

Safety and Airspace Regulation Group

Title of Airspace Change Proposal	Biggin Hill RNAV Procedures
Change Sponsor	Biggin Hill Airport Limited
SARG Project Leader	██████████
Case Study commencement date	30/07/2020
Case Study report as at	11/11/2020
File Reference	ACP-2013-08

Instructions

In providing a response for each question, please ensure that the 'Status' column is completed using the following options:

- Yes
- No
- Partially
- N/A

To aid the SARG Project Leader's efficient Project Management it may be useful that each question is also highlighted accordingly to illustrate what is resolved Green not resolved Amber or not compliant Red

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1.	Consultation Process	Status
1.1	<p>Is the following information complete and satisfactory?</p> <ul style="list-style-type: none"> • A copy of the original proposal upon which consultation was conducted. • A copy of all correspondence sent by the sponsor to consultees during consultation. • A copy of all correspondence received by the sponsor from consultees during consultation. • A referenced tabular summary record of consultation actions. • Details of and reasons for any changes to the original proposal as a result of the consultation. • Details of further consultation conducted on any revised proposal. 	<p align="center">YES</p> <p align="center">PARTIALLY</p> <p align="center">YES</p> <p align="center">PARTIALLY</p> <p align="center">YES</p> <p align="center">YES</p>

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<p>1.2</p>	<p>Were reasonable steps taken to ensure stakeholders actually received the information e.g. postal/e-mail/meeting fora?</p> <p>The change sponsor developed a list of 121 targeted stakeholder organisations (70 aviation and 51 non-aviation) and these were contacted by email/postal correspondence to confirm the launch of the consultation. The invitation to participate in the consultation gave a brief explanation of the rationale for pursuing the change and provided clear guidance on how to access the consultation document and related Q&A's. Whilst the primary means of accessing the consultation document was through the airport's website, hard copies were made available on request. To promote the consultation to a wider audience, the change sponsor stated that they arranged for the publication of related notices in six local/regional newspapers, but it was not possible to validate this as no relevant supporting evidence was provided.</p> <p>The change sponsor has provided a 'consultation consultee spreadsheet' which suggests that read receipts were used and that hastening correspondence was distributed to encourage/elicit responses, indicating that they were proactive in terms of tracking feedback from the targeted stakeholders. An acceptable response rate of 26% (31 responses from 121 targeted stakeholders) was achieved and this, alongside the additional responses from 38 non-targeted stakeholders, indicates that reasonable steps were taken by the change sponsor to distribute/promulgate the consultation. Related concerns were raised by consultees in their feedback and these were acknowledged and addressed by the change sponsor within their consultation response document (see Section 1.6 below – 'deficiencies in the consultee list').</p>	<p align="center">YES</p>																		
<p>1.3</p>	<p>What % of the targeted aviation stakeholders replied? (Include actual numbers).</p> <p>During this assessment, it was noted that there were discrepancies when cross-checking the raw data consultation responses, consultation consultee spreadsheet (which appears incomplete) and the consultation response document. The following numbers are based on a comprehensive review of the raw data consultation responses provided and therefore it should be noted that they differ from those presented in the change sponsor's consultation response document.</p> <p>The change sponsor targeted 70 aviation stakeholders and 18 responded; these numbers can be grouped and broken down as follows:</p> <table border="1" data-bbox="286 1177 1218 1391"> <thead> <tr> <th>Aviation Stakeholder Group</th> <th>Targeted</th> <th>Responded</th> </tr> </thead> <tbody> <tr> <td>Airport Users</td> <td align="center">25</td> <td align="center">7</td> </tr> <tr> <td>Other Affected Aviation</td> <td align="center">12</td> <td align="center">2*</td> </tr> <tr> <td>NATMAC – Civil</td> <td align="center">28</td> <td align="center">7</td> </tr> <tr> <td>NATMAC – Military</td> <td align="center">5</td> <td align="center">2</td> </tr> <tr> <td align="right">TOTALS</td> <td align="center">70</td> <td align="center">18</td> </tr> </tbody> </table>	Aviation Stakeholder Group	Targeted	Responded	Airport Users	25	7	Other Affected Aviation	12	2*	NATMAC – Civil	28	7	NATMAC – Military	5	2	TOTALS	70	18	<p align="center">26% (18/70)</p>
Aviation Stakeholder Group	Targeted	Responded																		
Airport Users	25	7																		
Other Affected Aviation	12	2*																		
NATMAC – Civil	28	7																		
NATMAC – Military	5	2																		
TOTALS	70	18																		

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*although each responded separately, the change sponsor merged the feedback from Gatwick Airport Limited with that provided by the airport's Air Navigation Service Provider (ANSP).

The 18 aviation consultee responses can be further broken down as follows:

- 12 (67%) supported the proposal
- 1 (6%) had no objection to the proposal
- 3 (15%) objected to the proposal
- 1 (6%) made no comment about the proposal

The status for the 1-remaining consultee is marked as 'pending' on the change sponsor's consultation consultee spreadsheet. Having been made aware that this consultee did not receive the original consultation invite, the change sponsor forwarded this on to them on the 15th January 2016. The consultee acknowledged receipt, suggested that the proposed Instrument Approach Procedure (IAP) was unlikely to "cause any major problems" and stated their intention to provide a formal consultation response before the specified deadline. No related follow-up correspondence was located during this assessment, so it is assumed that no formal consultation response was submitted.

1.4 What % of the targeted non-aviation stakeholders replied? (Include actual numbers).

**25%
(13/51)**

During this assessment, it was noted that there were discrepancies when cross-checking the raw data consultation responses, consultation consultee spreadsheet (which appears incomplete) and the consultation response document. The following numbers are based on a comprehensive review of the raw data consultation responses provided and therefore it should be noted that they are slightly different from those presented in the change sponsor's consultation response document.

The change sponsor targeted 51 non-aviation stakeholders and 13 responded; these numbers can be grouped and broken down as follows:

Non-Aviation Stakeholder Group	Targeted	Responded
Airport Consultative Committee	1*	1
Members of Parliament	13	2
County/City/District Councils	9	4**
Parish Councils (or equivalent)	22	5
Other Organisations/Individuals	6	1
TOTALS	51	13

* 15 stakeholders representing different areas of interest sit on the Airport Consultative Committee.

** 1 response from a District Council is not captured on the consultation consultee spreadsheet.

The 13 non-aviation consultee responses can be further broken down as follows:

- 2 (15%) supported the proposal
- 1 (8%) had no objection to the proposal
- 7 (54%) objected to the proposal
- 3 (23%) made no comment about the proposal

In addition to the feedback received from the targeted aviation and non-aviation consultees detailed above, the change sponsor received feedback from 38 consultees responding in an individual or representative capacity. These responses can be broken down as follows:

- 11 (29%) supported the proposal
- 1 (3%) had no objection to the proposal
- 21 (55%) objected to the proposal

The status for the 5-remaining consultees is marked as 'pending' on the change sponsor's consultation consultee spreadsheet. A review of the raw data consultation responses confirmed that:

- 1 consultee responded on the 19th December 2015 seeking clarification on several points. The change sponsor responded on the 1st February 2016. No further correspondence was received, so it is assumed that no formal consultation response was submitted.
- 1 consultee responded on the 1st January 2016 to advise that they were unable to download the consultation document. The change sponsor responded (including the consultation document as an email attachment) on the same day. No further correspondence was received, so it is assumed that no formal consultation response was submitted.
- 1 consultee responded on the 7th January 2016 seeking clarification on several points. It was not possible to determine whether the required follow up action was taken by the change sponsor from reviewing the evidence provided.
- 1 consultee responded on the 29th December 2015 seeking an official response to concerns regarding the potential overflight of residential areas given that the consultation document stated that the proposed IAP would be located over the A/M23. The change sponsor acknowledged the feedback on the 6th January 2016 and advised that it would be "*followed up*" and that they would be "*in touch in due course*". It was not possible to determine whether the required follow up action was taken by the change sponsor from reviewing the evidence provided.
- No related correspondence was located for the 1 remaining 'pending' consultee, so it was not possible to determine whether the required follow up action was taken by the change sponsor.

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1.5	Were reasonable steps taken to ensure as much substantive feedback was obtained from the consultees e.g. through follow-up letters/phone calls?	PARTIALLY
<p>The consultation was formally launched on the 18th November 2015 with the targeted stakeholders being contacted primarily by email, with hard-copy correspondence being distributed to those where no-known email address existed. The invitation to participate in the consultation gave a brief explanation of the rationale for pursuing the change and provided clear guidance on how to access the consultation document and related Q&A's. Whilst the primary means of accessing the consultation document was through the airport's website, hard copies were made available on request. To promote the consultation to a wider audience, the change sponsor states that they arranged for the publication of related notices in six local/regional newspapers, but it was not possible to validate this as no supporting evidence was provided.</p> <p>During the course of the consultation, the change sponsor facilitated meetings with:</p> <ul style="list-style-type: none"> • Community and aviation stakeholders to explain the proposal in detail (this was in response to a request from a local MP); and • Redhill aerodrome to discuss aspects to be addressed in the development of a Memorandum of Understanding covering the operational integration of the proposed procedure with Redhill operations. <p>The change sponsor was proactive in terms of monitoring the response rate from the targeted stakeholders, distributing hastening emails on the 15th January 2016 and 16th February 2016. However, there are some examples (see Section 1.3 and 1.4 above) of 'pending' consultation responses and it was not possible to determine whether the required follow up action was taken by the change sponsor.</p> <p>It was originally the change sponsors intention to run a 13-week consultation with a specified deadline of 17^h February 2016. However, in light of feedback received concerning failed hyperlinks in the consultation document, the change sponsor decided that it was necessary to extend the consultation by an extra week, thereby allowing stakeholders more time to access and review the referenced documents once they had corrected the hyperlinks.</p>		
1.6	Have all objections to the change proposal been resolved (or sufficiently mitigated)?	PARTIALLY
<p>The raw data consultation responses have been reviewed and whilst there are some examples where specific points of feedback have not been acknowledged/addressed by the change sponsor, I am satisfied that the 'issues and themes of concern' contained within the consultation response document is a fair and adequate representation of consultee feedback. The change sponsor has included their response to each within the consultation response document and in some cases,</p>		

they felt it necessary to respond directly to the consultee (examples of outgoing correspondence have been provided and reviewed as part of this assessment).

The following summarises the ‘issues and themes of concern’ specifically relevant to those consultees which objected to the proposed IAP and the change sponsors response to them:

Links to CAA website did not work

- Shortly before the consultation was due to close, consultees highlighted that the consultation document contained hyperlinks to CAA-documentation that did not work. The change sponsor corrected the hyperlinks and extended the consultation to the 26th February 2016, thereby allowing stakeholders more time to access and review the referenced documents.

Deficiencies in the consultee list

- Consultees were concerned about a lack of awareness of the consultation, suggesting that the list of targeted stakeholders was inadequate. They also felt that the change sponsor had not taken proactive steps to ensure that those communities likely to be affected were informed/made aware of the proposal. In response, the change sponsor referenced CAP 725 guidance, which states that “*all Regional, County, District, Borough Councils and Unitary Authorities, whose area of responsibility might be over flown...must be considered as ‘stakeholders’*” and that Parish/Community Councils “*must be considered*”. The change sponsor confirmed that it was their expectation that the listed stakeholders would “*disseminate information to appropriate focal points within their spheres of operation*” and referenced the additional activities undertaken to promote the consultation to a wider audience (e.g. uploading the consultation document to the airport website and publishing related notifications in six local/regional newspapers).

Forecast movements

- Consultees suggested that the consultation document contained an insufficient amount of information regarding the future/forecast use of Runway 03, highlighting that this was critically important in terms of being able to determine the likely impact of the proposed IAP. The change sponsor referenced the figures provided in Table 1 of the consultation document and whilst they stated that the figures are “*not expected to increase substantially*” they acknowledged the potential for a “*small proportional increase due to the lower landing minima available*”. They explained that it was difficult to predict future Instrument Flight Rules (IFR) movements due to the highly competitive nature of the

business and executive aviation market but suggested that “*only modest growth*” was achievable. They also stated that it was their estimation that circa 20% of the total arrivals in to Biggin Hill would land on Runway 03.

- Consultees noted that Table 1 in the consultation document confirmed that there had been a decline in aircraft movements over recent years and questioned the need for the proposed IAP. This was partially addressed by the change sponsor in the consultation response document as they advised that the procedure was not being proposed to generate traffic growth. The consultation document itself included a ‘what changes are being proposed?’ section which made it clear that the proposal was not solely related to/dependent on the number of aircraft movements.
- Consultees also expressed concern about the potential increase in noise if larger aircraft started using the airport and the proposed IAP, a point which the change sponsor did not acknowledge/address in their consultation response document.

Impact on residents close to Rwy 03 threshold

- A single consultee suggested that the proposed IAP would lead to a 30-35% increase in aircraft approaching from the south-west and questioned the change sponsors claim in the consultation document that it “*will bring benefits to all residents living around the airport*”. The change sponsor referenced the statistics provided in Table 1 (Aircraft Movements (Arrivals) 2009-2014) in the consultation document and highlighted that between 2009 and 2014, less than 16% of the total IFR arrivals landed on Runway 03. They did however acknowledge the potential for the proposed IAP to “*slightly increase the proportion of IFR arrivals landing on Runway 03*”.
- The same consultee also queried how the noise contours had been determined. The change sponsor confirmed that they had been produced by a specialist noise consultant in accordance with recognised methodologies accepted by the CAA.

Visual approach is better than Instrument approach

- Consultees noted that the proposed IAP would require aircraft to fly further away from the airport and that it would push the tracks over densely populated areas. The change sponsor explained the benefits of having a properly designed IAP versus the pre-existing arrangements, highlighting that it would represent “*a substantial enhancement to the safety and regularity of all-weather operation*”.

More aircraft will fly directly overfly the Coulsdon area – not currently overflown

- Several consultees expressed concern about the proposed IAP, highlighting that it would place aircraft over densely populated areas, some of which would be newly affected and therefore subject to increased disturbance. The

change sponsor acknowledged that the proposed IAP is located over densely populated areas and that it would affect communities not currently overflowed by aircraft operating in to/out of Biggin Hill. They also advised that the incidence of aircraft having to use the proposed IAP was low and suggested that the additional noise would be *"imperceptible to people on the ground"* given the high ambient noise level experienced in those areas, a claim that was also challenged by consultees (see 'Inadequate noise assessments' below).

- Consultees noted that the change sponsor had claimed in the consultation document that *"the noise impact will be minimal and localised, especially in the context of local ambient noise"* and challenged this in their feedback. The change sponsor provided comparative figures for noise experienced at the kerbside of a busy road (80dBA) versus the expected noise experienced at ground level from an aircraft flying the proposed procedure (56dBA). They also referenced the SEL charts contained within the consultation document, which show that no new populations would be exposed to sound levels of 80dBA from aircraft operating on the proposed IAP.
- Some consultees suggested that there was no justification provided for locating the proposed IAP over densely populated areas and that alternatives were available. The change sponsor cited safety requirements in terms of instrument flight procedure (IFP) design criteria and explained that they severely constrain alternative options. The change sponsor stated that in their view, the proposed IAP was *"the only feasible option that can be fitted in to the available airspace"*.

Inadequate noise assessments

- Several consultees challenged statements made in the consultation document concerning the potential noise impact at ground level, suggesting that they were not supported by factual evidence and/or simply incorrect. The change sponsor explained that the contour charts included within the consultation document, upon which their conclusions were based, were developed in accordance with Department for Transport policy and CAA requirements. They also referenced the additional noise assessment work undertaken by Bickerdike Allen Partners in January 2016, which covered predictions for locations at regular intervals along both the pre-existing and proposed tracks, particularly those further away from the airport which had not been considered in their original noise assessment. The report concluded that that the original findings remain unchanged.

Inadequate balanced argument

- Whilst consultees noted the benefits in terms of reducing aircraft noise for other communities, they suggested that there would be significant disbenefits for the densely populated areas located underneath the proposed IAP and felt that this had not been considered. The change sponsor explained that the proposed IAP would provide respite for those communities located under the approach path for Runway 21 as they were affected by all of the pre-existing

IAPs. They also highlighted that conurbations to the west and south-west of the airport are overflowed at a low-level by aircraft flying the 'circle-to-land' visual procedure. Given that the proposed IAP would be flown at higher altitudes in the initial and intermediate segments, the change sponsor concluded that the noise experienced at these parts of the flight profile *"will be less than that currently experienced at the comparable locations under the current [visual] route"*.

Air Pollution (CO₂)

- Consultees felt that the consultation document lacked detailed information in terms of the potential impacts on local air quality, particularly with regards to the southern part of the London Borough of Croydon. The change sponsor explained that the airspace change proposal was not being pursued to generate traffic growth over and above that which had already been approved for the airport and that therefore, no additional CO₂ emissions would accrue as a direct consequence of the proposed IAP. They also suggested that the proposed IAP would provide greater assurance of a successful landing in poor weather, thereby mitigating the additional CO₂ emissions caused by aircraft having to divert to an alternative aerodrome. With regards to the London Borough of Croydon, the change sponsor explained that it should not be adversely affected as the aircraft would be above 1,000ft, an altitude above which Government guidance states that emissions are unlikely to have any significant effect on air quality due to the effects of mixing and dispersion.

Terrain

- Consultees highlighted that some of the areas overflowed were already well above sea level and expressed concern that the consultation document did not include an assessment related to the terrain factors in terms of altitude (above mean sea level (AMSL)) versus height (above ground level (AGL)). The change sponsor acknowledged the local terrain and explained that the densely populated terrain located below the downwind leg of the proposed IAP was generally below 500ft AMSL. Taking this into consideration, they explained that they would not expect aircraft flying over these areas to be below 2,500ft AMSL. They also explained that a steeper than normal descent profile of 3.5° had been incorporated into the proposed IAP to ensure the aircraft were kept as high as possible, for as long as possible.

London/Gatwick/Biggin Corridor

- Several consultees highlighted the narrow gap which exists between the controlled airspace (CAS) associated with London Heathrow, London Gatwick and London City airports and the Biggin Hill Aerodrome Traffic Zone (ATZ),

raising concerns over the potential conflict between aircraft flying the proposed IAP and transiting Visual Flight Rules (VFR) traffic. Related to the possibility of conflict, consultees suggested that the only means of avoidance would be to infringe CAS and/or the Biggin Hill ATZ. The change sponsor explained that this situation already exists and advised that as the proposed IAP would keep arriving traffic inside CAS for longer, the risk of conflict was reduced for both parties (note that following this consultation the proposed IAP was re-designed and now leaves CAS earlier). They also pointed out that the proposed IAP, if approved and implemented, would be depicted on the 1:250000 and 1:500000 VFR charts, thereby heightening the awareness for VFR traffic planning to operate in that area.

- It was also felt that the consultation document lacked a survey-based risk assessment which supported the need for the proposed IAP. The change sponsor explained that it was not possible to carry out a quantifiable risk assessment because they did not retain records of the transiting VFR flights operating below the London Terminal Manoeuvring Area (LTMA) that did not communicate with Biggin Hill. They reiterated that as the proposed IAP will retain arriving aircraft in CAS for the maximum possible time the risk for both parties was reduced.
- One consultee noted that the consultation document failed to cover aircraft which may be in receipt of an air traffic control service from Farnborough and that there was no mention of any coordination with that unit. The change sponsor explained that Biggin Hill aircraft would be identifiable by their conspicuity squawk and therefore that Farnborough would provide an appropriate level of coordination/traffic information.
- Another consultee suggested that they had been “*rebutted*” by the change sponsor when they offered to discuss mechanisms that would facilitate the establishment of the proposed IAP, whilst managing the clear risk that it presents. Although this point was acknowledged in the consultation response document, the change sponsor does not specifically respond to it. However, the proposed IAP was subject to further discussion and a second round of consultation with affected stakeholders.

Access to IAP by non-TMA arrivals

- Noting that the initial part of the proposed IAP was contained within Class A CAS (the LTMA), consultees suggested that allowances should be made for non-LTMA IFR arrivals to fly the proposed IAP not-above 2,500ft (i.e. below the LTMA). The change sponsor explained that the proposed IAP was primarily for the use of IFR flights arriving via the airways/LTMA route structure and highlighted that the vertical profile had been designed to retain aircraft within CAS to reduce exposure to IFR/VFR traffic operating below the LTMA and to minimise noise disturbance. Whilst they acknowledged that it was possible to establish RNAV Direct Approach Procedures for IFR flights below CAS to the Intermediate Waypoints, they confirmed that it was not their intention to do so until sufficient practical experience of integrating the proposed IAP within the existing airspace arrangements had been secured.

Gatwick departures vs Biggin arrivals

- Concerns were raised with regards to the interaction between Gatwick airport's Runway 08 SAM and KENET Standard Instrument Departures (SIDs) and the proposed IAP, with the potential increase in workload for controllers at Gatwick airport and TC Swanwick being identified as an *"operational distraction"*. The change sponsor acknowledged that these concerns had been the subject of extensive engagement and evaluation. They confirmed that further discussions would be carried out with the relevant ANSP and that the output of these discussions would form part of the formal airspace change proposal submission.

Replication of Visual Circling tracks

- Referencing the tracks displayed on the contour maps in the consultation document (see Figures 12, 13 and 14), one consultee highlighted that the proposed IAP would position aircraft over densely populated areas. They suggested that the outer blue line offered a much better alternative as it would position aircraft over less densely populated areas. The change sponsor explained that the blue tracks represented an *"arbitrary specimen track"* used to enable the noise analysis to be completed and confirmed that the visual circling manoeuvre had no fixed or predetermined flightpath. They cited IFP design constraints and stated that the proposed IAP was designed to be *"the shortest possible procedure that could be fitted into the available airspace"*.

Other Options

- Observing that the scope of the consultation was essentially limited to the implementation (or not) of a single proposed IAP, consultees questioned whether other options had been considered by the change sponsor prior to undertaking the consultation. They highlighted that the consultation document lacked information on other routes which may have been considered and discounted and felt that there was insufficient justification for the single option chosen. The change sponsor referenced Paragraph 4.2.2 of the consultation document, which explained that it would have been their preference to route aircraft to the east of the airport but that this was not possible due to the potential conflict with the operations associated with London Gatwick airport. They also cited IFP design criteria constraints and the other airspace activities that needed to be considered when producing the design. Section 3.5 of the consultation document was titled *"What other options have been considered?"* and within the narrative the change sponsor acknowledges that there were *"limited options"* and includes details of other options (Non-precision (NDM IAP, VOR/DME IAP, Precision (ILS IAP) and do nothing) that were considered along with a rationale which sets out why they were discounted.

- Some consultees suggested that the proposed IAP should be routed further to the east (i.e. closer to the airport) so that it passed over less densely populated areas. The change sponsor explained that this was not possible due to IFP design criteria constraints, highlighting the need for minimum segment lengths between turns and for the intermediate and final approach segments of the proposed IAP.

Monitoring

- A single consultee queried how the change sponsor would monitor impacts on affected communities if the proposed IAP was approved and implemented. They also sought clarification on the impacts that could trigger the consideration of alternative routes. The change sponsor referenced the Post Implementation Review (PIR) process and explained its purpose, advising that the implemented procedure could be withdrawn or adjusted to ensure that it achieved the objectives set out in the airspace change proposal.

Track variability

- Consultees noted that the track of the proposed IAP was 'nominal' and sought clarification on the allowable lateral variations and tolerances. The change sponsor advised that in practice the actual navigation performance of aircraft was more accurate than the 'worst case' tolerance which was taken into account within the procedure design criteria. Whilst they did not confirm what the worst-case tolerance was in terms of potential lateral dispersion, the change sponsor explained that arriving aircraft would be using both lateral and vertical (LNAV/VNAV) guidance to carry out an LPV approach, which has *"the lateral accuracy, and repeatability, of an ILS localiser"*.

Track accuracy

- Acknowledging the accuracy of RNAV technology, consultees highlighted the potential for *"persistent annoyance"* for those living below the proposed IAP. It was suggested that the change sponsor hadn't taken advantage of the accurate navigation capability to route aircraft away from populated areas. The change sponsor referenced the Future Airspace Strategy and CAA Policy in terms of the move to Performance Based Navigation and explained that IFP design criteria sometimes precludes the alignment of tracks away from built up areas. This is slightly misleading as it was the proximity of surrounding controlled airspace which forced the design into its proposed location.

Radio Mandatory Airspace

- Noting that it had initially been the change sponsors intention to introduce Radio Mandatory Airspace (see Paragraph 2.3.4 of the consultation document) and that this was abandoned following feedback from General, Sport and Recreational Aviation stakeholders, a single consultee suggested that this would lead to a compromise in safety. The change sponsor explained that a complimentary RMZ was unlikely to be accepted by the CAA, given the feedback received from aviation stakeholders. They explained that the proposed IAP was designed so that arriving aircraft remained within the protection of CAS for as long as possible, thereby minimising their exposure to non-radio equipped aircraft. They also highlighted that the 'see and avoid' principle was viewed by the CAA as an acceptable means of collision avoidance outside of CAS and advised that as the proposed IAP would only be used to facilitate a landing in poor weather, it was unlikely that aircraft would come into conflict with non-radio equipped VFR traffic.

Tactical deviations from the procedure

- Consultees suggested that the consultation document made no reference to the potential impact of tactical interventions on the positioning of aircraft. The change sponsor confirmed that for IAPs, neither the pilot nor the controller has the authority to deviate from the published procedure.

Waypoint Query

- A single consultee observed an inconsistency in the consultation document concerning the location of waypoint ARR01, highlighting that the text confirmed that it was "*positioned overhead the M25 Junction 4*" whilst Figure 7 on the same page displayed it south-west of Junction 4. The consultee specifically requested that the location of this waypoint be altered and that the proposed IAP avoided the villages of Badgers Mount, Halsted and Pratts Bottom. The change sponsor acknowledged that this was an error in the text and confirmed that the position of the waypoint was as displayed in Figure 7, advising that at a nominal speed (210 knots) the turn would be initiated in the vicinity of airspace over Junction 4. However, they did not specifically acknowledge/address the request to alter the location of the waypoint and modify the proposed IAP to avoid overflying the referenced villages.

Compensation

- A single consultee queried what financial compensation would be made to those residents that would be affected by the proposed IAP, having not been previously overflown by any defined flightpath. The change sponsor referenced the noise assessment work undertaken by Bickerdikey Allen Partners and whilst they advised that it was their view

that no case for compensation would exist within the provisions of the Civil Aviation Act, they did not explain the link between the two nor their rationale for reaching that conclusion.

Future Development Areas

- Consultees suggested that the consultation document failed to adequately consider the impact that the proposed procedure could have on areas identified through the planning process for future residential development. The change sponsor pointed out the Bromley Unitary Development Plan (UDP) contained a 57dB LAeq 16h noise contour for the airport and that they had committed within their own Noise Action Plan that future noise contours would not exceed 50% of the total area displayed in the contour contained within the UDP. They also highlighted the need to observe emerging CAA policies with respect to navigational technologies and the potential for consequential impacts in terms of future alterations to flightpaths.

Although not raised by consultees which objected to the proposal, the following points of feedback are worth noting:

IAP minima

- Citing its advantages, a consultee suggested that the change sponsor should consider the use of LNAV/VNAV minima for the proposed IAP. Referencing Figure 6 in the consultation document, the change sponsor advised that the proposed IAP includes minima for both LNAV (non-precision approach) and LPV (Localiser Performance with Vertical Guidance), which is an Approach with Vertical Guidance (APV).

Routes for aircraft from the southwest

- A consultee expressed concern over the proposed IAPs use of the ALKIN hold, highlighting that it favoured fuel-efficient arrivals from the north/east, but the same can't be said for aircraft arriving from the south/west. The change sponsor explained that the retention of ALKIN as the start point of the proposed IAP meant that the route was compatible with the overlying LTMA and air traffic management arrangements.

NATS

- A comprehensive response was submitted by NATS, within which several operational and institutional issues were identified as needing to be resolved. The change sponsor committed to continue further discussions with NATS to resolve outstanding technical ATM issues before submitting the formal airspace change proposal to the CAA.

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2.	Recommendations / Conditions / PIR Data Requirements	
2.1	Are there any Recommendations which the change sponsor <u>should try</u> to address either before or after implementation (if approved)? If yes, please list them below.	N/A
	Modifications were made to the proposed IAP in-light of the feedback received and a supplementary consultation was undertaken by the change sponsor. A separate consultation assessment has been completed for the supplementary consultation, on which the recommendations / conditions / PIR data requirements (as required) have been captured accordingly.	
2.2	Are there any Condition(s) which the change sponsor <u>must fulfil</u> either before or after implementation (if approved)? If yes, please list them below.	N/A
	Modifications were made to the proposed IAP in-light of the feedback received and a supplementary consultation was undertaken by the change sponsor. A separate consultation assessment has been completed for the supplementary consultation, on which the recommendations / conditions / PIR data requirements (as required) have been captured accordingly.	
2.3	Are there any specific requirements in terms of the data to be collected by the change sponsor for the Post Implementation Review (if approved)? If yes, please list them below.	N/A
	Modifications were made to the proposed IAP in-light of the feedback received and a supplementary consultation was undertaken by the change sponsor. A separate consultation assessment has been completed for the supplementary consultation, on which the recommendations / conditions / PIR data requirements (as required) have been captured accordingly.	

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Conclusions	Yes/No
<p>Does the consultation meet the CAA’s regulatory requirements, the Government’s guidance principles for consultation and the Secretary of State’s Air Navigation Guidance?</p>	YES
<p>The fundamental principles of effective consultation are targeting the right audience, communicating in a way that suits them, and giving them the tools to make informative, valuable contributions to the proposal’s development. I am satisfied that these principles have been applied by the change sponsor before, during and after the consultation. I am also satisfied that the change sponsor has conducted this consultation in accordance with the requirements of CAP 725, that they have demonstrated the Government’s consultation principles and that the consultation has:</p> <ul style="list-style-type: none"> • Taken place when the proposal was at a formative stage. Although the scope of the consultation was essentially limited to the implementation (or not) of a single proposed IAP, modifications were made in-light of feedback received during this consultation, subsequent discussions were held with stakeholders and a supplementary consultation was undertaken. Therefore, the change sponsor has demonstrated that they were prepared to make alterations in response to the feedback received. • Presented the consultation material clearly and outlined the potential impacts that needed to be considered. Several concerns were raised by consultees which suggested that they felt that there was insufficient information contained within the consultation document and consequently that it failed to make the likely impact(s) clear. However, it is my view that the change sponsor had provided various sources of information/data and as much as they possibly could in the circumstances to allow stakeholders to determine the likely impact(s). This view is shared with the Airspace Regulator (Environment) who has confirmed that the change sponsor has met process requirements in terms of presenting the environmental impacts of the proposed IAP in both the original and supplementary consultation documents. • Provided a sufficient timeframe to allow considered responses. It was initially the change sponsors intention to run a 13-week consultation, but this was subsequently extended to 14-weeks in response to concerns raised regarding failed hyperlinks in the consultation document. The consultation period therefore exceeded the accepted and widely recognised standard of 12-weeks. • Taken into account the product of the consultation. This is evidenced by the comprehensive list of <i>‘issues and themes of concern’</i> that were identified by the change sponsor, the follow-up discussions with stakeholders, the subsequent modifications to the proposed IAP and supplementary consultation, all of which demonstrate that the change sponsor was prepared to be influenced by the feedback received. 	

General Summary

The scope of this consultation was limited to the implementation (or not) of a single proposed IAP. The consultation document was clear, written in plain-English and was suitable for all audiences. Whilst consultees suggested that there was insufficient information in the consultation document, it was structured in a logical order, with an appropriate amount of context being provided in terms of the need for change, the pre-existing arrival operations, the proposed IAP and the related anticipated impacts.

A comprehensive list of 121 (70 aviation and 51 non-aviation) stakeholders were targeted by the change sponsor and an acceptable response rate of 26% (31 responses) was achieved. This, alongside the additional responses from 38 non-targeted stakeholders, indicates that reasonable steps were taken by the change sponsor to distribute/promulgate the consultation to the targeted stakeholders and a wider audience.

It was noted during the assessment that there were discrepancies when cross-checking the raw data consultation responses, consultation consultee spreadsheet (which appears incomplete) and the consultation response document. It was also noted that there were several pieces (6 in total) of correspondence which had been listed as 'pending' and in some cases, it was not possible to determine whether the required follow up action was taken from reviewing the raw data consultation responses. However, I am satisfied that the change sponsor has fairly and adequately identified several *'issues and themes of concern'* from the feedback received and for the most part, that these have been sufficiently acknowledged and addressed in their consultation response document. In light of feedback received, the change sponsor modified the proposed IAP and completed a supplementary consultation on the modified design.

Having reviewed all the relevant material, it is my conclusion that the change sponsor completed a meaningful original consultation. Whilst there were elements that could have been done better (e.g. categorisation of responses, the tracking of consultation responses and related follow-up actions), it does meet the required regulatory standards and therefore it should be approved.

Safety and Airspace Regulation Group

Consultation Assessment Sign-off/ Approvals	Name	Signature	Date
Consultation Assessment completed by:	<div style="background-color: black; width: 100px; height: 15px; margin-bottom: 5px;"></div> Airspace Regulator (Engagement & Consultation)	<div style="background-color: black; width: 100%; height: 50px;"></div>	11/11/2020
Consultation Assessment approved by:	<div style="background-color: black; width: 100px; height: 15px; margin-bottom: 5px;"></div> Mgr AR	<div style="background-color: black; width: 100%; height: 50px;"></div>	19/11/2020
<p>Mgr AR Comments: It is understood that this first consultation and CAA assessment thereof was in part superseded by a consequential supplementary consultation, illustrating a willingness on the part of Biggin Hill Airport to be influenced by stakeholder feedback.</p>			