

Appendix 1-2

Consolidated Stakeholder Feedback DPv0-1

Local Authorities-Ref 48-71

48 GATCOM Introduction to Design Principles _ April19

An introduction to Design Principle Development

As you are aware, GATCOM welcomes the opportunity to engage with GAL on the development of design principles to be used to help shape airspace changes linked to the modernisation of airspace around Gatwick as part of the FASI-S project.

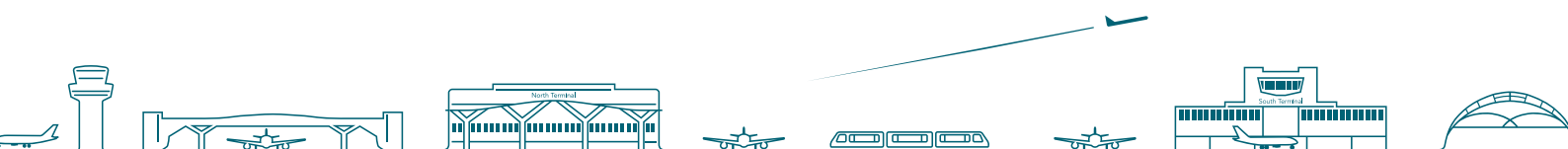
As the next meeting of GATCOM is not scheduled to take place until 25 April, the feedback set out in this letter is an officer view which will be reported to GATCOM for consideration on 25 April. It is possible that GATCOM members may wish to revise or add to this feedback which I hope GAL will still be able to take into account in further developing the design principles before their submission to the CAA. On this basis the following feedback is offered:

General Comment on Process

I can confirm that GAL's engagement document "[An Introduction to Design Principle Development](#)" was circulated to all GATCOM members on 19 March with a request that member organisations respond to GAL direct with their comments. GATCOM's Chair, Lead Member for Noise, Deputy Lead Member for Noise, GATCOM's Technical Adviser and the Secretariat have attended your engagement briefing sessions which appeared to be well attended and were informative. They have provided stakeholders with an opportunity to develop a better understanding of the process, the airspace modernisation programme and what it seeks to achieve at Gatwick and to ask questions.

It is appreciated that the timeline GAL is working to in the development of the Design Principles was agreed with the CAA at the Stage 1 assessment meeting on 22 January, when the 'Define' Gateway meeting was set to take place on 28 June when Gatwick's Design Principles will be assessed. Given this tight timeframe for engagement, it is suggested that GAL endeavours to provide as much time as possible to seek comments on the second document "Design Principles Outline Proposals". It is noted from the presentation at the briefing sessions that GAL will need to receive comments on the second document by no later than 17 May in order to meet the submission to the CAA in time for the 'Define' Gateway meeting on 28 June 2019. It is hoped therefore that GAL can issue the second document before Easter in order to maximise the time for feedback.

A key part of the CAP1616 process is engagement with a wide range of stakeholders and interested parties. It is noted that the CAA will need to be satisfied that there has been effective engagement at various stages of the process. It is hoped therefore that GAL adopts a progressive approach to engagement and responds positively to requests from other interested parties who seek to be engaged at this early stage in the process as well as in identifying other interested parties that need to be brought into the engagement process as the project progresses.



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Overview of Design Principles Development Document

Given airspace modernisation is a complex topic, the document is easy to understand and the use of icons helps to sign post the key aims of each principle. However, it is questioned whether GAL is being honest and realistic about the benefits that airspace modernisation will bring. Whilst airspace modernisation is likely to bring noise benefits for some people, it could also create increased noise and overflight for others. It is vitally important that GAL is honest about what communities can expect from the airspace change process and demonstrates that the development of design principles are aimed at limiting where possible the negative impacts of aircraft overflight and noise. An issue of concern is the use of the icon "reduced overflight of people" given GAL's growth plans set out in the draft airport master plan and the desire to achieve "fair and equitable distribution of flight paths (FED)" which could potentially see aircraft being spread over a wider area. It would be more honest to use the term "reduced frequency of overflight of people" for that particular icon.

In terms of delivering more airspace capacity as part of the wider airspace modernisation programme, it is important that GAL's desired outcomes reflect the need to deliver outcomes which benefit the industry, passengers through reducing the long term prevalence of cancellations and disruption to passenger travel plans and communities in a fair and balanced way.

It is noted that in the Statement of Need GAL has stated "At Gatwick, that means creating an airspace design that can accommodate a range of development scenarios, including making the best use of our existing runways and infrastructure, in line with stated government policy, and ultimately the development of a full second runway, should the Government decide to support that policy." As currently drafted the document does not clearly articulate this aim. It is suggested therefore that the opportunities highlighted in the Statement of Need are better reflected in the desired outcomes in paragraph 1.4 of the document.

Response to Questions

Q1a Do you agree that airspace design must be safe and further promote safety management systems?

Yes – safety is of paramount importance.

Q1b Should 'safer by design' attract the highest design principle priority?

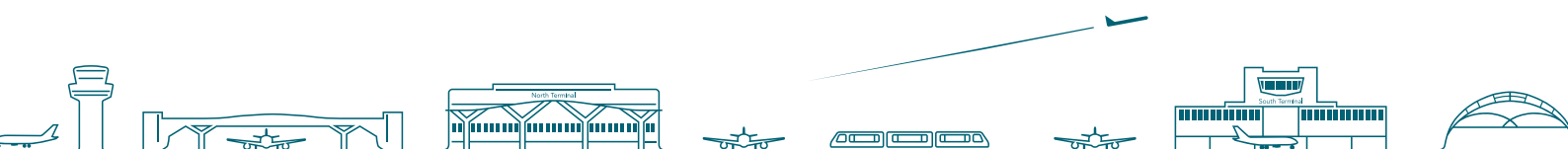
Yes

Q2 Should Gatwick adopt the most beneficial form of enhanced navigation standards as the foundation of its designs?

Yes – it would be helpful however to define who would benefit from enhanced navigation standards.

Q3 Should Gatwick adopt a design principle that offers long term predictability of flight paths and enables beneficial systems adaptations?

Yes



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Q4 Should Gatwick adopt a design principle that seeks, through its airspace design, to promote the adoption of enhanced aircraft capabilities that benefit communities and the more efficient management of air traffic?

Yes

Q5 Should Gatwick adopt a design principle that seeks to deconflict arrivals and departure routes below 7,000 feet to reduce the prevalence of overflight of a community by airport traffic on different routes and/ or by neighbouring airport traffic?

Yes. But it should also be noted that aircraft above 7,000 feet can still cause annoyance for some communities and this must be taken into account.

Q6. Should Gatwick adopt a design principle that seeks to create an arrival route consistent with time based operations?

This is supported in principle on the basis that the benefits and disadvantages for both the industry and communities of introducing time based operations on arrivals routes are fully explored and evaluated. This is important as what is viewed as the most efficient method for airlines may not be acceptable for communities, particularly if not previously overflown.

Q7. To what extent should London Gatwick consider multiple pathways on: (a) departures and (b) arrival procedures?

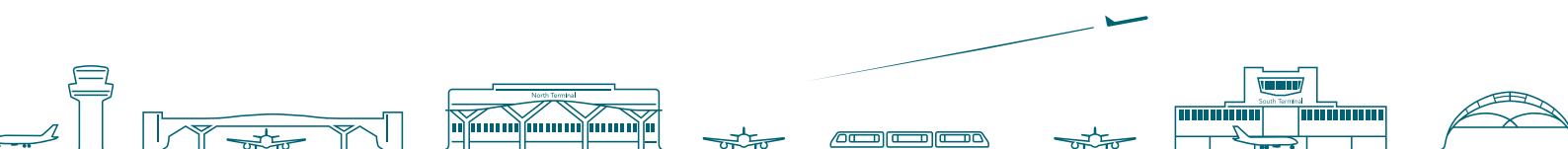
Over the years GATCOM has consistently advocated the need to avoid overflight of densely populated areas and would oppose any change to the current overflight rules such as for Horley, Crawley and Horsham.

GATCOM has also consistently stated that designing flight paths over areas of population not previously overflown, or experience very little overflight, should be avoided where ever possible.

Should proposed options come forward which will result in properties being newly overflown at a height below 7000ft, then GAL needs to consider as part of the proposals development a compensation/mitigation package. This will be particularly important if newly overflown properties experience a diminution of property value. It is accepted that the issue of compensation is being explored by the Government as part of the Aviation Green Paper policy proposals but it is hoped that GAL can take a lead in helping to develop best practice in compensation and mitigation packages in airspace redesign.

In terms of departures, it is acknowledged that seeking multiple routes to give respite to the frequency of overflight could be the most contentious aspect of airspace redesign and that a trade-off between dispersion and avoiding newly overflown at lower altitudes will have to be made. To achieve benefit for those communities under a NPR the design principles should seek a fair and equitable dispersion across the NPR swathe with continuous climb flight procedures to bring noise reduction benefits provided aircraft continue to follow the NPR trajectory.

As regards arrivals, if the current swathe was increased in width to include early joining to the ILS it is likely to affect a new group of communities previously not exposed to such regular overflights.



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Q8. In what order would you prioritise these 5 overflight management systems?
As stated in response to Q7 above, minimising the number of people newly affected, particularly at lower altitudes below 4000ft and those significantly affected by noise, should be a high priority wherever possible.

Q9. Are there other options we should consider and how would you prioritise them relative to your response to question 8?
It is important in designing routes that account is taken of land use planning and areas of land earmarked for future housing development. It is essential therefore that local planning authorities are fully engaged in route design.

Q10. Where on the spectrum of A-E would you wish Gatwick airport to prioritise these factors?
No comment. There are likely to be diverse views across GATCOM's membership on operational versus environmental impacts priorities.

Q11. Where on the spectrum of A-E would you wish Gatwick airport to prioritise operational resilience?
No comment. There are likely to be diverse views across GATCOM's membership on operational resilience versus environmental impacts priorities.

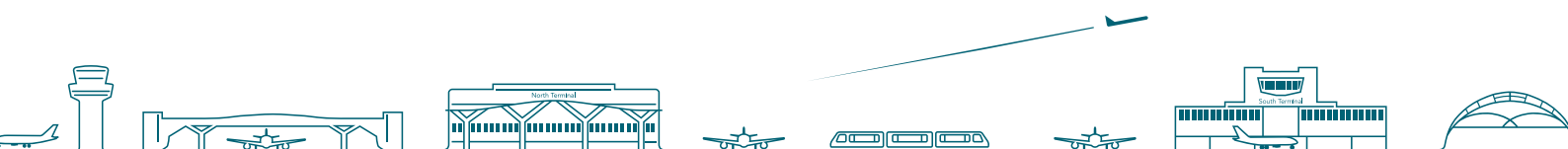
Q12. What are your top 5 Airspace Modernisation objectives and why?
Safety is of paramount importance and should therefore be an overriding objective. Then after that it has to be a balance between many of these options.

Q13. What other Airspace Modernisation objectives do you believe we should consider?
In order to build trust and confidence of local communities is it vital that in applying the objectives equal weight is given to increasing capacity, reducing congestion and delays and reducing environmental impacts, particularly noise.

Q14. What other design principles do you believe we should consider and why?
As mentioned in response to Q9, it is important in the design of routes that account is taken of land use planning and areas of land earmarked for future housing development. It is essential that local planning authorities are fully engaged in route design.

There is also a need to avoid overflight of noise sensitive buildings such as hospitals, hospices and schools at lower altitudes and to preserve areas of tranquillity.

I trust our views can be taken into account.



49 East Sussex CC Airspace Modernisation Design Principles comments April 2019 TSE

Thank you for the opportunity to comment on the Airspace Modernisation Design Principles consultation.

Ahead of our response, we wish to highlight our disappointment that such a short timescale was provided in order to respond to the consultation. For this reason we have been unable to incorporate input from all key players, and the comments may therefore not be as comprehensive as they otherwise would have been should a standard consultation period have been provided.

Background

This consultation is to introduce the airspace modernisation process and material Gatwick is proposing to use to develop the design principles that will shape changes to the way airspace around Gatwick is used, which will be linked to the wider UK airspace modernisation programme. The area affected by airspace change would include most of East Sussex; therefore it is important that the County Council participates in each stage of the consultation for airspace modernisation. Referred to as 'Step 1(b) Design Principles', these encompass the safety, environmental and operational criteria, and strategic policy objectives that are proposed to be developed. They are developed through engagement with stakeholders and form a qualitative structure against which design options can be evaluated.

There are four areas for consideration by stakeholders under the 'Introduction to Design Principles' for this initial stage of the Airspace Modernisation consultation, and these are:

1. Number of Routes (departures and arrivals)
2. How to manage impact of overflight
3. Operational efficiency vs environmental impact
4. Operational resilience

Consultation Questions:

Q1a. Do you agree that airspace design must be safe and further promote safety management systems?

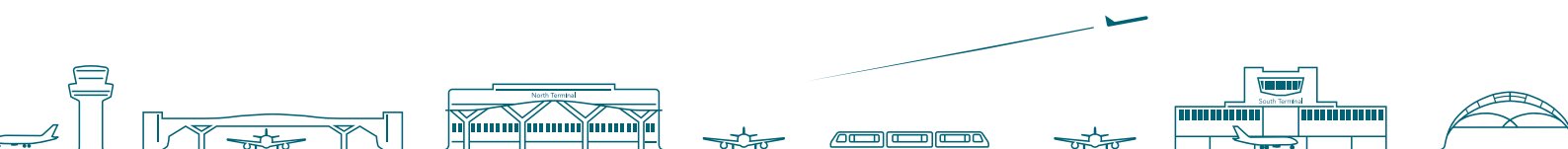
Safety should be the primary consideration for any changes made to any aspect of airspace design.

Q1b Should 'Safer by Design' attract the highest design principle priority?

Yes. Safety is paramount and must be considered first and foremost in each design principle.

Q2 Should Gatwick adopt the most beneficial form of enhanced navigation standards as the foundation of its designs?

The paper outlines the benefits of adopting enhanced navigation standards as: improved safety; reduced complexity; reduced overflight of people; reduced fuel burn; and, reduced noise. The County Council supports all of these, however we do have reservations about the 'reduced overflight of people' aspect, as one of our key concerns is the concentration of flights over populated areas, and whilst this is listed as a possible benefit, this will not be the case in all locations. Some communities may have aircraft noise exacerbated through (possible) intensification of routes, and we would not support any proposals which would result in this detrimental impact on East Sussex residents; notably those to the north of the County i.e. Crowborough and the surrounding areas.



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Our preference is for a dispersal of flight paths, which we recognise may affect more people, but will reduce the intensification of negative aircraft associated impacts (namely noise) on a particular locality.

Q3 Should Gatwick adopt a design principle that offers long term predictability of flight paths and enables beneficial system adaptations?

The adoption of this principle would provide benefits including reduced frequency of overflights, improved time management, reduced complexity and reduced fuel burn. The County Council support these benefits, especially the reduced frequency of overflights. By enabling long term predictability, those which, regrettably, are affected by aircraft noise can be identified at an early stage and procedures put in place to minimise disruption and to mitigate where possible the impacts.

Q4 Should Gatwick adopt a design principle that seeks, through its airspace design, to promote the adoption of enhanced aircraft capabilities that benefit communities and the more efficient management of air traffic?

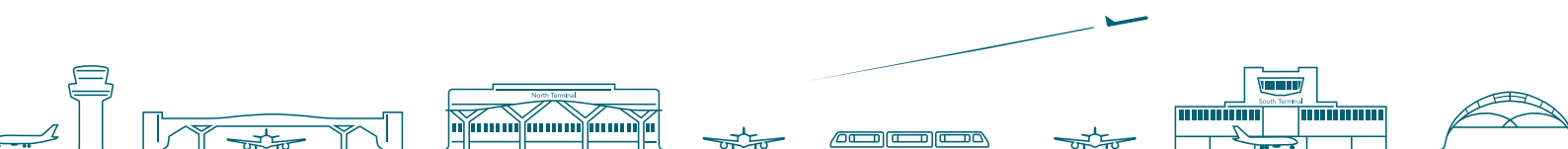
We are supportive of the notion that future airspace design should offer the greatest benefits to those airlines that have made investments to adopt efficient operational procedures and minimise their impact on local communities. Benefits would include reduced flight times and delays, reduced noise and CO₂, and reduced fuel burn.

Q5 Should Gatwick adopt a design principle that seeks to deconflict by design all Gatwick arrival and departure routes below 7000 feet to reduce the prevalence of overflight of a community by airport traffic on different routes and/or by neighbouring airport traffic?

The County Council's preference is for a reduction in concentrated flight paths for aircraft flying below 7000 feet, and for there to be a dispersal of routes overflown to lessen the impact of intensification of aircraft noise on local communities. Therefore a design principle which would enable a more dispersed flight path system would be fully supported.

Q6 Should Gatwick adopt a design principle that seeks to create an arrival route design compatible with time based operations?

Holding and delay techniques at airports results in disruption for passengers, and creates a snowball of negative impacts on other passengers and services. This has an impact on social, economic and environmental factors. It is expected that before 2030 it will be routinely possible to eliminate the need for delay techniques close to an airport. Gatwick wishes to be in a position to adopt time based management techniques as soon as practically possible, and therefore the adoption of a design principle which seeks to create and arrival routes design compatible with time based operations is supported.



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Q7 To what extent should Gatwick consider multiple pathways on: (a) departures and (b) arrival procedures?

Gatwick already uses enhanced navigation design standards for its nine departure routes. Current arrival procedures, however, use traditional radar vectoring which creates multiple pathways spreading the impact of descending traffic across a broad swathe over ground. This technique creates varied flight paths which may not be able to consider who is being overflown and how frequently. Gatwick propose the widespread adoption of enhanced navigation standards to address the impact of radar vectoring. Adoption of enhanced navigation standards would allow us to consider the merits of multiple pathways on departures and arrivals.

The County Council considers multiple pathways on both arrivals and departures as preferable as this would disperse the concentration of those affected by aircraft noise, thus reducing the intensification for particular local communities. We recognise that reducing the concentration of flights over a particular locality will have a negative impact on others who may not currently be affected by overflights, and whilst this is regrettable it is our preferred option. Where possible we recommend that unpopulated and unprotected areas are overflown.

Q8 In what order would you prioritise these 5 overflight management options? Either singularly or groups

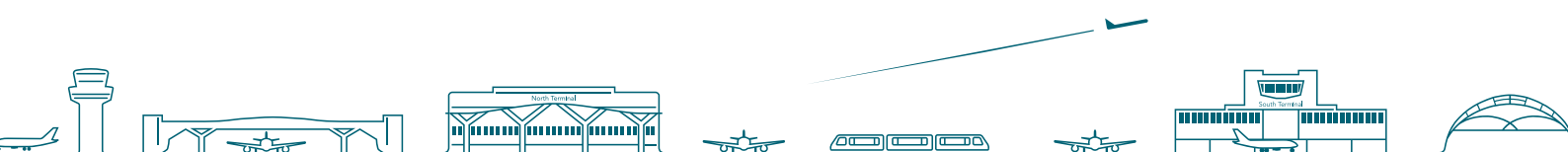
This question is difficult to respond to as it should be considered on a case by case basis with details on the proposed areas which would be affected to help formulate an evidence based response. It is not believed there is a 'one size fits all' approach, and this should ultimately be determined when local factors have been considered and assessed.

The way communities are overflown (as seen in A-C above) and the time management options (D and E above), whilst related, are two separate issues, and therefore we will not be collectively prioritising them.

As previously mentioned, we advocate a dispersed route management option, which would encompass options B and C. Which option is preferred of the two would depend on the localities affected, and, preferably, would be considered on a case-by-case basis. Notwithstanding, the aforementioned, option A is least preferred.

The options provided for D and E above are not options which we could support. Option D would only provide respite in specific areas for one hour at a time through the night. This is unacceptable. In respect of option E, it is unclear what the specific time frames are for the 'not before 0700' and 'not after 2200'. At what times would the 'not before 0700' finish, and at what time would the 'not after 2200' start? It is therefore difficult to gauge the impact and therefore our view of this option.

Both options would have significant detrimental (noise) impacts during key hours on a 'normal' sleeping pattern ie between the hours of 2300 and 0700. The times areas are overflown should be restricted to reduce the negative impact on the health and wellbeing of local communities, and it is therefore recommended that aircraft do not operate between the hours of 2300 and 0700 unless exceptional circumstances apply.



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Q9 Are there other options we should consider and how would you prioritise them relative to your response to Q8?

An option restricting aircraft operations between the hours of 2300 and 0700 should be included for all swathes. This would be our first priority for hours of operation for night flights (note: as previously mentioned, this option – for times of flights - should be considered separately the options on how people are affected by flight paths i.e. the routes).

Q10 Where on the spectrum of A – E would you wish Gatwick airport to prioritise these factors? Another area of consideration (operational efficiency and environmental impact) is how Gatwick handle the trade-offs between operational efficiency and the environmental impact of different route designs. Whilst airline operations would prefer airspace designs to minimise fuel burn, communities local to the airport and other stakeholders would prefer that airline operations focused on reducing the impact of noise and other local environmental factors. These factors can complement or oppose each other; this is dependent on the locality.

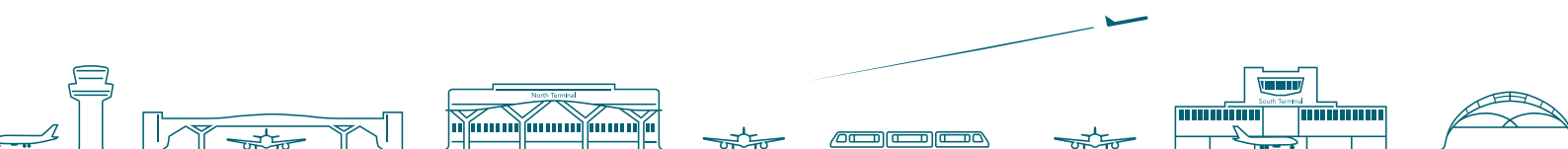
Some of the issues are complementary, as alluded to above. This includes reducing environmental impacts which will be of benefit to airport operations and local communities – modern aircraft are likely to have been designed to be quieter and be more efficient in terms of use of fuel / emissions compared to older aircraft of a similar size and nature. Also, aircraft flying higher will create less noise and fewer emissions thus also being complementary.

The order of preference for these factors is as follows:

1. Favour local environmental benefits
2. Maintain a balance between the two factors
3. Maximise only local environmental benefits
4. Maximise operational efficiency, reduced cost and minimise national environmental impact
5. Favour operational efficiency

Q11 Where on the spectrum of A – E would you wish Gatwick Airport to prioritise operational resilience?

Airline and airport operations can be impacted by a wide range of events, such as thunderstorms and short term runway unavailability, the consequences of which can vary in their severity. During this time operational disruptions can have an adverse impact on passengers, airlines and communities. Airspace design can help to limit the impact of events and provide additional options for airlines and air traffic control providers by building in resilience. Building in resilience to an airspace design, in the form of alternative pathways or procedures can increase the impact routinely experienced by some people.



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Operational resilience is a complicated issue which requires careful consideration. Disruption has a significant impact on passengers, airlines and communities, all of which needs to be delicately handled so that operations can resume quickly and efficiently with as few negative repercussions as possible. Based on this need for operations to resume as normal, our priorities are as follows:

1. E
2. C
3. D
4. B
5. A

It is recognised that to resume normal operational airline activity, this may impact on night flights operations. It is considered that this is acceptable as this short term disruption would allow for normal activities to resume, thus quickly and efficiently limiting further disruption for local communities.

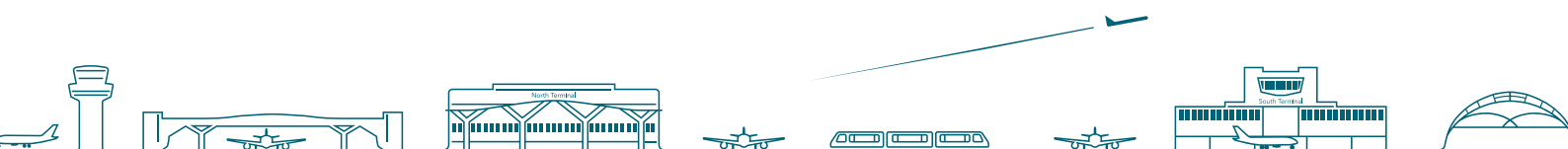
Q12 What are your top 5 Airspace Modernisation objectives?

1. E
2. D
3. G
4. I ('A' and 'I' are very similar objectives and we have chosen 'I' as the preferred objective as this also includes efficiency)
5. K

Please note that E is a priority objective, and 2-5 are in no particular order.

Q13 What other Airspace Modernisation objectives do you believe we should consider?

No comments to make



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1a. Do you agree that airspace design must be safe and further promote safety management systems?

The aviation industry promotes and expects all airspace users to make safety their number one priority. To support this safety culture there is a strong national and international regulatory framework which airports and airspace users must adhere to.

For Gatwick, maintaining and enhancing aviation safety is our top priority. Gatwick wishes to perpetuate, and if possible, further strengthen this safety culture. We therefore propose a core principle to be:

'Airspace design must at least maintain, and ideally enhance, aviation safety, by reducing or removing safety risk factors'

YES/NO

Additional comments:

Kent County Council (KCC) fully believes safe airspace design is of utmost importance and would encourage Gatwick to where possible, utilise opportunities to further strengthen the existing safety culture beyond current national and international regulatory standards.

1b. Should 'Safer by Design' attract the highest design principle priority?

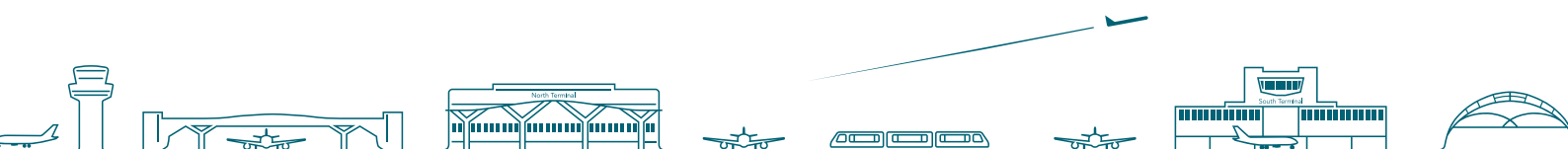
YES/NO

Additional comments:

KCC considers that 'safer by design' should be the highest design principle priority, however this should be closely followed by the remaining principles which focus on minimising and mitigating the environmental and community impacts of aircraft movements. Not only must the UK reach its climate change targets and address the problems of emissions, but any change should not come at the cost of local communities, many of whom are already significantly negatively impacted by the UK's aviation industry.

2. Should Gatwick adopt the most beneficial form of enhanced navigation standards as the foundation of its designs?

The requirement for Gatwick to upgrade its arrival and departure routes to satellite navigation standards is driven by EU Regulation 2018/1048 on performance-based navigation (PBN) published in July 2018. Gatwick already uses a variety of these PBN



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standards to define its departure routes. These enhanced navigation standards are now being widely adopted to assist with air traffic management in congested airspace, offer noise reduction and respite to communities and provide opportunities for airlines to save fuel and reduce their CO2 emissions.

Gatwick believes it is in the interests of all stakeholders to extend beyond the minimum legal requirement, the application of enhanced navigation standards to all aspects of our departure and arrival procedures. This will remove much of the variation airlines and communities experience and reduce the variability of the flight paths over the ground, some of which do not take into consideration their proximity to communities or sensitive areas. Therefore, we propose a core principle to be:

'Airspace design should adopt the most beneficial form of enhanced navigation standards for arrivals and departure routes'

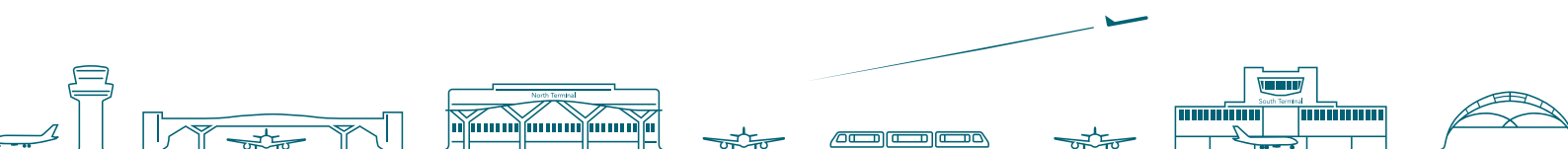
YES/NO

Additional comments:

Satellite-based routes can be much more precisely flown, but this can lead to a concentration of noise. KCC is aware that this has been well-received at airports in more rural locations where routes that affect very few people can be successfully flown. However, in the South East there is a conflict between population centres and the tranquillity of our rural and protected landscapes, such as National Parks and Areas of Outstanding Natural Beauty, where ambient noise levels are low and therefore aircraft noise is more noticeable than in urban areas. It is vital that a consensus is sought on these new/modernised routes, as well as Equalities Impact Assessments carried out when at the Operations Appraisal stage.

3. Should Gatwick adopt a design principle that offers long term predictability of flight paths and enables beneficial system adaptations?

The FASI-South Airspace Modernisation Programme offers a once in a generation opportunity to develop a design that will withstand the demands of the next 30 years. We believe that a central principle should be that airspace design should offer flight path predictability, coupled with the ability to improve the time management of air traffic. All of these features require enhancements to air traffic systems, some of which are already planned.



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Not all system capabilities are likely to be fully available to coincide with the first phase of implementation, however, international programmes are already investigating how they can be integrated. Therefore, we believe a principle should be that:

‘Airspace design should offer long term predictability of flight path routes and enable benefits from new air traffic management systems’

YES/NO

Additional comments:

Whilst long-term predictability is important, for those living under flight paths it is essential that predictable respite is also provided. This is only possible by using multiple flight paths so that the burden of over-flight is shared more equitably between affected communities.

4. Should Gatwick adopt a design principle that seeks, through its airspace design, to promote the adoption of enhanced aircraft capabilities that benefit communities and the more efficient management of air traffic?

Not all commercial aircraft are equipped to the same standard and the impact of airframe design engine type and avionics can make a big difference to the impact they have on communities and efficient airport operations. We believe that a future airspace design should offer the greatest benefits to those airlines that have made investments to adopt efficient operational procedures and minimise their impact on local communities.

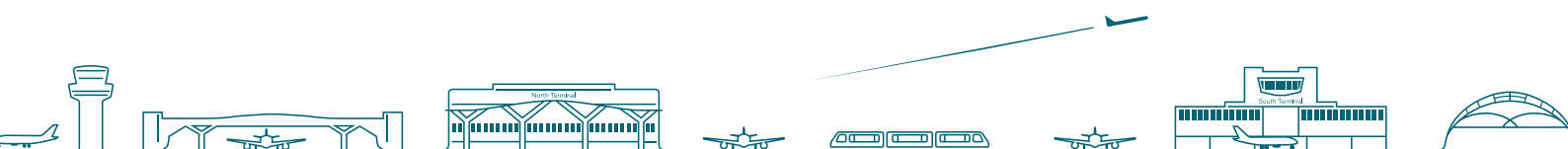
We believe it is important to develop designs that encourage airlines to adopt enhanced capabilities that enable efficient airline and airport operations. Therefore, we believe a principle should be that:

‘Airspace design should promote the adoption of aircraft capabilities that benefit communities and the more efficient management of air traffic’

YES/NO

Additional comments:

KCC recognises the potential improvements to the noise environment by the design of more fuel-efficient routes, faster climbs, quieter descents, and accurate navigation around populated areas; however, in some areas communities will not benefit. It is very possible that the South East is one of these areas, where demand for more flights from the country’s busiest airports is growing in a densely populated region. This will make it nearly impossible that routes will be found that sufficiently avoid creating negative impacts for communities on the ground even with aircraft with the most enhanced capabilities, therefore airspace design should make provision for multiple routes that offer respite for affected communities.



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5. Should Gatwick adopt a design principle that seeks to deconflict by design all Gatwick arrival and departure routes below 7000 feet to reduce the prevalence of overflight of a community by airport traffic on different routes and/or by neighbouring airport traffic?

The FASI-South Programme offers the opportunity to seek the deconflict neighbouring airport airspace designs. This would help to reduce frequency with which communities in close proximity to airports are overflowed below 7000 feet by traffic from more than one airport.

Whilst there will always be a need to deconflict aircraft in the vertical dimension, the adoption of enhanced navigation standards makes it much easier to safely deconflict the flight paths of aircraft laterally. As a result it should be possible to reduce or perhaps eliminate the overflight of communities by traffic from different airports who may experience both arriving and departing traffic regardless of which runway is in use. Therefore, we propose that an important environmental principle should be that:

‘Wherever possible Gatwick should deconflict by design flight paths below 7000 feet to reduce the prevalence of overflight of a community by airport traffic on different routes and/or by neighbouring airport traffic’

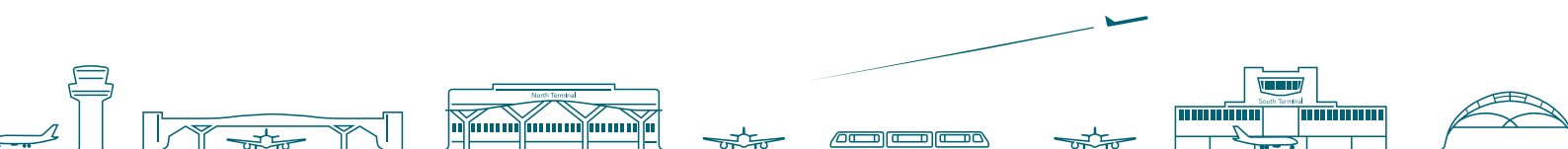
YES/NO

Additional comments:

West Kent has suffered with an intolerable increase in overflight in recent years, and the continued expansion of Gatwick Airport will mean a continued increase in noise exposure, especially at night because the new night noise regime will not reduce the movement allowance at Gatwick, and in fact, permits growth in the winter season. It is therefore essential that West Kent does not also experience overflight from neighbouring airports such as Heathrow. Gatwick flight paths should also not be used more intensively at night when there are greater restrictions on neighbouring airports, i.e. Heathrow. KCC has made the case in response to government consultations that the night noise restrictions at Heathrow should also apply to Gatwick.

6. Should Gatwick adopt a design principle that seeks to create an arrival route design compatible with time based operations?

The use of holding and delay techniques close to airports, often at relatively low altitudes, can sometimes be a frustration for passengers, flight crews, communities and airport operators. Aircraft and air traffic management capabilities are on the verge of being able to use ‘time’ as an additional deconfliction feature.



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Time based operations also have the potential to improve the management of respite. It also creates opportunities to reduce fuel burn, reduce delays and can lead to overall reductions in flight costs. It is expected that before 2030 it will be routinely possible to eliminate the need for delay techniques close to an airport. Gatwick wishes to be in a position to adopt time based management techniques as soon as practically possible. Therefore, we propose that an environmental and operational principles should be that:

'Route design below 7000 feet should be compatible with the adoption of time based arrival operations'

YES/NO

Additional comments:

The arrival management initiative is welcomed, especially where it will make the use of stacks obsolete and increase periods of respite. Kent is overflowed most significantly by Gatwick arrivals and the noise and environmental impacts of these aircraft movements greatly affect residents within areas of west Kent in particular.

7. To what extent should London Gatwick consider multiple pathways on:

(a) Departures procedures:

(b) Arrival procedures:

We are contemplating including a design principle that focuses on the potential adoption of multiple pathways and would value feedback on some of the important considerations.

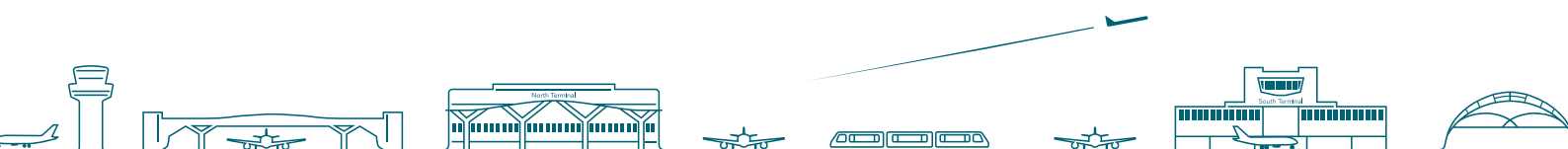
Gatwick already uses enhanced navigation design standards to precisely define its nine departure routes; each has a single pathway. Current arrival procedures, however, use traditional radar vectoring which creates multiple pathways spreading the impact of descending traffic across a broad swathe over ground. This technique creates varied flight paths which may not be able to consider who is being overflown and how frequently.

We proposed the widespread adoption of enhanced navigation standards that address the impact of radar vectoring. Adoption of enhanced navigation standards would allow us to consider the merits of multiple pathways on departures and arrivals.

Departures procedures:

Arrival procedures:

West Kent is impacted more by arrivals than departures due to the prevalence of westerly operations. This results in aircraft descending to a low altitude, and often turning, to join the final approach many miles to the east of Gatwick which affects Tunbridge Wells and rural areas of West Kent, especially in the Sevenoaks district, including low level over flight of places of national historical importance such as Hever Castle as well as the AONB.



50 Kent County Council Response to Gatwick Airspace Modernisation - Design Principle Development April 2019 - R

It has long been KCC's view that concentration of flight paths results in an untenable situation where certain settlements are intensively overflown compared to the previous situation where overflight was shared through the natural variation in choices made by pilots. Performance Based Navigation (PBN) allows precise routes to be chosen and flown and we believe that this technology could be better utilised to mimic the range of routes flown before its introduction. It is our policy (Policy on Gatwick Airport, 2014) that the use of multiple arrival and departure routes should be specified "to provide predictable rotating respite and spread the burden of over-flight more equitably between communities."

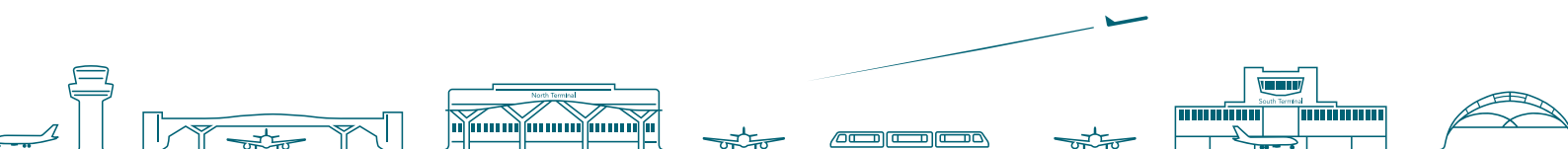
The distribution of new routes around airports should ideally mimic the existing routes as far as practicable. Decisions on whether to use single routes or multiple routes, and assessment of the impacts of both, should be done in consultation with local communities and representative bodies.

In general, airspace use that is as close as possible to the historical dispersal due to vectoring is what communities want rather than concentrated flight paths. At Gatwick, communities campaign for fair and equitable respite, which in practice means multiple routes in order to balance the benefits of modernising airspace and reduce the negative impacts on the ground. We acknowledge the difficulties that Gatwick's Noise Management Board have experienced in defining 'fair and equitable'. A combination of suitable metrics and discussion with the community bespoke to each situation will undoubtedly be necessary.

8. In what order would you prioritise these 5 overflight management options?

Government priorities for consideration of the environmental impacts arising from airspace change proposals are set out in its Air Navigation Guidance. In the airspace from the ground to below 4,000 feet, the Government's environmental priority is to limit, and where possible, reduce the total adverse effects on people. Where options for route design from the ground below 4000 feet are similar in terms of the number of people affected by total adverse noise effects, preference should be given to that option which is most consistent with existing published airspace arrangements. From 4000 to 7000 feet the policy is to minimise the impact of aviation noise unless this would disproportionately increase CO2 emissions.

- E – Restrict time of route availability to reduce impact
- D – Provide managed respite
- C – Sharing by managed dispersal
- A - Minimise the number of people newly affected
- B – Minimise the total number of people affected



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9. Are there other options we should consider and how would you prioritise them relative to your response to Qu 8?

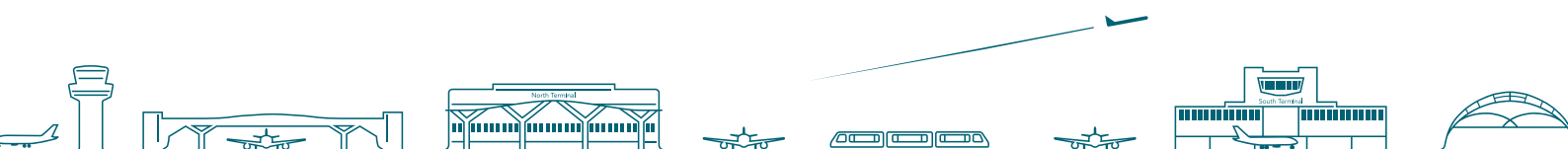
The options considered are appropriate. KCC considers that the first priority should be to restrict the time of route availability to reduce impact (E), i.e. there should be restrictions on night flights as noise that disrupts sleep is the most damaging to health. Providing managed respite (D) is the next highest priority so communities get some rest from noise and this is most likely to be achieved by sharing the burden of overflight by managed dispersal (C), i.e. multiple routes. The number of newly affected people should always be minimised (A) as should the total number of people affected (A).

10. Where on the spectrum of A – E would you wish Gatwick airport to prioritise these factors?

- A- Maximise operational efficiency, reduced cost and minimise national environmental impact
- B – Favour operational efficiency
- C – Maintain a balance between the 2 factors
- D – Favour local environmental benefits
- E – Maximise only local environmental benefits

11. Where on the spectrum of A – E would you wish Gatwick to prioritise operational resilience?

- A – Minimal resilience; procedures optimised for minimal impact, operational choices limited or nil, sustained recovery period with knock on impacts on some people, who might not be routinely overflown.
- B – Some limited operational choices, in the event of an incident, adverse impacts on some could be noticeable.
- C – Balanced consideration of resilience design and day to day impact on the majority
- D – Multiple choices (with constraints); impacts may be more limited/less frequent, some additional local impacts
- E – Fully resilient; multiple operational choices to limit event impact, faster operational recovery, some routine local impacts potential experienced by a wider group of people.



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12. What are your top 5 Airspace Modernisation Objectives?

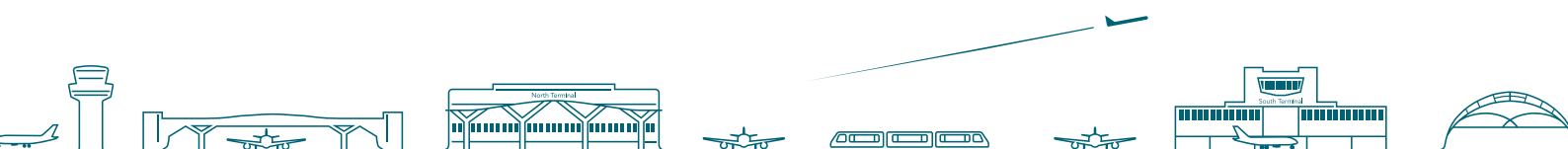
1. E – Enable government policies in respect of the reduction and mitigation of noise and how it should be distributed to manage the impact of aviation growth on local communities.
2. A – Enable and facilitate continuous improvements in safety standards through innovation.
3. F - Deal with ‘hotspots’ of congestion within the current system
4. H – Develop a genuinely sustainable framework to guide the aviation industry in its investment and technological development
5. I – Take advantage of those technological developments to improve safety and efficiency

13. What other Airspace Modernisation objectives do you believe we should consider?

Overall, airspace modernisation is expected to bring a reduction in the average noise per flight, but the reality could be that noise will be redistributed and that some areas could experience more frequent noise events and/or concentration of noise. This would be in line with Government guidance to reduce the number of people ‘significantly affected’ and therefore a greater number of individuals could be affected to some extent, if this reduced the number who are significantly affected (judged, for example, using an assessment of health impacts). However, studies have shown that individuals are more sensitive to noise impacts, meaning that the community view of ‘significantly affected’ could be quite different to the Government view.

14. What other design principles do you believe we should consider and why?

KCC has continually recommended the use of Nx contours (rather than the usually-used Leq contours) when showing the noise impact of overflight because they better represent the number of noise events an overflown community will experience at a given volume rather than an average noise level for the day or night across a whole season. Given the potentially profound changes to overflown and currently not overflown communities, it is imperative that these alternative metrics are used by airspace change promoters to ensure that communities are fully aware of the implications.



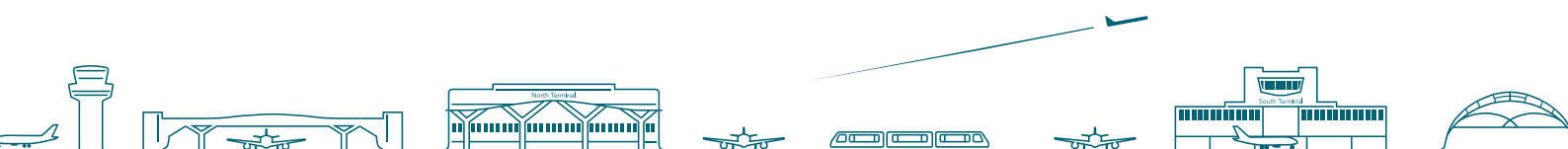
51 Surrey CC FINAL RESPONSE Airspace Modernisation 05 04 19 (002)

Surrey County Council's Response to the Airspace Modernisation Design Principles at Gatwick Airport Consultation March 2019

Thank you for consulting Surrey County Council on the design principles for airspace modernisation at Gatwick Airport. Our comments in response to the questions set out in the consultation document are included in Annex 1 attached to this letter.

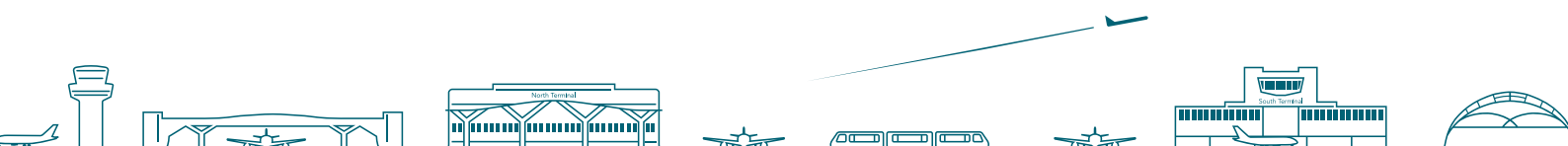
We would emphasise that every effort must be made to ensure that all Surrey communities likely to be affected are kept informed of future consultations on airspace change proposals at Gatwick Airport and that residents are given the opportunity to attend events local to them to enable their full participation.

Question	Response
1a) Do you agree that airspace design must be safe and further promote safety management systems?	Yes.
1b) Should 'Safer by Design' attract the highest design principle priority?	Yes.
2) Should Gatwick adopt the most beneficial form of enhanced navigation standards as the foundation of its designs?	Even though aircraft are getting quieter, narrow flightpaths can lead to intolerable levels of noise. Given the likely concentration effects of performance based navigation (PBN), sharing routes over a wider area compared to a fully concentrated future scenario will be necessary in order to avoid unacceptable impacts from concentration. Concentrated flightpaths with no respite are not acceptable. Respite must be provided for both existing overflowed residents as well as any newly regularly overflowed residents, especially in the case of scenario 2 of the Gatwick Masterplan being taken forward.
3) Should Gatwick adopt a design principle that offers long term predictability of flight paths and enables beneficial system adaptations?	Once established, new flight paths should provide for long-term predictability for those finding themselves overflowed and include the provision of respite. Any system adaptations should not increase the noise impacts for local communities.



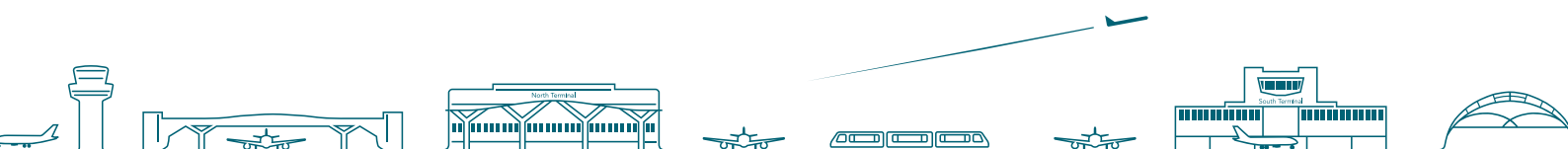
51 Surrey CC FINAL RESPONSE Airspace Modernisation 05 04 19 (002)

<p>4) Should Gatwick adopt a design principle that seeks, through its airspace design, to promote the adoption of enhanced aircraft capabilities that benefit communities and the more efficient management of air traffic?</p>	<p>Yes.</p> <p>Our primary concern is our residents and so we support principles that can be proven to benefit local communities. It is important to incentivise those airlines that make investments to minimise their noise impact on local communities.</p>
<p>5) Should Gatwick adopt a design principle that seeks to deconflict by design all Gatwick arrival and departure routes below 7000 feet to reduce the prevalence of overflight of a community by airport traffic on different routes and/or by neighbouring airport traffic?</p>	<p>Yes.</p> <p>By adopting this principle, not only could levels of noise experienced by communities reduce, but the frequency of overflights experienced by communities, which is a key factor contributing to noise impacts would also reduce. The latter is an important metric that must be considered when consulting with local communities.</p> <p>It is important for the stage 3 consultation that residents are given the complete picture of flight paths – either current or future – to/from other airports as well as Gatwick. By doing this, the public are given a clearer indication of what the full, ‘in combination’ noise impacts on them could be given the significant impact that noise can have on residents. Many Surrey residents experience air traffic from several airports, including Gatwick, Heathrow and Biggin Hill.</p>
<p>6) Should Gatwick adopt a design principle that seeks to create an arrival route design compatible with time based operations?</p>	<p>Yes.</p> <p>Surrey County Council supports measures that are able to deliver reductions in noise as well as improve respite from noise for local communities. Therefore, we support reducing occurrences of stacking in order to delay planes arriving into Gatwick, which can lead to increased levels of noise. We also recognise that time-based operations may lead to reduced fuel burn, thus potentially reducing carbon emissions and improving air quality for affected communities nearer the airport.</p>



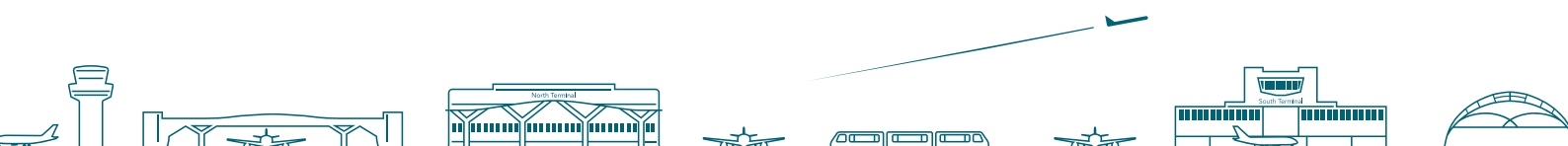
51 Surrey CC FINAL RESPONSE Airspace Modernisation 05 04 19 (002)

<p>7) To what extent should London Gatwick consider multiple pathways on:</p> <p>a) Departures procedures</p> <p>b) Arrivals procedures</p>	<p>For both departures procedures as well as arrivals procedures, Surrey County Council supports a multiple pathways approach if it would provide more opportunity for respite for those communities overflowed.</p> <p>As set out in our answer to question 2, respite must be an option for any community overflowed by aircraft using Gatwick. Aviation noise can be incredibly disruptive, so it is important that communities have predictable periods of respite.</p>
<p>8) In what order would you prioritise these 5 overflight management options?</p>	<p>We are unable to prioritise or rank options at this early stage, as it is difficult to assess issues when there is little data available on the numbers of people affected by any potential proposals. We would however reiterate that we consider predictable respite from noise to be an essential piece of mitigation of existing and increased operations at Gatwick along with sharing routes over a wider area to avoid unacceptable impacts from route concentration.</p> <p>We would also welcome any design standards or principles that restrict the timing of route availability to reduce the impacts of night flights on communities local to the airport.</p>
<p>9) Are there other options we should consider and how would you prioritise them relative to your response to Qu 8?</p>	<p>No comments.</p>
<p>10) Where on the spectrum of A – E would you wish Gatwick airport to prioritise these factors?</p>	<p>As per the Government's priorities, our number one environmental consideration below 7000ft is minimising the impact of aviation noise on local communities.</p> <p>We support the exploration of measures such as steeper take-offs and steeper landings as a means of reducing noise impacts.</p>
<p>11) Where on the spectrum of A – E would you wish Gatwick airport to prioritise operational resilience?</p>	<p>We would not be opposed to Gatwick designing in a certain level of resilience to cope with unforeseen events, but would not wish to see local communities routinely experience more adverse noise impacts.</p>



51 Surrey CC FINAL RESPONSE Airspace Modernisation 05 04 19 (002)

<p>12) What are your top 5 Airspace Modernisation objectives?</p>	<p>A key concern for Surrey County Council is the noise impact of airport operations on residents, how it can be reduced and what mitigation can be provided by the airport and airline operators. Sharing the burden of noise over a wider area may be necessary to avoid unacceptable impacts of flightpath concentration. Concentrated flightpaths with no respite are not acceptable .</p> <p>In terms of the objectives suggested, we would prioritise option E. However in our view, there needs to be a clear objective that aims to reduce the effects of noise to protect the health and quality of life of impacted communities. Predictable and regular respite from aircraft noise is vital.</p>
<p>13) What other Airspace Modernisation objectives do you believe we should consider?</p>	<p>As stated above there needs to be a clear objective that aims to reduce the effects of noise to protect the health and quality of life of impacted communities. Predictable and regular respite from aircraft noise is vital. Restricting the timing of route availability to reduce the impacts of night flights on communities local to the airport should also be a consideration.</p>
<p>14) What other design principles do you believe we should consider and why?</p>	<p>We would be supportive of Gatwick designing flight paths over less sensitive land uses such as commercial and industrial areas, in order to avoid residential areas.</p>



56 Crawley BC Gatwick Airspace _Apr_19

It is generally accepted that the UK Airspace is not run optimally and causes numerous conflicts between different flightpaths from different airports which results in aircraft not being able to climb continuously and therefore results in residents being unnecessarily being exposed to increased levels of noise.

However de-conflicting these routes comes with its own challenges and will need to be handled carefully as the result may well result in overflight of areas which previously experienced no or very little overflight in the past. There is a drive by a number of communities around the Airport for Fair & Equitable Distribution (FED) of flights but that should be within existing swaths rather than creating new ones.

It is likely that improving the airspace will increase the number of flights overall and therefore resulting in further congestion (as does increasing lanes on a motorway). Therefore any acoustic benefits from de-confliction could soon be lost to increase overflight.

It should also be noted that not all overflights are equal. An overflight at the 66dB contour is far more disturbing and damaging to an individual's health than an overflight at the 57dB contour. Therefore where possible any relief to those closer into the airport should be given priority to those further out. Maybe when calculating the 'number of people overflown' a greater 'weighting' is given to those in noisier locations.

There are potential financial gains for airlines from the more efficient use of the airspace and if there are newly overflown then these financial benefits should be shared with them.

Response to Questions

Q1a Do you agree that airspace design must be safe and further promote safety management systems?

Yes.

Q1b Should 'safer by design' attract the highest design principle priority?

Yes

Q2 Should Gatwick adopt the most beneficial form of enhanced navigation standards as the foundation of its designs?

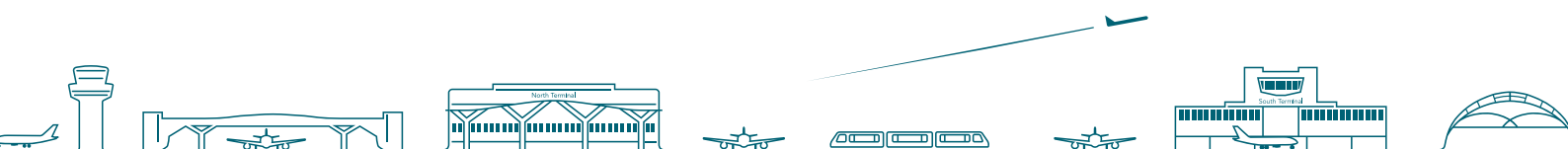
Yes

Q3 Should Gatwick adopt a design principle that offers long term predictability of flight paths and enables beneficial systems adaptations?

Yes

Q4 Should Gatwick adopt a design principle that seeks, through its airspace design, to promote the adoption of enhanced aircraft capabilities that benefit communities and the more efficient management of air traffic?

Yes



56 Crawley BC Gatwick Airspace _Apr_19

Q5. Should Gatwick adopt a design principle that seeks to deconflict arrivals and departure routes below 7,000 feet to reduce the prevalence of overflight of a community by airport traffic on different routes and/or by neighbouring airport traffic?

Yes

N.B. Aircraft above 7,000' can still cause annoyance. A B747-400 at 7,050' is far louder than an Airbus A320 Neo at 6,950'. Therefore 7'000' should not be a cut-off with everything above being deemed to be acceptable. There should be two height standards one for QC0.5 or below and one for QC1 and above.

Q6. Should Gatwick adopt a design principle that seeks to create an arrival route consistent with time based operations?

Yes. This is clearly the most efficient way for aircraft to fly as it should remove the need for fuel wasting holding stacks. However the most efficient method for airlines may not be acceptable for residents if not previously overflowed. So there is a balance to be had.

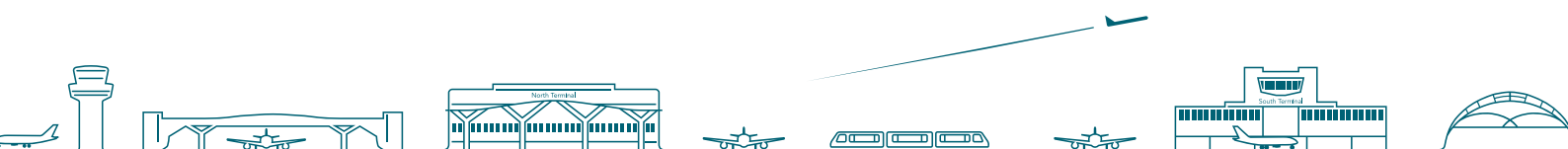
Q7. To what extent should London Gatwick consider multiple pathways on: (a) departures and (b) arrival procedures?

This depends on where the multiple pathways would be and at what height. With departures aircraft can be vectored out of the NPR above 3,000 or 4,000' so there is already the opportunity for multiple pathways. Up to 3-4,000' within the existing NPR a departures towards one edge of the NPR would offer respite to those on the opposite side of the NPR. It is therefore possible to run multiple routes within an NPR as a form of FED. However focussing a larger proportion of flight on the edges of NPRs would have a greater effect on those outside the NPRs. Again a balance needs to be struck. For arrivals there is already a broad swath off aircraft approaching the ILS. If this swath was increased in width to include early joining to the ILS it is likely to affect a new group of residents previously not exposed to such regular overflights.

There are several AIPs which prevent the overflight of urban areas like Crawley, Horley and Horsham. These must be continued due to the sheer numbers that would be affected if overflying over these urban areas were to commence.

Q8. In what order would you prioritise these 5 overflight management systems?

As discussed above the priority should always be given to those most affected by noise from Gatwick. More weight should be given to reducing noise for someone affected by noise above 60dB than below. 60dB being the level recommended in PPG24 as the upper desirable limit for exposure to aviation noise. Further out then a balance between number of people affected v minimising the newly overflowed should be found but with an understanding that the any newly overflow are offered compensation or the ability to relocate if inside the 54dB contour.



56 Crawley BC Gatwick Airspace _Apr_19

Q9. Are there other options we should consider and how would you prioritise them relative to your response to question 8?

An Airbus Neo is 4dB quieter on departure than its predecessor. Halving the number of overflights over a certain point reduces noise by 3dB. An option maybe to restrict new departure routes to Airbus Neo or B737 Max aircraft only.

Q10. Where on the spectrum of A-E would you wish Gatwick airport to prioritise these factors?
Environmental Benefits include reducing noise and carbon dioxide both of which can be improved by operational efficiency. So the two are not mutually exclusive. However some operational efficiencies will potentially effect new residents not previously affected. Therefore if this were the case some of the financial benefits of operational efficiency should be shared with those people.

Inside 60dB contour = E
Above 10,000' = A

Q11. Where on the spectrum of A-E would you wish Gatwick airport to prioritise operational resilience?

The risk of having a fully resilient system is that it may become an easy choice for minor disruptions or permanent choice when maximum capacity has been reached and disruption is the norm. I would therefore recommend that operational disruption is defined and agree prior to agreeing the level of resilience

Q12. What are your top 5 Airspace Modernisation objectives and why?

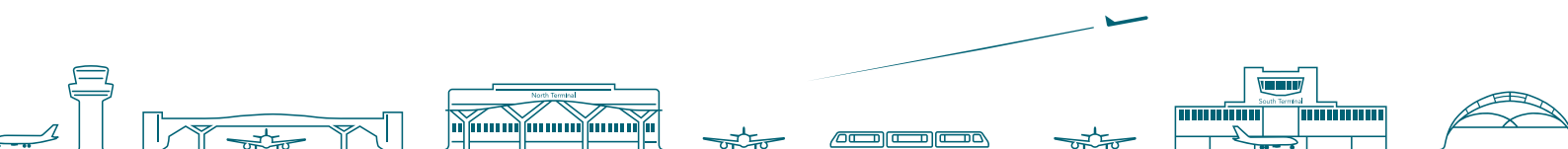
Safety (A) must come first but then it has to be a balance between many of these options. However E & F must be high on the list. Also H should be included but only if it is expanded to include aviation into the realms of common law nuisance – so making it truly sustainable.

Q13. What other Airspace Modernisation objectives do you believe we should consider?

Rather than any other Airspace Modernisation objectives there is one area that Aviation itself needs to modernise and that is in relation to fuel tax. If is time the industry accepts that it can no longer be subsidised by the general public and should pay its own way. Flights to Edinburgh should not be cheaper than the train, it is unsustainable.

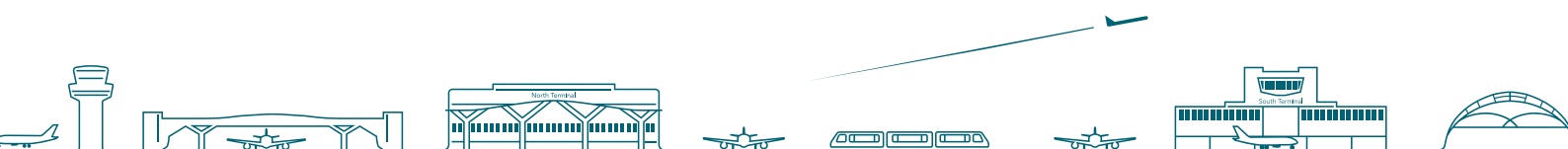
Q14. What other design principles do you believe we should consider and why?

There needs to be joined up thinking within Government with regards noise and land-use planning. There is little point modernising airspace in the south east and reducing the number of people affected by noise and the level of noise which affects them if another Government Department then permits 100's or 1000's of new houses to be built under a flightpath.



57 DPv0-1 Response Lewes - Deferred - 20180404

Thank you for your recent invitation to consult on Gatwick's design principles development. Having reviewed the documents we do not plan to submit a response to your consultation, although we remain broadly in agreement with the principles being set. I trust this is sufficient for your requirements, but please do let me know if you require any further clarification.



58 DPv0-1 Response Guildford - 20180409

Thank you for engaging with Guildford Borough Council in respect of the process of Design Principle Development for the Airspace Modernisation of Gatwick airport.

This is an officer-level response only in respect of the document 'Airspace Modernisation - Gatwick Airport: An Introduction to Design Principle Development' dated 18 March 2019.

We are responding with respect to the following questions:

3.8 Potential Principle - Deconfliction by Design

Qu 5 Should Gatwick adopt a design principle that seeks to deconflict by design all Gatwick arrival and departure routes below 7000 feet to reduce the prevalence of overflight of a community by airport traffic on different routes and/or by neighbouring airport traffic?

Response: Yes.

3.11 Area of Consideration - Managing Overflight

Qu 8 In what order would you prioritise these 5 overflight management options? Either singularly or groups

Response: Order of preference of the options is C, B, D, A, and E.

Qu 9 Are there other options we should consider and how would you prioritise them relative to your response to Qu 8?

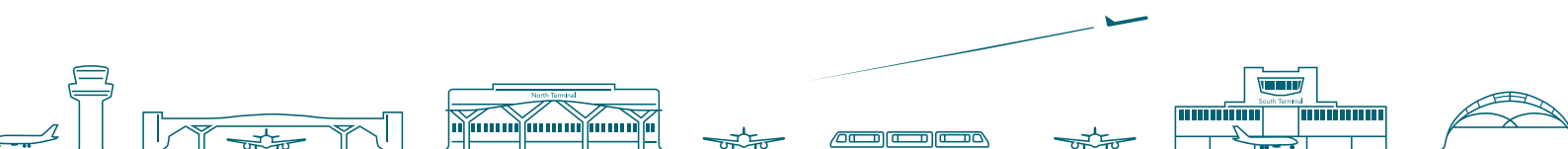
Response: None suggested.

3.12 Area of Consideration - Operational Efficiency v Environmental Impact

Qu 10 Where on the spectrum of A ÷ E would you wish Gatwick airport to prioritise these factors?

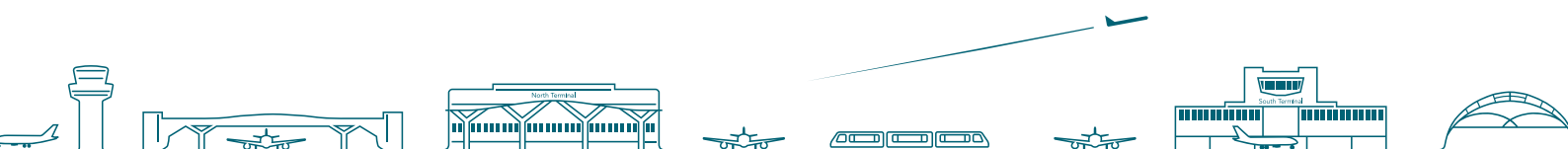
Response: Order of preference of the options is C, A, E, D, and B.

Going forward, we would like to be involved in your future engagement and consultation activities, including attending briefings.



60 DPv0-1 Response Horsham - Deferred - 20180404

Horsham District Council will likely submit our comments in the next phase of consultation on the Outline Design Principles. Do you know if there are any further presentations by Gatwick planned?



63 MVDC Response to GAL Design Principle Development, Apr 2019 - Final

I am writing on behalf of Mole Valley District Council (MVDC) to respond to Gatwick Airport Limited (GAL)'s focused engagement with key stakeholders on design principle development that forms part of the Future Airspace Strategy Implementation – South (FASI-S) process.

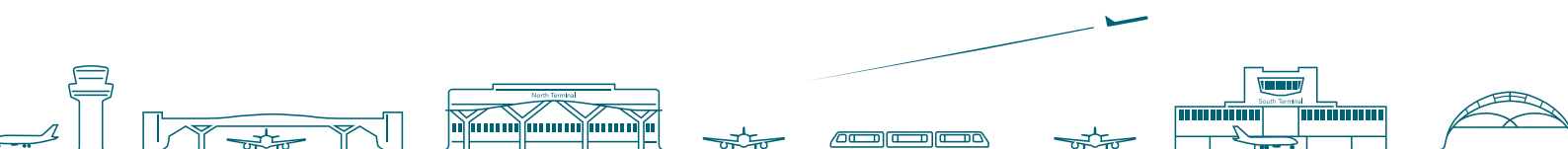
MVDC welcomes the airspace redesign process and recognises that this is an important opportunity to alleviate noise impacts on communities close to airports. Whilst we understand the tight timescale in which GAL has to work to feed in to this wider process, we are nonetheless disappointed with the hurried manner in which responses to this initial engagement have had to be written. Design principles form an important part of the airspace change process and a lack of time to properly consider the implications of each is far from ideal. Furthermore, GAL's decision not to engage at this stage with Parish Councils, whilst not allowing District and Borough Councils enough time to reach out to local organisations, presents the very real threat that invaluable local opinion and knowledge on relevant matters will be missed.

1a: Do you agree that airspace design must be safe and further promote safety management systems?

MVDC agrees that airspace design must be safe and further promote safety management systems. We believe that safety is paramount and should not be a matter for the key stakeholders of this engagement process, but instead for the regulatory bodies tasked with upholding safety standards.

1b: Should 'Safer by Design' attract the highest design principle priority?

MVDC categorically believes that 'Safer by Design' should be the highest design principle priority and that this should not be up for debate.



63 MVDC Response to GAL Design Principle Development, Apr 2019 - Final

2: Should Gatwick adopt the most beneficial form of enhanced navigation standards as the foundation of its designs?

As GAL will be well aware, the introduction of Performance Based Navigation (PBN) at Gatwick has had an adverse effect on some local communities in that the concentration of flights above certain areas has increased substantially, worsening noise impacts considerably. MVDC is supportive of enhanced navigation standards but only if used to provide an equitable and fair distribution of aircraft across NPR swathes.

3: Should Gatwick adopt a design principle that offers long term predictability of flight paths and enables beneficial system adaptations?

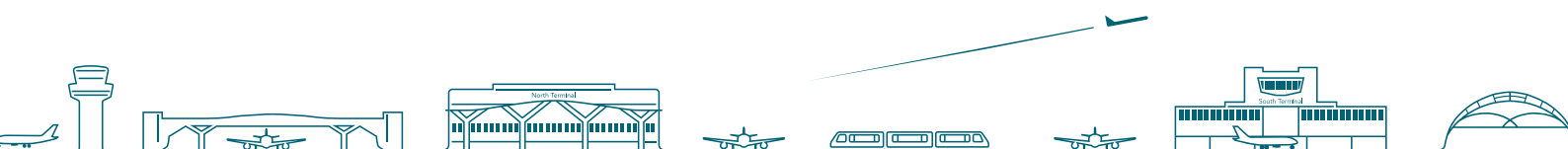
MVDC is supportive of long term predictability of flight paths, but is concerned that this could be at the expense of communities close to the airport. As outlined previously, we are alarmed at the impact that PBN has had on communities by increasing the concentrations of flights overhead and therefore support predictability of flight paths where aircraft are distributed fairly and equally across the NPR swathes. MVDC does not support the concentration of flights using PBN under the justification that it provides flight path predictability.

4: Should Gatwick adopt a design principle that seeks, through its airspace design, to promote the adoption of enhanced aircraft capabilities that benefit communities and the more efficient management of air traffic?

MVDC agrees that GAL should adopt a design principle that seeks to promote the adoption of enhanced aircraft capabilities, where they benefit communities and the more efficient management of air traffic. MVDC would not support the utilisation of enhanced aircraft capabilities where there would be a negative impact on communities, particularly through the overflight of those not currently impacted by aircraft noise.

5: Should Gatwick adopt a design principle that seeks to deconflict by design all Gatwick arrival and departure routes below 7000 feet to reduce the prevalence of overflight of a community by airport traffic on different routes and/or by neighbouring airport traffic?

MVDC believes that the airspace change process is the principle opportunity to deconflict flight paths across the wider region, with substantial benefits to communities currently impacted by aircraft noise. We therefore strongly support the adoption of a design principle that seeks to deconflict by design all Gatwick arrival and departure routes to reduce the prevalence of overflight of a community. We encourage GAL to work collaboratively with other airports such as Heathrow, to ensure that aircraft leaving Gatwick are not restricted in their rate of climb by other aircraft as is currently the case with Routes 3 and 4. MVDC strongly support aircraft climbing at the optimum rate to minimise noise impacts on communities close to the airport as well as those further away.



63 MVDC Response to GAL Design Principle Development, Apr 2019 - Final

6: Should Gatwick adopt a design principle that seeks to create an arrival route design compatible with time based operations?

MVDC is encouraging of a design principle that seeks to create an arrival route design compatible with time based operations, to limit and if possible remove the need to hold aircraft in stacks before coming in to land. The noise benefits coupled with the environmental gains of this design principle are both supported.

7a: To what extent should London Gatwick consider multiple pathways on departures procedures?

MVDC is of the belief that a single pathway for departures is unacceptable in that it significantly worsens the noise impacts of aircraft upon the same concentrated area. However, we also disagree with the principle of spreading multiple routes across a broader area that might affect people not currently overflown, outside of the current NPR swathes. MVDC therefore proposes that GAL consider the equal and fair distribution of flight paths and aircraft across the current NPR swathes using Performance Based Navigation. This will ensure that no new communities or households are newly overflown, whilst ensuring that aggregate noise impacts are reduced.

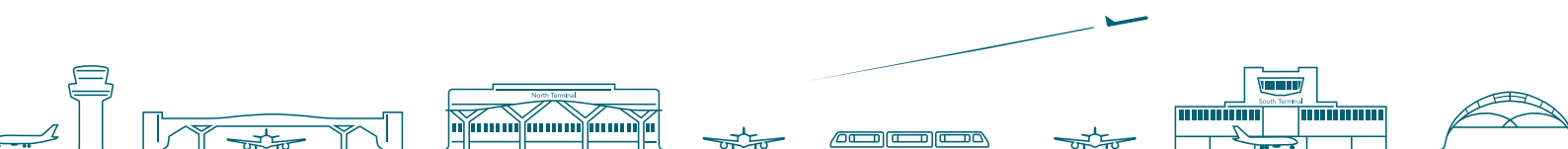
7b: To what extent should London Gatwick consider multiple pathways on arrival procedures?

Similarly to question 7a, MVDC believes that on arrivals, aircraft should be dispersed fairly and equitably over a pre-defined swathe to reduce the frequency of noise impacts on communities. However, we would not advocate the overflight of those not currently affected by aircraft noise.

8: In what order would you prioritise these 5 overflight management options?

MVDC does not wish to prioritise the five proposed overflight management options outlined in section 3.11 of the engagement document. However, we would call on GAL to follow national policy to 'limit and, where possible, reduce the total adverse effects on people' by implementing the equitable and fair distribution of aircraft over the existing NPR swathes, ensuring the frequency of noise events is not concentrated unfairly whilst also avoiding the overflight of people not currently affected by aircraft noise. MVDC therefore would prioritise managed dispersal over minimising the total number of people affected, but only in the context of a wide dispersal of flights over an NPR swathe rather than two or three separate flight paths in each swathe.

MVDC does not wish to comment on the provision of managed respite and the restriction of route availability at certain times to reduce noise impacts on communities, owing to the lack of detailed information on each. Furthermore, without engagement or consultation with the communities likely to be affected by such decisions, MVDC is not in a position to comment on whether either option would be favourable or not. It is unfair of GAL to ask such a question to County, District and Borough Councils but not to Parish Councils that will have a better understanding of the local situation and what people currently affected by noise may prefer.



63 MVDC Response to GAL Design Principle Development, Apr 2019 - Final

9: Are there other options we should consider and how would you prioritise them relative to your response to Question 8?

Please see the above answer.

10: Where on the spectrum of A – E would you wish Gatwick airport to prioritise these factors?

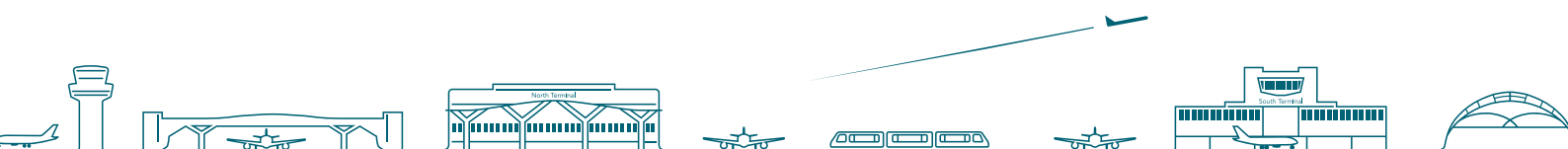
MVDC does not wish to comment on at what point on the provided scale GAL should prioritise the balance between operational efficiency and local environmental benefits. Without further information on each potential trade-off, it is impossible to make an educated judgement about what GAL should be prioritising. MVDC acknowledge that there is a need to consider operational efficiency, reduced cost and minimising national environmental impacts when designing airspace, however we also strongly believe that local environmental benefits must also be given robust consideration. It would be irresponsible to choose which of these factors should be prioritised before understanding the scenario in which one is choosing between the two and therefore MVDC does not want to make a judgement either way. However, we would emphasise the importance of environmental benefits to communities close to the airport and would urge GAL to fully consider them in any airspace design decisions. MVDC is particularly supportive of aircraft climbing uninterrupted at an optimum rate which increases operational efficiency and minimises environmental impacts simultaneously.

11. Where on the spectrum of A – E would you wish Gatwick airport to prioritise operational resilience?

MVDC is supportive of the correct balance being struck in terms of operational resilience. We understand that airport operations can be impacted by a wide range of events with varying consequences, and recognise that Gatwick must be resilient in such instances. However, we firmly believe that this should not be at the complete expense of local communities and minor delays should not be a reason for an increase in noise events on those that live close to the airport. Furthermore, we do not support operational resilience at the expense of those who are not normally overflowed.

12: What are your top 5 Airspace Modernisation objectives?

The single most important airspace modernisation objective to MVDC is to enable government policies in respect of the reduction and mitigation of noise and how it should be distributed to manage the impact of aviation growth on local communities. We understand that airspace redesign can have a number of other benefits but firmly believe that the priority should be to improve the noise climate for communities currently blighted by aircraft noise.



63 MVDC Response to GAL Design Principle Development, Apr 2019 - Final

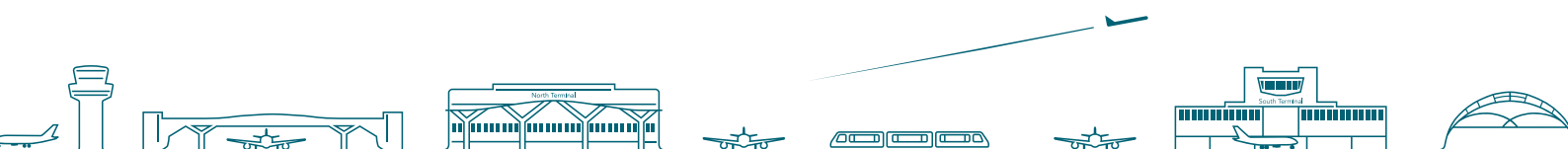
Other matters

In line with the CAA's Airspace Design Guidance (CAP 1616), MVDC would urge GAL to consider a number of other factors when identifying design principles. GAL should ensure that the nationally designated Surrey Hills Area of Outstanding Natural Beauty (AONB) is protected from noisy and visually intrusive aircraft overhead. Airspace change sponsors are required by CAP 1616 to have regard to the statutory purpose of the AONB which is to conserve and enhance the natural beauty of the area. GAL should also assess the impact upon tranquillity of any airspace change near to this sensitive area.

MVDC would also encourage GAL to consider the location of noise-sensitive buildings as an airspace design principle. Hospitals, care homes, schools, higher education establishments and places of worship are all particularly susceptible to aircraft noise and flight paths should therefore avoid these where possible.

CAP 1616 also requires that airspace change sponsors have an up-to-date knowledge of local plans while developing design options. MVDC is currently in the process of preparing a new Local Plan and we anticipate a Regulation 18 consultation in the summer of this year that will provide details of proposed development over the next 15 years. We will be sure to consult with GAL accordingly.

MVDC welcomes the opportunity to comment at this early stage of the process and looks forward to further engagement and consultation in due course.



64 Reigate & Banstead Design Principles Response FINAL April 2019 -

Thank you for the opportunity to comment on Gatwick Airport's 'Airspace Modernisation: An introduction to design principle document', and for inviting council representatives to attend your recent workshops in relation to the FASI-South process. We have set out below our comments on the engagement document.

Safety:

We agree that airspace design must be safe and note that this principle is enshrined in national and international legislation as well as being reflected in Gatwick's Statement of Need outcomes.

We would expect safety to be considered in the most holistic sense as part of the airspace options development and appraisal process, for example through an assessment of the health impact of any changes on residents. We therefore suggest that the proposed design principle be broadened beyond 'aviation safety' to also include the health and safety of those impacted by aircraft overflying.

Core principles:

We consider the other core principles should be:

- **Not increasing - and where possible reducing - noise disturbance to communities and residents** (note that this is not the same as 'limiting and where possible reducing'); and
- **Minimising newly overflowed people and minimising the total population overflowed**

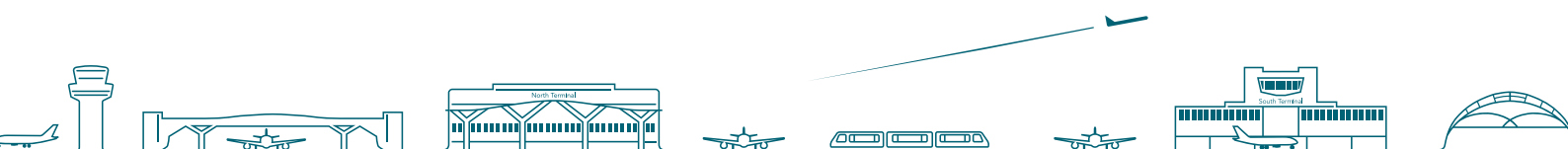
Including these as core principles would help provide reassurance for the Council and local residents that Gatwick Airport is committed to protecting the amenity and health of local communities and residents.

We feel that **all other airspace design principles should be subsidiary** to this – ie that **navigational standards** above statutory requirements are adopted should be based on these achieving the core principles we have set out above. As currently worded, Gatwick's principle is vague – the term 'beneficial' could be interpreted in many different ways, negating the value of this design principle.

Similarly, the promotion of **enhanced aircraft capabilities** should be with a view to achieving the above proposed core principles.

In relation to the proposed '**de-confliction by design**' principle, we agree that plans need to take account of the combined impact of airports' arrivals and departures (including Heathrow) on communities when designing routes to enable faster climb and descent.

We support the use of multiple departure routes where these would offer genuine benefits to local communities affected by aircraft noise; however it is important as part of the options assessment work that a comprehensive assessment of the different total and relative noise impact of different options is undertaken.



64 Reigate & Banstead Design Principles Response FINAL April 2019 -

Managing overflight

We are not in a position to prioritise the options presented as we do not necessarily consider them to be mutually exclusive, and it is important that the final design principles do not present them as being so.

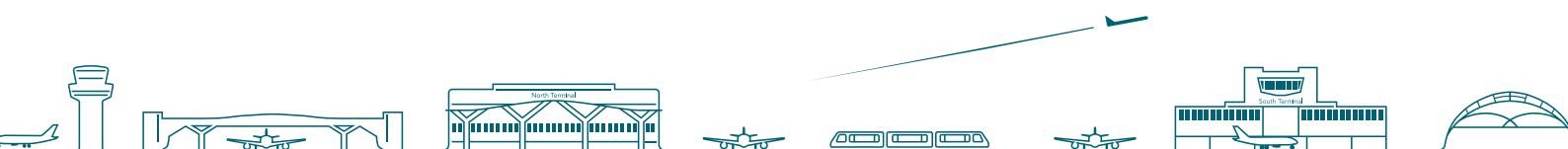
We consider that minimising the number of people newly affected, and the total number of people affected, should be core principles.

We support predictable respite, but do not consider that the design principles should constrain how this respite might be achieved. Respite needs to be genuine respite, that is, as actually experienced by local residents and communities, taking into account eg the noise shadow.

Other comments

We appreciate that the following matters are probably for the Stage 2 consultation but we would like to set out our expectations for options testing which may help inform your developing approach.

- We seek reassurance that the impact of Gatwick Airport's growth plans will be properly assessed through the airspace design process
- We support the position of Horley Town Council that the 'no overflying of Horley' principle should be retained, reflecting the urban character of this area and ongoing growth plans for the town
- We support the position of Salfords and Sidlow Parish Council that - in relation to Route 4 - future routes should reflect the pre-2012 'legacy' position towards the northern edge of the current NPR
- Also in relation to Route 4, the outcomes of the planned review should be integrated with the outcomes of the FASI-South review
- We would expect to see separate health impact assessment included in the Stage 2 options testing work (separate from WebTAG) and ensure that the WebTAG appraisal includes the latest noise information from the WHO
- We would expect Gatwick Airport to take the opportunity presented by its review of growth plans and airspace to work towards reducing night flights.



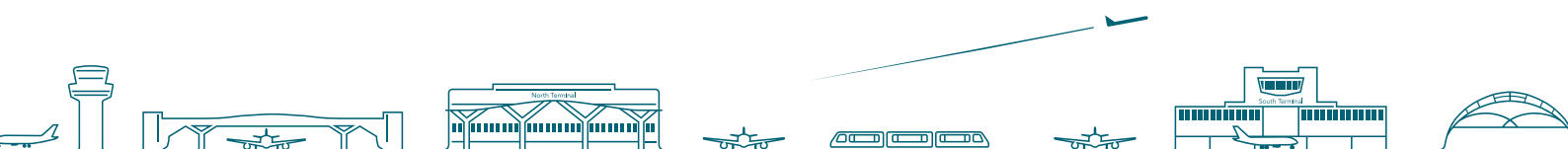
67 DPv0-1 Response Tandridge - 20180402

Tandridge District Council welcome the invite to be involved in the Airspace Modernisation programme. The Council recognises the importance of Gatwick and how it contributes to both local employment as well as national economic prosperity. The Council supports the airport in seeking to carry out its operations in the most efficient and modern way and the Council is interested in both how Gatwick will improve and thrive, but also what impacts, if any, will be had on our residents and businesses. The District has a number of settlements and communities in close proximity to the runway and within a wider area where air traffic is noticeable. As a rural district the impact of flightpaths is often more apparent to our communities than those of a more urbanised nature. The District is affected by a number of flightpaths from airfields around the border including Redhill Aerodrome and Biggin Hill, but of course Gatwick is the most substantial operator.

Before making some more specific comments we would like to raise a general point that a whilst the majority of the questions asked as part of this consultation seem to attract an obvious and positive answer, in the absence of a cost/benefit analysis for options, it is not possible to respond in any detail. As such, the Council await further involvement and understanding before commenting on some of these matters further.

Comments that the Council do feel able to make at this time are set out below:

- 1)** At section 2.4.2, you list the number of groups that you would seek to engage, can we ask that reference is also made to parish councils, not just town councils. Tandridge District is a parished area and it is essential that they are recognised and asked for input;
- 2)** Under 3.2.1 it is not clear how the impacts on communities is captured. We would assume that this is under 'environmental', however, more recognition of this is needed to ensure that the impacts on quality of life is a key consideration;
- 3)** Regarding 3.8 to 3.12 without understanding the potential options and cost vDs benefit, the Council is unable to offer further comment at this time but look forward to engaging further on this as the project progresses.



68 Tonbridge & Malling 190405 - Gatwick Airspace Modernisation

Thank you for the opportunity to engage with Gatwick Airport, in developing the design principles that will shape changes linked to the modernisation of the airspace over the South East of England (FASI-South).

Tonbridge and Malling Borough Council is concerned about impacts upon local communities that are overflown by aircraft below 7000ft. Any improvements that are implemented in due course, to ensure that communities in our borough are not overflown at low level would be welcomed.

Please find below our response to the questions that are set out in the airspace modernisation document (March 2019). Please note that this is an officer level response. Our members will be updated on this matter at the next meeting of our Planning and Transportation Advisory Board to be held in June.

We look forward to hearing further from you regarding this matter.

Questions

1a - Do you agree that airspace design must be safe and further promote safety management systems? **Yes**

Additional comments: TMBC has no further comment.

1b - Should 'Safer by Design' attract the highest design principle priority? **Yes**

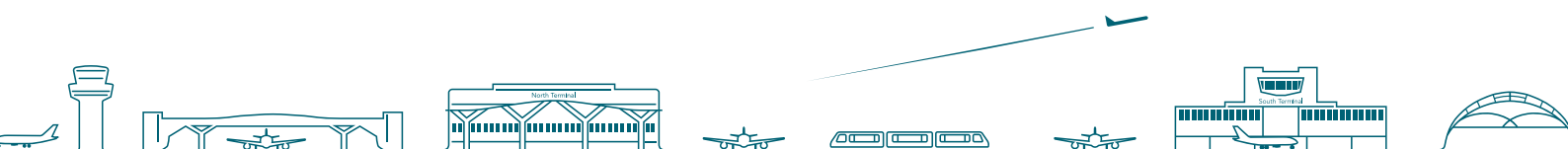
Additional comments: TMBC has no further comment.

2 - Should Gatwick adopt the most beneficial form of enhanced navigation standards as the foundation of its designs? **Yes**

Additional comments: As long as this is also beneficial to over flown communities, allowing departure and arrival paths to be optimised below 7000 ft.

3 - Should Gatwick adopt a design principle that offers long term predictability of flight paths and enables beneficial system adaptations? **Yes**

Additional comments: It is helpful for statutory partners and local communities to have a predictable understanding of flight paths.



68 Tonbridge & Malling 190405 - Gatwick Airspace Modernisation

4 - Should Gatwick adopt a design principle that seeks, through its airspace design, to promote the adoption of enhanced aircraft capabilities that benefit communities and the more efficient management of air traffic? **Yes**

Additional comments: As long as these are proven safe by international regulatory bodies and the CAA. Nobody wishes for a repeat of the recent 737 Max 8 incidents, or similar due to a technical fault with complex on-board systems.

5 - Should Gatwick adopt a design principle that seeks to deconflict by design all Gatwick arrival and departure routes below 7000 feet to reduce the prevalence of overflight of a community by airport traffic on different routes and/or by neighbouring airport traffic? **Yes**

Additional comments: It is anticipated that in practice this could be difficult to achieve, as all local authorities in the South East are challenged with the requirement to accommodate significant housing and employment growth. In considering routes below 7000ft, Gatwick and NATS need to have an awareness of existing and proposed communities, which are identified in Local Authority development plans.

6 - Should Gatwick adopt a design principle that seeks to create an arrival route design compatible with time based operations? **Yes**

Additional comments: TMBC has no further comment.

7 - To what extent should London Gatwick consider multiple pathways on:

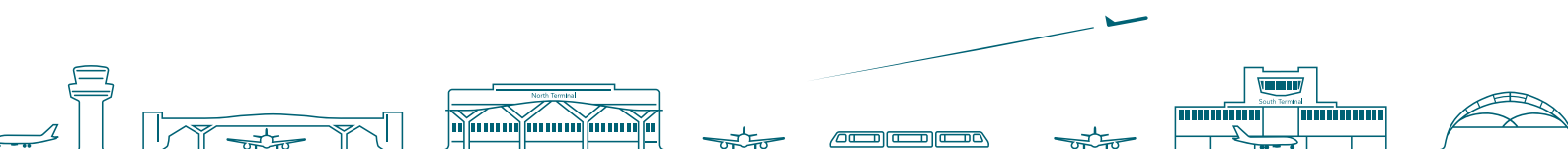
(a) Departure procedures – yes, subject to further consultation with partner organisations and use of enhanced navigation standards.

(b) Arrival procedures – yes, subject to further consultation with partner organisations and use of enhanced navigation standards.

8 - In what order would you prioritise these 5 overflight management options?

A (2) B (1) C (3) D (5) E (4)

9 - Are there other options we should consider and how would you prioritise them relative to your response to Qu 8? Option B is preferable, even if this may not result in the most direct flight paths below 7000ft.



68 Tonbridge & Malling 190405 - Gatwick Airspace Modernisation

10 - Where on the spectrum of A – E would you wish Gatwick airport to prioritise these factors? A () B () C (X) D () E ()

11 - Where on the spectrum of A – E would you wish Gatwick airport to prioritise operational resilience? A () B () C (X) D () E ()

12 - What are your top 5 Airspace Modernisation objectives?

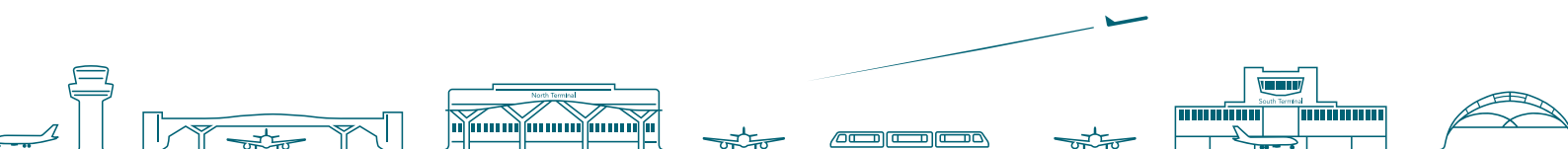
- 1 - E
- 2 - K
- 3 - A
- 4 - G
- 5 - H

13 - What other Airspace Modernisation objectives do you believe we should consider?

TMBC has no further comment.

14 - What other design principles do you believe we should consider and why?

TMBC has no further comment.



71 Airspace Modernisation Gatwick Airport Consultation March 2019 Wealden DC response_

3.15 Summary of Questions

1a	<p>Do you agree that airspace design must be safe and further promote safety management systems? YES <input checked="" type="checkbox"/> / NO <input type="checkbox"/></p> <p>Additional comments: Safety is a fundamental priority for aviation, as with all other transport modes. In line with the Safety Core Principle, design should seek to enhance aviation safety by reducing or removing safety risk factors.</p>
1b	<p>Should 'Safer by Design' attract the highest design principle priority? YES <input checked="" type="checkbox"/> / NO <input type="checkbox"/></p> <p>Additional comments: It is agreed that the highest quality design should be provided in order to ensure safety, and reference to further strengthening safety culture in aviation is welcomed.</p>
2	<p>Should Gatwick adopt the most beneficial form of enhanced navigation standards as the foundation of its designs? YES <input checked="" type="checkbox"/> / NO <input type="checkbox"/></p> <p>Additional comments: We welcome Gatwick's aspirations to extend beyond the minimum legal requirements to apply enhanced navigation standards to all aspects of departure and arrival procedures, for the reasons stated.</p>
3	<p>Should Gatwick adopt a design principle that offers long term predictability of flight paths and enables beneficial system adaptations? YES <input checked="" type="checkbox"/> / NO <input type="checkbox"/></p> <p>Additional comments: It is agreed that airspace designs should withstand the demands of the next 30 years, but it is appreciated that predicting and resolving growth and development needs for this long time period will be a challenge. Prior to full implementation being achieved, the shorter term plans and phases should be set out in a transparent way, including any potential impacts.</p>
4	<p>Should Gatwick adopt a design principle that seeks, through its airspace design, to promote the adoption of enhanced aircraft capabilities that benefit communities and the more efficient management of air traffic? YES <input checked="" type="checkbox"/> / NO <input type="checkbox"/></p> <p>Additional comments: It is agreed that future airspace design should offer the greatest benefits to those airlines that have made investments to adopt efficient operations and minimise their impact on local communities.</p>
5	<p>Should Gatwick adopt a design principle that seeks to deconflict by design all Gatwick arrival and departure routes below 7000 feet to reduce the prevalence of overflight of a community by airport traffic on different routes and/or by neighbouring airport traffic? YES <input checked="" type="checkbox"/> / NO <input type="checkbox"/></p> <p>Additional comments: It is beneficial to reduce the prevalence of flight paths under 7000ft on particular areas and local communities. This will require close working with neighbouring airports on their airspace modernisation plans, hopefully undertaken concurrently.</p>
6	<p>Should Gatwick adopt a design principle that seeks to create an arrival route design compatible with time based operations? YES <input checked="" type="checkbox"/> / NO <input type="checkbox"/></p> <p>Additional comments: This is a positive step and will eliminate the need for flight delay techniques at low altitudes close to the airport which can impact on local communities. Appropriate technologies are available to ensure the seamless transition of flights, to descent to the airport runway.</p>
7	<p>To what extent should London Gatwick consider multiple pathways on:</p> <p>(a) Departures procedures This could help to minimise the potential impact of take off flights on a specific area, but the number of pathways should be limited to those that have the least impact.</p> <p>(b) Arrival procedures There are similar impacts associated with departures above. However, the greater amount of pathways into descent and arrival could assist with limiting the amount of delays and periods when the aircraft is in hold below 7000 ft, which would impact local communities more.</p>



71 Airspace Modernisation Gatwick Airport Consultation March 2019 Wealden DC response_

8	In what order would you prioritise these 5 overflight management options?	We are unable to answer this question as we cannot currently assess the impact.	A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/>
9	<p>Are there other options we should consider and how would you prioritise them relative to your response to Qu 8?</p> <p>No further comments.</p>		
10	Where on the spectrum of A – E would you wish Gatwick airport to prioritise these factors?	A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input checked="" type="checkbox"/>	
11	Where on the spectrum of A – E would you wish Gatwick airport to prioritise operational resilience?	A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input checked="" type="checkbox"/>	
12	<p>What are your top 5 Airspace Modernisation objectives?</p> <ol style="list-style-type: none"> 1 Enable and facilitate continuous improvements in safety standards through innovation 2 Develop a sustainability framework to guide the aviation industry in its investment and technological development 3 Enable government policies in respect of the reduction and mitigation of noise and how it should be distributed to manage impact on local communities * 4 Safely and efficiently accommodate new technologies that change the type and of aerial craft and how they operate 5 Provide flexibility within the system to enable continuing development and improvement <p>*Please note that Wealden District Council consider that this objective should include reducing and mitigating all environmental impacts, not just noise.</p>		
13	<p>What other Airspace Modernisation objectives do you believe we should consider?</p> <p>There should be specific reference to the need for a coordinated strategy which takes into account the modernisation strategies of neighbouring airports and the close working with NATS with regards to operation of airspace above 7,000 ft.</p>		
14	<p>What other design principles do you believe we should consider and why?</p> <p>The consultation and seminar sessions held at Gatwick were very useful in informing stakeholders on the lack of modern technologies that are currently used in the operation of airspace and the fact that a number of aircraft have now been disposed of that invested in technologies that were not able to be utilised by British airports. Whilst not an additional design principle, the effective use of modern technologies is imperative to the modernisation strategy.</p>		

