience warrant a higher relative priority, second only to safety principles and objectives. Indeed, meeting capacity requirements would be a core requirement for any future airport or airspace modernisation developments designated to be of national significance.
22. Principles related to optimising environmental performance (a balanced approach to limiting the adverse impacts of both noise and emissions) and use of the latest technological developments also warrant a higher relative priority.



17 easyJet feedback to FASI-S questionnaire - 20190514

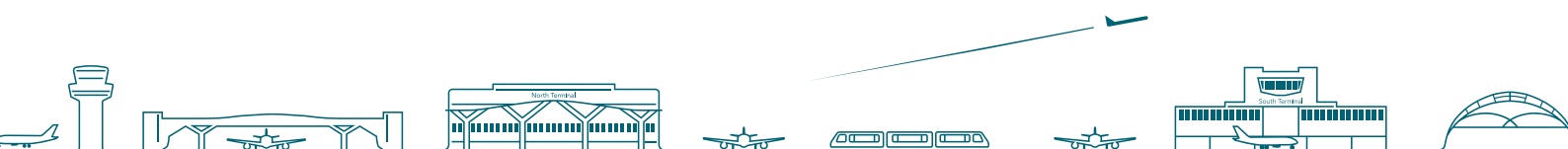
As part two of our engagement on design principles we are asking for specific feedback on the following questions:

- 1 Should Gatwick include a principle that seeks to create an airspace design that aims to limit and where possible seek to reduce the adverse impacts of aircraft noise? YES / NO
- Additional comments: airspace design should accommodate the higher rates of climb available in new, modern aircraft.
- 2 Should Gatwick adopt the design principle to limit adverse noise impacts as a core principle? YES / NO
- Additional comments: aviation should consider its neighbours and facilitate procedures which takes the noise away from the ground as quickly as possible.
- 3 Do you agree with the adjustments to the following design principles:
 a. Safer by Design
 b. Long-term Predictability & Adaptation
 c. Optimise Use of Aircraft Capabilities
 d. Deconfliction by Design
 YES / NO
 YES / NO
 YES / NO
 YES / NO
- Additional comments: _____
- 4 Should Gatwick adopt a principle to 'Build in Resilience' where practical? YES / NO
- Additional comments: Resilience is key to recovering stability which minimises the overall impact of noise caused by late turning aircraft.
- 5 Should Gatwick adopt a principle of 'Locally Tailored Designs'? YES / NO
- Additional comments: whereby locally tailored is fully integrated with LHR but which also recognises the variations in types of flying between the 2 airports.
- 6 Do you believe any of the six non-core design principles warrant a higher relative priority? YES / NO
- Please explain why: 'c' - optimum use of aircraft design This has been disregarded to tend towards always accommodating the lowest common denominator to the detriment of the norm. In other words, design something which 95% of flights can accomplish and retain an option for the few that are performance constrained to meet demanding climb profiles.



18 Emirates - Airspace Modernisation - EGKK - response to 2nd questionnaire - 20190514

Q.	Y / N	Remarks
1	YES	Our expectation is that noise abatement procedures will be an integral design feature of all future flight paths
2	NO	Limiting / reducing the effects of noise is worth aiming for, however, with modern aircraft becoming increasingly quieter together with the emphasis on environmental issues in general, it doesn't warrant being a core principle as there is sufficient awareness of the topic to ensure it is addressed anyway.
3	YES	
4	YES	
5	YES	
6	NO	



21 Norwegian - Design Principle Development - Part 2 - 20190503

Please find our response to your request for feedback on the Airspace Modernisation - Outline Design Principles V0-2-1A - 20190426 document as part of the airspace design consultation process.

Section 4

1. Yes

2. No

3a. Yes

3b. Yes

3c. Yes

3d. Yes

4. Yes.

The design of future airspace should deliver a robust and resilient operating environment, whereby daily flight operations are materially unaffected by a degradation in meteorological conditions (such as low visibility and thunderstorms) or technical failures.

Adequate contingency measures should be provided in order to protect and maintain the operational efficiency of the airport and surrounding airspace.

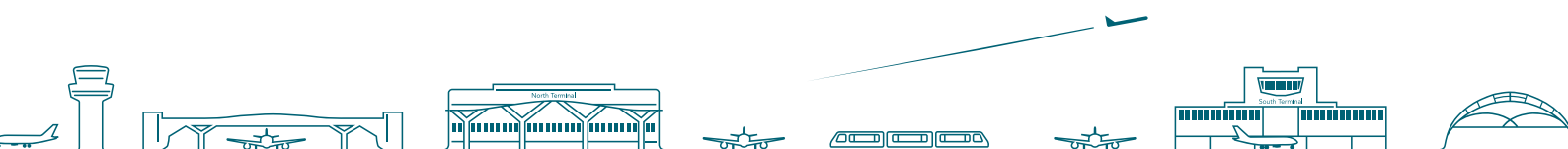
5. Yes.

The airspace design should incorporate the most suitable design principles best suited for Gatwick and its locality. Any locally tailored designs should meet internationally recognized airspace design standards.

6. Yes.

Resilience Built in. Norwegian operates an intensive flight schedule spanning a global route network. For this operation to succeed, we require high standards of punctuality under all operating conditions across our entire route network.

This is particularly important for passengers with onward flight connections.

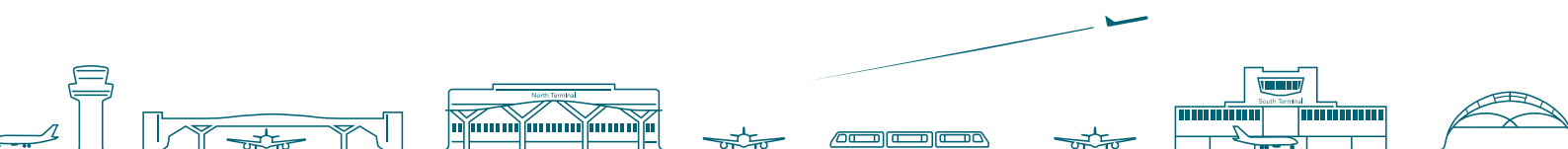


25 Thomas Cook Feedback DP2 - 20190516

I am responding to the 6 questions asked in the document Airspace Modernisation – Gatwick Airport.

1. Yes
2. Yes
3. Yes
4. Yes
5. Yes
6. No

Additional Comments: The 6 non-core design principles are of equal merit and all should be considered.

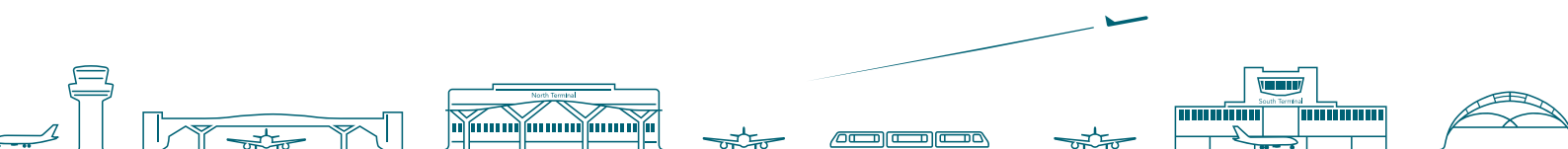


26 TUI - Airspace Modernisation - Gatwick - Outline Design Principles - 20190514

Section 4 - Feedback Question Summary

As part two of our engagement on design principles we are asking for specific feedback on the following questions:

1	<p>Should Gatwick include a principle that seeks to create an airspace design that aims to limit and where possible seek to reduce the adverse impacts of aircraft noise? YES <input checked="" type="checkbox"/> / NO <input type="checkbox"/></p> <p>Additional comments: <u>While clearly desirable for local communities, and supported by us, care must be taken to ensure that concentrating on aircraft noise does not reduce some of the other benefits and advantages that may be afforded by this change.</u></p>
2	<p>Should Gatwick adopt the design principle to limit adverse noise impacts as a core principle? YES <input type="checkbox"/> / NO <input checked="" type="checkbox"/></p> <p>Additional comments: <u>Danger that inclusion of this principle will have a significant adverse effect on attempts to produce a design that maximises support for the other design principles.</u></p>
3	<p>Do you agree with the adjustments to the following design principles:</p> <ul style="list-style-type: none"> a. Safer by Design YES <input checked="" type="checkbox"/> / NO <input type="checkbox"/> b. Long-term Predictability & Adaptation YES <input checked="" type="checkbox"/> / NO <input type="checkbox"/> c. Optimise Use of Aircraft Capabilities YES <input checked="" type="checkbox"/> / NO <input type="checkbox"/> d. Deconfliction by Design YES <input checked="" type="checkbox"/> / NO <input type="checkbox"/> <p>Additional comments: _____</p>
4	<p>Should Gatwick adopt a principle to 'Build in Resilience' where practical? YES <input checked="" type="checkbox"/> / NO <input type="checkbox"/></p> <p>Additional comments: <u>This should be a priority.</u></p>
5	<p>Should Gatwick adopt a principle of 'Locally Tailored Designs'?' YES <input checked="" type="checkbox"/> / NO <input type="checkbox"/></p> <p>Additional comments: <u>This will benefit local communities. However, should not be at the expense of increased flight time / track milage which would have further environmental impact in terms of emissions etc.</u></p>
6	<p>Do you believe any of the six non-core design principles warrant a higher relative priority? YES <input checked="" type="checkbox"/> / NO <input type="checkbox"/></p> <p>Please explain why: <u>Resilience built in - We have seen time and again that there are many factors that can affect and disrupt operations at LGW. Resilience is required to protect the program and ensure we prevent excessive delays.</u></p>



29 Virgin Feedback of Gatwick Design Principles - 20190517

Please see responses below to the latest round of questions seeking further feedback, as per document dated 26 April 2019;

1

Should Gatwick include a principle that seeks to create an airspace design that aims to limit and where

possible seek to reduce the adverse impacts of aircraft noise? YES

Additional comments: This principle should be followed, unless it becomes impractical to introduce necessary airspace changes as part of the overall airspace modernisation programme.

2

Should Gatwick adopt the design principle to limit adverse noise impacts as a core principle? YES

Additional comments: We agree with the principle unless this adversely limits the ability for Gatwick Airport to make any required airspace changes.

3

Do you agree with the adjustments to the following design principles:

a. Safer by Design YES

b. Long-term Predictability & Adaptation YES

c. Optimise Use of Aircraft Capabilities YES

d. De-confliction by Design YES

Additional comments: We understand that Gatwick Airport may find it necessary to adjust or modify the design principles in order to meet broader acceptance.

4

Should Gatwick adopt a principle to 'Build in Resilience' where practical? YES

Additional comments: Having resilience in the system is critical in order to avoid or at least minimise major operational disruption when applicable.

5

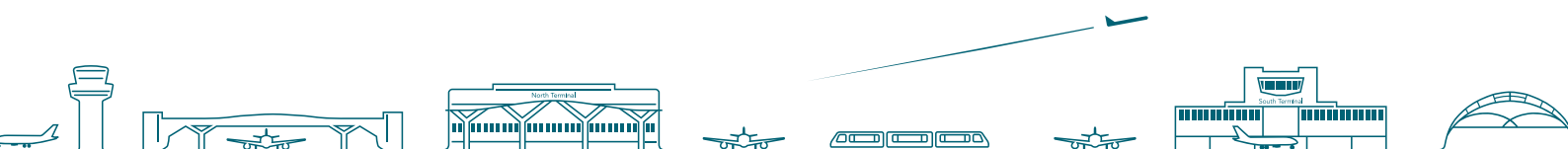
Should Gatwick adopt a principle of 'Locally Tailored Designs'? YES

Additional comments: Provided any designs do not negatively impact on the overall airspace efficiency of the S.E. UK and surrounding airports.

6

Do you believe any of the six non-core design principles warrant a higher relative priority? YES

Please explain why: Potentially 'Resilience Built in' along with 'Predictable & Adaptable Routes' could warrant higher priority.

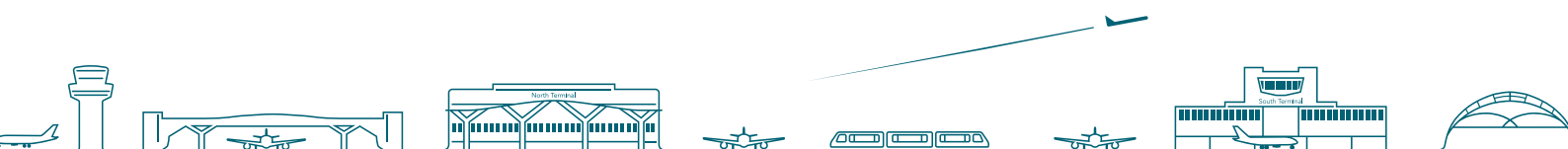


33 Biggin Hill GATWICK FEEDBACK from BIGGIN HILL AIRPORT (002)

FEEDBACK from BIGGIN HILL AIRPORT - 9th May 2019

- | | | |
|---|--|--------------------------------|
| 1 | Should Gatwick include a principle that seeks to create an airspace design that aims to limit and where possible seek to reduce the adverse impacts of aircraft noise? | YES / <input type="checkbox"/> |
| 2 | Should Gatwick adopt the design principle to limit adverse noise impacts as a core principle? | YES / <input type="checkbox"/> |
| 3 | Do you agree with the adjustments to the following design principles? | |
| | a. Safer by Design | YES / <input type="checkbox"/> |
| | b. Long-term Predictability & Adaptation | YES / <input type="checkbox"/> |
| | c. Optimise Use of Aircraft Capabilities | YES / <input type="checkbox"/> |
| | d. Deconfliction by Design | YES / <input type="checkbox"/> |
| 4 | Should Gatwick adopt a principle to 'Build in Resilience' where practical? | YES / <input type="checkbox"/> |
| 5 | Should Gatwick adopt a principle of 'Locally Tailored Designs'? | YES / <input type="checkbox"/> |
| 6 | Do you believe any of the six non-core design principles warrant a higher relative priority? | YES / NO |

Additional Comments: In principle, London Biggin Hill would like to endorse the developed Design Principles of Gatwick Airport, which will be incorporated into this complicated but essential ACP. Whilst we fully understand the benefits which can be achieved through the development of the airspace, it is crucial that a collaborative approach is maintained by both airports, since London Biggin Hill is also involved in the reorganisation of the airspace in the same London Airspace. This will ensure that there is a fair balance of the environmental gains to be made by both airports in accordance with your proposed Design Principles.



35 Heathrow response to Gatwick follow up design principles -DP2 - 20190516

Heathrow Airport response to Gatwick Airport's Design Principle Development, Part 2

Thank you for the opportunity to comment further on Gatwick's outline design principles in support of Gatwick's plans to modernise its airspace.

Overall, we believe the design principles capture the broad set of issues that matter to stakeholders. While the high-level title of each design principle is clear, some of the descriptions are slightly ambiguous to an uninformed reader. This could lead to potential differences in interpretation by Gatwick's stakeholders, and potentially could give rise to difficulties when Gatwick carries out its design principle evaluation process of the route design options.

Our responses to the individual questions posed by Gatwick's document are set out below. We have only added comments where we believe further clarification is required.

Questions

1. ***Should Gatwick include a principle that seeks to create an airspace design that aims to limit and where possible seek to reduce the adverse impacts of aircraft noise?***

Yes.

Comment:

Gatwick may wish to consider exploring further how their local communities would prioritise minimising those newly overflowed, minimising the total number overflowed, overflight of urban, vs rural areas.

2. ***Should Gatwick adopt the design principle to limit adverse noise impacts as a core principle?***

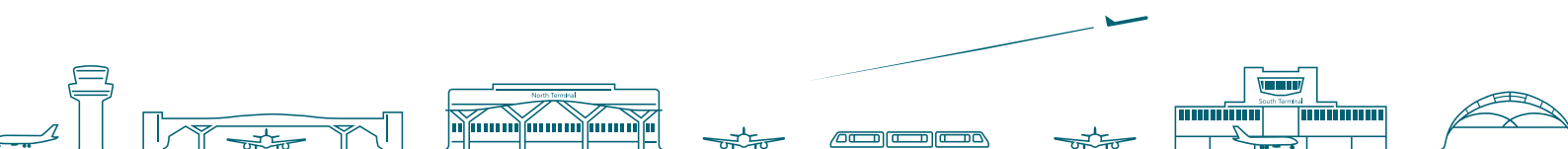
We do not think that it is appropriate for Heathrow Airport to determine whether this is a core principle for Gatwick Airport.

3. ***Do you agree with the adjustments to the following design principles***

- | | |
|--|-----|
| a. <i>Safer by Design</i> | Yes |
| b. <i>Long-term Predictability & Adaptation</i> | Yes |
| c. <i>Optimise Use of Aircraft Capabilities</i> | Yes |
| d. <i>Deconfliction by Design</i> | Yes |

Comment:

The description of the 'Deconfliction by Design' principle is particularly complicated, incorporating a number of elements: deconfliction of routes below 7,000ft by design; avoiding multiple overflights



35 Heathrow response to Gatwick follow up design principles -DP2 - 20190516

by arriving / departing flights; avoiding communities being overflow by flights from more than one airport, all whilst trying to ensure that departure tracks are not significantly extended as a result. Gatwick may wish to consider engaging with its stakeholders to determine which of these elements is of a higher priority so as to assist Gatwick when it comes to undertaking the design principle evaluation process.

4. *Should Gatwick adopt a principle to 'Build in Resilience' where practical?*

Yes

Comment:

Building in resilience into airspace design will enable Gatwick to recover from unexpected events, and will also deliver network benefits.

5. *Should Gatwick adopt a principle of 'Locally Tailored Designs'?*

Yes

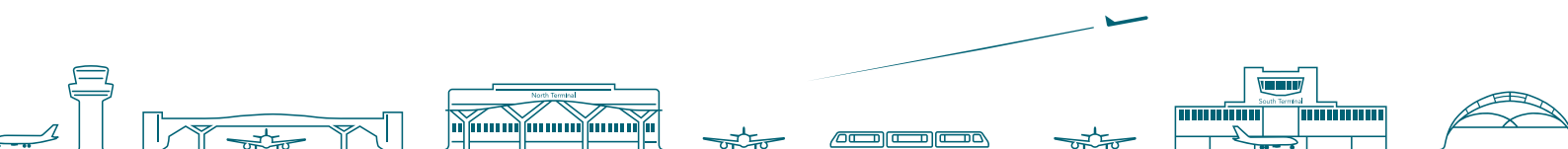
Comment:

We agree with Gatwick's intention behind this design principle; that a one-size fits all approach may not be appropriate when it comes to considering each of the issues captured. We agree that different stakeholders will place differing degrees of prioritisation on each issue and therefore it is not easy to present each of the issues as a prioritised list. However, we think that the description as currently worded may not be clear enough to enable Gatwick to apply a consistent methodology during the design principle evaluation phase. Gatwick should consider providing further clarity on how it intends to apply this principle.

6. *Do you believe any of the six non-core design principles warrant a higher relative priority? Why?*

No comment

Please do not hesitate to contact me if you wish to discuss any of our comments further.



38 ANS FASI responses DP0-2 - 20190517

1. Should Gatwick include a principle that seeks to create an airspace design that aims to limit and where possible seek to reduce the adverse impacts of aircraft noise?

Yes, as a basic underlying principle this should be the one of the key foundations of proposed designs

2. Should Gatwick adopt the design principle to limit adverse noise impacts as a core principle?

No not necessarily – operational requirements have to be critical with the aim to meet noise reductions as a key rather than core function

3. Do you agree with the adjustments to the following design principles?

- a. Safer by Design

Yes – the change underpins the previous principle improving it overall

- b. Long-term Predictability & Adaptation

Yes -if future proofing and real strategy in design is possible it absolutely should be incorporated. There is some question as to whether this is possible with the extremely long timescales associated with airspace regulation. Changes in industry from economics to development happen in a much a quicker time window.

- c. Optimise Use of Aircraft Capabilities

Yes – with the caveat that flexibility should be maintained to ensure an efficient network can be delivered for all

- d. Deconfliction by Design

Yes – in principle ANSL agree however if this principle builds in additional complexity in attempting to reach its goal this will detract from the overall effectiveness.

4. Should Gatwick adopt a principle to 'Build in Resilience' where practical?

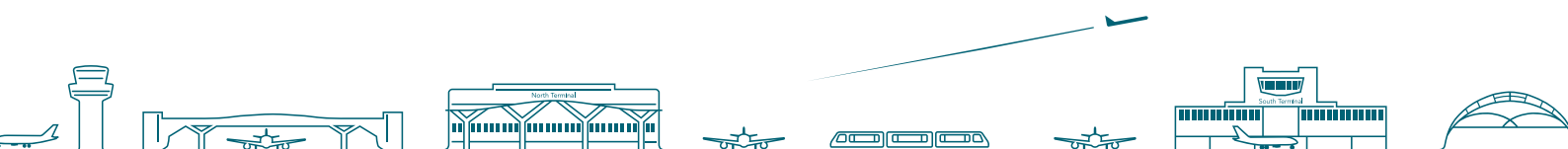
Yes in principle – achieving a resilient design is mainly focused around capacity and this will need to be carefully maintained.

5. Should Gatwick adopt a principle of 'Locally Tailored Designs'?

Yes – again the principle is worthy but the practical delivery of these goals needs to be understood and the 'art of the possible' delivered is an atc challenge.

6. Do you believe any of the six non-core design principles warrant a higher relative priority?

The arrangement in the document suggests an arrow head with the priority at the point. **This principle is agreed by ANSL and therefore no changes** to priorities are required.



39 NATS Gatwick DP 2 Response - 20190517

Gatwick Airport Airspace Modernisation Outline Design Principles

Thank you for once again providing NATS with the opportunity to respond on your Outline Design Principles in support of your airspace modernisation process. As previously stated NATS and GAL have a long history of working together and we look forward to continuing with this throughout the programme.

You asked 6 questions in your document, our answers to which are below:

- **Q1. Should Gatwick include a principle that seeks to create an airspace design that aims to limit and where possible seek to reduce the adverse impacts of aircraft noise?**

NATS fully understands the comments you received from correspondents to the first engagement regarding aircraft noise and therefore recognise your desire to include a design principle covering this topic. This is also in line with the aims of the Airspace Modernisation Strategy, and therefore NATS supports its inclusion.

However, we believe that it is important to point out that enhanced navigation standards do bring benefits (as evidenced around the world) and can be used as a way of routing traffic much more accurately and therefore avoiding population centres, AONB's, sensitive areas etc. It is not necessarily a causal factor in creating newly overflown stakeholders (as per your comment on page 8).

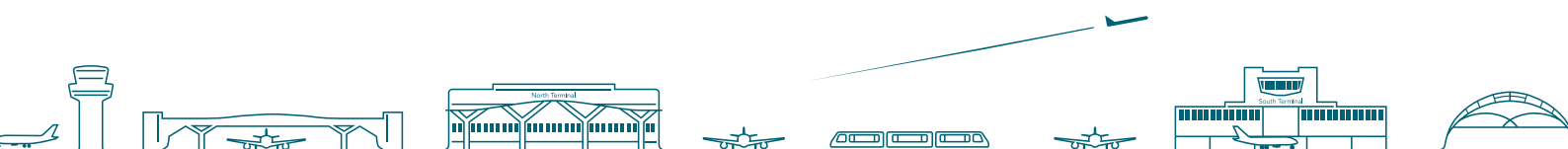
- **Q2. Should Gatwick adopt the design principle to limit adverse noise impacts as a core principle?**

As stated previously NATS are in support of the inclusion of this principle, but have no direct comment to make on its relative importance.

- **Q3. Do you agree with the adjustments to the following design principle?**

Safer by Design

NATS has always stated that safety should be the primary concern in all aspects of air traffic management and we fully support the inclusion of the Core Design Principle covering this. We have noted the comment on Page 16 of the document, regarding "discretionary enhancements to safety", and feel that this needs to be clarified in terms of understanding the meaning of this phrase. A safety-related DP as this should be afforded the highest priority.



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Long term predictability and adaptation

As previously stated, NATS will be designing the network airspace that sits above the Gatwick airspace change, and others, and therefore looks forward to working together in order to understand how the predictability and adaptation elements of the design options will develop. We would caution that there are likely to be limitations to what is possible in terms of flight planning capabilities, other airspace users and the wider question of resilience (covered later).

Optimise use of aircraft capabilities

NATS still firmly believes that this topic goes hand in hand with the 2nd core principle, Enhanced Navigation Standards. Whilst it is a business decision for GAL as to the range of operators it has at the airport it is still our opinion that it would be beneficial to all that designs and procedures should utilise Advanced PBN to their maximum capability in order to provide benefits to all stakeholders, fulfilling the requirements set out in European Commission mandates.

Deconfliction by design

We have noted the NATS attributed comment associated with the Core Design Principle “Enhanced Navigation Standards” but believe that the content should actually be a part of this Design Principle (or a wholly separate one). We are fully supportive of the need to design with other airports in mind, but feel that there also needs to be an appreciation of the wider air traffic environment included.

Therefore we would suggest adding sufficient wording to cover the following;

- *Any design work undertaken will ultimately take into account the change in vertical reference caused by the transition altitude, particularly with interactions with other airports.*

With the rationale:

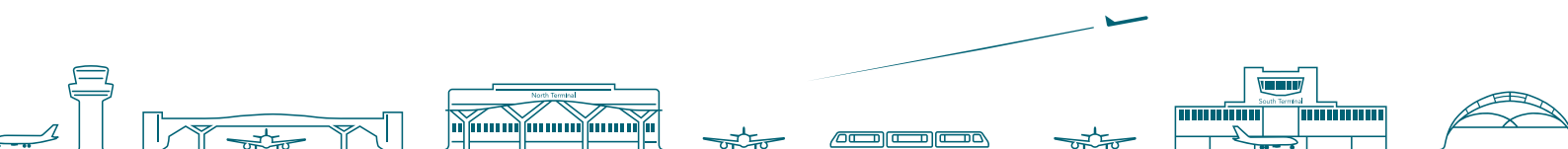
- *NATS will be responsible for the network design for arrivals and departures above 7000ft/FL70 with GAL responsible for the routes to/from the ground, including interactions with adjacent airports and appropriate community engagement. However network route positions will be influenced to a large degree by the airports’ requirements (geographically distilled into the Letterbox positions for each proposed route). These letterboxes/route positions will also be influenced by the Transition Altitude and any interactions between the routes of other airports.*

- **Q4. Should Gatwick adopt a principle to ‘Build in Resilience’ where practical?**

Once again NATS fully understands the desire of Gatwick Airport to include a design principle of this nature. However it must be noted that there needs to be a balance struck between foreseeable events and suitable contingent procedures, and the occasional random nature of disruptions in Air Traffic Management. We look forward to working together in order to formulate adequate responses to these events.

- **Q5. Should Gatwick adopt a principle of ‘Locally Tailored Designs’?**

NATS fully understands the aims of this design principle – the desire to balance all of the stakeholders needs in the airspace design. However we believe that this is the overall aim of the process described in CAP1616 and feel that it is unnecessary to have a design principle per se.



42 British Heli Assn - Design Principle Development - Part 2 EGTO - 20190429

Thank you for the opportunity to comment. By making your attached presentation a PDF it is difficult to respond easily.

My response is as follows:

Q1. Yes

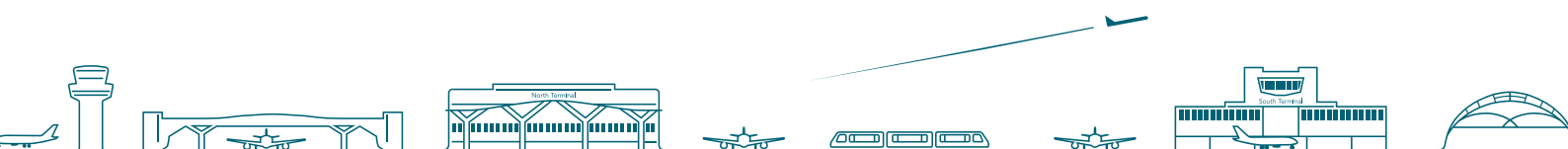
Q2. No. This will distract from the 3 important major core principles. [GAL Note 8 responder appears to have misunderstood the question 8 Score as YES based on text response]

Q3. Yes

Q4. No. I would have thought that any design would take resilience into account from the outset and be a fundamental part of the design.

Q5. Yes

Q6. No. By prioritising any of the six, or all of the six, you will have different views from the various sectors. Who then makes a decision on prioritisation?



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(Part 2) - 20190515**

On behalf of the MOD, have no further comment to add wrt the additional questions.

