11 July 2016
Reference: F0002814

Dear ███████

I am writing in respect of your recent request of 13 June 2016, for the release of information held by the Civil Aviation Authority (CAA). Your request has been considered in line with the provisions of the Freedom of Information Act 2000 (FOIA).

In your request you have asked for information relating to *'FAQ on CAA website on IFP'*. You specifically have requested the following information:

1) *All emails exchanges on this subject,*
2) *All minutes of meetings on this subject,*
3) *Notes and records of any management oversight and decisions on this subject,*
4) *Supporting evidence including analysis of MOR and safety reports for this subject,*
5) *Copies of regulatory impact assessments for this subject,*
6) *Copies of environmental impact assessments for this subject,*
7) *Minutes of meetings at other organisations, such as, but not limited to, the ICAO Instrument Flight Procedures Panel, which references this topic, as alluded to by the policy statement.*
8) *Details of what consultation took place on this policy.*

Our response:

Response to question 1:

Please refer to the attached documents where you will find copies of all relevant email exchanges. We have redacted all personal information in accordance with Section 40(2) of the FOIA as to release the information would be unfair to the individuals concerned and would therefore contravene the first data protection principle that personal data shall be processed fairly and lawfully. A copy of the exemption can be found below.

Response to questions 2-7:

The information you have requested is not held by the CAA.

Response to question 8:

The information request is not held by the CAA; the IFP FAQs represents what the CAA considers best practice, not formal policy.

Civil Aviation Authority
Aviation House Gatwick Airport South Gatwick RH6 0YR. www.caa.co.uk
Telephone: 01293 768512. foi.requests@caa.co.uk

If you are not satisfied with how we have dealt with your request in the first instance you should approach the CAA in writing at:-

Caroline Chalk
Head of External Information Services
Civil Aviation Authority
Aviation House
Gatwick Airport South
Gatwick
RH6 0YR

caroline.chalk@caa.co.uk

The CAA has a formal internal review process for dealing with appeals or complaints in connection with Freedom of Information requests. The key steps in this process are set in the attachment.

Should you remain dissatisfied with the outcome you have a right under Section 50 of the FOIA to appeal against the decision by contacting the Information Commissioner at:-

Information Commissioner's Office
FOI/EIR Complaints Resolution
Wycliffe House
Water Lane
Wilmslow
SK9 5AF
https://ico.org.uk/concerns/

If you wish to request further information from the CAA, please use the form on the CAA website at http://publicapps.caa.co.uk/modalapplication.aspx?appid=24.

Yours sincerely

Rihanne Stephen
Information Rights Officer

CAA INTERNAL REVIEW & COMPLAINTS PROCEDURE

- The original case to which the appeal or complaint relates is identified and the case file is made available;

- The appeal or complaint is allocated to an Appeal Manager, the appeal is acknowledged and the details of the Appeal Manager are provided to the applicant;

- The Appeal Manager reviews the case to understand the nature of the appeal or complaint, reviews the actions and decisions taken in connection with the original case and takes account of any new information that may have been received. This will typically require contact with those persons involved in the original case and consultation with the CAA Legal Department;

- The Appeal Manager concludes the review and, after consultation with those involved with the case, and with the CAA Legal Department, agrees on the course of action to be taken;

- The Appeal Manager prepares the necessary response and collates any information to be provided to the applicant;

- The response and any necessary information is sent to the applicant, together with information about further rights of appeal to the Information Commissioners Office, including full contact details.

Freedom of Information Act: Section 40

(1) Any information to which a request for information relates is exempt information if it constitutes personal data of which the applicant is the data subject.

(2) Any information to which a request for information relates is also exempt information if-
        (a) it constitutes personal data which do not fall within subsection (1), and
        (b) either the first or the second condition below is satisfied.

(3) The first condition is-
        (a) in a case where the information falls within any of paragraphs (a) to (d) of the definition of "data" in section 1(1) of the Data Protection Act 1998, that the disclosure of the information to a member of the public otherwise than under this Act would contravene-

           (i) any of the data protection principles, or
           (ii) section 10 of that Act (right to prevent processing likely to cause damage or distress), and

        (b) in any other case, that the disclosure of the information to a member of the public otherwise than under this Act would contravene any of the data protection principles if the exemptions in section 33A(1) of the Data Protection Act 1998 (which relate to manual data held by public authorities) were disregarded.

(4) The second condition is that by virtue of any provision of Part IV of the Data Protection Act 1998 the information is exempt from section 7(1)(c) of that Act (data subject's right of access to personal data).

(5) The duty to confirm or deny-

        (a) does not arise in relation to information which is (or if it were held by the public authority would be) exempt information by virtue of subsection (1), and

        (b) does not arise in relation to other information if or to the extent that either-

           (i) the giving to a member of the public of the confirmation or denial that would have to be given to comply with section 1(1)(a) would (apart from this Act) contravene any of the data protection principles or section 10 of the Data Protection Act 1998 or would do so if the exemptions in section 33A(1) of that Act were disregarded, or
           (ii) by virtue of any provision of Part IV of the Data Protection Act 1998 the information is exempt from section 7(1)(a) of that Act (data subject's right to be informed whether personal data being processed).

(6) In determining for the purposes of this section whether anything done before 24th October 2007 would contravene any of the data protection principles, the exemptions in Part III of Schedule 8 to the Data Protection Act 1998 shall be disregarded.

(7) In this section-
      "the data protection principles" means the principles set out in Part I of Schedule 1 to the Data Protection Act 1998, as read subject to Part II of that Schedule and section 27(1) of that Act;
      "data subject" has the same meaning as in section 1(1) of that Act;
      "personal data" has the same meaning as in section 1(1) of that Act.

From: ███████
Sent: 20 January 2015 12:05
To: ████████████████████
Subject: RE: IFP Questions
Attachments: Copy of Copy of IFP Questions v1 0 with ██ and ██ comments ██.xlsx

Hi █████████

I have added a column (E) with my comments.

Perhaps we should have a chat to discuss.

Thanks

██

From: ████████████████████████
Sent: 15 January 2015 07:54
To: ████████████████████
Subject: IFP Questions

█████████,

Please find attached my first stab at sorting through the Q&As from PDG. I have colour coded them as per the column title at the top and I have incorporated ████████ first input as well. There are still a few that need some refinement and a couple that we probably need to chat about but see what you think. Enter anything you like on this spreadsheet and I will collate all comments and produce a definitive list for ███████ to update our FAQ page with.

If there are any other ones that you think need to go on there then please add them as well.

Thanks

██

From: ████████

Sent: 20 January 2015 13:25

To: ██████████████████

Subject: RE: IFP Questions

Thanks ███ ,

Agree we probably still need to chat about some of them. I'm trying to get Islay finished at the moment but when I get a minute I'll collate all the easy answers where we agree and then just leave the outstanding issues which we can then discuss.

███

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Subject: RE: IFP Questions

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If there are any other ones that you think need to go on there then please add them as well.

Thanks

██

From: ████████████

Sent: 29 January 2015 09:34

To: ████████████████

Subject: RE: IFP Questions

██████

I agree with all amendments

██████

From: ████████████

Sent: 29 January 2015 08:49

To: ████████████████████

Subject: IFP Questions

████████████████

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I have had a discussion with ██ and ██ at NATS re the pdf from the FAS Data block tool (Item 22) and they both agree that the PDG wording would work for them so I have included their words (slighty modified).

I have tweeked quite a few of the ones I had in there originally so do have a look at all the red text and make sure your happy with my phrasing of things.

Let me know what you think and if we do need a three way chat I'll set that up.

Thanks

██████

▮▮▮

Mighty fine job!

Thanks

▮▮

▮▮▮▮

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Thanks

▮▮

		Potential Candidate IFP FAQs	**CAA Wording**/discussion points	Comments		Comments
IAP	1	**Where can I find UK allowances for 'high resolution' SRE equipment?** AIP GEN 1-7 para 6.6 applies.	AIP GEN 1-7 Doc 8168 UK Addition 6.6 refers.			
GEN	2	**Charting - Do draft charts need to be to an 'AIP ready' standard?** It is not necessary to have an AIP ready chart for approval submission. It does, though, greatly aid cartography if the draft is of similar layout to the UK AIP format	It is not necessary to have an AIP ready chart for approval submission. It does, though, greatly aid cartography if the draft is of similar layout to the UK AIP format			
IAP	3	**How should advisory altitudes be calculated?** Calculate the unrounded altitude, then round up nearest to the next highest or lowest 10ft. To calculate the height, take off THR elevation from the rounded altitude. This height figure is not rounded.	Calculate the exact altitude, then round to the nearest 10ft. To calculate the height, subtract THR elevation from the rounded altitude. This height figure is not rounded.			
IAP	4	**What vertical datum should be used for non-precision approaches?** Non-precision approach vertical datum is always THR elevation.	Non-precision approach vertical datum is always THR elevation.			
IAP	5	**Should SRA ranges be referenced to THR or TDZ?** At some aerodromes they are distance from THR and at others they are distance from TDZ! Be sure to check with the aerodrome what theirs is referenced to. Apparently aerodromes are trying to move over to distance from touchdown due to a reference in CAP493 - Mats Pt 1 that refers to distances being given from touchdown on final approach.	This is already covered on the FAQ page			
IAP	6	**How should MAPs for approaches with vertical guidance charted alongside NPAs be displayed on draft charts?** Draw two lines on the MAP to show one is descending lower than the other.	If we feel this is a valid question my suggested response is "See examples in the AIP" Personally I don't think we should include this one. These are the sorts of questions they should be able to answer themselves.	See examples in AIP.		I agree with comments and in any case with the different min, carto will accomadate this issue.
IAP	7	**Under what circumstances should SRA RTR to MAPt timing not be used? AIP GEN 1-7 states that it may be used 'where operationally advantageous'?** Generally we would only use a timed MAPt if there was a significant gain in the OCA/H.	Discussion needed on wording. To me it again makes sense to reference the benefit of 50ft or more as per the use of SDFs. Suggested wording might be: In the rare event of a new SRA procedure being designed use the same rationale as for SDF or increased MACG. For all other reviews use the currently published parameters.	Agree		This should be on a case by case basis. With SRAs being removed by many aerodromes I cant see that this is a major issue.
IAP	8	**Is it possible to adjust the SRA RTR to remove the need for MAPt timing?** CAP493 Part 1, Section 3, Chapter 2, Para 11.6b gives the clue to this one. Essentially to have an RTR of 1nm you need a dedicated controller.	CAP493 Part 1, Section 3, Chapter 2, Para 11.6b gives the clue to this one. Essentially to have an RTR of 1nm you need a dedicated controller.			
IAP	9	**Is the Fix Tolerance area for 'high resolution' RADAR equipment is the same as that for TAR in PANS-OPS Table I-2-2-3 and should the NM or km value be used?** Fix tolerance is as per the table and we use km.	Changed my mind on this one. There are three Hi Res radars Gloucestershire, Scatsta & Yeovil. Looking at the spreadsheets we have in the past used a smaller value than those in the table so I think we need to put something separate out on this one.			
IAP	10	**How should RTR to MAPt be constructed?** The Final Approach Segment splays at 15° from the earliest fix tolerance of the 2nm RTR point to the MAPt. This is because all course guidance stops at this point.	The Final Approach Segment splays at 15° from the earliest fix tolerance of the RTR as this is the point where course guidance stops.			
IAP	11	**For procedure design, is it acceptable to always take the most adverse stance for construction etc?** Try to avoid adverse selection or design - just get it right.	Discussion needed on wording. Do we need to emphasise the point that in a lot of cases airspace containment is just as important as obstacle clearance.		The most important thing is to use correct construction. Then if airspace or other constraints come into play it is up to the designer to find a solution that is a) safe, b) operationally acceptable.	Construct protection areas as per the design criteria. It will always be on a case by case basis as to what adjustments may be required.
IAP	12	**In the initial MAP, can secondary assessment be used in conjuction with extension of the MAP surface for reduced MOC?**				

It is the CAA's opinion that 'SOC refinement' and secondary dispensation cannot be both applied at the same time.

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IAP	13	**What is the minimum OCA(H) gain acceptable to necessitate adding a SDF?** It is the CAA's policy to only use a SDF if it provides a benefit of 50ft or more.	This is already covered on the FAQ page		

IAP 14 **What is the minimum OCA(H) gain acceptable to necessitate publishing a separate MACG?**

it might be a good idea to only publish a separate MAP CG if it provides a benefit of more than 50ft.

In line with the policy on the use of SDFs an alternate MACG should only be published if it provides a benefit of 50ft or more.

IAP 15 **What altitude is published at the SDF?**

The actual MOCA is published prior to the SDF (rather then the SDF nominal altitude/height).

The actual MOCA is published on the profile in the grey box prior to the SDF. In addition the recommended altitude at the SDF is published in the Recommended Profile boxes.

IAP	16	**What maximum missed approach speeed should be used for UK work?** There is a UK difference in the AIP regarding the max missed approach speed being 185KIAS - however the CAA intend to remove this at some point and so all procedures are being changed to standard ICAO max missed approach speeds where possible, i.e. where it does not make a significant difference to the OCA/H, etc.	This is already covered on the FAQ page	

IAP 17 **Do protection areas need to be constructed if Z+MOC is proven to be safely below the procedure altitude i.e. base turns/hold etc?**

The construction of areas that are above the tallest obstacle + MOC might not need to be constructed. For example, the construction of a procedure turn with a FAF Alt of 2000' would not need to be drawn if the maximum obstacle in the data set is below 300M. The designer would still need to ensure that by not constructing the area no airspace issues exist and would need to prove the minima is safe.

It is recommended that the protection areas are always constructed to ensure that there is always something to base future enquiries on. Whilst it may not be necessary to conduct an obstacle analysis in this situation issues of airspace containment and future safeguarding questions can only be accurately assessed if the protection areas are constructed accurately.

Combine with 11

I would say that the protections areas should always be drawn but the obstacle analysis may not need to be conducted. In this case the designer will provide the rationale e.g. Procedure over water, above the MSA etc. This is necessary in the case of airspace containment, future procedure safeguarding. The sponsor is paying for the design and it should be complete in the sense that the protections areas are quantified.

(RNAV) IAP	18	**For the FAS DB, what should be used for the ICAO Code (2 letters) field?** Last two letters of the ICAO location indicator.	Don't think we need to use this one. This is a standard ICAO requirement.	Agree	Not sure I get the query?
(RNAV) IAP	19	**For the FAS DB, what should be used for the LTP/FTP Orthometric Height (metres)?** take the THR elevation from the survey in metres rounded to the nearest 0.1m.	ü Wording is OK but again I don't think we need to put this one in, its not really a UK difference.	....or part of FAS DB requirement or am I missing something?	This is correct but only when the LTP is the threshold. Again it depends on the procedure, so on a case by case basis.

(RNAV) IAP 20 **For the FAS DB, what should be used for the FPAP Orthometric Height (metres)?**

Where the FPAP is a surveyed location (e.g. LOC or ASDA_END) then the elevation from the survey in metres rounded to the nearest 0.1m. Where it is calculated then the nearest surveyed ground point elevation will suffice.

Where the FPAP is a surveyed location (e.g. LOC or ASDA_END) then the elevation from the survey in metres rounded to the nearest 0.1m. Where it is calculated then the closest surveyed ground point elevation should be used.

As above ? If part of FAS DB.

(RNAV) IAP	21	**RNAV APCH-LPV: Do I need to save the FAS DB tool bin/txt files?** The bin and txt files are recommended to be saved from the FAS DB tool into the project folder for audit-trail.	Again I don't think we need to use this one?		If they dont use the ourput files from the FAS tool waht would they suggest. Strange question.

(RNAV) IAP 22 **RNAV APCH-LPV: Do I need to save the FAS DB html page and if so how should it be presented?**

The html page is recommended to be printed to PDF from the FAS DB tool. Crop the page using Adobe Acrobat to just get the centre portion and save. Then print to 'Adobe PDF' to obtain a 'clean' A4 PDF.

It is recommended that the html page be printed to PDF from the FAS DB tool. Crop the page using Adobe Acrobat to just get the centre portion and save. Then print to 'Adobe PDF' to obtain a 'clean' A4 PDF.

This may be a query for ■ in AIS as to how they to get the FAS data. We need the Fas tool output files. From these we can see what inputs were used.

(RNAV) IAP 23 **For RNAV initial and intermediate approaches do the segment lengths need to be divisible by 0.1NM?**

[request CAA response]

The length used should be consistent with the procedure altitude and profile required. In many cases the WP can be placed to facilitate the exact distance required. The length of the segments do not need to be divisble by 0.1nm in the design process but should be charted with lengths rounded to the nearest 0.1nm

The length used should be consistent with the altitude and profile used as in many cases the WP can be placed to faciliate the required distance.

(RNAV) IAP 24	**SBAS - Where should the GARP be placed when the GARP-LTP distance is <2000m?** For SBAS approaches to runways with GARP-LTP distance <2000m, the CAA's opinion is that the GARP should be placed 2000m from the LTP. (Note: this contradicts a segment of PANS-OPS which says that the GARP should be conincident with the stop-end for runways which do not have an existing LOC.)	The position of the FPAP should be such that the LTP/GARP distance is at least 2000m. On short runways the FPAP needs to be situated beyond the end of the runway to maintain the relationship of 105m course width at LTP with the max angle of full scale deflection of 3° (see Doc 8168 III-2-6-App A-4 Explanation of FAS Data Block Entries paras 3l and m). When this methodology is used there will be a "D length offset" that has to be completed in the FAS Data Block fields. See also Annex 10, Vol 1, ATT d-62, Fig D-6.	Placement is as per the design criteria where it clearly gives guidance for the short runway scenario. Agree with the red text.
(RNAV) IAP 25	**RNP APCH - Is it acceptable to use large track-angle changes with a DF (e.g. for a turning missed approach) due to current IFPP concerns that an aircraft may turn in the wrong direction if crabbing into wind?** The CAA advises not to use large track-angle changes with a DF due to known issues with aircraft not interpreting turn direction correctly.	There is a known issue with RNAV coding whereby if a direct to fix path terminator is used to define a free turn back through 180° some aircraft systems will turn the shortest way irrespective of which direction is specified. In crosswind situations the shortest way may be the wrong way. Therefore a Missed Approach design utilising at least two waypoints is ~~recommended.~~ required.	This is more than the CAA advising or a recommending, this is a shall.
(RNAV) IAP 26	**Where should 'not below' lines be indicated on RNAV charts?** In the UK AIP a not below line is used at the FAF/FAP only.	Discussion needed on wording. There are a lot of inconsistencies in the AIP and we probably need to do some work on this.	Agree with blue text. But in the context of the procedure, the published altitudes are "not below" and the FAF/FAP is actually @ altiutude
(RNAV) IAP 27	**Which method of classification of approach/missed approach obstacles must be used for LPV?** 'The range method' classification from ICAO PANS-OPS III-3-5.4.5.9.2	'The range method' classification from ICAO PANS-OPS III-3-5.4.5.9.2 is the only option currently approved by the UK CAA.	Pans Ops clearly states that a State would need to approve the other option.
<mark>(RNAV) IAP</mark> 28	**For LPV approaches, where a LOC already exists, should the course width from the calibration reports be used for the LPV?** [request CAA response]	In most cases the answer will be yes. However, in the case of a short runway this will need to be discussed as in the RNAV LPV IAP the FPAP will be placed such that the LTP to GARP distance is at least 2000m.	In the case of a short runway this will need to be discussed as in the RNAV LPV IAP the FPAP will be placed such that the LTP to GARP distance is at least 2000m.
(RNAV) SID 29	**When is an initial CA leg required to prevent turns below 500ft?** If the early turn point for the first waypoint is before the point at which an aircraft would reach 500ft AAL following a 3.3% climb gradient from 5m above DER. (Unless a higher PDG is required for obstacle clearance.)	In general if the early turn point for the first waypoint is before the point at which an aircraft would reach 500ft AAL following a 3.3% climb gradient from 5m above DER then a CA leg would be an option. (Unless a higher PDG is required for obstacle clearance.) This question should be addressed on a case by case basis	This is true on a general basis, but will need to be assessed on a case by case basis.
GEN 30	**What MagVar value should be used for UK projects?** [request CAA response]	US National Oceanic & Atmospheric Administration (NOAA) value specific to the aerodrome lat/long for the time of design or forecast promulgation date. Alternatively, the mag var value can be confirmed with NATS AIS.	This is also something that the designer can confirm with AIS.
MISC 31	**What is the maximum e-mail size that can be delivered to the CAA mailbox?** The CAA mailbox size is 5MB. [request CAA clarification]	Maximum file size from an external organisation is 10Mb	It should be understood that IFP approvals have to be submitted using the methology as documented in the APD design QMS.
MISC 32	**In what format do the CAA prefer design packages?** The CAA prefer a 2007 format DWG. [request CAA clarification]	The design package for IFP approvals is dependent on the APD QMS . But where an AutoCad drawing is submitted then for the moment a 2010 format DWG file is required.	The design package for IFP approvals is dependance on the APD QMS . But where an AutoCad drawing is submitted then for the moment a 2010 format DWG file is required. Any question that is APD QMS/Approval dependence I think should not be on the Q&A page.
<mark>IAP</mark>	**How should an IAP RCF be depicted on an IAC?**	The RCF procedure where provided will be in textual form only. The MAP will be in textual form in the profile view and also shown on the plan view of the chart.	The RCF procedure where provided will be in textual form only. The MAP will be in textual form in the profile view and also shown on the plan view of the chart.

IAP

When conducting 5-yearly reviews of IFPs is a flight validation required?

A 5-yearly periodic review of IAPs would not normally necessitate a flight validation. However, if significant changes are introduced into the IAPs during the review process then this requirement will be assessed on a case by case basis by the CAA IFP Section.

		Potential Candidate IFP FAQs	CAA Wording/observations/recommendations/discussion points	Comments

IAP   **1 Where can I find UK allowances for 'high resolution' SRE equipment?**
AIP GEN 1-7 para 6.6 applies.
CAA: AIP GEN 1-7 Doc 8168 UK Addition 6.6 refers.

GEN   **2 Charting - Do draft charts need to be to an 'AIP ready' standard?**
It is not necessary to have an AIP ready chart for approval submission. It does, though, greatly aid cartography if the draft is of similar layout to the UK AIP format ✓

IAP   **3 How should advisory altitudes be calculated?**
Calculate the unrounded altitude, then round up nearest to the next highest or lowest 10ft. To calculate the height, take off THR elevation from the rounded altitude. This height figure is not rounded.
CAA: Calculate the exact altitude, then round to the nearest 10ft. To calculate the height, subtract THR elevation from the rounded altitude. This height figure is not rounded.

IAP   **4 What vertical datum should be used for non-precision approaches?**
Non-precision approach vertical datum is always THR elevation. ✓

IAP   **5 Should SRA ranges be referenced to THR or TDZ?**
At some aerodromes they are distance from THR and at others they are distance from TDZ! Be sure to check with the aerodrome what theirs is referenced to. Apparently aerodromes are trying to move over to distance from touchdown due to a reference in CAP493 - Mats Pt 1 that refers to distances being given from touchdown on final approach.
CAA: This is already covered on the FAQ page

IAP   **6 How should MAPs for approaches with vertical guidance charted alongside NPAs be displayed on draft charts?**
Draw two lines on the MAP to show one is descending lower than the other.
CAA: If we feel this is a valid question my suggested response is "See examples in the AIP" Personally I don't think we should include this one. These are the sorts of questions they should be able to answer themselves.
Comments: I agree with comments and in any case with the different min, carto will accomodate this issue.

IAP   **7 Under what circumstances should SRA RTR to MAPt timing not be used? AIP GEN 1-7 states that it may be used 'where operationally advantageous'?**
Generally we would only use a timed MAPt if there was a significant gain in the OCA/H.
CAA: Discussion needed on wording. To me it again makes sense to reference the benefit of 50ft or more as per the use of SDFs.
Comments: This should be on a case by case basis. With SRAs being removed by many aerodromes I cant see that this is a major issue.

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IAP   **9 Is the Fix Tolerance area for 'high resolution' RADAR equipment is the same as that for TAR in PANS-OPS Table I-2-2-3 and should the NM or km value be used?**
Fix tolerance is as per the table and we use km. ✓

IAP   **10 How should RTR to MAPt be constructed?**
The Final Approach Segment splays at 15° from the earliest fix tolerance of the 2nm RTR point to the MAPt. This is because all course guidance stops at this point. ✓

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Try to avoid adverse selection or design - just get it right.
CAA: Discussion needed on wording. Do we need to emphasise the point that in a lot of cases airspace containment is just as important as obstacle clearance.
Comments: Construct protection areas as per the design criteria. It will always be on a case by case basis as to what adjustments may be required.

IAP   **12 In the initial MAP, can secondary assessment be used in conjuction with extension of the MAP surface for reduced MOC?**
It is the CAA's opinion that 'SOC refinement' and secondary dispensation cannot be both applied at the s ✓

IAP   **13 What is the minimum OCA(H) gain acceptable to necessitate adding a SDF?**
It is the CAA's policy to only use a SDF if it provides a benefit of 50ft or more.
CAA: This is already covered on the FAQ page

IAP   **14 What is the minimum OCA(H) gain acceptable to necessitate publishing a separate MACG?**
it might be a good idea to only publish a separate MAP CG if it provides a benefit of more than 50ft.
CAA: In line with the policy on the use of SDFs an alternate MACG should only be published if it provides a benefit of 50ft or more.

IAP   **15 What altitude is published at the SDF?**
The actual MOCA is published prior to the SDF (rather than the SDF nominal altitude/height).
CAA: The actual MOCA is published in the grey MOCA box prior to the SDF. In addition the recommended altitude at the SDF is published in the Recommended Profile boxes.

IAP   **16 What maximum missed approach speeed should be used for UK work?**
There is a UK difference in the AIP regarding the max missed approach speed being 185KIAS - however the CAA intend to remove this at some point and so all procedures are being changed to standard ICAO max missed approach speeds where possible, i.e. where it does not make a significant difference to the OCA/H, etc.
CAA: This is already covered on the FAQ page

IAP   **17 Do protection areas need to be constructed if Z+MOC is proven to be safely below the procedure altitude i.e. base turns/hold etc?**

The construction of areas that are above the tallest obstacle + MOC might not need to be constructed. For example, the construction of a procedure turn with a FAF Alt of 2000' would not need to be drawn if the maximum obstacle in the data set is below 300M. The designer would still need to ensure that by not constructing the area no airspace issues exist and would need to prove the minima is safe.

Discussion needed on wording. This is close but do we need a little more? Can we combine this one with item number 11?

I would say that the protections areas should always be drawn but the obstacle analysis may not need to be conducted. In this case the designer will provide the rationale e.g. Procedure over water, above the MSA etc. This is necessary in the case of airspace containment, future procedure safeguarding. The sponsor is paying for the design and it should be complete in the sense that the protections areas are quantified.

(RNAV) IAP **18 For the FAS DB, what should be used for the ICAO Code (2 letters) field?**

Last two letters of the ICAO location indicator.

Don't think we need to use this one. This is a standard ICAO requirement.

Not sure I get the query?

(RNAV) IAP **19 For the FAS DB, what should be used for the LTP/FTP Orthometric Height (metres)?**

take the THR elevation from the survey in metres rounded to the nearest 0.1m.

✓ Wording is OK but again I don't think we need to put this one in, its not really a UK difference.

This is correct but only when the LTP is the threshold. Again it depends on the procedure, so on a case by case basis.

(RNAV) IAP **20 For the FAS DB, what should be used for the FPAP Orthometric Height (metres)?**

Where the FPAP is a surveyed location (e.g. LOC or ASDA_END) then the elevation from the survey in metres rounded to the nearest 0.1m. Where it is calculated then the nearest surveyed ground point elevation will suffice.

Where the FPAP is a surveyed location (e.g. LOC or ASDA_END) then the elevation from the survey in metres rounded to the nearest 0.1m. Where it is calculated then the closest surveyed ground point elevation should be used.

(RNAV) IAP **21 RNAV APCH-LPV: Do I need to save the FAS DB tool bin/txt files?**

The bin and txt files are recommended to be saved from the FAS DB tool into the project folder for audit

Again I don't think we need to use this one?

If they dont use the ouput files from the FAS tool waht would they suggest. Strange question.

(RNAV) IAP **22 RNAV APCH-LPV: Do I need to save the FAS DB html page and if so how should it be presented?**

The html page is recommended to be printed to PDF from the FAS DB tool. Crop the page using Adobe Acrobat to just get the centre portion and save. Then print to 'Adobe PDF' to obtain a 'clean' A4 PDF.

Discussion needed on wording. We need them to provide this information with the ACR submission but do we need to get into this level of detail?

This may be a query for Jo in AIS as to how they to get the FAS data. We need the Fas tool output files. From these we can see what inputs were used.

(RNAV) IAP **23 For RNAV initial and intermediate approaches do the segment lengths need to be divisible by 0.1NM?**

[request CAA response]

The length of the segments do not need to be divisble by 0.1nm in the design process but should be charted with lengths rounded to the nearest 0.1nm

The length used should be consistent with the altitude and profile used as in many cases the WP can be placed to faciliate the required distance.

(RNAV) IAP **24 SBAS - Where should the GARP be placed when the GARP-LTP distance is <2000m?**

For SBAS approaches to runways with GARP-LTP distance <2000m, the CAA's opinion is that the GARP should be placed 2000m from the LTP. (Note: this contradicts a segment of PANS-OPS which says that the GARP should be conincident with the stop-end for runways which do not have an existing LOC.)

The position of the FPAP should be such that the LTP/GARP distance is at least 2000m. On short runways the FPAP needs to be situated beyond the end of the runway to maintain the relationship of 105m course width at LTP with the max angle of full scale deflection of 3° (see Doc 8168 III-2-6-App A-4 Explanation of FAS Data Block Entries paras 3l and m). When this methodology is used there will be a "D length offset" that has to be completed in the FAS Data Block fields. See also Annex 10, Vol 1, ATT d-62, Fig D-6.

Placement is as per the design criteria where it clearly gives guidance for the short runway scenario. Agree with the red text.

(RNAV) IAP **25 RNP APCH - Is it acceptable to use large track-angle changes with a DF (e.g. for a turning missed approach) due to current IFPP concerns that an aircraft may turn in the wrong direction if crabbing into wind?**

The CAA advises not to use large track-angle changes with a DF due to known issues with aircraft not interpreting turn direction correctly.

There is a known issue with RNAV coding whereby if a direct to fix path terminator is used to define a free turn back through 180° some aircraft systems will turn the shortest way irrespective of which direction is specified. In crosswind situations the shortest way may be the wrong way. Therefore a Missed Approach design utilising at least two waypoints is recommended.

This is more than the CAA advising or a recommending, this is a shall.

(RNAV) IAP **26 Where should 'not below' lines be indicated on RNAV charts?**

In the UK AIP a not below line is used at the FAF/FAP only.

Discussion needed on wording. There are a lot of inconsistencies in the AIP and we probably need to do some work on this.

Agree with blue text. But in the context of the procedure, the published altitudes are "not below" and the FAF/FAP is actually @ altiutude

---

(RNAV) IAP **27 Which method of classification of approach/missed approach obstacles must be used for LPV?**

'The range method' classification from ICAO PANS-OPS III-3-5.4.5.9.2

✓

Pans Ops clearly states that a State would need to approve the other option.

(RNAV) IAP **28 For LPV approaches, where a LOC already exists, should the course width from the calibration reports be used for the LPV?**

[request CAA response]

Yes

In the case of a short runway this will need to be discussed as in the RNAV LPV IAP the FPAP will be placed such that the LTP to GARP distance is at least 2000m.

(RNAV) SID **29 When is an initial CA leg required to prevent turns below 500ft?**

If the early turn point for the first waypoint is before the point at which an aircraft would reach 500ft AAL following a 3.3% climb gradient from 5m above DER. (Unless a higher PDG is required for obstacle clearance.)

Discussion needed on wording

This is true on a general basis, but will need to be assessed on a case by case basis.

GEN **30 What MagVar value should be used for UK projects?**

[request CAA response]

US National Oceanic & Atmospheric Administration (NOAA) value specific to the aerodrome lat/long for the time of design or forecast promulgation date

This is also something that the designer can confirm with AIS.

MISC **31 What is the maximum e-mail size that can be delivered to the CAA mailbox?**

The CAA mailbox size is 5MB. [request CAA clarification]

Maximum file size from an external organisation is 10Mb

It should be understood that IFP approvals have to be submitted using the methology as documented in the APD design QMS.

MISC	32 **In what format do the CAA prefer design packages?**

The CAA prefer a 2007 format DWG.   [request CAA clarification]   Not appropriate especially as PDG going to FPDAM. gCAP and Jeppesen are also different.

The design package for IFP approvals is dependance on the APD QMS . But where an AutoCad drawing is submitted then for the moment a 2010 format DWG file is required.

Any question that is APD QMS/Approval dependence I think should not be on the Q&A page.

IAP

How should an IAP RCF be depicted on an IAC?

The RCF procedure where provided will be in textual form only. The MAP will be in textual form in the profile view and also shown on the plan view of the chart.

From: ▮▮▮▮▮▮
Sent: 29 January 2015 08:49
To: ▮▮▮▮▮▮▮▮▮▮▮
Subject: IFP Questions
Attachments: 05Copy of IFP Questions v3 0 with all comments .xlsx

▮▮▮▮▮▮

Next itteration of the spreadsheet taking into account your last input. There are just two or three now that we still need to bottom out and that may be better done on a conference call.

I have had a discussion with Ian and Jo at NATS re the pdf from the FAS Data block tool (Item 22) and they both agree that the PDG wording would work for them so I have included their words (slighty modified).

I have tweeked quite a few of the ones I had in there originally so do have a look at all the red text and make sure your happy with my phrasing of things.

Let me know what you think and if we do need a three way chat I'll set that up.

Thanks

▮▮▮

Where can I find UK allowances for 'high resolution' SRE equipment?
AIP GEN 1-7 Doc 8168 UK Addition 6.6 refers.

Charting - Do draft charts need to be to an 'AIP ready' standard?
It is not necessary to have an AIP ready chart for approval submission. It does, though, greatly aid cartography if the draft is of similar layout to the UK AIP format.

How should advisory altitudes be calculated?
Calculate the exact altitude, then round to the nearest 10ft. To calculate the height, subtract THR elevation from the rounded altitude. This height figure is not rounded.

What vertical datum should be used for non-precision approaches?
Non-precision approach vertical datum is always THR elevation.

Is it possible to adjust the SRA RTR to remove the need for MAPt timing?
CAP493 Part 1, Section 3, Chapter 2, Para 11.6b gives the clue to this one. Essentially to have an RTR of 1nm you need a dedicated controller. This reference may need to be checked as I cannot find it! Also I'm not sure how this actually relates to the question which is about mapt timing.

How should RTR to MAPt be constructed?
The Final Approach Segment splays at 15° from the earliest fix tolerance of the RTR as this is the point where course guidance stops.

In the initial MAP, can secondary assessment be used in conjuction with extension of the MAP surface for reduced MOC?
It is the CAA's opinion that 'SOC refinement' and secondary dispensation cannot be both applied at the same time.

What is the minimum OCA(H) gain acceptable to necessitate publishing a separate MACG?
In line with the policy on the use of SDFs an alternate MACG should only be published if it provides a benefit of 50ft or more. This issue is different to a SDF and it does not have the same impact on flying the procedure so I disagree with this answer. The important issue here is that only whole MAP CG are used for precision and APV approaches.

What altitude is published at the SDF?
The actual MOCA is published on the profile in the grey box prior to the SDF. In addition the recommended altitude at the SDF is published in the Recommended Profile boxes.

Do protection areas need to be constructed if Z+MOC is proven to be safely below the procedure altitude i.e. base turns/hold etc?
It is recommended that the protection areas areshould always be constructed to ensure that there is always something to base future enquiries on. Whilst it may not be necessary to conduct an obstacle analysis in this situation issues of airspace containment and future safeguarding questions can only be accurately assessed if the protection areas are constructed accurately.

For the FAS DB, what should be used for the FPAP Orthometric Height (metres)?
Where the FPAP is a surveyed location (e.g. LOC or ASDA_END) then the elevation from the survey in metres rounded to the nearest 0.1m. Where it is calculated then the closest surveyed ground point elevation should be used.

RNAV APCH-LPV: Do I need to save the FAS DB html page and if so how should it be presented?

It is recommended that the html page be printed to PDF from the FAS DB tool. Crop the page using Adobe Acrobat to just get the centre portion and save. Then print to 'Adobe PDF' to obtain a 'clean' A4 PDF.I would suggest just save the page from the FAS DB tool and leave the cropping to AIS.

For RNAV initial and intermediate approaches do the segment lengths need to be divisible by 0.1NM?
The length used should be consistent with the procedure altitude and profile required. In many cases the WP can be placed to facilitate the exact distance required. The length of the segments do not need to be divisble by 0.1nm in the design process but should be charted with lengths rounded to the nearest 0.1nm

SBAS - Where should the GARP be placed when the GARP-LTP distance is <2000m?
The position of the FPAP should be such that the LTP/GARP distance is at least 2000m. On short runways the FPAP needs to be situated beyond the end of the runway to maintain the relationship of 105m course width at LTP with the max angle of full scale deflection of 3° (see Doc 8168 III-2-6-App A-4 Explanation of FAS Data Block Entries paras 3I and m). When this methodology is used there will be a "D length offset" that has to be completed in the FAS Data Block fields. See also Annex 10, Vol 1, ATT d-62, Fig D-6.

RNP APCH - Is it acceptable to use large track-angle changes with a DF (e.g. for a turning missed approach) due to current IFPP concerns that an aircraft may turn in the wrong direction if crabbing into wind?
There is a known issue with RNAV coding whereby if a direct to fix path terminator is used to define a free turn back through 180° some aircraft systems will turn the shortest way irrespective of which direction is specified. In crosswind situations the shortest way may be the wrong way. Therefore a Missed Approach design utilising at least two waypoints is required.

Which method of classification of approach/missed approach obstacles must be used for LPV?
'The range method' classification from ICAO PANS-OPS III-3-5.4.5.9.2 is the only option currently approved by the UK CAA.

For LPV approaches, where a LOC already exists, should the course width from the calibration reports be used for the LPV?
In most cases the answer will be yes. However, in the case of a short runway this will need to be discussed as in the RNAV LPV IAP the FPAP will be placed such that the LTP to GARP distance is at least 2000m.

When is an initial CA leg required to prevent turns below 500ft?
In the UK for all SIDs there is a requirement of "No turns below 500' QFE". In general if the early turn point for the first waypoint is before the point at which an aircraft would reach 500ft AAL following a 3.3% climb gradient from 5m above DER then a CA leg would be an optionrequired. (Unless a higher PDG is required for obstacle clearance.) This question should be addressed on a case by case basis

What MagVar value should be used for UK projects?
US National Oceanic & Atmospheric Administration (NOAA) value specific to the aerodrome lat/long for the time of design or forecast promulgation date. Alternatively, the mag var value can be confirmed with NATS AIS. This question could relate as to whether one uses the aerodrome or navigation aid mag var. Where did this question come from originally?

What is the maximum e-mail size that can be delivered to the CAA mailbox?
Maximum file size from an external organisation is 10Mb

In what format do the CAA prefer design packages?

The design package for IFP approvals is dependent on the APD QMS . But where an AutoCad drawing is submitted then for the moment a 2010 format DWG file is required.

How should an IAP RCF be depicted on an IAC?

The RCF procedure where provided will be in textual form only. The MAP will be in textual form in the profile view and also shown on the plan view of the chart. In RNAV IAPs please note that the RCF will not be coded into the navigation databasefor use by pilots.

When conducting 5-yearly reviews of IFPs is a flight validation required?

A 5-yearly periodic review of IAPs would not normally necessitate a flight validation. However, if significant changes are introduced into the IAPs during the review process then this requirement will be assessed on a case by case basis by the CAA IFP Section.

I suggest that the Q&As are divided into topics as its feels that the questions above are very varied.

From: ████████
Sent: 15 May 2015 09:58
To: ██████████████████
Subject: New FAQ Pages
Attachments: New FAQ Pages.doc

████████ ,

Just preparing to give ██████ the stuff to put in the FAQ webpage. I have extracted the relevant questions and answers from the spreadsheet into a word doc so ██████ can just cut and paste into the webpage.

Just have a final look through and make sure we are all happy with the wording and if you have any last minute entries you think should go in please just add to the bottom.

Thanks

████

Hi ████ ,

Hope you are well.

Using "large turns back" as you put it in certain wind conditions will mean that the guidance will be opposite to what it should be. This is an unsafe practice that can lead to loss of situational awareness.

Depending who you ask in the IFPP you get a diff answer, this is a known issue and some choose to ignore it, which is what your last sentence allows one to do. RNAV was never designed to be using turns of this magnitude, it is due to trying to replicate the conventional IAPs MAP that this issue comes about for the most part.

What is wrong with putting in an extra WP to ensure that the turn direction guidance is always provided correctly regardless of wind conditions?

Thanks

████

████████

IFP Regulator
45-59 Kingsway
London
WC2B 6TE

-----Original Message-----
From: ████████████
Sent: Friday, April 08, 2016 04:16 PM GMT Standard Time

To: ████████████

Subject: DF in MAP turns

████████

Hope you are enjoying Seoul. A question that harps back to a query from ████████████ re MAP and the use of DFs in large turn backs and our FAQs and statements therein. Does IFPP have a view on this? or should anyone wishing to employ a turning MAP with a large turn and employing a DF just make the case why it should be allowed.

Regards

████████████████████████

Airspace Regulator (IFP)
Airspace, ATM & Aerodromes
Civil Aviation Authority

Tel: 020 7453 █████

Follow us on Twitter: @UK_CAA

Please consider the environment. Think before printing this email.

From: ████████████████████
Sent: 13 April 2016 14:01
To: ██████████████
Subject: RE: EGBJ

Again love to but in the midst of changing house as well so can't really justify and time away as keeping it for when really important. Not that getting airborne isn't important!

From: Alex Hartland [mailto:alex@gcap.eu]
Sent: 13 April 2016 13:27
To: ██████████████
Subject: Re: EGBJ

I'm flying the jet empty tomorrow but it's out of EMA so a bit of trek for you to come along.

Alex

> On 13 Apr 2016, at 12:42, ████████████████████████████ wrote:
>
> Love to but probably doing another APD approval audit!
>
> **From:** ████████████████████████
> **Sent:** 13 April 2016 12:29
> **To:** ██████████████
> **Subject:** Re: EGBJ
>
> PS, I'm probably flying the BA B777 and B747 sims on 23 or 24th May, can probably sneak you in if interested?
>
> ██████
>
>> On 13 Apr 2016, at 11:46, ████████████████████████████ wrote:
>>
>> ██████
>>
>> 1) Reread PANSOPS.

2) Regarding MAP, with a large turn back there is nothing to stop a proposal being put forward and reasoning as to why it is a safe and repeatable operation. The proof will be In validation and extreme conditions. The issue of aircraft avionics will also play a part.

Regards

███████████████████   <image001.gif>

Airspace Regulator (IFP)
Airspace, ATM & Aerodromes
Civil Aviation Authority

Tel: 020 7453 █████

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Please consider the environment. Think before printing this email.

<image002.jpg>

From: ████████████████████████
Sent: 13 April 2016 11:10
To: ███████████
Subject: Re: EGBJ

Nah! No refresher needed, it's off criteria, but CAA can do that, us poor industry designers would be shot down for it. :-p

Any news on the RNAV missed approach issue, need to have a formal answer on it so it can be fed into an ACP to justify why the airspace is so large.

████

On 13 Apr 2016, at 11:01, █████████████████████████████████ wrote:

You need conventional refresher!

From: ████████████████████
Sent: 13 April 2016 10:48
To: █████████████████
Subject: Re: EGBJ

PSSSS, not sure how you can have an intermediate segment following a base turn on this chart! I have a vague memory of discussing this before with Don/Dave.

███

On 13 Apr 2016, at 09:59, ██ wrote:

██

Thanks, will be remedied. SDF @ 2D 650ft

(PS MOC is 246ft!)

Regards

████████████████

Airspace Regulator (IFP)
Airspace, ATM & Aerodromes
Civil Aviation Authority

Tel. 020 7453 ████

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Please consider the environment. Think before printing this email.

-----Original Message-----
From: ████████████████████████
Sent: 12 April 2016 14:54
To: ████████████████
Cc: ██████████t
Subject: EGBJ

Hi ████████

On chart EGBJ 8-8 NDB/DME RWY 27 is there not meant to be a step down fix at 2d of 800ft?

Or is the mast shown on the chart centreline at 393ft not there? as 393+256 is more than the OCA of 600ft a simple inspection of the chart shows it is wrong? However, I think the controlling obs is not this mast but further up the approach. ███████ have spotted it and added in their own SDF for their chart based on the mast but I think that is too low but better than the AIP version!

██

****