Corporate Communications
External Information Services

F0002539

Dear XXXX

I am writing in respect of your recent request of 4 November 2015, for the release of information held by the Civil Aviation Authority (CAA).

Your request, as clarified on 6 November 2015, was

We are asking for a copy of the risk assessment upon which the CAA relied in reaching its conclusion in October 2015, that no further steps were necessary in respect of safety at RAF Northolt plus surrounding correspondence.

Our response:

Having considered your request in line with the provisions of the Freedom of Information Act 2000 (FOIA), we are able to provide the information below.

Following receipt of a letter from Biggin Hill airport dated 8 July 2015, the CAA conducted several items of work which we used to develop our response to the points made in that letter. This is the material that we used to establish our reply to Biggin Hill of 4 November in which we stated that *we do not see a need to impose additional conditions on civil aircraft operators at this time.*

This work aimed to

1. Examine the points made in the letter with regard specifically to declared runway distances and aerodrome operating minima, in order to be assured regarding the ongoing level of safety for civil aviation at RAF Northolt.

2. Specifically:

    a. Identify whether reductions in declared distances or performance factors for civil aircraft are required;

    b. Evaluate whether the aerodrome operating minima for civil aviation are consistent with those that would be applied were Northolt a licensed aerodrome.

3. Examine the CAA's review of the MOD Lytag safety assessment and identify further actions required (either to the review or regarding civil aviation).

A CAA aerodrome policy specialist that had not been previously involved with the Judicial Review concerning Northolt considered points 2a and 3, and the resulting report is provided as attachment 1.

In relation to point 2b, we asked our Flight Operations team to comment and subsequently sought guidance from a performance specialist from easyJet, who advised that the minima would be adequate provided that the instrument flight procedures have been designed in accordance with PANS OPS. Para 6.3 of Annex G to the Northolt Aerodrome Manual confirms that this is the case, as below with the relevant text in italics.

6. **Obstacle Limitation Surfaces (OLS)**. Due, in part, to the proximity of the A40 and A4180 to the runway thresholds, a number of obstacles penetrate the approach and take-off climb surfaces at Northolt. Full details of these and other obstacles can be found at section 4.10 of this document*. Both approach and departure procedures are PANS-OPS compliant and ensure safe clearance from relevant obstacles in the vicinity of Northolt.* Operators should, nevertheless, assess aircraft performance for each arrival and departure to ensure their compliance with published procedures. Of note, pilots should be aware that the Threshold Crossing Height for a PAR approach to Runway 07 is 30 ft, as opposed to the Military Instrument Procedures and Standards (MIPS) requirement of 32ft.

A copy of relevant emails are provided in attachment 2.

We have redacted some personal data 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 this exemption can be found enclosed.

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
www.ico.gov.uk/complaints.aspx

If you wish to request further information from the CAA, please use the form on the CAA website at http://www.caa.co.uk/application.aspx?catid=286&pagetype=65&appid=24.

Yours sincerely

Mark Stevens
External Response Manager

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.

RAF Northolt

Independent peer review of the documentation

Introduction

As part of the ongoing internal investigation following the Northolt Judicial Review, the Aerodrome Standards section of the Airspace, ATM and Aerodromes (AAA), Safety and Airspace Regulatory Group (SARG) requested that an independent peer review of key documentation be undertaken. This review was to ensure that all aspects and issues raised had been appropriately covered and investigated. Documents provided for review were -

1. The MOD (RAF Northolt) safety assessment for the LYTAG beds.
2. The review by [redacted] of the safety assessment.
3. Will Curtis's letter of 8 July, to Mark Swan, which comments on the assessment.
4 Mark Swan's response which points out that we will do the review

Document 1 – Safety Assessment for Runways 07 Undershoot RESA (NOR/ATC/SA1914)

This document is a comprehensive report that identifies the hazards to aircraft and lists the mitigation measures in place. Whilst I agree generally with the mitigations, there is one key mitigation which requires further understanding. That mitigation is the provision of Precision Approach Radar (PAR) for runway 07. As the current issue is the safety of civil aircraft operating into Northolt it should be noted that the MAA Regulatory Article (RA) 3291 : Precision Approach Radar (PAR) states –

> 'Regulation 3291(2) PAR for Civil Pilots – *Controllers **shall not** offer PAR approaches to civil pilots.* Additionally *controllers **should not** assume that a civil pilot has been authorised and trained to fly a PAR.*

PAR approaches are therefore not the norm at Northolt for civil arrivals. SRAs are used which have higher decision heights and greater visibility requirements. The UK AIP entry for Northolt states "*Most Surveillance Radar approaches will be performed using PAR equipment*". The military controllers carry out civil SRA's using PAR; however the UK AIP for Northolt does not currently show an ICAO Instrument Approach Chart for an SRA to runway 07. The mitigation should therefore only include SRAs not PAR approaches.

An additional mitigation that could be considered is the removal of that section of the LYTAG bed that sits within the RESA. From the map in Annex B to the report this indicates that this is approximately 25-30 metres in length. By doing this a full 90 meter RESA could be provided with a reduced LYTAG arrestor bed. The report does however indicate that an EMAS bed is planned for installation in 2016 and any interim construction work on the LYTAG could be nugatory. When the EMAS bed is being designed consideration should be given to starting the EMAS should be at the end of a full 90 meter RESA.

Document 2 – CAA review of safety assessment ([redacted])

This document had a very specific aim to review the RAF risk assessment noted in document 1 above, to ascertain whether all risks and mitigations related to RESA and declared distances had been identified. The CAA report generally agrees with the military report with regard to the risks and mitigations. However the mitigation of the PAR needs clarification as only SRAs are provided as discussed above. The report does correctly highlight the offset approach to 4nm as a possible precursor to an unstable approach. In the summary item c) states - "Northolt's TORA/ASDA/LDA for both 07 and 25 are 'considerably less' than the published runway dimensions – they were reduced in 2014 to provide compliant RESAs. I think this would be better worded as 'Northolt's TORA/ASDA/LDA are considerably less than the actual physical runway dimensions thus allowing for a safety 'buffer'. The review correctly identifies that overrun and undershoot incidents are extremely rare (very remote) events in the UK.

In the section dealing with Civil Airport Equivalence the report correctly identifies Southampton Airport as having an arrester bed within the RESA. The report correctly states that the arrester bed at Southampton forms approximately 60 metres of the RESA whilst the one at Northolt is approximately 30 metres.

The report also references the US Airport Cooperative Research Programme (ACRP 3) and the issue of landing aircraft 'skipping' over arrester beds. Undershoot evidence from the USA has shown landing aircraft, even though they are undershooting, still have enough lift so as to not deposit their full weight on the bed.

Overall the report by [redacted] is a fair and accurate assessment of the military risk assessment document.

Document 3 – Letter from Mr Will Curtis to Mark Swan

This is a very detailed letter covering many aspects of aerodrome and ATM operational issues. I have attempted to provide additional material were possible.

Item 1 – notified reduction of declared distances or factoring. There appears to be a claim that the AIP current declared distances are in excess of what they should be. In recent weeks Northolt has been subject to an aerodrome survey carried out by a known civil contractor that regularly surveys civilian aerodromes. It has been confirmed that the criteria used for survey is the same as for civil aerodromes. The suggestion of a factoring of 0.95 for TORA/TODA/ASDA and 0.85 for LDA is therefore not required as they are measured correctly. Also the suggestion of two sets of declared distances one for civil and one for military is not required and should not be entertained.

The military requirements for aerodrome survey are contained in the Manual of Aerodrome Design and Survey (MADS). The MADS chapter 5 specifies compliance with ICAO Annex 14, ICAO Airport Services Manual Part 6, Control of Obstacles (Doc 9137) and UK CAA CAP 232. ISP has confirmation that a recent aerodrome survey at Northolt was carried out to these requirements and specifications.

The UK MIL AIP entry for Northolt (08 Jan 2015) contains much more useful information for pilots that the UK civil AIP entry. As noted in the investigation of document 1 above Northolt is not allowed (unless specifically requested) to provide a PAR to civil aircraft. The UK MIL entry for SRA to runway 07 shows a decision height (DH) of 700 ft and a minimum visibility of 3400 m. Therefore Mr Curtis's statements are incorrect in this respect, as PAR approaches are not normally given to civil pilots. Additionally his suggestion that only 'vectoring to visual' should be allowed is again incorrect, as an SRA to the minima noted above are acceptable and safer than vectoring to visual. The 40 degree turn onto short finals at 4 miles is however unusual and could be a precursor to an unstabilised approach.

As an additional comment it should be noted that the entries for the UK AIP and MIL AIP for Northolt are not the same. There is considerably more information regarding ATM issues in the MIL AIP and consideration should be given to adding these to the civil AIP, this will provide an additional safety benefit and additional mitigation. It should also be noted that the MIL AIP is only normally available to military pilots.

Item 2 - Aerodrome operating minima. As noted above Northolt already have operating minima for SRAs that are considerably more restrictive (higher) than those for PAR approaches.

Item 3 – Listing of hazards in the AIP. There needs to be a check for consistency between the MIL AIP and UK CAA AIP for safety information considered necessary for pilots.

Item 4 – RESA. I do not think it necessary to differentiate between overshoot and undershoot RESAs.

Item 5 – RFFS. This is not an issue and the ICAO RFFS category equivalence to the military category is made clear and obvious.

Item 6 – Additional comments. With the available data the conclusions of Document 2 ([redacted]) are sound. The issue of the Lytag arrestor beds will cease to be an issue when the EMAS bed is provided and located correctly. The reference to the church spires at 2nm from touchdown is valid and we should check with the instrument flight procedures section in this regard. (See information on Hazard 4, page 4 below)

Item 7 – The current policy stance of the CAA with respect to existing Lytag beds is to leave them in situ, therefore the Northolt situation is not in breach of our regulations. Note – currently the ICAO Aerodrome Design and Operations Panel is considering a risk based

approach for determining requirements for a combined RESA and arresting system with the intention of allowing the RESA/arrestor bed combination. Further comments regarding the surveying of obstacles in the aerodrome environment is highlighted by Mr Curtis. The MADS as noted above is based on civilian aerodrome requirements.

Item 8 – Recommendations and Hazards.

Hazard 1 Declared distances – We have been advised that Northolt declared distances declared are calculated in the same way as for civil aerodromes.

Hazard 2 – Obstacles in slopes. Again the recent survey undertaken has resolved this issue. An initial analysis using Google Earth does indicate that the TORA and TODA are correctly calculated with the TODA being measured up to the start of the arrester beds.

Hazard 3 – SRA to 07 with 40 degree turn at 4 miles. A typical precision and non-precision intercept heading is 40 degrees (MATS Part 1, Section 3 Chapter 2 Page 4) however this intercept heading is normally given between 8-10 miles from touchdown. Such a turn at 4 miles (approximately 1250 feet QFE) is not the norm particularly for an SRA.

Hazard 4 – Church spires at 2 miles final runway 25. The obstacles in question are notified on the runway 25 ILS and SRA approach charts. Having checked with CAA AAA instrument approach procedure expert the following information was obtained – "*Non-precision approach obstacle clearance is 246ft. Given that an ILS is precision with vertical guidance, Northolt THR 25 elevation 124ft plus 744ft accounting for a 3.5° glideslope at 2nm = 868ft (amsl). Less 556ft for the church = 312ft.* This was considered adequate."

Hazard 5 – Lack of overrun RESA Runway 25. This runway does have a 90 metre RESA (the ICAO recommended practice). A new EMAS bed would also provide the same.

Hazard 6 – Inappropriate weather criteria. The minima for the SRAs are already greater than for PAR approaches and discussed in detail above.

Hazard 7 – Lack of adequate RESA. The RESA issue will be settled with the construction of an EMAS bed for runway 25 overshoot. Is there a plan for one for runway 07 overshoot?

Hazard 8 – LHR dictating QFU. Need to check how often a Heathrow runway choice conflicts with operations at Northolt resulting in tailwind landings.

Hazard 9 – Unlit obstacles – Recent survey will indicate any obstacles that need to be lit.

Hazard 10 – Lytag fire retarding capability - this issue will cease when the EMAS beds are constructed.

[redacted]

Stevens Mark

From: [redacted]
Sent: 08 October 2015 21:23
To: [redacted]
Cc: [redacted]

Subject: RE: RAF Northolt - Use by Civil Operators

Dear [redacted]

Thank you for your question as set out in item 2(b) of your email as follows:

1. *To examine the points made in WC letter of 8 July with regard specifically to declared runway distances and aerodrome operating minima, in order to be assured regarding the ongoing level of safety for civil aviation at RAF Northolt.*

2. *Specifically:*
   a. *Identify whether reductions in declared distances or performance factors for civil aircraft are required;*
   b. *Evaluate whether the aerodrome operating minima for civil aviation are consistent with those that would be applied were Northolt a licensed aerodrome.*

3. *Examine the CAA's review of the MOD Lytag safety assessment and identify further actions required (either to the review or regarding civil aviation).*

[redacted] has kindly looked into this matter and his comments are reproduced below. I concur with [redacted]s conclusion *that we at Flight Ops are not fully qualified to answer this evaluation question without further consultation with AAA and other suitably qualified departments . From my limited experience on this subject and the regulations regarding licenced aerodromes, I would have expected an audit/ survey by the CAA in order to evaluate things such as ground equipment, obstacles in the approach , adequacy and performance of the available visual /no visual aids on the ground.*

Without these assessments I would say it would be near impossible to say whether the AOM should be raised or remain the same and remain compliant with AIR OPS.

I was hoping to gain [redacted]s view but unfortunately I gather he is on sick leave.

I am sorry that we cannot add any further comment but assume that there must be colleagues in the CAA qualified in Instrument Procedure Design who can help further. If Minima have been derived from the Northolt Obstacle data in section 'EGWU AD 2.10 AERODROME OBSTACLES' of the UK AIP then I am not sure on what basis Minima could be amended and by how much. Published Minima are always the lowest available and it is incumbent on the operator and commander to apply increments as deemed necessary.

Best Wishes

[redacted]

Hi [redacted]

Please see a brief explanation on my findings this evening. I hope this helps .....

I have looked through CAP168 ....Licensing of aerodromes as mentioned by WC, and the AIR OPS CAT OP MPA 110

Although as mentioned in WC letter Northolt does not have to meet all the requirements in CAP 168, but it does have to be demonstrated it is no less safe than a aerodrome operating to CAP168

AOM are defined in : (ICAO Annex 6 Part 1) and PANS-OPS 8168 and AIR OPS CAT.OP.MPA.110

The limits of usability of an aerodrome for:

a) take-off, expressed in terms of RVR and/or visibility and, if necessary, cloud conditions;

b) landing in Precision Approach and landing operations, expressed in terms of visibility and/or RVR and Decision Altitude/Height (DA/H) as appropriate to the category of the operation;

c) landing in approach and landing operations with vertical guidance, expressed in terms of visibility and/or RVR and DA/H; and

d) landing in Non-Precision Approach and landing operations, expressed in terms of visibility and/or RVR, Minimum Descent Altitude/Height (MDA/H) and, if necessary, cloud conditions."

AOM are calculated by the operator based on information supplied by the national authority and are published in the Flight Operations Manual.

In establishing the aerodrome operating minima which will apply to any particular operation, an operator must take full account of: (AIR OPS CAT.OP.MPA.110)

1. the type, performance and handling characteristics of the aeroplane;
2. the composition of the flight crew, their competence and experience;
3. the dimensions and characteristics of the runways which may be selected for use;
4. the adequacy and performance of the available visual and non-visual ground aids
5. the equipment available on the aeroplane for the purpose of navigation and/or control of the flight path, as appropriate, during the take-off, the approach, the flare, the landing, roll-out and the missed approach;
6. the obstacles in the approach, missed approach and the climb-out areas required for the execution of contingency procedures and necessary clearance;
7. the obstacle clearance altitude/height for the instrument approach procedures;
8. the means to determine and report meteorological conditions;
9. the flight technique to be used during the final approach.

The operator shall specify the method of determining aerodrome operating minima in the operations manual .

The minima for a specific approach and landing procedure shall only be used if all the following conditions are met...

1. The ground equipment shown on the chart required for the intended procedure is operative
2. The aircraft systems required for the type of approach are operative
3. The required aircraft performance criteria are met
4. The crew is appropriately qualified

(Special provisions apply to Low Visibility Procedures)

.... on the basis of these requirements listed above, I think that we at Flight Ops are not fully qualified to answer this evaluation question without further consultation with AAA and other suitably qualified departments . From my limited experience on this subject and the regulations regarding licenced aerodromes, I would have expected an

audit/ survey by the CAA in order to evaluate things such as ground equipment, obstacles in the approach , adequacy and performance of the available visual /no visual aids on the ground.

Without these assessments I would say it would be near impossible to say whether the AOM should be raised or remain the same and remain compliant with AIR OPS

I hope this helps

[redacted]

Captain [redacted]
Flight Operations & Training Inspector
Flight Operations Aeroplanes
Civil Aviation Authority

Tel: [redacted]
Mob: [redacted]

Email [redacted]@caa.co.uk

Follow us on Twitter: @UK_CAA

From: [redacted]
Sent: 08 October 2015 17:12
To: [redacted]
Subject: RE: RAF Northolt - Use by Civil Operators

Thanks [redacted]

Much appreciated.

[redacted]

Airspace, ATM & Aerodromes
Civil Aviation Authority

Tel: [redacted]
Mob: [redacted]

Follow us on Twitter: @UK_CAA

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From: [redacted]
Sent: 08 October 2015 11:13

To: [redacted]
Subject: FW: RAF Northolt - Use by Civil Operators

Hi [redacted]

Thank you for your email.

Just to let you know I have asked Captain [redacted] to look at 2 b and I will get back to you as soon as possible.

[redacted]

From: [redacted]
Sent: 29 September 2015 09:21
To: [redacted]
Cc: [redacted]
Subject: RE: RAF Northolt - Use by Civil Operators

[redacted]

Thanks again for your time on Friday afternoon. As we discussed, the letter that went back to Will Curtis (draft attached) explained that we would review his comments in detail. To provide clarity for ourselves [redacted] and I have set out the following terms of reference:

1. To examine the points made in WC letter of 8 July with regard specifically to declared runway distances and aerodrome operating minima, in order to be assured regarding the ongoing level of safety for civil aviation at RAF Northolt.

2. Specifically:
    a. Identify whether reductions in declared distances or performance factors for civil aircraft are required;
    b. Evaluate whether the aerodrome operating minima for civil aviation are consistent with those that would be applied were Northolt a licensed aerodrome.

3. Examine the CAA's review of the MOD Lytag safety assessment and identify further actions required (either to the review or regarding civil aviation).

[redacted] is reviewing 2a and 3, whilst 2b reflects the question posed about flight operations. All the other points raised in his latter have been answered.

Therefore, as we discussed could I ask you to review Will Curtis's comments regarding aerodrome operating minima (point 2 of his letter) and set out our position on them (whether they are valid or not), at which point we'll decide whether action to restrict civil aircraft operation is required or not. Your original reply to me is below and I've attached the letter from Will Curtis; when we spoke you suggested that you would be able to get back to me by 16 October, which would allow us to reply to Will Curtis by the end of the month.

Thanks again for your help. If you have any questions please let me know.

Regards

[redacted]

[redacted]
Airspace, ATM & Aerodromes
Civil Aviation Authority

Tel: [redacted]
Mob: [redacted]

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Please consider the environment. Think before printing this email.

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<< File: Letter to Mark Swan 8 July 2015 from Will Curtis.pdf >> << File: WC 2 September Letter Draft Reply.docx >>

From: [redacted]
Sent: 29 July 2015 18:18
To: [redacted]
Cc: [redacted]
Subject: RE: RAF Northolt - Use by Civil Operators

[redacted]

Please find my comments in red.

<< OLE Object: Picture (Device Independent Bitmap) >>

Captain [redacted]

Flight Operations Manager
& Training Inspector
Safety and Airspace Regulation Group
Civil Aviation Authority
Gatwick Regional Office
Aviation House 1W
[redacted]@caa.co.uk
Tel
Mobile [redacted]
www.caa.co.uk

Please copy in npa@caa.co.uk
for all NPAs and Crew Notices/NOTACs

From: [redacted]
Sent: 21 July 2015 15:53
To: [redacted]
Cc: [redacted]
Subject: RAF Northolt - Use by Civil Operators

[redacted]

You might be aware that last year the CAA, MOD and DfT were subject to a Judicial Review into the use of RAF Northolt by civil operators – the MOD had increased the permitted number of civil movements by 5000 pa, against

which Biggin Hill and Oxford airports sought a JR. Notwithstanding that their case was not supported and that civil operators may continue to use Northolt, the judge did clarify that the CAA is responsible for safety in relation to the use of RAF Northolt by civil aircraft; indeed this applies to all Government aerodromes. We are working with the MAA to develop an MoU to clarify our roles to manage the activities of civil operators into all government aerodromes, but that is not directly relevant to my request of you.

Without going into unnecessary detail, BIG continues to be unhappy that civil operations continue into Northolt. Will Curtis has recently sent the attached letter below to Mark Swan. We have sent a holding reply because the letter is long and contains a lot of points, several of which comment on aircraft operations (as opposed to the aerodrome issues that I am dealing with).

So to my request for help. I had a conversation with [redacted] who suggested that I contact you because you are responsible for the (mainly corporate) aircraft operators that use Northolt. Therefore could I please ask you for your expertise and comment on the letter, specifically:

- Pg 2 – para starting "Of significant concern..." regarding tailwind operations; It is axiomatic that airfields are all unique and will therefore have their own peculiarities and hazards that an operator must take into account. The fact that a runway could have a tailwind component is certainly a hazard that would need to be evaluated and mitigated by the operator. The Management of such hazards and risks is enshrined in law. Specifically the 'EASA AIR OPERATIONS Regulation 965/2012 ORO.GEN.200 *states (a) The operator shall establish, implement and maintain a management system that includes: (3) the identification of aviation safety hazards entailed by the activities of the operator, their evaluation and the management of associated risks, including taking actions to mitigate the risk and verify their effectiveness. ALSO (b) The management system shall correspond to the size of the operator and the nature and complexity of its activities, taking into account the hazards and associated risks inherent in these activities.* The need to meet this requirement is one of the central capabilities about which the CAA must be assured in certifying an operator for Commercial Air Transport (CAT) operations. Furthermore Operators are required to produce and maintain an Operations Manual that should describe the method of categorisation of aerodromes and, in the case of CAT operations, provide a list of those aerodrome categorised as B or C. The categorisation details are as follows:

  (i) category A – an aerodrome that meets all of the following requirements:
  (A) an approved instrument approach procedure;
  (B) at least one runway with no performance limited procedure for take-off and/or landing;
  (C) published circling minima not higher than 1 000 ft above aerodrome level; and
  (D) night operations capability.

  (ii) category B – an aerodrome that does not meet the category A requirements or which requires extra considerations such as:
  (A) non-standard approach aids and/or approach patterns;
  (B) unusual local weather conditions;
  (C) unusual characteristics or performance limitations; or
  (D) any other relevant considerations including obstructions, physical layout, lighting etc.

  (iii) category C – an aerodrome that requires additional considerations to a category B aerodrome;

  Thus if an operator choses to operate to Northolt it would have to correctly categorise the airfield and manage/mitigate any risks through its Management System.

- Pg 3 – para starting "From the table above..." regarding the application of different performance factors for civil aircraft; I suggest that this is best answered by [redacted] whose expertise includes fixed wing performance matters covering operational as well as airworthiness areas. Furthermore I think that AAA would need to comment on the application in the AIP of a TORA/ASDA/TODA factor of circa .95 and circa .85 for LDA to achieve CAP168 equivalence as suggested by Mr Curtis.

- Pgs 3-5 – his point 2 regarding operating minima and the use of SAR/PAR approaches; As above. I expect that PANS-OPS 8168 criteria will need to be applied. As regards NIGHT operations I am not an expert in the requirement for the illumination of obstacles around an airfield.
- Pg 5 – his point 3 regarding civil operators' SMS; I concur with his comments in Para 3.
- Pg 8 – para starting '[redacted]conveniently…" and the para below regarding windshear; I am not comfortable with his personalised wording but do agree with his assertion that the MOR re Windshear events is not relevant
- Pg 9 – para starting "It is clear that RAF Northolt…" and the para below regarding obstacle clearance and aircraft performance. I think that he has a compelling argument point if Declared Distances are not correct IAW CAP 168 and obstacles are not properly lit. He is correct to assert that distances must be correct to ensure that calculated aircraft performance is valid.

Additionally, the wider question is what safety assurance process operators would use to identify the specific issues at Northolt? I think that a competent AOC CAT operator should be able to use its SMS to come to a decision as regards operations at Northolt. However I agree with Mr Curtis that the AIP *statement 'Northolt is a Government Aerodrome regulated by the Ministry of Defence. No guarantee can be given that this airfield meets the requirements of ICAO Annex 14 Volume I and II. Operators are to satisfy themselves that they have met all the requirements of the UK Air Navigation Order 2009 and EU-OPS (See AD 1.1, sub-sections 2.12 and 2.13).'* is not enough to assure safe operations in practice. I think this is particularly true of for non-AOC operators. (From 25th August 2016 the CAA have oversight of UK based NCC (Non Commercial Complex) operators. However the level of oversight is yet to be determined and starts with the NCC operator making a 'Declaration'. (Part-NCC requires each operator to adhere to the same essential requirements as commercial air transport operators but the rules are proportionate - instead of holding an AOC, operators must submit a declaration to us about their operation. The declaration will help us to establish and maintain the required oversight programme for Part-NCC aircraft.) However the UK CAA will not have oversight of foreign NCC operators.

I would suggest that to assure safe operations at Northolt the CAA should evaluate the airfield for operations IAW CAP 168 and ICAO Annex 14 and publish the data in the AIP. An AIP statement that the airfield is 'Government owned and cannot be guaranteed e.t.c …' should still remain but would be – to use Mr Cutis' words non 'disingenuous'. I don't think the AIP data is as good as it reasonably could be if we are to protect the travelling public. In any case an operator may need to divert there in an emergency.

I'm here for this week and next, by which time we need to have provided a reply, so I'm very grateful for any help you can offer. Happy to talk it through anytime.

Regards

[redacted]

[redacted]

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<< File: MarkSwan.150708.pdf >>

Stevens Mark

From: [redacted]
Sent: 26 October 2015 13:00
To: [redacted]
Subject: RE: Northolt

[redacted]

There is almost nothing concerning the domain of instrument procedure design in this letter, rather aerodrome safeguarding and flt operations issues AOM, landing distances etc.

The only possible hint concerns the church spire 558ft, which [redacted] has already ask me a question and received a reply. Without doing a full assessment, one must take it that the MOD designers, one of our APD companies, have taken this obstacle into account when designing the ILS and LOC. We do not have any oversight of their activities not concerning the UK AIP.

Having just looked again the spire appears at 2.9nm (not 2) from the threshold Rwy 25 so less of a problem; ILS OAS surface at this point 170.07m(558ft) above threshold, therefore 124 plus 558 = 682ft, well above spire 558ft, so does not become accountable. (please don't be confused at OAS height, just coincidence in this case!)

I trust that this helps you, always at the end of a phone.

regards

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[redacted]

From: [redacted]
Sent: 26 October 2015 10:18
To: [redacted]
Subject: FW: Northolt

[redacted]

As discussed. You know the background regarding Northolt. We received the attached letter from Biggin Hill in July and replied to most of the points made. However, given the level of detail and importance we agreed to do a review of his items 1 and 2 and it is only item 2 where I'm seeking your help.

Could I please ask for your comments on his allegations regarding the operating minima. The Northolt Aerodrome Manual confirms that the IFPs were designed iaw PANSOPS. We discussed it with a performance specialist from Easyjet last week who confirmed that EZY would be satisfied and able to make an assessment into the adequacy of the aerodrome if the IFPs are PANSOPS compliant and they are aware of the obstacles. Is there anything else from your side that would need to be taken into consideration.

I would welcome any input you can offer – we have to reply to Biggin by the end of the week

Please do not copy of circulate the letter – it is sensitive and the situation is very politicised.

Thanks

[redacted]

[redacted]
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<< File: Letter to Mark Swan 8 July 2015 from Will Curtis.pdf >>

From: [redacted]
Sent: 23 October 2015 16:59
To: [redacted]
Subject: Northolt Telecon

[redacted]

[redacted] and I had a useful teleconference call with a performance specialist [redacted] from EZY. He pointed out the main performance areas he felt need to be addressed, to which I've added my comments:

1. The potential differences between civil and military IFP design criteria with his understanding that MIL IFPs design criteria are "broadly similar" to PANSOPS/Doc 8168 - the NH DAMS confirms that the IFPs are PANS-OPS compliant (DAMS Annex G, Part 6). Given this I think we should ask FOD and IFP [redacted] or [redacted] to confirm this and therefore that the minima are suitable or what they could/should be.
2. Confirm that the obstacles are identified and promulgated – we can ask for confirmation from NH OPS or the MAA.
3. Highlight the warnings in the MIL AIP (that don't appear in the civil AIP) – the warnings in both AIPs are consistent.
4. Are the MIL requirements for lighting obstacles different from civil regs? We need to find out.
5. Assessments into the adequacy of the aerodrome should be conducted at operator level (not just left to the pilot) (he cited Southend as an EZY example). It may be we (FOD) could test UK AOC operators by doing a Special Operations Check on their safety assessments for the use of NH.
6. Approach Charts are contained only the MIL AIP. Not sure about the relevance of this.

More work, although we didn't think too much, next week, but we should test it with [redacted]

[redacted]

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Stevens Mark

From: [redacted]
Sent: 26 October 2015 14:41
To: [redacted]
Subject: Northolt

PS Talking to [redacted] who used to do the military designs in days of old, the reason for the 3.5° glidepath was the church spire.

The letter is rather loose in some of its statements, yes it is a safety issue if one flies below the glideslope and is why pilots are trained appropriately to fly no more than half-scale deflection low. No procedure is safe if flown widely inaccurately, there are tolerances built into the design criteria, pilot reaction, flight and navigation tolerances, but abiding by the principles of instrument flying one should remain safe to a point where visual references take over or a go-around is initiated. If a go-around is initiated even if IMC, the procedures are developed to keep one safe, as long as one flies the procedure as designed and as per SOPs.

regards

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Stevens Mark

From: [redacted]
Sent: 30 October 2015 15:38
To: [redacted]
Cc:
Subject: Northolt

[redacted]

After a brief conversation on the subject with [redacted] just documenting the following:

Northolt lighting equivalent to EU/EASA OPS Intermediate lighting

EU/EASA OPS

Note 2: Intermediate facilities comprise runway markings, 420-719 m of HI/MI approach lights, runway edge lights, threshold lights and runway end lights. Lights must be on.

for ILS CAT 1 based upon listing in the MIL BINA En-route Supplement namely:

L6 Runway edge lighting High Intensity

L7 Approach lights (listed as 567m in length High Intensity, centreline plus 3x crossbars)

L12 Runway End Identification lights

L13 Runway Threshold lighting

L15 PAPI 3.5°.

ILS

EU/EASA Ops Intermediate Lighting RVR		
Decision height DH	RVR (m)	
201ft - 250ft	700m	
251ft - 300ft	800m	
Northolt Chart DH and RVR minima		
Aircraft category	DH (ft)	RVR Minima (m)
A	230	1200m
B	240	1200m
C	250	1200m
D	260	1200m

Military RVR more restrictive than EU/EASA OPS

LOCALIZER ONLY

EU/EASA Ops Intermediate Lighting RVR		
Minimum descent height MDH	RVR (m)	
300 – 449ft	1300m	
Northolt Chart MDH and RVR minima		
Aircraft category	MDH (ft)	RVR Minima (m)
A	440	1500m
B	440	1500m
C	440	1600m
D	440	2000m

Military RVR more restrictive than EU/EASA OPS

CIRCLING

EU/EASA Ops Intermediate Lighting RVR		
Aircraft category	Circling lowest MDH	RVR (m)
A	400	1500
B	500	1600
C	600	2400
D	700	3600
Northolt Chart Circling		
Aircraft category	MDH (ft)	RVR Minima (m)
A	590	2600m
B	590	2600m
C	850	4000m
D	890	4800m

Military RVR more restrictive than EU/EASA OPS

Also note the following extract from UK AIP page AD1.1-6 para 4.3, especially the last point, which to me has always been an aviation tenet, i.e. 'use the most restrictive'.

4.3 Commercial Air Transport (CAT) Operations

4.3.1 For CAT operators, the method of calculating AOM should be in accordance with the most restrictive of their company operations manual or EASA Ops unless more restrictive minima are notified in respect of a particular aerodrome.

Regards

[redacted]
Airspace Regulator
Airspace, ATM & Aerodromes
Civil Aviation Authority

Tel: [redacted]

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