

Safety and Airspace Regulation Group

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Airspace Change Proposal - Operational Assessment

Version: 1.0/ 2016

Title of Airspace Change Proposal	Sywell IAPs
Change Sponsor	Sywell Aerodrome
SARG Project Leader	██████████
Case Study commencement date	07 August 2018
Case Study recommencement date	03 May 2019
Case Study report as at	22 November 2019
File Reference	ACP-2016-03

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 not resolved not compliant as part of the AR Project Leader's efficient project management.

Green

Amber

Red

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1.	Justification for change and "Option Analysis"	Status
1.1	<p>Is the explanation of the proposed change clear and understood?</p> <p>The proposed change is to introduce Instrument Approach Procedures (IAPs) to both runway ends at Sywell Aerodrome, without approach control.</p>	YES
1.2	<p>Are the reasons for the change stated and acceptable?</p> <p>The based operators at the aerodrome are unable to return to the aerodrome during periods of reduced cloud ceiling or visibility without either performing a cloud break procedure elsewhere or diverting to an alternate aerodrome. By introducing IAPs at the aerodrome, the ability for those operators to recover to Sywell is improved.</p> <p>The sponsor sent a letter on 01 November 2019 indicating that the operational situation at Sywell had changed over the time that the proposal was being considered. The main based operator, 2Excel Aviation, moved the majority of their fleet to Doncaster Sheffield airport. As such, they have revised their proposal to include visitors utilising small executive aircraft. The procedures would give operators of those aircraft, more certainty of being able to recover to the aerodrome in poor weather.</p> <p>We've also taken into account letters from the Secretary of State dated 26 September 2019 and 30 October 2019 regarding GNSS Approaches and The Civil Aviation Authority (Air Navigation) Directions 2017.</p>	YES
1.3	<p>Have all appropriate alternative options been considered, including the 'do nothing' option?</p> <p>The sponsor has considered the do-nothing option which would leave the issue of operators not being able to recover to the aerodrome in poor weather conditions. The sponsor also considered options including offset approaches and lower FAFs but settled on designs that balanced environmental impact with operational simplicity, and alignment with CAP1122.</p> <p>Following comments from the IFP regulator, the sponsor s amended the design to remove the eastern T Bar segments to limit the possibility of conflict between Cranfield and themselves.</p> <p>The sponsor did not consider the introduction of an airspace structure such as an RMZ to provide additional situational awareness to the FISO unit and aircraft utilising the procedures. Given the anticipated limited usage of the procedures, the introduction of a large airspace structure such as an RMZ would likely have been excessive and led to increased FISO workload and impact on other airspace users.</p> <p>For these reasons we agree that all appropriate options have been considered.</p>	YES
1.4	<p>Is the justification for the selection of the proposed option sound and acceptable?</p> <p>The sponsor had proposed IAPs with "T Bars" to enable straight forward approaches from any direction. The eastern T Bar segments (particularly for the RWY 03) extend towards Cranfield and additional ATS procedures may have had to be developed between the units to mitigate the proximity of aircraft on the procedures simultaneously.</p>	YES

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Further to comments fed back from the IFP regulator, the sponsor has amended the design to remove the eastern T Bar segments to limit the possibility of conflict between the two aerodromes.
 The RWY21 design has a FAF at 2,300 feet amsl which ensures aircraft are above 2,000 feet agl when passing over Kettering. The missed approach for RWY21 minimises noise impact over north-eastern Northampton.
 For these reasons, the justification for the proposed solution is acceptable.

2.	Airspace Description and Operational Arrangements	Status												
2.1	<p>Is the type of proposed airspace clearly stated and understood?</p> <p>No changes to airspace structure or classification is proposed, only the introduction of the RNAV GNSS procedures.</p>	YES												
2.2	<p>Are the hours of operation of the airspace and any seasonal variations stated and acceptable?</p> <p>No changes to the hours of operation is proposed.</p>	N/A												
2.3	<p>Is any interaction with adjacent domestic and international airspace structures stated and acceptable including an explanation of how connectivity is to be achieved? Has the agreement of adjacent States been secured in respect of High Seas airspace changes?</p> <p>The sponsor has amended the design to remove the eastern T Bar segments to limit the possibility of conflict between two aerodromes. Consequently the ATS Inspector is content that no additional procedures or LoA are required.</p>	YES												
2.4	<p>Is the supporting statistical evidence relevant and acceptable?</p> <p>The sponsor has provided information about the total number of aircraft movements at the aerodrome, currently around 35,000pa. The sponsor initially expected the numbers of aircraft likely to utilise the procedure after implementation as follows:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Aircraft Type</th> <th style="text-align: center;">Annual Movements</th> <th style="text-align: center;">Monthly Average</th> </tr> </thead> <tbody> <tr> <td>Fixed Wing - Twin Piston & Turbo Prop</td> <td style="text-align: center;">456</td> <td style="text-align: center;">38</td> </tr> <tr> <td>Turbine Helicopters</td> <td style="text-align: center;">240</td> <td style="text-align: center;">20</td> </tr> <tr> <td>Fixed Wing - Jet</td> <td style="text-align: center;">8</td> <td style="text-align: center;">< 1</td> </tr> </tbody> </table> <p>Activity at the aerodrome reduces significantly during poor weather and there were more than 50 days in 2016 where the total number of movements recorded was less than 15. The sponsor states that <i>"It is not expected that the number of movements on poor weather days will rise significantly due to</i></p>	Aircraft Type	Annual Movements	Monthly Average	Fixed Wing - Twin Piston & Turbo Prop	456	38	Turbine Helicopters	240	20	Fixed Wing - Jet	8	< 1	YES
Aircraft Type	Annual Movements	Monthly Average												
Fixed Wing - Twin Piston & Turbo Prop	456	38												
Turbine Helicopters	240	20												
Fixed Wing - Jet	8	< 1												

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the limited number of commercial operators and suitable equipped aircraft based at Sywell.”

The sponsor has now amended the proposal to include operators that are not based at the aerodrome, because their largest based operator who was envisaged as using the procedures most, have now removed most of their aircraft. As such, it is more difficult to give a precise number of aircraft that are likely to use the procedure.

The sponsor has indicated that the procedures will not be made available for initial instrument training purposes as they consider *“the business impact of lost revenue by ceasing operations for extended periods to accommodate training flights is not commercially viable.”*

The sponsor has indicated that due to the lack of a based operator requirement to regularly use the procedures, the use of the procedures is likely to be lower than those initially indicated. This is not an unreasonable assumption but will be monitored after the introduction of the procedures through the CAA’s ATS oversight. In a letter sent to Hd AAA the sponsor dated 23 October 2019, the sponsor indicated that if the restriction to based operators remained, it would “kill off our aspirations of becoming a Corporate Aircraft Facility to serve Northamptonshire”. This aspiration had not been articulated to the CAA before this date and as such needed to be considered along with the other information provided. While the introduction of the procedures may lead to an increase in the number of operators that consider Sywell as a base, the overall number of movements are unlikely to increase significantly due to the limited number of operators that would benefit from the procedures but an accurate figure is difficult to quantify.

Even though the numbers of aircraft using the procedures is likely to be lower than originally anticipated, the implementation of the procedures is still justified based on the fact that there is still a requirement for aircraft to arrive safely in poor weather conditions.

2.5 Is the analysis of the impact of the traffic mix on complexity and workload of operations complete and satisfactory?

YES

The procedures were initially proposed to only be utilised by based operators when the weather does not permit a visual approach direct to the aerodrome. The procedures will be validated with relevant aircraft types, representative of those likely to use the procedures. Following analysis of the ATS Safety Case by the assigned ATS Inspector, which was provided to management on 13 July 2018, the ATS safety case has been approved by the CAA.

Given that the sponsor has now amended the proposal to include operators that are not based at the aerodrome it is more difficult to give a precise number of aircraft that will use the procedure. The sponsor has indicated that due to the lack of a frequent based operator requirement to regularly use the procedures in poor weather, the number is likely to be lower than those initially indicated. This is not an unreasonable assumption but will be monitored after the introduction of the procedures through the CAA’s ATS oversight. The sponsor has provided sufficient information in their ATS safety case (for example, their pilot brief) to satisfy the CAA that visiting operators would be able to use the procedures safely.

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2.6	<p>Are any draft Letters of Agreement and/ or Memoranda of Understanding included and, if so, do they contain the commitments to resolve ATS procedures (ATSD) and airspace management requirements?</p> <p>Not required</p>	N/A
2.7	<p>Should there be any other aviation activity (low flying, gliding, parachuting, microlight site etc) in the vicinity of the new airspace structure and no suitable operating agreements or ATC Procedures can be devised, what action has the sponsor carried out to resolve any conflicting interests?</p> <p>In the vicinity of the RWY 21R IAP, less than 5nm ENE of the IAF/IF, "LUCES", there is a glider site - Lyveden (Welland Gliding Club), which winch launches to 1500 feet aal (aerotow occasionally available) on weekends, bank holidays and midweek by prior arrangement. Husbands Bosworth, a much busier glider site, is located less than 10nm WSW of the IAF "DOGOS". This activity will normally be taking place in VMC, when the IAP is not required.</p> <p>The VFR charts will have IAP "feathers", informing pilots that there are IAPs available at the aerodrome. The procedures will be published in the UK AIP and liaison has taken place between Sywell and local ATSUs to inform them of the introduction of the procedures. The ATS Inspector is content that no additional procedures or LoA are required.</p>	YES
2.8	<p>Is the evidence that the Airspace Design is compliant with ICAO SARPs, Airspace Design & FUA regulations, and Eurocontrol Guidance satisfactory?</p> <p>It is normal practice in the UK for IAPs/MAPs to have an associated Hold, however these IAPs have been designed without a Hold. Sywell developed a bespoke rationale and safety argument for having no Hold, it is described in the Annex to the IFP Report. Both the rationale and safety argument were subject to significant for/against debate within the CAA. The CAA did not agree with Sywell's rationale for not including a Hold as some of the items set out in the rationale were incorrect. The rationale states that there would be additional environmental impact because "aircraft would be required to fly the Hold after a missed approach...". This is not correct, flying the Hold would be optional depending on the circumstances, but would give pilots the ability to Hold in a known location, if required. The rationale states that a Hold could introduce increased workload for aircraft not suitably equipped and that this equipage is "not reflected in the majority of the UK GA fleet...". These procedures have not been proposed to be used by the majority of the UK GA fleet, but by based and visiting suitably equipped operators, to improve their ability to recover to the aerodrome. The rationale states that "Using raw data to hand fly a Hold significantly increases rather than reduces pilot workload." The proposed procedures are RNP APCH procedures and are for those aircraft suitably equipped to fly them. However, on balance, this was not deemed to be a 'showstopper'. The safety argument in support of not having a Hold, again following for/against internal debate, was accepted by the CAA following feedback received from CAA SMEs on 15 April 2019.</p>	PARTIALLY

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2.9	Is the proposed airspace classification stated and justification for that classification acceptable?	N/A
	No change to airspace classification is proposed.	
2.10	Within the constraints of safety and efficiency, does the airspace classification permit access to as many classes of user as practicable?	YES
	Class G. No change to airspace classification is proposed.	
2.11	Is there assurance, as far as practicable, against unauthorised incursions? (This is usually done through the classification and promulgation)	N/A
	No controlled airspace is proposed.	
2.12	Is there a commitment to allow access to all airspace users seeking a transit through controlled airspace as per the classification, or in the event of such a request being denied, a service around the affected area?	N/A
	N/A	
2.13	Are appropriate arrangements for transiting aircraft in place in accordance with stated commitments?	N/A
	N/A	
2.14	Are any airspace user group's requirements not met?	NO
2.15	Is any delegation of ATS justified and acceptable? (If yes, refer to Delegated ATS Procedure).	N/A
	N/A	
2.16	Is the airspace structure of sufficient dimensions with regard to expected aircraft navigation performance and manoeuvrability to contain horizontal and vertical flight activity (including holding patterns) and associated protected areas in both radar and non-radar environments?	YES
	These IAPs are in Class G airspace.	

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2.17	<p>Have all safety buffer requirements (or mitigation of these) been identified and described satisfactorily (to be in accordance with the agreed parameters or show acceptable mitigation)? (Refer to buffer policy letter).</p>	N/A
	N/A	
2.18	<p>Do ATC procedures ensure the maintenance of prescribed separation between traffic inside a new airspace structure and traffic within existing adjacent or other new airspace structures?</p>	YES
	<p>When a slot has been reserved for use of the IAPs, the aerodrome will restrict the use of the ATZ as far as it is able, using the same procedures it uses when 'The Blades' aerobatic team are performing. Before entering an ATZ with a FISO Unit, any pilot must obtain information from the person providing the flight information service to enable the flight to be conducted safely within the ATZ.</p>	
2.19	<p>Is the airspace structure designed to ensure that adequate and appropriate terrain clearance can be readily applied within and adjacent to the proposed airspace?</p>	YES
	The proposed IFPs have been assessed for terrain clearance.	
2.20	<p>If the new structure lies close to another airspace structure or overlaps an associated airspace structure, have appropriate operating arrangements been agreed?</p>	YES
	The proposed procedures lie to the NW of those at Cranfield Airport. The sponsor has withdrawn the proposal for the eastern legs of the T Bars to remove potential interaction between aircraft utilising the procedures.	
2.21	<p>Where terminal and en-route structures adjoin, is the effective integration of departure and arrival routes achieved?</p>	N/A
	N/A	

3.	Supporting Resources and CNS Infrastructure	Status
3.1	<p>Is the evidence of supporting CNS infrastructure together with availability and contingency procedures complete and acceptable? The following are to be satisfied:</p> <ul style="list-style-type: none"> ▪ Communication: Is the evidence of communications infrastructure including RT coverage together with availability and contingency procedures complete and acceptable? Has this frequency been agreed with AAA Infrastructure? 	YES

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	The sponsor has (22/05/2019) applied for a change to increase their Designated Operational Coverage (DOC) which has been approved.	
	<ul style="list-style-type: none"> ▪ Navigation: Is there sufficient accurate navigational guidance based on in-line VOR or NDB or by approved RNAV derived sources, to contain the aircraft within the route to the published RNP value in accordance with ICAO/ Eurocontrol Standards? Eg. Nav aids – has coverage assessment been made eg. a DEMETER report, and if so, is it satisfactory? 	YES
	<ul style="list-style-type: none"> ▪ Surveillance: Radar Provision – have radar diagrams been provided, and do they show that the ATS route / airspace structure can be supported? 	N/A
3.2	Where appropriate, are there any indications of the resources to be applied, or a commitment to provide them, in line with current forecast traffic growths acceptable?	N/A

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4.	Maps/Charts/Diagrams	Status
4.1	<p>Is a diagram of the proposed airspace included in the proposal, clearly showing the dimensions and WGS84 co-ordinates? (We would expect sponsors to include clear maps and diagrams of the proposed airspace structure(s) – they do not have to accord with AC&D aeronautical cartographical standards (see CAP725), rather they should be clear and unambiguous and reflect precisely the narrative descriptions of the proposals. AC&D work would relate to regulatory consultation charts only).</p> <p>The IFP designs have been provided in full to the IFP Regulator. A map of the local area with the procedures overlaid has been provided along with typical approach paths taken by the types of aircraft using the procedures.</p>	YES
4.2	<p>Do the charts clearly indicate the proposed airspace change?</p>	YES
4.3	<p>Has the Change Sponsor identified AIP pages affected by the Change Proposal and provided a draft amendment?</p>	YES

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5.	Operational Impact	Status
5.1	<p>Is the Change Sponsor's analysis of the impact of the change on all airspace users, airfields and traffic levels, and evidence of mitigation of the effects of the change on any of these, complete and satisfactory? Consideration should be given to:</p> <p>a) Impact on IFR GAT, on OAT or on VFR general aviation traffic flow in or through the area.</p>	YES
	The impact of the changes, given the anticipated use of an average of 3 per week (probably less), will be negligible.	
	b) Impact on VFR Routes.	N/A
	c) Consequential effects on procedures and capacity, ie on SIDS, STARS, holds. Details of existing or planned routes and holds.	N/A
	d) Impact on Airfields and other specific activities within or adjacent to the proposed airspace.	NO
	<p>Given the proximity of Sywell to Cranfield aerodrome, the sponsor has taken steps to minimise the potential for interaction between the two aerodromes procedures. The sponsor has indicated in the BowTie response that liaison between the two ATSUs has taken place. The potential for impact on glider activity in the area is mitigated by the limited frequency of operators using the procedures and the fact that gliders are unlikely to be airborne when the weather conditions are such that the procedures are required.</p>	
	e) Any flight planning restrictions and/ or route requirements.	N/A
5.2	<p>Does the Change Sponsor Consultation reflect the likely operational impact of the change?</p>	N/A
	<p>Once the assessment of the initial impact assessment provided by the sponsor was complete, the sponsor was contacted by phone on 27 July 2018 to inform them that the CAA did not consider any further environmental assessment or stakeholder consultation necessary. This was because the number of aircraft that were predicted to use the procedures was very low and would not introduce aircraft types that were not already using the aerodrome in VMC. The areas overflowed by the procedures were in Class G airspace and were overflowed by other aircraft in all directions at varying altitudes in VMC. The procedures were away from other airspace structures and would not be used for initial instrument training and the procedures had been designed to minimise noise impact where appropriate without additional operational complexity.</p>	

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6.	Economic Impact	Status
6.1	Is a provisional economic impact assessment to all categories of operations and users likely to be affected by the change included and acceptable? (This may include any forecast capacity gains and the cost of any resultant additional track mileage).	NO
Given the limited use of the procedures, the capacity gain is very small, but may enable the aerodrome to attract more corporate business.		

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Case Study Conclusions – To be completed by SARG Project Leader	Yes/No
<p>Has the Change Sponsor met the SARG Airspace Change Proposal requirements and Airspace Regulatory requirements above?</p> <p>The sponsor has developed IAPs for a limited use at an aerodrome in Class G airspace. The project started under CAP 1122 which has since been suspended but still applies to those applications that commenced in accordance with it. CAP 1122 advised that the starting point should be a standard IAP design, with OCH no lower than 500 feet.</p> <p>The sponsor has submitted a non-standard IAP design with no Hold and a rationale which has incorrect statements within it. However, the supporting safety argument, after vigorous review and debate, was accepted.</p> <p>The procedures are proposed utilising a slot system which would give a maximum of six approaches using the IAPs per day, with the anticipated usage much lower at approximately 3 per week. There may also be an increase in the numbers of operators attracted to Sywell due to the introduction of the procedures but this number is difficult to quantify but could never be more than 6 per day and is likely to be far less due to the weather conditions in which the procedures will be used.</p> <p>The procedures are not close to other airspace structures and will be used by aircraft types that already use the aerodrome.</p> <p>The impact on other aviation stakeholders and non-aviation stakeholders is minimal.</p> <p>Highlighting the potential for intense gliding activity on the charts published in the AIP, as is done at Cranfield would also be sensible.</p> <p>The ATM Safety Case has been approved the CAA and the rationale for procedures without a Hold has been accepted by the CAA in this specific case.</p>	YES

Outstanding Issues		
Serial	Issue	Action Required
1		
2		

Additional Compliance Requirements (to be satisfied by Change Sponsor)	
Serial	Requirement
1	IFP Approval - include amending charts to include required warnings and notes as to remove LPV minima

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2	
3	
4	

Recommendations	Yes/No
Has the Secretary of State decided to call this proposal in for decision by themselves?	NO
Is the approval of the MoD required in respect of National Security issues surrounding the airspace change?	NO

General Summary

The sponsor has provided a summary of the likely limited operational environmental impact of the proposed change, with which I agree, given that the proposed procedures:

- Will be limited to specific circumstances (when a pilot is unable to make a visual approach).
- Will be used very infrequently compared to the general level of traffic.
- Are in a location away from other airspace structures.
- Will be used by aircraft types which already visit the aerodrome.
- Will not be made available for initial instrument training.
- Will reduce any other activity within the aerodrome ATZ while the procedure is in use.
- Have been designed to minimise noise impact where safe operation is not impacted.

The ATS safety case has been accepted and the procedure design will need to be approved by the CAA before implementation. As such I recommend that the procedures be approved.

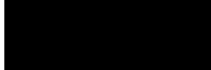
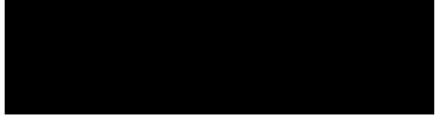

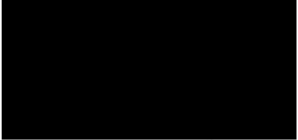
02 December 2019: LNAV procedures have been approved. LPV procedures require validation which will be done at a later date.

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Comments & Observations

Ongoing ATS oversight (including MET) will ensure that the operation continues to be safe and that the usage of the procedures is in line with the predictions made by the sponsor. As part of that oversight the sponsor should record the number of movements on the procedure, any noise complaints related to those movements, feedback from other airspace users as well as those utilising the procedures which will need to be submitted to the CAA as part of the PIR process.

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Operational Assessment Sign-off/ Approvals	Name	Signature	Date
Operational Assessment completed by:	 AR Case Officer		22 November 2019
Operational Assessment approved:	 Mgr AR		27/11/2019

Mgr AR Comments: I recommend that that the GNSS IAP without APC service at Sywell is **approved** – initially this can only be the LNAV element. Given that this is the first ‘CAP 1122’ proposal to progress through the Airspace Change Process (ACP), it is perhaps understandable that it has taken longer than anyone would have liked; with the proposal evolving over its gestation, requiring previously agreed elements to be re-worked. Airspace change is primarily a change sponsor led activity, with the CAA, in the role of independent decision maker, defining the process and technical requirements, in accordance with policy and legislation from the DfT, ICAO and EASA, that the sponsor needs to comply with. Having taken conscientious account of the proposal, the activities of the sponsor and future requirements I have made five primary observations:

- **Safety:** I have reviewed all safety related documentation provided by the sponsor and my CAA colleagues. There has been a wide-ranging debate within the CAA around this RNAV GNSS IAP design without an approach control and associated hold, and the supporting safety argument formulated by the sponsor on the CAA’s Safety Bow Tie Server; there have been arguments both for and against. There are risks associated with not having an IAP (e.g. the widely accepted understanding that across the flying community that uses these aerodromes, there are many homemade/bespoke IAP designs without consideration for obstacles, minima, design criteria, etc that are outwith regulatory oversight, and pilots flying into aerodromes during inappropriate met criteria) as there are with having one (e.g. IFR aircraft following an IAP in a uncontrolled, largely VFR environment). Taking account of all the inputs from CAA Subject Matter Experts, the sponsor, experienced stakeholders, etc, I am content, when considering this as a balance of risk deliberation, it is preferable in this instance to implement the RNAV GNSS IAPs, even without an approach control and associated hold, and that doing so is the best way of meeting our duty to maintain a high standard of safety.
- **Change in rationale:** At the original Framework Briefing the change sponsor presented a rationale for the proposal constructed largely around the usage by their primary based operator, 2xcel. This significantly limited, to virtually nothing, the potential impacts on either environmental and/or aviation– there would in effect be no discernible difference. This enabled AR to agree to a scaled down ACP with no environmental consultation. However, the sponsor had to revise their rationale following the move of 2xcel. Their revised rationale has fewer aircraft, admittedly of a different aircraft types to 2xcel (but

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types that already operate to Sywell), using the procedure; hence I am content that the original decision not to require environmental consultation still stands. The usage of Sywell will need to be kept under review by the ATS Ops Inspector and be a focal of a later PIR to ensure that this conclusion remains sound.

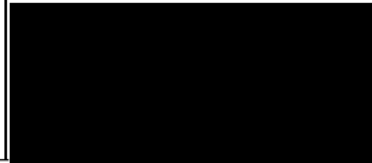
- **Initial approval LNAV only:** The CAA is required to ensure that any FMS coding table that is notified within the UK AIP has been properly validated. This not only ensures that the agreed design has been correctly coded but also that no errors in coding have been introduced. The requirements for this are documented in the CAA's validation policy, which may or may not mean a procedure, and its associated coding table, needs to be flown to validate it. As noted earlier, Sywell's proposed design changed to correct issues highlighted by the CAA. Unfortunately, the coding table for the first iteration of Sywell's design was entered into the validation process by the sponsor; this version cannot be notified in the UK AIP. The CAA were however able to extract from the validation exercise the LNAV elements of Sywell's GNSS IAP and approve those; but the LPV elements could not be approved. Hence, initially at least, only the LNAV element is approved for notification in the AIP. Once the sponsor has successfully concluded the LPV validation, this can be notified at an agreed later date. In summary, I am recommending approval of the proposal, approval of implementation of the LNAV procedures and approving subject to successful validation, the LPV procedures.
- **EGNOS Working Agreement (EWA):** An LPV element of an IAP requires an EWA between the procedure's sponsor and the EGNOS Service Provider (ESSP); an LNAV does not require this. The ESSP have indicated that they are content to enter into such an agreement but will only do so once there is a planned implementation date. Once the sponsor has concluded the validation of the LPV and is targeting a specific implementation date, they will then need to secure an EWA with the ESSP. ESSP have raised one caution, the EWA may need to be different from what has been issued previously depending on when LPV implementation is scheduled in relation to BREXIT and the nature of BREXIT – this could delay the drafting of the EWA.
- **Ongoing Maintenance of IAPs:** Any sponsor of any IAP has an obligation to provide ongoing maintenance (as per CAP785) to ensure continued safe operation. In this case this falls broadly into three requirements:
 - To be aware of any new obstacles, temporary or otherwise, in the vicinity of the aerodrome that could penetrate the Instrument Flight Procedure surfaces. Having the obstacles checked, probably by an APDO.
 - Annual maintenance. To have the IAPs checked against the annual aerodrome survey.
 - 5 Year Review. All IAPs must be fully checked every 5 years by an Approved Procedure Design organisation and submitted to the CAA for review.Sywell will need to plan for these for these activities.

Hd AAA Comment/ Approvals	Name	Signature	Date
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Operational Assessment Conclusions approved:

Jon Round
Hd AAA



28/11/19

Hd AAA Comments: **This Airspace change is approved** (initially for LNAV operations, once the LPV element is satisfactorily flight validated, this will be notified as a consolidated approval.)

This Application and Airspace Change has taken considerably longer to complete than all parties would have expected and wished. The first of its kind in the UK, the history is well understood by all parties. The approval of a satisfactory safety case and instrument flight procedures which are by definition out of the norm have caused considerable attention by CAA staff who have rightly aired their views about what is a balance of risk judgment, backed up with significant mitigations. The management team have acknowledged and carefully worked alongside the whole team to debate and test all input to the debate. The judgement that leads today to this decision to approve is that the safety benefits of implementing this approach considerably outweigh the anticipated potential detriment (should the mitigations not be followed). Further regulatory assurance of the proposed operation will be achieved by higher than normal oversight visits and a requirement for detailed record keeping of all approaches to ensure the parameters agreed are being delivered.

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