Annex D to
RAF Northolt ACP Submission
Dated 17 June 19

STAKEHOLDER FEEDBACK

The table below lists every stakeholder who has replied to RAF Northolt's engagement for the development of its design principles, along with a copy of each reply.

Gatwick

Royal Air Force Northolt Draft Design Principles

1. In the tables below, we have set out the draft Design Principles that will help shape the Airspace Change Proposal for Royal Air Force Northolt. Some of the Design Principles are set in stone and no comment is requested, but we seek your input into the remainder.

2. **Table 1**. These Design Principles do not require your comments but are included for your awareness.

Proposed Design Principle	Reasoning
Must be safe	Provide a safely designed airspace structure and routes, to ensure the safe operation of aircraft
Must ensure continuation of military and governmental operational activity	RAF Northolt must be able to operate to its current commitments and future Defence requirements

Table 2. Please consider the Design Principles for the general design of the Airspace Change Proposal in Table 2 below. You are requested to rank them in level of importance to you and your organisation where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	2	We agree with this principle. We would ask that wherever possible airports strive for lateral deconfliction below 7000 ' of routes to avoid overflight of the same communities
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	1	Yes we agree this should be a key design principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	3=	A design principle that prioritises operational efficiency will not always be in harmony with maximising the benefits to all stakeholders. It may be better to seek operational efficiencies that enable reduced fuel and greenhouse gases, unless there are clear dis-benefits for other stakeholders.
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	5	This is a net outcome of the DP above. See response above.
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	3=	Whilst we recognise the intent; a translation of compliance with Govt Policy. You may wish to consider what design features you may use to enable this outcome.

3. Please make any other comments you see fit on our draft Design Principles.

NIL

Gatwick Airport
4 April 19

Royal Air Force Northolt Draft Design Principles

1. In the tables below, we have set out the draft Design Principles that will help shape the Airspace Change Proposal for Royal Air Force Northolt. Some of the Design Principles are set in stone and no comment is requested, but we seek your input into the remainder.

2. **Table 1**. These Design Principles do not require your comments but are included for your awareness.

Proposed Design Principle	Reasoning
Must be safe	Provide a safely designed airspace structure and routes, to ensure the safe operation of aircraft
Must ensure continuation of military and governmental operational activity	RAF Northolt must be able to operate to its current commitments and future Defence requirements

Table 2. Please consider the Design Principles for the general design of the Airspace Change Proposal in Table 2 below. You are requested to rank them in level of importance to you and your organisation where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	3	We welcome this proposed principle and as such will continue to work with Northolt to achieve the best integration of both of our operations to enable a modernised airspace for the South of England.
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	3	

Proposed Design Principle	Reasoning	Ranking	Comment
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	3	
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	1	
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	1	The Government has set out its vision for sustainable development in its Noise Policy Statement for England to "promote good health and a good quality of life through the effective management of noise…". This vision is supported by three aims: to avoid significant adverse impacts on health and quality of life; to mitigate and minimise adverse impacts on health and quality of life; and where possible, contribute to the improvement of health and quality of life. In accordance with this, Heathrow believes that minimising the impact of aircraft noise should be prioritised (highly) in the list of design principles

3. Please make any other comments you see fit on our draft Design Principles.

Thank you for the opportunity to comment on your emerging design principles for your airspace change proposal. As a member of the Future Airspace Strategy Implementation – South (FASI-S), Heathrow is committed to working together with other airport operators to bring about the airspace changes required to deliver the benefits of a modernised airspace in the south of England.

We have not attempted to rank the design principles fully. Given the close proximity of our two operations, we have instead considered how they might align with the Design Principles that Heathrow has adopted for the airspace change required for Expansion. As a member of FASI-South, our key priority is to ensure that the suite of airspace changes from FASI-S members are aligned and can be sequenced in an appropriate way, so as to deliver the benefits of a modernised airspace in the south of England at the earliest opportunity.

We would like to propose that Northolt add a further Design Principle which is: "Avoid overflight of communities with multiple routes from different airports". This is a very important issue for our local communities and, given the close proximity of Northolt and Heathrow, we would like to see this principle mirrored in Northolt's design principles.

Please be advised that we only received the hard copy information which outlines the airspace change proposal (on 4 April), the same day that we received the email communication. As such we have only had limited opportunity to review this information within the timescales offered. If possible, in future, please could you engage with us via email at the earliest opportunity, using the address that you have, to ensure that we can respond to your request in good time and allow this to be socialised within the business.

Luton

Table 2. Please consider the Design Principles for the general design of the Airspace Change Proposal in Table 2 below. You are requested to rank them in level of importance to you and your organisation where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	1	It is essential that dependencies in airspace structures are not created so as to facilitate improvements in continuous climb operations allowing the economic and environmental benefits of modern aircraft technologies to be realised to their full potential. Dependencies may also create capacity restrictions on airports which may impact on business aspirations.
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	2	In order to ensure that the most efficient use of airspace is created it is essential that PBN design criteria is adopted to reduce separation requirements.
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	3	The LTMA is a particularly busy and complex airspace to work with, increasing systemisation will reduce complexity ensuring we can increase capacity whilst reducing environmental and economic impacts.
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	5	It is important that as an industry we are able to grow but this must be done in a sustainable manner ensuring we meet all relevant national targets.
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	4	It is important that as an industry we are able to grow but this must be done in a sustainable manner ensuring that noise impacts are kept to a minimum.

North Weald

Table 2. Please consider the Design Principles for the general design of the Airspace Change Proposal in Table 2 below. You are requested to rank them in level of importance to you and your organisation where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	1	Flexible use of airspace is increasingly important as more controlled airspace is being created around London and the south east. This is obviously more important for somewhere like Denham which is in close proximity to Northolt, but affects any aircraft transiting between Heathrow and Luton.
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	4	This would be used to fly the procedure anyway, whatever is put in place, so is deemed top have lower importance in terms of new designs.
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	2	Minimising workload is safer and more efficient. It will also help to reduce fuel use as a secondary benefit.
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	5	While important environmentally, it is the least important in terms of designing procedures when compared with the other factors.
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	3	Aircraft noise is a big issue for local residents. At North Weald we constantly have to field complaints and have altered our procedures accordingly. This is why I have ranked this higher in terms of designing new Northolt procedures.

3. Please make any other comments you see fit on our draft Design Principles.

The procedure designs should also take account of future increased traffic levels, even though Northolt has a civil movements cap. For example, North Weald movements are increasing around 10% per year and are now at nearly 42,000 for 2018-19.

NATS

Table 2. Please consider the Design Principles for the *general design of the airspace change proposal* in Table 2 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	3	NATS welcomes this as a design principle consideration and acknowledges that it considers the needs of other airspace users as well as airports.
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	3	NATS would suggest that RAF Northolt consider including in the wording of the final design principle a minimum navigational standard, e.g. RNAV1. This will assist in the design of routes in the process and reduce the impact on other airports and airspace users.
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	3	NATS welcomes the principle as it is important to consider the benefits to stakeholders as well as the sponsor.
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	3	Whilst the design principle is perfectly acceptable the wording of the reasoning may not be achievable. All flight paths will need to be considered, and the most efficient may not be the shortest or most direct when considered against other factors.
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	3	NATS supports RAF Northolt in the aims of this Design Principle.

Table 3. Please consider the Design Principles for *minimising the impact of aircraft noise* in Table 3 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	3	Whilst NATS has no direct comment to make we do feel that this should be considered in concert with the aims of the other suggested DPs
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	3	NATS recognised that this is in line with DfT guidance on noise but understands that RAF Northolt will consider all possible options
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	3	Whilst NATS has no direct comment to make we do feel that this should be considered in concert with the aims of the other suggested DPs
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	3	Whilst NATS has no direct comment to make we do feel that this should be considered in concert with the aims of the other suggested DPs, although the wording of this may not satisfy DfT guidance on noise
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	3	Whilst NATS has no direct comment to make we do feel that this should be considered in concert with the aims of the other suggested DPs

3. Please make any other comments you see fit on our draft Design Principles.

NATS would suggest that RAF Northolt include a design principle that takes into account the Transition Altitude and the interactions with other airports routes that may be influenced by it. Our suggested wording would be:

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

With the following rationale:

- *NATS will be primarily responsible for the network design for arrivals and departures above 7000ft/FL70. However network route positions will be influenced to a large degree by the airports' requirements (geographically distilled into the Letterbox positions for each proposed route). These letterboxes/route positions will also be influenced by the Transition Altitude and any interactions between the routes of other airports.*

Chiltern and South Bucks Council

Classification: OFFICIAL

Royal Air Force Northolt Draft Design Principles

1. In the tables below, we have set out the draft Design Principles that will help shape the Airspace Change Proposal for Royal Air Force Northolt. Some of the Design Principles are set in stone and no comment is requested, but we seek your input into the remainder.

2. **Table 1**. These Design Principles do not require your comments but are included for your awareness.

Proposed Design Principle	Reasoning
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3. **Table 2**. Please consider the Design Principles for the *general design of the Airspace Change Proposal* in Table 2 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	5	Should minimise impact on other *existing* airspace use
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	2	Should base airspace design on the latest navigation technology widely available
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	4	No comment
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	3	Should minimise fuel/CO2/greenhouse gases per flight

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	1	Where possible using more noise efficient aircraft and operational practices

4. **Table 3**. Please consider the Design Principles for *minimising the impact of aircraft noise* in Table 3 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	1	This assumes that "little or no change" is an option.
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	3	Also maximise sharing through managed dispersal
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	4	Very much depends on the receptor and aircraft
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	2	Very much depends on the receptor and aircraft
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	5	Accept that prioritising routing flight paths over parks and open spaces (rather than over residential areas) may be necessary, but flight path envelope design should seek to avoid overflying the Colne Valley Regional Park and Areas of Outstanding Natural Beauty (AONB)

5. Please make any other comments you see fit on our draft Design Principles.

Thanks for the opportunity to respond.

It is acknowledged that adding a third runway to the North of Heathrow in close proximity of Northolt, Luton, Stansted and London City requires a complicated airspace re-design.

It is not clear if the proposed design principles relate to military operations, commercial operations or both. Since the sponsor is the MoD It is assumed that the changes to airspace design fall into the CAP1616 level M category although the total ATMs are low compared to neighbouring airports.

As a general observation we would not wish to see our communities and comparatively tranquil areas suffer increased environmental impacts as a consequence of "making space" for expanded airports at Heathrow and Luton.

Ealing Council

Transport Planning Service

www.ealing.gov.uk

RAF Northolt
West End Road
Ruislip
Middlesex
HA4 6NG

[redacted]

your ref: | my ref: | please ask for [redacted] | date: **17 May 2019**

Dear [redacted]

SUBJECT: RAF NORTHOLT AIRSPACE CONSULTATION

Thank you for consulting Ealing Council on the proposed RAF Northolt Airspace changes in your letter of 21 March 2019. Please find enclosed our response in the tabulated format as requested.

Yours sincerely,

[redacted]

Please consider the Design Principles for the *general design of the Airspace Change Proposal* in Table 2 below. You are requested to rank them in level of importance to your and organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	**Reasoning**	**Ranking**	**Comment**
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	4	It is important that RAF Northolt does not negatively impact Heathrow Airport's operations and solutions proposed to avoid overflying. Giving away airspace must be done with caution and Ealing Council must be notified as this could result in new overflown communities in Northolt and beyond. More information is needed on how RAF Northolt's airspace will change and how this will affect other airports operations, especially Heathrow's as they are the closest airport to Ealing.
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	3	Ealing Council supports this as long as the new navigational technology is used to minimise impacts on overflown communities and avoid overflying new ones.
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	5	More information is needed on designing more efficient routes. The Council would like to know if it will have a say in designing new routes and if not, if the new flight paths can be provided.
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	2	Ealing Council believes this is a crucial design principle. Air quality and air pollution has been a growing concern for Ealing residents and impacts must be minimised at all costs. Stricter environmental standards must be enforced to ensure that incoming aircrafts have the smallest impact on Ealing's communities. Ealing Council understands that the impact of air pollution is lessened when the emissions occur at higher altitudes. However, communities overflown in the final approach to the runway will be directly exposed. Therefore, stricter standards must be brought in.
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of by considering local circumstances	1	Ealing Council believes that this is a critical design principle. Parts of Ealing, including Northolt, will be overflown due to Heathrow Airport's re-design of its airspace and flightpaths. RAF Northolt must ensure that the noise impact is minimised for overflown communities and avoid overflying new ones.

			The health impacts associated with noise are well documented and can affect individuals in many ways beyond quality of life. Northolt is primarily a residential area and many families have settled down. Pupils who attend schools in Northolt will no doubt be affected by the potential change in airspace and airspace activity. Noise impact has been a main point of contention in the discussion with Heathrow Airport, and RAF Northolt must ensure that the changes in its airspace do not contribute to the Heathrow Airport noise issue.

Please consider the Design Principles for the *general design of the Airspace Change Proposal* in Table 3 below. You are requested to rank them in level of importance to your and organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	**Reasoning**	**Ranking**	**Comment**
Minimise the number of people newly overflown	Limit designing new routes over those people, who are not currently overflown by keeping routes as close to today's flight paths as possible	2	Ealing will be overflown by Heathrow operations. Therefore, it is important that new routes be designed to avoid overflying new communities and minimising the impact on overflown ones.
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	1	The number of people affected by noise must be kept to a minimum. Special focus must be given to the airspace above Northolt as the area will be overflown by Heathrow's proposed airspace re-design and flight path changes.
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	4	Noise reduction should be key, but over a larger area. Ealing Council would like to know how communities living close to the runway will be provided with respite from noise as they will most likely be affected by either take-offs or landings.
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	3	Noise reduction over a larger area should be key. Ealing Council fully supports this but would like to enquire about the actual proposed noise limit (dB).
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	5	Ealing Council supports this but must first be provided with the alternative airspace and flight paths.

Please make any other comments you see fit on our draft Design Principles.

Ealing Council believes the draft Design Principles should focus on:

1) Minimising noise impact to overflown communities
2) Ensuring that no new communities are overflown
3) Minimising air quality impacts to communities in Northolt
4) Ensuring that its operations do not conflict with Heathrow Airport's airspace and flight path changes, and adversely impact Ealing.

1) and 2) should be prioritised at all times.

The design principles should also be encouraging the use of more environmentally friendly aircraft as well as stricter environmental standards.

Hillingdon Council

HILLINGDON
LONDON

[redacted]
Royal Air Force Northolt
West End Road
Ruislip
Middlesex
HA4 6NG

8 May 2019

Ref [redacted]

Dear [redacted]

The Chief Executive [redacted] has asked me to reply on her behalf to the RAF Northolt Airspace Change Proposal, I note this is being taken forward under the requirement of the DfT's Future Airspace Change Strategy Implementation (South) (FAS1 South) programme.

There are communities around RAF Northolt and further afield who are currently impacted by the operation of the base and your letter confirms there is a community engagement process being undertaken which involves consultation with our residents. We acknowledge and commend the extent of this consultation and would welcome being kept informed of any subsequent developments that stem from this process.

Notwithstanding the above, we do have concerns in regard to the complexities involved in attempting to agree a set of design principles at an individual aerodrome with the level of information that has been provided to date. These concerns are detailed below.

Design Principles

The accompanying information describes a series of design principles and asks residents and stakeholders to rank them in the order of importance in regard to minimising the impact of aircraft noise. These are potentially divisive questions, for example, communities not currently overflown could be seeking concentration of the flightpaths over the existing impacted communities; whilst communities currently overflown could be seeking a dispersal of flightpaths to those not currently impacted. Both have consequences for the noise experienced by local communities. The concern stems from the ability to answer these questions without the necessary detailed information. For example, preference might be for a more equitable distribution of noise, but under this scenario we simply do not know how many more people become overflown or to what level of noise.

Residents Services

[redacted]

Furthermore, there is no clarity as to how the consultation responses will be evaluated and the basis on which design principles to be pursued will be made. This is important given that this decision will define the further remaining stages of the Airspace Design Process. Without the accompanying information, including an assessment of the environmental impacts of the differing principles, the results of the consultation comments will have been made on an ill-informed basis which will then infect the remainder of the Airspace Change process.

Many of these issues were also relevant to the recent Heathrow Expansion airspace consultation. The problem stems from being asked to consider a principle without any supporting information on the detail. We cannot commit to one option without certainty that it does not result in the most harmful scenario. The issues for the RAF base are far less harmful in scope, both geographic and demographic and consequently we would welcome further discussions to allow a more informed decision to be taken on the preferred approach.

Cumulative Impacts

As the letter states the FAS1 South involves all airports and airfield in the south east of England. There is an additional complexity for our residents in regard to other expansion proposals. It is not clear how the potential cumulative effects of these changes are to be assessed and how the interaction between the needs of different airports could potentially impact on other aerodromes. For example Luton and Heathrow are both keen on expansion and both, alongside RAF Northolt, have the potential to impact residents in the same area. Again, this has serious ramifications for whether we seek noise concentration over a smaller area, or have an equitable distribution over a wider area. This could weaken the solutions being developed from this consultation.

I appreciate the process places a burden on the RAF Base to resolve the impacts from their own airspace. However, I do not believe this process allows for effective and meaningful community engagement on individual airport airspace decisions until the full implications of all the current and future airport airspace changes have been properly assessed and consulted upon. This is a matter we will be taking up with the CAA and DfT directly.

Yours sincerely

[redacted]

Residents Services

London Borough of Harrow Council

[redacted] Corporate Director
Community

RAF Northolt Draft Design Principles
nor-airspaceportal@mod.gov.uk

12th April 2019

Dear Sir / Madam

RE: London Borough of Harrow Response to the RAF Northolt Draft Design Principles

Thank you for the opportunity to comment on the RAF Northolt Draft Design Principles. This letter and associated tables constitutes the Council's formal response to RAF Northolt's Draft Design Principles consultation. Whilst the following forms a formal response, it is done so on the information that is currently available which at this stage is still very high level and lacks clarity as to the extent of the impact of the potential airspace and operational changes at RAF Northolt. Harrow Council would welcome the opportunity to provide further, supplementary comments in response to any further consultation published by RAF Northolt, particularly once detailed flight paths, landing and departure approach and take-off details, and predicted noise levels are available.

The formal advice is also provided on the basis that RAF Northolt are not proposing to increase the hours of operations of the airport, nor are they proposing to increase the amount of flights per day over and above the existing thresholds. For clarity, the following are understood to be the opening times and the amount of civil aircraft movements;

Civilian aircraft fly from RAF Northolt:

- *Monday to Friday, 8am to 8pm*
- *Saturday, 8am to 3pm*
- *Sunday and bank holidays, midday to 7pm*

Military aircraft will attempt to adhere to the above times, but may fly as required to meet operational needs.

Civilian air movements are restricted to 40 per day

In the event that more consultation information becomes available, especially insofar as changes to hours of operation and /or number of flights per day (leading to other potential impacts such as Traffic & Highways/Economic Benefits), Harrow Council would request the opportunity to either amend its current position or provide further comment.

Other Comments on the Design Principles

The consultation request at this stage appears very high level, with no detail on how RAF Northolt is currently operated, such as directional preference and what navigational technology is currently in use for example. The consequence of this is that consultation responses will not be able to provide

meaningful responses if the current operational principles are not understood. Furthermore, whilst it is understood that RAF Northolt must continue to meets its military and government requirements, there is no detail with regard to the civilian aspect of the operations. Going forward, any change to the operations of this element would need to be made clear and the opportunity for interested stakeholders to provide further comment.

If you have any queries, please contact [redacted]

Kind regards,

[redacted]

Corporate Director – Community

Royal Air Force Northolt Draft Design Principles

Table 2 – general design of the Airspace Change Proposal

Proposed Design Principle	Reasoning	Ranking (1 most important, 5 least)	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	5	The London Borough of Harrow is aware that the existing flight path in and around the London area are to be revised, with several airports utilising the same or similar airspace. The London Borough of Harrow supports this (subject to further consultation) and would also encourage RAF Northolt to give away airspace that is not required under future operations provided this doesn't worsen noise nuisance experienced by Harrow residents.
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	2	The London Borough of Harrow strongly encourages RAF Northolt to facilitate design through using modern technology. Utilising modern technology is likely to assist in achieving the other design principles within this table. Aside from the Design Principles set out in this consultation, modern navigational design (such as radar for landing) would allow a greater level of certainty for development within Harrow. Currently, important areas of Harrow (such as the Metropolitan Town Centre) are within the RAF Northolt safeguarding zones. The impact on this creates both a restriction of development, and also a level of uncertainty for developers. Harrow has a number of examples where uncertainty and unclear guidance from the RAF Northolt safeguarding team have severely impacted developments within the Borough.

Proposed Design Principle	Reasoning	Ranking (1 most important, 5 least)	Comment
			RAF Northolt must be aware that the Mayor of London, through the London Plan, sets the strategic housing (among others) targets for London Boroughs. As an example, the housing target set for the Harrow under the draft London Plan (2017), almost triples the housing targets previously sought. This places greater emphasis on the Borough to maximise the efficiency and potential development outputs of schemes. Inefficient or outdated navigational technology does not enable the efficient arrival routes (specifically), whereby giving greater certainty for developments, and also allowing the Borough to maximise the development potential of sites. Modern navigational equipment is essential to facilitate future flight paths, by ensuring a more consistent line is followed when aircraft are arriving on final approach. It allows for less variance n the approach, which therefore allows the areas outside of the 'accurate approach line' to have more certainty in development opportunities.
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	4	Harrow supports operational efficiencies which would allow benefits to all stakeholders.
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of	2	It is imperative that RAF Northolt contributes to a reduction in CO2 emissions and other pollutants. Based solely on air space principles, more efficient flight paths should be brought into

Proposed Design Principle	Reasoning	Ranking (1 most important, 5 least)	Comment
	short, direct flight paths.		practice whilst balancing other objectives, such as those relating to noise.
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances.	1	Harrow seeks to protect its residents from harmful impacts. RAF Northolt should at the very minimum comply with government regulation on noise. However, through consultation and dialogue with stakeholders should endeavour to reduce the noise of aircraft by offering meaningful respite and appropriate hours of operation. Again, it is noted that the consultation at this stage does not propose an increase in flights from the facility or a variation to the existing hours of operation.

Table 3 – Design Principles for minimising the impact of aircraft noise

Proposed Design Principle	Reasoning	Ranking (1 most important, 5 least)	Comment
Minimise the number of people newly overflown	Limit new routes over those people who are not currently overflown by keeping routes as close to today's flight path as possible	2	This is a difficult question to answer for Harrow Council on behalf of its residents, as nuisance is individual to the person that is impacted upon. However, a more accurate final approach may allow a variation which would offer respite to residents beneath the flightpath. Take-off will in any case impact those at the end of the runway.

Proposed Design Principle	Reasoning	Ranking (1 most important, 5 least)	Comment
Minimise the total number of people affected by noise	Reduce the amount of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes.	1	Harrow strongly supports the minimisation of the total number of people affected by noise from aircraft.
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	2	This is a difficult question to answer for Harrow Council on behalf of its residents, as nuisance is individual to the person that is impacted upon. It is not only the noise of an aircraft that could be of nuisance, but also the frequency of that noise. At this stage, RAF Northolt have not provided any details on if the hours of operations would be altered, or if number of flights in and out of the facility would increase. Nor is there any detail at this stage of noise contours and total noise exposure (currently and as a result of any proposed airspace changes). Harrow Council seeks to protect its residents, but equally understand that the aircraft safety is paramount.
Consider more people affected, but less noise	A shallower climb gradient would result in a potential reduction in noise, but over a larger area	2	This is a difficult question to answer for Harrow Council on behalf of its residents, as nuisance is individual to the person that is impacted upon. It is not only the noise of an aircraft that could be of nuisance, but also the frequency of that noise. At this stage, RAF Northolt have not provided any details on if the hours of operations would be altered, or if number of flights in and out of the facility would increase. Nor is there any detail at this stage of noise contours and total noise exposure (currently and as a result of any proposed airspace changes). Harrow

Proposed Design Principle	Reasoning	Ranking (1 most important, 5 least)	Comment
			Council seeks to protect its residents, but equally understand that the aircraft safety is paramount.
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather residential areas in towns and cities.	5	In the vicinity of RAF Northolt, the majority of Harrow residents are within an urban environment. Harrow Council is therefore this principle is unlikely to have any significant impact / benefit for our residents.

Slough Borough Council

3. **Table 2**. Please consider the Design Principles for the *general design of the Airspace Change Proposal* in Table 2 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	5	This Design Principle has the least impact on the residents of Slough, therefore it is ranked the lowest.
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	2	Heathrow is planning to increase capacity by using Performance Based Navigation (PBN), allowing aircraft to fly closer together and flight paths to be more efficiently designed. The Design Principle here suggests PBN will also be used for RAF Northolt, which, if Slough is impacted, will allow precise airspace routes to be designed which could provide regular respite periods from overflying aircraft.
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	3	In conjunction with Design Principle 2, efficient and precise flight paths will result in a reduced noise impact on residents, as this allows for regular respite periods. It should be noted that Design Principles ranked 2-4 are all equally important to Slough.
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	4	Minimising fuel and CO2 emissions produced by aircraft through designing short direct flights will result in fewer communities unnecessarily overflown and reduce the noise impact for those communities.
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	1	Slough are aware that the additional flights per year brought in by Heathrow's third runway and IPA will cause a significant impact on local residents. It is vital that operations from RAF Northolt do not contribute to the excessive noise levels that Slough will experience in the future due to the Heathrow.

4. **Table 3**. Please consider the Design Principles for *minimising the impact of aircraft noise* in Table 3 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	1	The most important priority for Slough is minimising the number of people newly affected by noise. It is unclear what the airspace change will consist of, as the RAF Northolt website states that flights are restricted to 7000 per year and an application to increase capacity was rejected. This suggests the airspace change will affect flight path designs only. More information is required on what the current operations are so the impact can be determined.
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	2	This is an important Design Principle for Slough. Densely populated areas should be avoided to reduce the total number of people affected in Slough, by focusing on rural areas and open spaces.
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	5	Slough do not support increasing noise for local communities. Although a steeper climb will result in a smaller area impacted, new areas will experience departure noise which will be unacceptable in conjunction with additional flights from Heathrow.
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	3	This Design Principle may be more suitable for Slough residents. As Slough will be impacted by the Heathrow expansion, it is important that the number of residents impacted by excessive flight noise is reduced. If flights from RAF Northolt are distributed over a wider area with reduced noise, the overall impact on residents will be smaller. Although it is preferred for the total number of people affected by noise to be reduced, it is unacceptable for residents in Slough to be impacted by greater noise levels. As it is also a priority that the number of people newly affected by noise is minimised, Design Principles which implement more efficient airspace use to result in less noise impact and predictable respite are supported.
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	4	Prioritising parks and open space over residential areas would reduce noise impact for those living in the Borough, however there are no flight path maps provided to show current operation so it is unclear to determine how Slough will be impacted by the airspace change. Although concentrating flights over rural areas is recommended, large areas of open space is very limited in Slough. The only areas that could be considered large open space is the southern border of the Borough at Upton Court Park and the north-eastern border at Wexham.

5. Please make any other comments you see fit on our draft Design Principles.

The RAF Northolt website quotes the following operational times:

Civilian aircraft fly from RAF Northolt:
Monday to Friday, 8am to 8pm
Saturday, 8am to 3pm
Sunday and bank holidays, midday to 7pm

Military aircraft will attempt to adhere to the above times, but may fly as required to meet operational needs.

Where possible night flying is limited, but may occur as required to meet operational needs.

Slough expect these operational procedures to be adhered to when designing airspace changes, to ensure residents in Slough are not subjected to noise issues beyond these allocated hours. Any changes to these schedules should consider the needs of Slough's residents and also consider comments made to HAL regarding airspace change and future operations for the third runway and IPA proposals.

Slough expect the night time respite period (23:00-07:00) to be implemented as stated in the Airport National Policy Statement, to allow residents to have 8 hours undisturbed sleep. The RAF Northolt website states that night flying is limited and this should remain the case, or fully restricted. If night flights are unavoidable, it is expected that the quietest aircraft are used during the night time period if possible, to reduce noise impact on residents.

St Albans City and District Council

St Albans City & District Council

PLANNING & BUILDING CONTROL
[redacted] - Head of Planning & Building Control

My Ref:
Please ask for: [redacted]
Telephone:
E-mail:
Date: 15th April 2019

[redacted]
By email

Dear [redacted]

RE: Royal Air Force Northolt Airspace Draft Principles Consultation – April 2019

Thank you for consulting St. Albans City and District Council (SADC) on the key design principles that could be used as the basis for developing RAF Northolt's future airspace design. Whilst we have limited information as to the current air space operations of RAF Northolt and do not want to comment in detail on all the proposed design principles set out in the response tables, we do wish to draw your attention to two design principles which we consider most important to minimise the impact on our residents, businesses and stakeholders.

SADC supports efforts to minimise the impact on other airspace users, in particular London Luton Airport (LTN) and London Heathrow (LHR). These currently create a significant noise burden, with LHR departure routes creating a significant indirect noise burden because they pass above the current departure routes of LTN, thus capping the altitude to which LTN westerly departures can readily climb. This creates significant low-level noise over the entire SADC area and it is hugely inefficient in fuel terms. SADC therefore supports designers to take into account the need to avoid constraining the departures from adjacent airports as new routes are designed.

Further to the above, SADC also supports a design process which identifies and takes into account noise sensitive receptors, and minimises the impact of aircraft noise. SADC supports airspace design principles to get air traffic to climb quickly, reducing noise impact. Concern is however raised as to the impact of flights using PBN technology to enable aircraft to fly tracks precisely which can cause the impression on those living many miles distant that the airport is very close. Multiple PBN routes should be designed, with adequate separation to offer real respite for those under or close to flight paths, and this should be a design principle.

SADC trust that the above comments will be taken into consideration. SADC remains keen to have the opportunity to provide feedback on documents and to participate in future discussions regarding the air space proposals.

Yours sincerely,

[redacted]
Business and Community Portfolio Holder

St Albans City & District Council District Council Offices, St Peter's Street, St Albans, Herts AL1 3JE
Tel: [redacted] www.stalbans.gov.uk

Watford Borough Council

Town Hall, Watford, WD17 3EX
T 01923 278280 F 01923 278100
DX 51529 Watford 2
enquiries@watford.gov.uk
watford.gov.uk

[redacted]
Royal Air Force Northolt
West End Road
Middlesex
HA4 6NG

12 April 2019

Watford Borough Council Response to Royal Airforce Northolt Design Principles

Dear [redacted]

Please find below a response to the RAF Northolt Design Principles consultation which is endorsed by [redacted] Watford Borough Council's Portfolio Holder for Regeneration and Development. If you wish to discuss further, please contact myself at [redacted]. For any future consultations please send to strategy@watford.gov.uk

Yours sincerely,

[redacted]

[redacted]
Planning Policy Section Head
Place Shaping and Corporate Performance
Watford Borough Council

3. **Table 2**. Please consider the Design Principles for the *general design of the Airspace Change Proposal* in Table 2 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	4	Watford Borough Council would not support airspace being given to neighbouring airports if it were to impact on Watford residents in terms of health impacts.
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	3	This is not a consideration for Watford Borough Council though we would expect navigational technology to achieve the highest safety standards for both those travelling by aeroplanes and for those on the ground below.
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	5	This is not a consideration for Watford Borough Council
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	1	Reduction in CO2 emissions is critical for the Government to meet its reduction targets
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	1	Watford is among one of the mostly densely packed boroughs outside London with c 97.000 people living in 8.2 sq miles. New airspace routes should avoid flying over Watford in order to minimise noise impacts on local residents.

4. **Table 3**. Please consider the Design Principles for *minimising the impact of aircraft noise* in Table 3 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	3	This would be broadly supported by Watford but consideration should be made as to adjusting flight paths to minimise the impact over the number of people effected.
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	1	Noise can cause harm to public health. Watford would seek routes that are away from the town in order to protect the majority.
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	5	This may be attractive but it depends on the area being covered and the risks associated with a steeper climb.
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	4	This would depend on the details and how many more people are adversely effected by the additional noise, the times and the frequency of flights.
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	2	This would be more favoured from a Watford perspective but more rural authorities are likely to disagree.

5. Please make any other comments you see fit on our draft Design Principles.

Watford Borough Council broadly supports the aviation sector as a generator of wealth and creator of new opportunities. However we are keen to protect the environment and the amenities Watford residents currently enjoy. We would object strongly to new flight paths being created over Watford which would adversely impact on our residents. At present the principles discussed in the consultation document make no reference to the increase volume of flights, frequency or operational hours, the types of aircraft, etc. We are aware of Heathrow's current ambitions and have responded along similar lines.

We would welcome the opportunity to meet to discuss your plans as they develop.

Eastcote Residents' Association

3. **Table 2**. Please consider the Design Principles for the *general design of the Airspace Change Proposal* in Table 2 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	5	This could lead to increased commercial traffic over our area.
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	3	We assume that this would lead to less environmental impact.
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	3	This is an operational consideration and the residents are neutral.
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	1	This is a good objective.
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	1	Our local area does not suffer unduly from aircraft noise at the present time and we would hope that any new design would aim to minimise noise.

4. **Table 3**. Please consider the Design Principles for *minimising the impact of aircraft noise* in Table 3 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	1	We strongly endorse this principle.
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	1	This is a desirable objective but should, of course, comply with government regulation and policy on noise impact under the new routes.
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	3	This unlikely to have a big impact on the area covered by our residents' association.
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	3	This may lead to a slight increase in noise in the southern part of our area but the residents were neutral.
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	1	This seems to be desirable from the perspective of noise solution and safety.

North Uxbridge Residents' Association

3. **Table 2**. Please consider the Design Principles for the *general design of the Airspace Change Proposal* in Table 2 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	5	If by giving away airspace, it does not result in a greater number of houses being overflown
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	3	Minimise deviation from defined routes, so as to minimise noise pollution to nearby houses
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	4	
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	2	
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	1	

4. **Table 3**. Please consider the Design Principles for *minimising the impact of aircraft noise* in Table 3 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	3	OTBE, Residents who may feel overly sensitive as regards noise pollution would place great priority as to their housing location, whereas those currently overflown it is a status quo.
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	4	
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	5	Aircraft size is very relevant to noise footprint. The presumption must be that engine noise is likely to keep going down
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	2	Aircraft size is very relevant to noise footprint. . The presumption must be that engine noise is likely to keep going down
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	1	

Oak Farm Residents' Association

3. **Table 2**. Please consider the Design Principles for the *general design of the Airspace Change Proposal* in Table 2 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	4	
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	3	
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	5	
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	2	
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	1	

4. **Table 3**. Please consider the Design Principles for *minimising the impact of aircraft noise* in Table 3 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	1	
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	3	
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	4	
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	2	
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	5	

5. Please make any other comments you see fit on our draft Design Principles.

These rankings were decided in discussion with members of Oak Farm Residents' Association present at meetings in May 2019.

Members have also been asked to submit their own opinions separately.

[redacted]
Secretary
for Oak Farm Residents' Association

Resident ([redacted])

3. **Table 2**. Please consider the Design Principles for the *general design of the Airspace Change Proposal* in Table 2 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	4	
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	5	
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	3	
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	2	
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	1	

4. **Table 3**. Please consider the Design Principles for *minimising the impact of aircraft noise* in Table 3 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	2	
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	4	
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	3	
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	1	
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	5	

5. Please make any other comments you see fit on our draft Design Principles.

Please don't make our lives worse than they already are.

Resident ([redacted])

3. **Table 2**. Please consider the Design Principles for the *general design of the Airspace Change Proposal* in Table 2 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	5	Concern if give away airspace to other users means increased air traffic over this area
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	4	Safety issue?
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	3	More efficient routes should mean less use of fuel
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	2	Climate change issues require strong controls
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	1	Aircraft noise must not be at levels more than we have currently in this area to maintain our enjoyment of our environment and enable us to live our lives without stress of aircraft noise and to not be a detriment to property values.

4. **Table 3**. Please consider the Design Principles for *minimising the impact of aircraft noise* in Table 3 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	1	Critical for continual enjoyment of our environment
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	3	Concentration over a smaller area would mean those currently suffering from aircraft noise would be further stressed
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	4	Increase in noise should not happen
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	2	Out of the options given very difficult choice but if giving reduction in noise seems a fair selection
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	5	If those in rural areas currently do not suffer from aircraft noise see no reason why they should suffer in place of urban areas doing so if they currently suffer

Resident [redacted]

Royal Air Force Northolt Draft Design Principles

1. In the tables below we have set out the draft Design Principles that will help shape the Airspace Change Proposal for Royal Air Force Northolt. Some of the Design Principles are set in stone and no comment is requested, but we request your input into the remainder. Please send any replies to: SATCO, RAF Northolt, Middlesex, HA4 6NG, or via email: nor-airspaceportal@mod.gov.uk. Please reply by no latter than 12 May 2019.

2. **Table 1**. These Design Principles do not require your comments but are included for your awareness.

Proposed Design Principle	Reasoning
Must be safe	Provide a safely designed airspace structure and routes, to ensure the safe operation of aircraft
Must ensure continuation of military and governmental operational activity	RAF Northolt must be able to operate to its current commitments and future Defence requirements

3. **Table 2**. Please consider the Design Principles for the *general design of the airspace change proposal* in Table 2 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	5	DON'T WANT AIRSPACE GIVEN TO OTHER AIRPORTS THAT HAVE A HIGHER NUMBER OF FLIGHTS THAN NORTHOLT.
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	3	MAXIMISING NEW TECHNOLOGY IS A GOOD THING TO IMPROVE EFFICIENCIES BUT ONLY TO IMPROVE IMPACT ON RESIDENTS NOT TO CRAM IN MORE FLIGHTS FOR OTHER AIRPORTS.

1

Proposed Design Principle	Reasoning	Ranking	Comment
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	4	DID NOT HEAR AT THE NURA MEETING FROM THE NORTHOLT TEAM THIS WAS AN ISSUE THAT NEEDED FIXING ?
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	2	REDUCING IMPACT OF EMISSIONS FROM AIRCRAFT IS IMPORTANT FOR OUR ENVIRONMENT WITH AVIATION GROWTH OF COMMERCIAL FLIGHTS THIS HAS TO BE A MAJOR CONSIDERATION.
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	1	NOISE ADDS STRESS TO PEOPLES LIVES & LIVING UNDER THE FLIGHT PATH I WOULD HOPE THE NEW DESIGN MAKES IT BETTER NOT WORSE

4. **Table 3**. Please consider the Design Principles for *minimising the impact of aircraft noise* in Table 3 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	3	THIS HAS PROBABLY NO OPTION TO COMPROMISE, OTHERWISE NOTHING COULD CHANGE ?

...osed Design Principle	Reasoning	Ranking	Comment
...inimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	4	THIS JUST MAKES IT WORSE FOR THOSE PEOPLE ALREADY EFFECTED THE MOST BY NOISE? NOT SURE ETHICALLY THAT WOULD BE RIGHT
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	5	THIS JUST MAKES IT WORSE AS ABOVE TO THOSE ALREADY IMPACTED THE MOST.
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	2	REDUCING NOISE IS THE PRIORITY SPREADING OVER A LARGER AREA IS POTENTIALLY THE ONLY WAY TO REDUCE NOISE?
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	1	IF FLIGHTS CAN BE DIRECTED WITH MODERN TECHNOLOGY BETTER, THEN IT MAKES SENSE AS IT REDUCES IMPACT ON NUMBER OF PEOPLE IMPACTED.

5. Please make any other comments you see fit on our draft Design Principles.

THIS SHOULD BE AN OPPORTUNITY TO IMPROVE IMPACT OF AIR TRAFFIC NOISE FOR THE BETTER OF LOCAL RESIDENTS.

IT SHOULD NOT BE AN OPPORTUNITY TO INCREASE COMMERCIAL FLIGHTS TO NORTHOLT OR GIVING AIRSPACE TO HEATHROW TO OVER FLY NORTH UXBRIDGE.

IF IT IS NOT POSSIBLE, THEN PLEASE KEEP IT THE SAME AS IT IS AND DO NOT MAKE IT WORSE.

FEEDBACK ON ENGAGING WITH STAKEHOLDERS. I THINK THE USE OF A PRESENTATION WITH IMAGES DESCRIBING THESE DESIGN PRINCIPLES WOULD HAVE BEEN BETTER FOR PEOPLE TO UNDERSTAND THE OPTIONS BETTER.

Resident ([redacted])

3. **Table 2**. Please consider the Design Principles for the *general design of the Airspace Change Proposal* in Table 2 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	1	Airspace is vital with the possibility of an extension to Heathrow Airport.
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	1	Very important to avoid possibilities of near misses or contact with other aircraft.
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	1	Very important to reduce fatigue.
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	1	Very important to try to reduce these emissions for the planet and future of mankind.
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	1	Very important for the communities effected by aircraft noise.

4. **Table 3**. Please consider the Design Principles for *minimising the impact of aircraft noise* in Table 3 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	1	Important to avoid extra impact on current communities.
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	1	As above.
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	1	Fewer communities impacted by this.
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	5	Better for less than more communities to be affected.
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	1	This would avoid more communities being impacted on flight paths.

Resident ([redacted])

3. **Table 2**. Please consider the Design Principles for the *general design of the Airspace Change Proposal* in Table 2 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	5	As residents living directly under the current flight path, we do not wish you to give away any more airspace and therefore increase Northolts usage other than for important military operations.
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	4	We cannot see what advantage this would be to us as residents
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	3	Although workload should be monitored effectively this is not a priority when you are living directly under the flight path.
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	2	Air quality is of major importance when your garden is directly under the flight path.
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	1	Health and quality of life is of paramount importance, particularly in any residential area.

4. **Table 3**. Please consider the Design Principles for *minimising the impact of aircraft noise* in Table 3 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	5	As residents directly under the current flightpath we would be looking for ways of reducing the amount of flights using the current flight path and therefore new alternative routes are essential to us.
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	4	The amount of people is not the issue, it is the noise and pollution that affects quality of life and the environment.
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	3	The people who live under the flight path should not suffer even more noise in order to benefit the wider population
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	2	Any reduction in noise would benefit us enormously.
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	1	This would be a major improvement to quality of life for residents

5. Please make any other comments you see fit on our draft Design Principles.

We appreciate RAF Northolt's role in carrying out Defence requirements. Additional comments are:

1. Surely the position of the runway has an impact on the use of future airspace, so is this review already limited by the current runway just being replaced in situ?

2. Better public awareness and on-line feedback options should have been created so as to canvass as many public opinions as possible for this very important subject.

[redacted]

Resident ([redacted])

Royal Air Force Northolt Draft Design Principles

1. In the tables below we have set out the draft Design Principles that will help shape the Airspace Change Proposal for Royal Air Force Northolt. Some of the Design Principles are set in stone and no comment is requested, but we request your input into the remainder. Please send any replies to: SATCO, RAF Northolt, Middlesex, HA4 6NG, or via email: nor-airspaceportal@mod.gov.uk. Please reply by no latter than 12 May 2019.

2. **Table 1**. These Design Principles do not require your comments but are included for your awareness.

Proposed Design Principle	Reasoning
Must be safe	Provide a safely designed airspace structure and routes, to ensure the safe operation of aircraft
Must ensure continuation of military and governmental operational activity	RAF Northolt must be able to operate to its current commitments and future Defence requirements

3. **Table 2**. Please consider the Design Principles for the *general design of the airspace change proposal* in Table 2 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	5	Please do not give away any airspace to Heathrow. I am desperate to avoid the torture of sleep deprivation that would result from Heathrow aircraft flying over North Uxbridge at night and in the early hours of the morning. Airspace for defence and security flights must take precedence over commercial and other non essential flights.
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	4	Make sure this new technology works reliably and securely before becoming dependent on it. Is it safe from hackers or people of evil intent? Consider factors that might prevent it from working properly, and the effects of it malfunctioning.

Proposed Design Principle	Reasoning	Ranking	Comment
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	3	"Efficient" routes should not be to the detriment of people on the ground who have to suffer being over-flown. Pilots and air traffic controllers are not the only people who should be given consideration.
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	2	I assume you mean fuel use, not fuel dumping. Perhaps this should be clarified. In addition to the CO_2 problem, other products of combustion may also be harmful to health of people on the ground, particularly when aircraft are at low altitude.
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	1	Night flights and early morning flights (i.e. between 2300 and 0700) should be prohibited except for defence and extreme national importance. No commercial or pleasure flights should be allowed at night, as they cause sleep deprivation, a form of torture.

4. **Table 3**. Please consider the Design Principles for *minimising the impact of aircraft noise* in Table 3 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	1	I moved to Uxbridge from Hounslow to get away from Heathrow Airport noise. I do not want to have this noise and pollution inflicted on me again.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	2	The people who have to suffer the noise and pollution etc. from over-flying aircraft should be paid regular compensation based on the number of aircraft over-flying and their noise and pollution emissions.
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	3	Ensure that the aircraft can ascend / land at steeper gradients safely, without the risk of crashing. (Bear in mind the recent Boeing crashes.)
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	4	If steep ascent / descent is less safe, then shallower climb would be preferable.
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	5	This is meaningless for airports like Northolt and Heathrow, which are already sited in residential areas. This principle would only be relevant if Northolt and Heathrow were to be closed down and relocated to rural areas.

5. Please make any other comments you see fit on our draft Design Principles.

1. Any proposals to over-fly residential areas that are not over-flown now or were not over-flown in the very recent past (bearing in mind current runway closure at Northolt) are undesirable.
2. Such proposals would be completely unacceptable if the aircraft were to be flying over during the night time period between 2300 and 0700 at a height such that their noise level would cause sleep disturbance to people in dwellings below with windows open. The damaging effects of sleep deprivation on health, cognition and productivity are well known, and I am totally opposed to having this harm inflicted on me or anyone else. Airport operators and those who decide where aircraft may fly need to place a lot more importance on the basic human right of people on the ground to be able to have a proper night's sleep without being disturbed by aircraft noise.
3. Flights capable of causing sleep disturbance to people on the ground between 2300 and 0700 must be restricted to those required for national defence and security, or extreme medical emergency, or those carrying important members of government on essential journeys.

Resident ([redacted])

3. **Table 2**. Please consider the Design Principles for the *general design of the Airspace Change Proposal* in Table 2 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	4	
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	3	
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	5	
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	2	
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	1	

4. **Table 3**. Please consider the Design Principles for *minimising the impact of aircraft noise* in Table 3 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	1	
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	3	
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	4	
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	2	
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	5	

Resident ([redacted])

3. **Table 2**. Please consider the Design Principles for the *general design of the Airspace Change Proposal* in Table 2 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	3	I am really concerned about this statement. I feel residents who live near Northolt have enough to put up with without Northolt considering opportunities to give away air space. I don't suppose it would take many guesses as to who that would be. This question just confirms that the health and quality of life for residents is not high on the agenda.
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	4	This doesn't sound like it is in the best interests of residents, just the airport
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	5	Again no consideration of residents just whatever makes life easier for the airport.
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	2	One way to do this is to be serious about or carbon footprint and have less flights. I am pretty fed up with the lip service that is paid to this; the answer is simple less flights.
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	1	It appears that the health and quality of life for residents in Hillingdon are being seriously undermined. I feel strongly that all these proposals for Heathrow, HS2 and now Northolt are only playing lip service to resident's health and quality of life.

4. **Table 3**. Please consider the Design Principles for *minimising the impact of aircraft noise* in Table 3 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	2	How many people want to be overflown and have the quality of the life diminished by aircraft noise?
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	1	For the health and quality of residents lives this should be a priority I feel that the way these questions are being asked and the way we are being asked to rate them is to benefit the airport and not residents. I would rate them all as 1
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	4	I cannot believe we are being asked to agree to increased noise. Currently when an aircraft flies into or out of Northolt and I am at my sister's house we cannot speak or hear anything for several minutes. It is unbearable especially in the summer time when you have to have windows open
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	5	How do you expect residents to agree to even more noise
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	3	Anyone would opt for this rather than be overflown

5. Please make any other comments you see fit on our draft Design Principles.

I am pretty angry at these proposals and do not see how any of it benefits residents.
I do not trust that there isn't an ulterior motive to all of this. As always probably about making money.
It is disappointing and worrying that more effort was not made to truly engage residents in completing this questionnaire. I found out about it by chance.

Resident ([redacted])

3. **Table 2**. Please consider the Design Principles for the *general design of the Airspace Change Proposal* in Table 2 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	3	
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	3	
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	3	
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	1	
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	1	

4. **Table 3**. Please consider the Design Principles for *minimising the impact of aircraft noise* in Table 3 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	2	
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	1	
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	3	
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	3	
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	1	

Resident ([redacted])

3. **Table 2**. Please consider the Design Principles for the *general design of the Airspace Change Proposal* in Table 2 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	5	I would **expect** military matters to take precedence at an MOD facility
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	3	#3 + #4 – operational efficiency and safety of your personnel should be an important consideration
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	4	
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	1	Although environmental effects of waste gases should be considered, the impact of noise is also an important factor
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	2	(see above - #1)

4. **Table 3**. Please consider the Design Principles for *minimising the impact of aircraft noise* in Table 3 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	1	The majority of residents in this area bought their houses after RAF Northolt was established, and therefore knew that they would be affected by aircraft noise. Those who have not previously been under the flight path may have grounds for complaint.
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	4	#3 and #4 – unless aircraft noise can be reduced, then an increase in volume or duration would have a greater impact on those below.
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	3	
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	2	Most flight movements from Northolt are relatively short duration: and see #1 above.
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	5	Difficult in this area!

5. Please make any other comments you see fit on our draft Design Principles.

To repeat my comment in Table 3, rank#1, we knew about the airfield when we bought our home. As long as the promised cap on civilian flights is not increased, we should continue to live with it.
And be grateful for the defence provided.

[redacted]

Resident ([redacted])

3. **Table 2**. Please consider the Design Principles for the *general design of the Airspace Change Proposal* in Table 2 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	2	
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	2	
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	1	
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	5	I live close to the A40 which emites enough pollution
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	5	We are right under the flight path noise can be deafening

4. **Table 3**. Please consider the Design Principles for *minimising the impact of aircraft noise* in Table 3 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible		Don't understand this ?
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	5	
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	3	
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	5	
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	5	This would be ideal as area is already polluted

5. Please make any other comments you see fit on our draft Design Principles.

This needs to be emailed to as many residents as possible rather than the selected few who attend residents association meetings. It was only by chance that I was able to attend the residents meeting due to having childcare and children not being allowed at meetings. Sure this is the case for those with children especially at it will affect the future generation.

Resident ([redacted])

3. **Table 2**. Please consider the Design Principles for the *general design of the Airspace Change Proposal* in Table 2 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	1	
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	5	
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	1	
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	5	
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	5	

4. **Table 3**. Please consider the Design Principles for *minimising the impact of aircraft noise* in Table 3 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	1	If the aircraft is flying a number of different routes, this will make noise, pollution levels for the amount of residents that are currently on flight paths minimise.
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	1	As above. For a lot of people the noise is unbearable especially in the summer, unable to sit in your garden, so by sharing the routes, its means there will be fewer planes in the routes that are currently being used at the moment.
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	1	As above, lets share.
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	5	
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	5	This makes absolute sense. If you have the option to fly over areas that are less populated then that's great for all.

Resident ([redacted])

3. **Table 2**. Please consider the Design Principles for the *general design of the Airspace Change Proposal* in Table 2 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	5	The Air space above the residential areas is already overused with the associated noise and pollution. Giving away airspace to increase overflying should not be an option
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	5	It is presumed that the safest and most modern techniques would be used in the air industry anyway.
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	5	This priority needs to weighed against the effect on the environment and residents who are overflown by the aircraft. Residents concerns should take priority over convenience
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	3	This priority needs to weighed against the other effects on the environment and the residents who are overflown by the aircraft. Examples would be the detrimental effect of noise on the quality of life and direct pollution from low overflying aircraft. Reducing the number of flights and only allowing fuel efficient aircraft to use Northolt would have more impact
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	1	Absolute priority in a built up area. Aircraft noise has a detrimental effect on quality of life and health.

4. **Table 3**. Please consider the Design Principles for *minimising the impact of aircraft noise* in Table 3 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	1	It would not be acceptable to impose aircraft noise and pollution on more people than are currently affected by it.
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	1	Routes should minimise the number of people adversely affect by aircraft noise and pollution by overflying fields and industrial areas where noise might be less of an issue
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	2	Consideration should be given to how much noise any community would be affected by this. If high power/ noise while climbing was over fields it may be acceptable. If directly over residential areas probably not.
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	2	This would depend where the increased noise footprint fell. See above
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	1	This would seem the lesser of two evils and have detrimental effect on the least number of people.

5. Please make any other comments you see fit on our draft Design Principles.

These comments are based on experience of living in [redacted] where the number of noisy aircraft movements has increased in recent years and the tendency to overfly residential areas rather than Court Park has been very noticeable.

Air traffic movement has a huge detrimental impact on the areas it affects primarily through noise and pollution but also in traffic generation.
Health, quality of life and general environmental impacts need to be considered.

Given the above air traffic movements should be kept to the minimum.
Where essential they should be planned to have the least impact on the environment and the people overflown.
Only 'quiet' aircraft should be allowed to overfly residential areas below 10,000 feet.

Northolt should concentrate on ensuring that the number of flights are restricted and only quiet aircraft are used.
Flight paths from Norholt and elsewhere should kept away from residential areas as far as practical.

RAF military air traffic movements are accepted. It is a military base. It is only since commercial use has been introduced that noise and pollution have become a real issue due to the number of flights, the flight paths and the noisy aircraft used.

Resident ([redacted])

Royal Air Force Northolt Draft Design Principles

1. In the tables below we have set out the draft Design Principles that will help shape the Airspace Change Proposal for Royal Air Force Northolt. Some of the Design Principles are set in stone and no comment is requested, but we request your input into the remainder. Please send any replies to: SATCO, RAF Northolt, Middlesex, HA4 6NG, or via email: nor-airspaceportal@mod.gov.uk. Please reply by no latter than 12 May 2019.

2. **Table 1**. These Design Principles do not require your comments but are included for your awareness.

Proposed Design Principle	Reasoning
Must be safe	Provide a safely designed airspace structure and routes, to ensure the safe operation of aircraft
Must ensure continuation of military and governmental operational activity	RAF Northolt must be able to operate to its current commitments and future Defence requirements

3. **Table 2**. Please consider the Design Principles for the *general design of the airspace change proposal* in Table 2 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	4	A sensible administrative principle, but not of the same order of priority for local stakeholders of Northolt airport area.
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology		A no-brainer. [redacted] cannot be ranked meaningfully alongside others, as does not really impact stakeholders But also note risk of using only GPS (without backup)

Proposed Design Principle	Reasoning	Ranking	Comment
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control. as well as design more efficient routes	3	This has an element of air safety, but mitigated by sensitive vectoring and maximum flexibility policies
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	1	A top priority for civil ops. Presumably not applicable for military ops Reduce unnecessary ops.
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	2	Necessary for good relations with local communities

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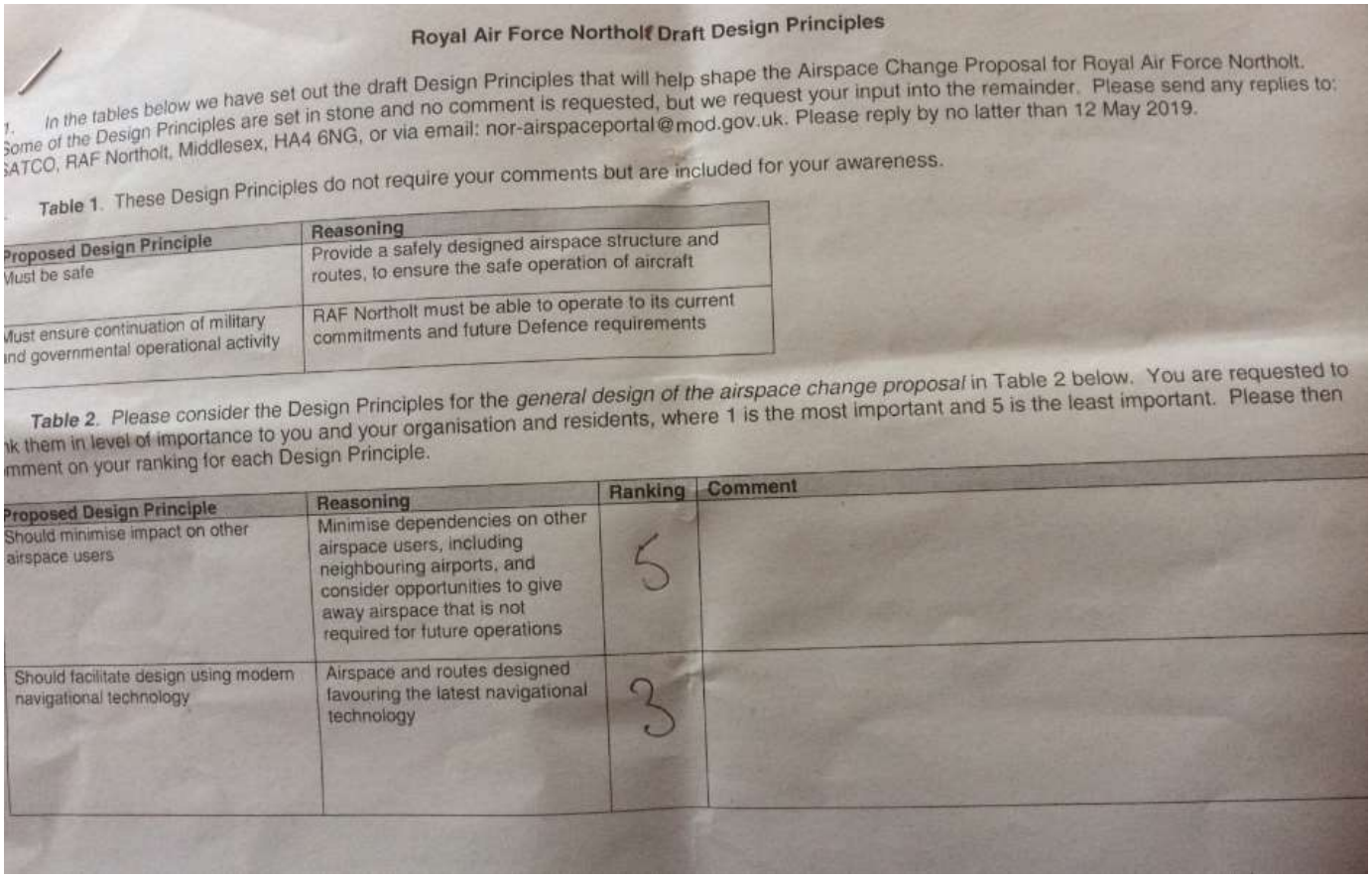
Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	4	Recognises needs for stability of noise profiles, but could argue for opposite principle, to give those on today's flight paths a break.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	3	Just slightly better than avoiding overflying new people.
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	5	Least attractive as affected people will feel abandoned by those less affected and weaken community cohesion.
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	1	Consider also stacking on takeoff to minimise affected area. Is this feasible? Contradicts CO_2 reduction? Less noise but more people affected in general is fairer and is less prejudicial to property prices in affected areas
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	2	This might protect the rural areas from further urban residential development.

I am retired BA staff, so have picked up something from my 32 years there. If you want clarification of my convoluted rankings, please contact me at [redacted]

5. Please make any other comments you see fit on our draft Design Principles.

Resident ([redacted])



Royal Air Force Northolt Draft Design Principles

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Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	5	
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	3	
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	4	
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	1	As Greta Thunberg says 'the house is burning' we need to do more on climate change, now.
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	2	The noise is detrimental to those living + schools near the airport - help them

Table 3. Please consider the Design Principles for *minimising the impact of aircraft noise* in Table 3 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

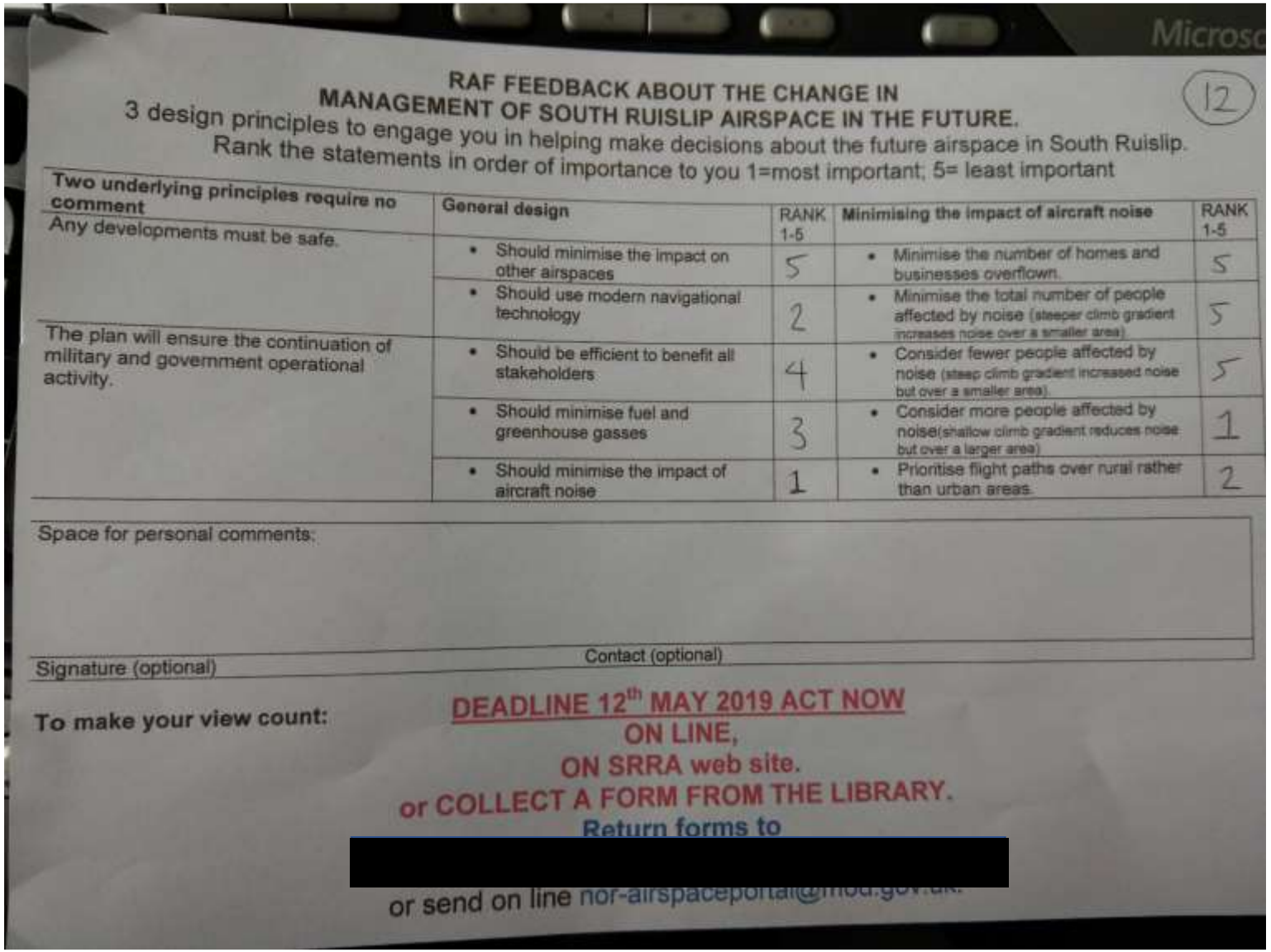
Proposed Design Principle	Reasoning	Ranking	Comment
minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	2	House values differ greatly dependi on aircraft noise - it would be unfair to alter that greatly

...osed Design Principle	Reasoning	Ranking	Comment
...imise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	3	
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	5	I would not like some to suffer much more noise just so others are not affected
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	4	
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	1	Obviously preferable but hard to achieve in the densely populated southeast UK.

5. Please make any other comments you see fit on our draft Design Principles.

Thank you for coming to NWRA to explain - we are spreading the word.

Resident ([redacted])



RAF FEEDBACK ABOUT THE CHANGE IN
MANAGEMENT OF SOUTH RUISLIP AIRSPACE IN THE FUTURE.

12

3 design principles to engage you in helping make decisions about the future airspace in South Ruislip.
Rank the statements in order of importance to you 1=most important; 5= least important

Two underlying principles require no comment	General design	RANK 1-5	Minimising the impact of aircraft noise	RANK 1-5
Any developments must be safe.	• Should minimise the impact on other airspaces	5	• Minimise the number of homes and businesses overflown.	5
	• Should use modern navigational technology	2	• Minimise the total number of people affected by noise (steeper climb gradient increases noise over a smaller area)	5
The plan will ensure the continuation of military and government operational activity.	• Should be efficient to benefit all stakeholders	4	• Consider fewer people affected by noise (steep climb gradient increased noise but over a smaller area)	5
	• Should minimise fuel and greenhouse gasses	3	• Consider more people affected by noise(shallow climb gradient reduces noise but over a larger area)	1
	• Should minimise the impact of aircraft noise	1	• Prioritise flight paths over rural rather than urban areas.	2

Space for personal comments:

Signature (optional) Contact (optional)

To make your view count:

DEADLINE 12th MAY 2019 ACT NOW
ON LINE,
ON SRRA web site.
or COLLECT A FORM FROM THE LIBRARY.
Return forms to
[redacted]
or send on line nor-airspaceportal@mod.gov.uk

Resident ([redacted])

3. **Table 2**. Please consider the Design Principles for the *general design of the Airspace Change Proposal* in Table 2 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	5	
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	4	
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	3	
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	2	
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	1	

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Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	3	
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	4	
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	5	
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	2	
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	1	

5. Please make any other comments you see fit on our draft Design Principles.

Resident ([redacted])

8TH MAY 2019

[redacted]

EMAIL – [redacted]

TO SENIOR AIR TRAFFIC CONTROL

I ATTENDED A LOCAL RESIDENTS MEETING WHERE [redacted] FROM RAF NORTHOLT GAVE INFORMATION REGARDING AIR SPACE CHANGE PROPOSAL AND RAF NORTHOLT PLANES.

ENCLOSED WITH THIS LETTER, I HAVE FILLED OUT A HARD COPY FORM OF THE DESIGN PRINCIPLES TABLE 2 AND TABLE 3. ALSO ON PAGE 4|5, I HAVE DRAWN A SKETCH|MAP OF WHERE I LIVE CLOSE TO THE RUNWAY.

AS YOU CAN SEE, I LIVE AT [redacted] ON THE [redacted].

THIS SHOWS MY CONCERNS, MY HOUSE IS UNDER THE ROUTE FLIGHT PATH, WHERE AIRCRAFTS LAND AND TAKE OFF FROM THE RUNWAY, WITH ONLY THE A·40 AND A FIELD BETWEEN MY HOUSE AND THE RUNWAY.

MY CONCERNS ARE THE QUALITY OF LIFE FOR THE FUCTURE, AS A LOCAL RESIDENT, NEAR TO RAF NORTHOLT.

YOURS SINCERELY

[redacted]

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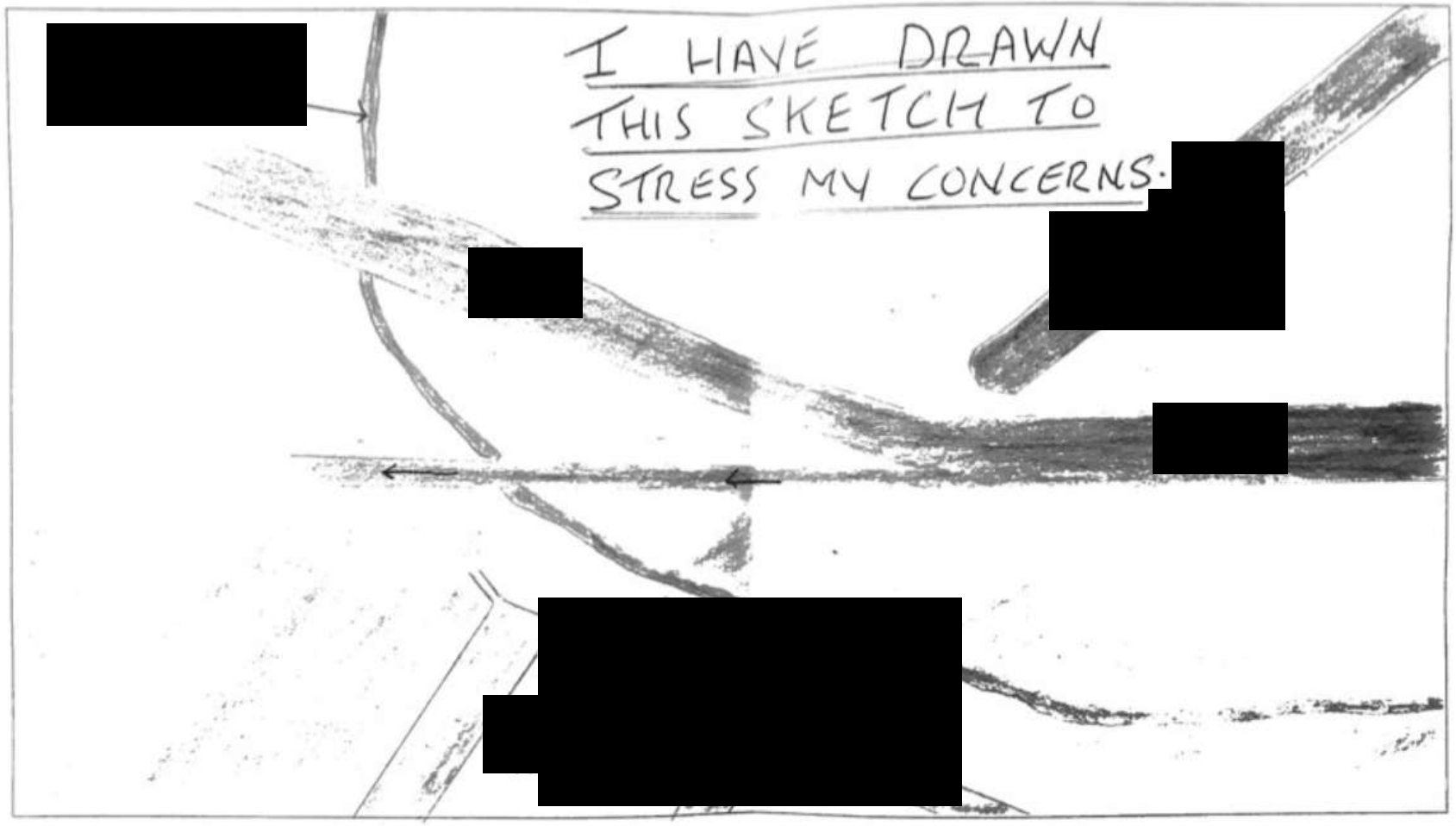
Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	2	HEATHROW ~~AIRSPACE AWAY~~ FLIGHTS COULD THEN USE NORTHOLTS AIRSPACE AT TIMES, WHEN NORTHOLTS AIR TRAFFIC HAS LESS. SO THE IMPACT OF MORE AIRCRAFTS ABOVE ME.
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	1	I AGREE THAT AIRSPACE AND ROUTES NEED THE LATEST AND THE VERY BEST NAVIGATIONAL TECHNOLOGY.
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	3	MINIMISE THE WORK LOAD HEALTH AND SAFTEY IS REQUIRED WITH MORE EFFICIENT ROUTES.
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	1	I AM AWARE OF THE CO2 EMISSION. REGARDING THE FLIGHT PATH THAT GOES OVER MY HOUSE, WITH THE AIRCRAFT HEIGHT AND WIND DRAG. I WONDER WHERE THE FUMES GO?
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	1	QUALITY OF LIFE, AND HEALTH. POLLUTION/FUMES AND THE NOISE. THIS IS A CONCERN AS A LOCAL RESIDENT, LIVING ON THE OAKFARM ESTATE. HILLINGDON, LIVING UNDER THE FLIGHT PATH.

4. **Table 3**. Please consider the Design Principles for *minimising the impact of aircraft noise* in Table 3 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	1	FOR MY WELL BEING, IT WOULD BE GOOD TO DESIGN NEW ROUTES. THOU WOULD THAT BE PRACTICAL? ~~AND~~ MORE PEOPLE WOULD BE AFFECTED BY NEWLY OVERFLOWN.
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	2	TO MINIMISE THE NOISE WOULD BE GOOD TO HAVE, ~~THOU~~ THOU HAVING SMALLER NUMBER OF ROUTES I COULD HAVE MORE FLIGHTS BECAUSE MY ROUTE MAYBE BE CONCENTRATED.
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	1	A STEEPER CLIMB. SO INCREASE OF NOISE. THOU IN A SHORTER SPACE OF TIME. AS WELL ~~THOU~~ AS OVER SMALLER AREA. ~~THOU~~ MORE FLIGHTS OVER MY HOUSE? ? THAT COULD HAPPEN WHICH IS A CONCERN.
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	1	ALL THE AIRCRAFTS THAT GO OVER MY HOUSE MAKE A NOISE. A SHALLOWER CLIMB ~~NOISE~~ MAY BE SLIGHTLY LESS THAN A STEEPER CLIMB, THOU THOU IT COULD BE LONGER.
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	1	I WOULD BE IN FAVOUR OF FLIGHTS OVER RURAL AREAS, THOU THE RUNWAY IS THE OTHER SIDE OF THE A·40, FROM MY HOUSE. TO CHANGE THE ROUTE WOULD BE GREAT.

P.T.O.

5. Please make any other comments you see fit on our draft Design Principles.



Resident ([redacted])

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Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	4	
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	3	
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	5	
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	2	An important factor to reduce, as far as possible, unnecessary impacts on the heavily polluted air in this area. There are already shocking levels of NO2 across Hillingdon and including the “rural” areas to the North of the airfield, surrounding several schools and in residential areas.
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	1	The impact on residents living under / near the flightpath is a key consideration from a safety, health and quality of life perspective. The airfield is surrounded by areas of relatively high density housing with only one viable runway. While residents are sympathetic to military aircraft use, commercial aircraft use must be restricted and closely managed.

4. **Table 3**. Please consider the Design Principles for *minimising the impact of aircraft noise* in Table 3 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	3	
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	1	The airfield is located in an area with high levels of housing so it is hard to see how this aim can be achieved.
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	5	
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	2	
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	5	The airfield is located in NW London and is surrounded by relatively high density housing. There are very limited rural areas to fly over given the single runway and location.

5. Please make any other comments you see fit on our draft Design Principles.

It is hard to critique the design principles without seeing a heat-map of alternative scenarios for noise and air pollution on the surrounding residential areas under whatever alternatives can be considered.

The airfield is located in NW London, has a single SSE to NNW angled runway and is surrounded in all directions by residential housing with a hill to the North of the airfield, so it appears that the practical alternatives may be quite limited.

While residents are generally accepting of the military aircraft requirements at a long established military airfield, commercial traffic must be limited and closely monitored.

Resident ([redacted])

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Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	5	THIS SHOULD ALREADY BE POLICY.
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	3	GPS SHOULD ENABLE MUCH MORE EFFICIENT ROUTINGS.
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	4	KEEP ROUTES SHORTER AND MINIMISE AIRCRAFT HOLDING.
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	1	POLLUTION KILLS ABOUT 30,000 PEOPLE A YEAR IN THE UK, ABOUT 10 TIMES MORE THAN ROAD TRAFFC ACCIDENTS.
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	2	INCREASED GLIDESLOPE ANGLE WILL REDUCE NOISE FOR MOST PEOPLE, ESPECIALLY WITH LANDING AIRCRAFT.

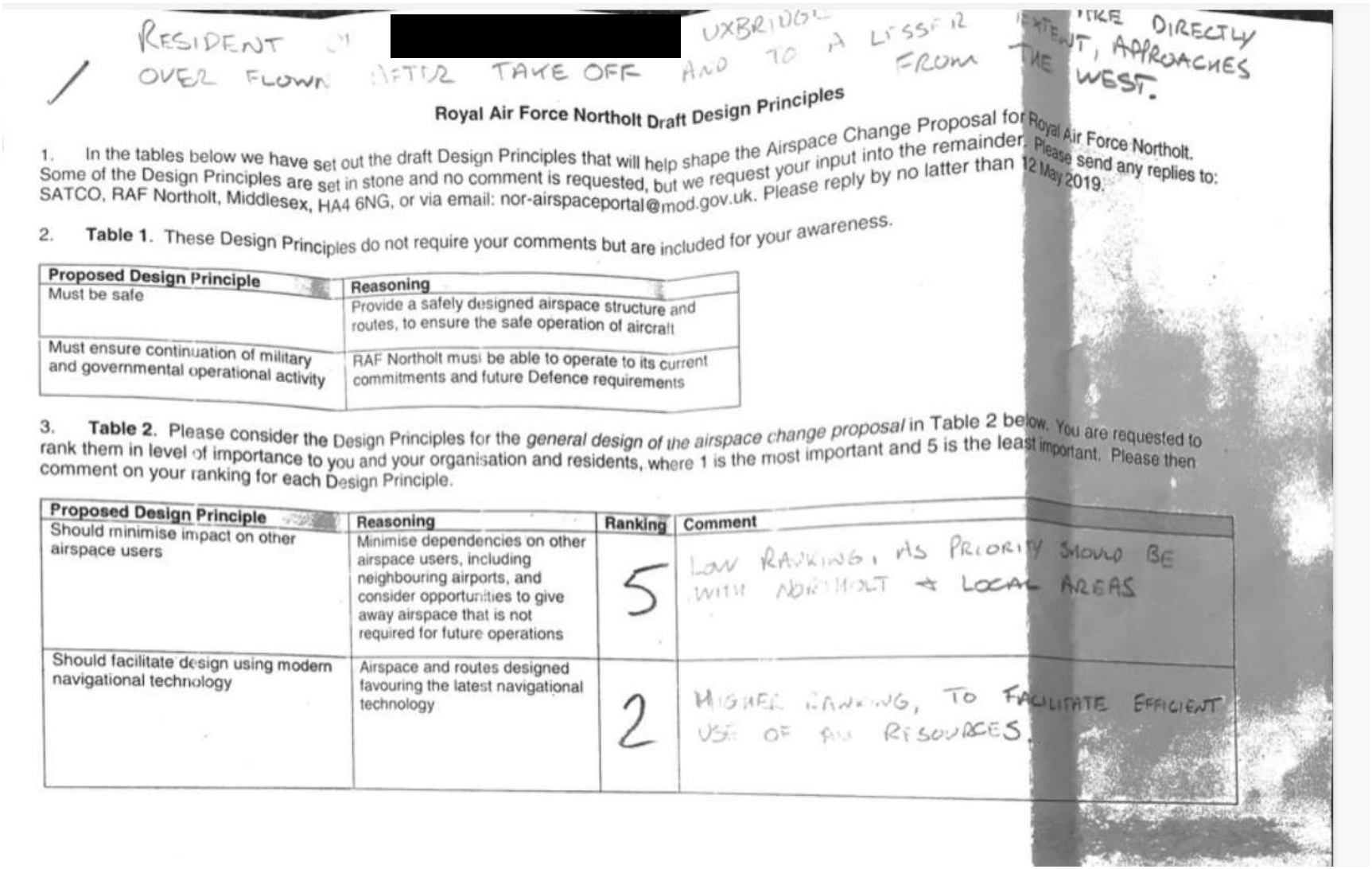
4. **Table 3**. Please consider the Design Principles for *minimising the impact of aircraft noise* in Table 3 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	2	PEOPLE WHO HAVE DECIDED TO LIVE UNDER EXISTING FLIGHT PATHS HAVE CHOSEN TO DO SO. DO NOT INFLICT NEW ROUTES OVER PEOPLE WHO HAVE CHOSEN TO AVOID NOISE AND AIR POLLUTON.
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	3	QUITER AIRCRAFT WILL MINIMISE THIS PROBLEM OVER TIME.
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	4	AIRCRAFT ARE GETTING MUCH MORE POWERFUL AND QUITER SO NOT MUCH INCREASE IN THIS PROBLEM.
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	5	NOT A GOOD IDEA.
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	1	THIS SHOULD ALREAD BE POLICY.

5. Please make any other comments you see fit on our draft Design Principles.

HEATHROW ARE CONSIDERING USING A GLIDESLOPE OF 3.2 DEGREES INSTEAD OF THE CURRENT 3.0 DEGREES. RAF NORTHOLT SHOULD DO THE SAME.

Resident (no name provided)



RESIDENT OF [redacted] UXBRIDGE OVER FLOWN AFTER TAKE OFF AND TO A LESSER EXTENT FROM THE WEST. MORE DIRECTLY APPROACHES

Royal Air Force Northolt Draft Design Principles

1. In the tables below we have set out the draft Design Principles that will help shape the Airspace Change Proposal for Royal Air Force Northolt. Some of the Design Principles are set in stone and no comment is requested, but we request your input into the remainder. Please send any replies to: SATCO, RAF Northolt, Middlesex, HA4 6NG, or via email: nor-airspaceportal@mod.gov.uk. Please reply by no latter than 12 May 2019.

2. **Table 1**. These Design Principles do not require your comments but are included for your awareness.

Proposed Design Principle	Reasoning
Must be safe	Provide a safely designed airspace structure and routes, to ensure the safe operation of aircraft
Must ensure continuation of military and governmental operational activity	RAF Northolt must be able to operate to its current commitments and future Defence requirements

3. **Table 2**. Please consider the Design Principles for the *general design of the airspace change proposal* in Table 2 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	5	LOW RANKING, AS PRIORITY SHOULD BE WITH NORTHOLT & LOCAL AREAS
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	2	HIGHER RANKING, TO FACILITATE EFFICIENT USE OF ALL RESOURCES.

Proposed Design Principle	Reasoning	Ranking	Comment
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	2	HIGHER RANKING,
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	1	HIGH PRIORITY. FUEL EFFICENCY & LOW EMISSIONS ESSENTIAL
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	1	HIGH PRIORTY. MINIMISE NOISE IMPACT ON RESIDENTS

4. **Table 3**. Please consider the Design Principles for *minimising the impact of aircraft noise* in Table 3 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	5	LOW RANKING. CONSIDER VARIABLE ROUTES TO REDUCE IMPACT ON THOSE FREQUENTLY OVER FLOWN.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	5	LOW RANKING, CONSIDER MORE ROUTES TO VARY IMPACT OF THOSE FREQUENTLY OVER FLOWN.
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	5	LOW RANKING, NEED TO MINIMISE NOISE AS #1 PRIORITY ALONG WITH FUEL EFFICIENCY.
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	1	HIGHER RANKING, MORE APPROPRIATE FOR RESIDENTIAL AREAS
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	1	HIGHER RANKING. WHERE POSSIBLE TO MINIMISE IMPACT ON THOSE FREQUENTLY OVER FLOWN.

Resident (no name provided)

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Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	5	This proposal seems to ~~for~~ want to hive out air space?
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	1	As I reside on the flight path I would like this technology to the best - increased flights more risk of accidents.

Proposed Design Principle	Reasoning	Ranking	Comment
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	1	Would like more routes to divert over countryside
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	1	A necessity rather than an option.
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	1	

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Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	5	~~As I live under a fli~~ As I am overflown I certainly would not like to have any further increase in flights - we would never be able to enjoy our garden.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	1	
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	1	Divert over countryside - there is space or make the M40 ~~underground~~ and make runway M40! ~~via underpass~~
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area		
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	1	Here is space to achieve this

5. Please make any other comments you see fit on our draft Design Principles.

I will be a little disappointed if these proposals do not take overflow residences into consideration - I suppose one has to live under a flight path to know how annoying ~~what~~ one ~~cannot~~ cannot enjoy ~~sitting~~ sitting quietly in the garden!
I also feel the value of my property will decrease somewhat.

3

RAF FEEDBACK ABOUT THE CHANGE IN MANAGEMENT OF SOUTH RUISLIP AIRSPACE IN THE FUTURE.

3 design principles to engage you in helping make decisions about the future airspace in South Ruislip.
Rank the statements in order of importance to you 1=most important; 5= least important

Two underlying principles require no comment	**General design**	RANK 1-5	**Minimising the impact of aircraft noise**	RANK 1-5
Any developments must be safe.	• Should minimise the impact on other airspaces	/	• Minimise the number of homes and businesses overflown.	/
	• Should use modern navigational technology	/	• Minimise the total number of people affected by noise (steeper climb gradient increases noise over a smaller area).	/
The plan will ensure the continuation of military and government operational activity.	• Should be efficient to benefit all stakeholders	/	• Consider fewer people affected by noise (steep climb gradient increased noise but over a smaller area).	/
	• Should minimise fuel and greenhouse gasses	/	• Consider more people affected by noise(shallow climb gradient reduces noise but over a larger area)	/
	• Should minimise the impact of aircraft noise	/	• Prioritise flight paths over rural rather than urban areas.	/

Space for personal comments:

Signature (optional) Contact (optional)

To make your view count:

DEADLINE 12th MAY 2019 ACT NOW
ON LINE,
ON SRRA web site.
or COLLECT A FORM FROM THE LIBRARY.
Return forms to
[redacted]
or send on line nor-airspaceportal@mod.gov.uk.

British Balloon and Airship Club

1. **Table 2**. Please consider the Design Principles for the *general design of the airspace change proposal* in Table 2 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	1	It is important not to further restrict the use of airspace on general aviation. Further changes to airspace could lead to more infringements.
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	3	Although a lot of GA traffic use electronic navigational devices the boundaries of CAS should still be easily seen from the cockpit using well known land features. The routes should use navigational technology, but this does not generally apply to VFR GA traffic.
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	3	Totally agree, but this generally does not apply to GA traffic.
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	1	Totally agree.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	1	Totally agree.

4. **Table 3**. Please consider the Design Principles for *minimising the impact of aircraft noise* in Table 3 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	3	No-one should be immune from the noise footprint.
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	2	I agree in principle but this can lead to routes that are impractical to fly.
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	4	Engines are becoming quieter so this might not be such a problem. The airspace is very congested so it might not be possible to implement this principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	3	I refer to the comment above.
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	3	Nobody likes aircraft noise but an even spread would be preferable to concentrating all the flightpaths over a small area.

5. Please make any other comments you see fit on our draft Design Principles.

With a third runway at Heathrow, and more traffic at local small and medium sized airfields there might be a case for the RAF to consider closing down Northolt. Royal flights could use London City, Biggin Hill, of Farnborough.

British Helicopter Association

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Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	1	Any additional Controlled Airspace (CAS) should be kept to a minimum; no lowering of the height of the base of the TMA. The London Helicopter Routes pass to the south of Northolt and future procedures should not necessitate movement of or decreased routings. The current routes were designed to keep single engine aircraft over areas where a safe forced landing could be achieved.
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	2	Use of PBN and other such technology is encouraged but the design should not conflict with but fit in with other potential users of this technology. Should a low level PBN corridor for Helicopter traffic departing/arriving the TMA be introduced the airspace requirement would need to be coordinated
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	3	See above comments
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	5	Linked to PBN this should allow more efficient approach and departure procedures hence lowering CO2.
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	4	This is becoming an increasing issue. The ‘fan’ type PBN arrivals and departures are liable to put noise over people not currently affected by the traffic flow patterns used by legacy ground-based navigation systems. Moving heli routes will likely generate more noise complaints as people not used to having overflights are subjected to increased levels

4. **Table 3**. Please consider the Design Principles for *minimising the impact of aircraft noise* in Table 3 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible	1	This will potentially cause a smaller increase in noise complaints, if any, associated with the design
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes	2	
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area	4	
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area	5	
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities	3	

5. Please make any other comments you see fit on our draft Design Principles.

Any increase in amount of CAS will mean less airspace for aircraft proceeding VFR therefore creating a higher traffic density in the non-CAS; this will adversely affect safety as the risk of mid-air collision increases.

[redacted]
British Helicopter Association

General Aviation Alliance

3. **Table 2**. Please consider the Design Principles for the *general design of the airspace change proposal* in Table 2 below. You are requested to rank them in level of importance to you and your organisation and residents, where 1 is the most important and 5 is the least important. Please then comment on your ranking for each Design Principle.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	1	Airspace is a finite resource and must be shared amicably by all users. We appreciate that certain activities have a route priority, for example CAT cannot be expected to frequently divert from planned flight paths to fit in with other traffic that is perhaps on a sight-seeing flight. We also appreciate that flight safety is paramount and that controlled airspace is established to provide a known traffic environment and safe separation between flights. However, it is important that the volume of controlled airspace is only that required for the safe and efficient operation of the aircraft for which it is established. Planning new or revised airspace must take into account the effect that it will have on neighbouring airspace and the volume of uncontrolled airspace that is available for use by aircraft not wanting, or unable, to enter controlled airspace. The GAA believes that it is important that airspace is designed with the principle that it will be available to all classes of aircraft for as much time as

Proposed Design Principle	Reasoning	Ranking	Comment
			possible and encourages airspace design that recognises opportunities for airspace sharing. The GAA supports the development of electronic conspicuity devices and encourages airspace sponsors to realise their part in enabling flexible use of airspace.
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	2	The GAA agrees with this principle which we believe will lead to more efficient routing and as a result minimise the volume of airspace required; minimise emissions; minimise noise. We accept that modern navigation technology will enable more precise routes to be flown, which has the knock-on effect of concentrating overflight and noise. Residents below these flight paths may suffer increased effects as a result. This nuisance must be balanced against the need for efficient and environmentally better use of the airspace.
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	3	The GAA agrees with the principle of improving operational efficiency but is concerned that it does not lead to an undesirable increase in airspace volume.
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	4	The GAA supports the aim of more efficient flight profiles and where applicable timed arrivals to eliminate the need for stacking/holding. Efficient flight profiles require less airspace and so should be considered a normal part of airspace planning.

Proposed Design Principle	Reasoning	Ranking	Comment
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	5	The GAA supports endeavours to reduce the impact of aircraft noise on residential areas below flight paths. It is inevitable that some residential areas will be overflown. Incorporating into the airspace design best use of aircraft performance and the use of varied flight paths for respite can reduce the noise impact.

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We have responded to each of the principles for minimising the impact of aircraft noise, but we are unwilling to rank them in any order.

Proposed Design Principle	Reasoning	Ranking	Comment
Minimise the number of people newly overflown	Limit designing new routes over those people who are not currently overflown by keeping routes as close to today's flight paths as possible		The GAA supports flight profiles that minimise the volume of airspace required.
Minimise the total number of people affected by noise	Reduce the number of people overflown by aircraft. This would lead to aircraft concentrated over a smaller number of routes		The GAA supports flight profiles that minimise the volume of airspace required.
Consider fewer people affected, but more noise	A steeper climb gradient would result in a potential increase in noise, but over a smaller area		The GAA supports flight profiles that minimise the volume of airspace required.

Proposed Design Principle	Reasoning	Ranking	Comment
Consider more people affected, but less noise	A shallower climb gradient would result in potential reduction in noise, but over a larger area		The GAA does not support the general use of a shallower climb gradient which will result in increased airspace.
Prioritise flight paths over rural areas rather than urban areas	Favour routes over rural areas, rather than residential areas in towns and cities		The GAA supports the prioritisation of routes over rural areas but the routing should not require an increased volume of airspace over that if this priority was not a consideration.

5. Please make any other comments you see fit on our draft Design Principles.

For your information I have included the GAA Principles during ACP engagement.

Consultation

1. The GAA welcomes the opportunity to engage in consultation at an early stage within the ACP CAP 1616 process.
2. Sponsors are encouraged to engage with the GAA and its members as early as possible during the development of the ACP. Previous ACPs have missed the opportunity for early engagement and dialogue resulting in significant and costly delays.

Airspace classification

1. The GAA considers that the UK airspace's default classification is G and that sponsors must establish a safety case for proposing to change this class or add any further restrictions or requirements by their ACP.
2. All sponsors must demonstrate that alternatives have been considered such as RMZ and TMZ before considering controlled airspace.
3. Class E without a TMZ should be considered as a normal option.

Access by GA

1. Sponsors must accept the assumption that GA including sporting and recreational aviation is entitled to continued safe use of airspace and that commercial aviation does not have a right to limit airspace access.
2. Sponsors should ensure that there will be measures to allow flexible use of airspace and prepare for the wider use of electronic conspicuity devices and interoperability with existing e-conspicuity, e.g. FLARM and Pilot Aware etc...

Airspace volume

1. In line with the principles of the Airspace Modernisation (was FAS) principles the ACP must respect the requirement for minimum airspace volumes designed for efficiency and reduced environmental impact. These principles will include:

- Minimum size of controlled airspace
- Minimum number of departure/arrival routes

- Steeper and continuous climbs and descents for cost and environmental benefits as well as minimisation of CAS footprint.

Justification

1. Sponsors must conduct and present proper analysis of overall airspace safety changes i.e. based on modelling and evidence rather than purely subjective opinion.
2. Sponsors must provide proper validation of forecast traffic levels. There is an expectation that data used, particularly forecasts, will be verifiable including details of any and all assumptions.

Airspace integration

1. Sponsors must show how they are integrating their proposal within the overall UK airspace modernisation context (for example, proposals which do not connect efficiently between upper and lower airspace (potentially under different airspace "management") would only inhibit overall airspace efficiency and therefore not receive our support)
2. Optimisation of the development work above and below the 7,000ft NATS en-route split.

Response submitted on behalf of the General Aviation Alliance by [redacted]

MOD ([redacted])

From: [redacted]
Sent: 26 April 2019 11:46
To: [redacted]
Subject: RE: 20190410-RAF Northolt Airspace Change

Morning Ma'am,

I have been collating the responses from the RN perspective via the relevant Force Commanders and wanted to present their replies. Is it yourself that this needs forwarding to?

From a RW perspective their main concern is ensuring future equipment requirements that would be necessary / mandatory to facilitate operations within the airspace at Northolt and that the nav aids proposed in the ACP would continue to ensure navigational freedom.

I am working from home but available via my mobile if there is further information required. Apologies if this information needs to be submitted elsewhere – please just let me know and I will forward accordingly.

Yours aye,

[redacted]

MOD ([redacted])

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Should minimise impact on other airspace users	Minimise dependencies on other airspace users, including neighbouring airports, and consider opportunities to give away airspace that is not required for future operations	3	[redacted]

Proposed Design Principle	Reasoning	Ranking	Comment
Should facilitate design using modern navigational technology	Airspace and routes designed favouring the latest navigational technology	2	[redacted]
Should facilitate operational efficiencies to maximise benefits to all stakeholders	Flight paths that minimise the workload of pilots and air traffic control, as well as design more efficient routes	1	[redacted]
Should minimise fuel and greenhouse gases (for civil operations)	Seek to minimise the amount of fuel and CO2 emissions produced. Consideration of short, direct flight paths	4	[redacted]
Should minimise the impact of aircraft noise	Comply with government regulation and policy on noise impact. Aim to reduce effects on health and quality of life by considering local circumstances	5	[redacted]

3. Please make any other comments you see fit on our draft Design Principles.

[redacted]

Albinati Aeronautics

Dear Sir,

I reviewed the proposed changes which we fully support as they would increase safety & efficiency of operating into Northolt.

Best regards

[redacted]

[redacted]
Captain
Flight Operations Manager
[redacted](Telephone)
[redacted](Mobile)

Right-click or tap and hold here to download pictures. To help protect your privacy, Out

[redacted]