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Our Ref: F0006659 & F0006661  
Your Ref:

7 January 2011

Dear XXXXX,

**Request for information pursuant to the Freedom of Information Act 2000**  
**Re: Volcanic Ash - Virgin Atlantic and EasyJet**

Further to my letter of 12 August I can now confirm that the Department has completed its search for the information which you requested on 15 July on behalf of your client, XXXX. I would like to apologise for the lengthy delay in responding to your request, but as I am sure you will appreciate, the volcanic ash event generated a significant volume of documentation (around 7000 separate items), all of which needed to be reviewed. Further, although submitted separately, your three requests for information on behalf of XXXX, XXXX and XXXX respectively have, because of their common subject matter and broad similarity, been handled as a single request albeit one amounting to approximately 100 questions and sub-questions. A response to the requests submitted on behalf of XXXX was sent to you on 20 August.

You have requested any information or advice received by the Department from the CAA or NATS between 06.00 hrs on 14 April and 12.00 hrs on 22 April 2010 concerning the volcanic ash event in so far as it may relate to the safe or otherwise operation of commercial aircraft in UK airspace. You asked that this include,

- i) any conditions, directions, instructions, plans policies or guidance intended or given by the CAA to NATS re: the presence of volcanic ash,
- ii) what NATS had or intended to do regarding flow rates or the provision of Instrument Flight Rule Air Traffic Services (IFR ATS), and
- iii) what would be required for NATS to change its position on any flow rate restriction or withdraw/suspend IFR ATS.

In response to your request, the relevant information identified as being held by the Department is either set out below or otherwise enclosed.

As you know, the Freedom of Information Act does not entitle a requestor to copies of documentation, simply to relevant information held by the body to which the request is made, in this case the Department of Transport. Notwithstanding this, I am providing the information that you have requested in two forms. Where a particular document falls entirely within the scope of your request, a copy accompanies this letter. For ease of reference I have also included a table setting out the various documents being disclosed.

Where a document contains information that only partly falls within the scope of your request, for example a wide ranging briefing document, I have extracted the relevant section(s) and combined these into a separate document that I have entitled, "Extracted Information". When making reference to this you should be aware that while the extracts are copied verbatim from the original sources, in places these contain factual errors or require further clarification. The following seeks to rectify the errors identified and/or provide context. The corrections are not exhaustive and you should note that there may be other errors in the information provided that I have not managed to identify.

### **"Extracted Information" document**

#### **Extract number 4, "Internal DfT Volcanic Ash situation report" - 15 April 2010 - 13.55hrs**

In the second paragraph of the "Safety" section, the briefing note suggests that the CAA set the rules for amending traffic flow rates during the volcanic ash events in April/May this year that NATS then followed. The CAA has pointed out that neither it, nor the ICAO Contingency Plan in place at the time, imposed air traffic flow rates for NATS to follow.

*[The same passage is repeated in the corresponding sections of extract 8, 12, 13, 21, 28, 35 and 48.]*

#### **Extract number 8, "Internal DfT Volcanic Ash situation report" - 15 April 2010 - 16.38hrs**

In the opening bullet point there is reference to the volcano erupting to 55,000ft when in fact, I am informed by the Met Office that the eruption never exceeded 35,000 ft. The accuracy of the suggested impact of the volcanic cloud particles on machinery, as described in the final sentence of this paragraph, has also been questioned.

*[The same factual error is repeated in the corresponding section of extract 12.]*

#### **Extract number 8, "Internal DfT Volcanic Ash situation report" - 15 April 2010 - 13.55hrs**

In the third paragraph of the "Met Office" section, reference is made to the CAA contacting the FAA and other EU Regulators to get more information about the reliability of the Met Office's model. The CAA has informed me that it was in fact simply seeking to gain a better understanding of how other forecasting models worked.

*[The same passage is repeated in the corresponding sections of extract 12, 13, 21 and 28]*

#### **Extract number 27, "Summary from note of ATM Regeneration Principles meeting"**

Under the question, "What is an acceptable window of opportunity?" the name of an individual has been redacted. From the information held, the seniority of the individual could not be determined and so the name has been redacted in accordance with the Data Protection Act and Section 40 of the Freedom of Information Act 2000 (personal information).

**Extract number 32, "Internal email summarising NACME meeting" - 18 April 2010 - 16.22hrs**

The text of the third bullet point may give the impression that CAA decisions on whether or not to permit individual flights were pre-judged. In fact, I am informed that the CAA received a request from Thomson Airways requesting permission for six ferry flights from Iceland to the UK, which, after consideration, was not granted. EasyJet were granted permission to carry out a "pathfinder" flight, for which the CAA directed NATS to provide an Air Traffic Service. This flight took place on 20 April 2010.

**Extract number 35, "From internal DfT Volcanic Ash situation report" - 19 April 2010 - 09.30hrs**

In the second bullet point, reference is made to "very high" concentrations of ash found near Southampton. The Met Office has confirmed that concentrations up to 8 times more than elsewhere in the UK were observed near Southampton, though this might not necessarily be considered as "very high".

*[The same point is made in respect of the second paragraph of the section entitled, "Met Office"]*

In the fourth bullet point, volcanic eruption intensity decreased but did not actually stop, as is suggested in the text.

**Extract number 37, "Internal DfT email dated 19 April 2010 09.39hrs**

In the fifth paragraph, starting with the words, "The Met Office is providing ....", the first line includes reference to the "density" of ash. In fact, this should be "ash concentration".

Further, I am informed by the Met Office that the final sentence of the same paragraph is factually incorrect. The Met Office uses its own model for assessing ash, known as NAME, which is a Lagrangian model like the US models, but is fundamentally different in that NAME models the removal of ash by natural processes (washout, deposition, etc) whereas the US (WSI) model does not and therefore starts with a "clean slate" every 48 hours.

**Extract number 39, "Extract from DfT incident room meeting minutes" 19 April 2010 11.00hrs**

The Met Office informs me that the reference to the volcano as having stopped erupting was erroneous. While the eruption had died down at that point, it had not stopped.

**Extract number 40, "Summary of NACME meeting" 19 April 2010 14.30 hrs**

The opening paragraph notes that the Met Office had reported that the volcanic eruptions had died down. To be more accurate, the Met Office was acting on reports from the Icelandic Met Office.

Later in this extract it is noted that the, "CAA reported that the Met Office was prepared to indicate a "no fly zone" within the red line drawn on the VAAC map, provided that this was approved by the regulator". However, the Met Office believes that this gives a false impression of its role which was solely to advise in terms of the location of volcanic ash (and after 21 April 2010, on how much ash). It would be for others, based on this advice, to determine where flights could or could not, be permitted.

The extract goes on to note that, "NATS and the Met Office were due to issue a joint statement on airspace access at 3.00 pm". While the Met Office communications team did make a joint statement with NATS at this time, the Met Office's role in the joint statement was to comment on the meteorology and not to pass comment on any airspace impacts of the volcanic ash.

#### **Extract number 42, "Summary of NACME meeting" 19 April 2010 20.30hrs**

In the opening paragraph the Met Office informs me that the correct position is that volcanic activity increased rather than started again.

For clarification, the figure quoted in the seventh and eighth paragraphs of 10 (x-16) equates to an ash concentration of  $2 \times 10^{-3}$  gm-3.

#### **Extract number 44, "Internal DfT email" dated 19 April 2010 22.03hrs**

The second paragraph states that, "The CAA confirmed it has now asked the Met Office to run a revised version of their model that will show a contour for a lower level of contamination than the current VAAC". The Met Office has confirmed that it did *not* run a new *version* of its model; it simply provided a new model-derived output depicting threshold levels.

#### **Extract number 46, "Extract from internal DfT email" 20 April 2010 04.27 hrs**

The Met Office believes that the opening sentence of the second paragraph gives a misleading impression of the situation at that time. Ash was still present but the new higher "safe" ash concentration threshold effectively freed up more airspace.

#### **Extract number 48, "Extracts from internal DfT VA situation report 20 April 2010 09.30 hrs**

In the opening paragraph of the "Background" section, there is reference to the volcano erupting to an altitude of 55,000 ft when, the Met Office informs me that in fact the highest plume height was 35,000 ft.

#### **Extract number 52, Extract from note of meeting between DfT, CAA, NATS and airline representatives dated 20 April 2010**

This extract was taken from the minutes of a meeting which were not circulated to the participants to verify their accuracy. Consistent with our duties under the Freedom of Information Act and, where applicable, the Environmental Information Regulations, the minutes have been reviewed by a senior official who participated in the meeting. This has resulted in the following corrections.

On the fourth line of the first paragraph, where there is reference to, "a maximum ash concentration of 10-16" this should instead read, "a maximum ash concentration of 2000 micrograms per cubic metre".

On the seventh line of the same paragraph, again where the text reads, "10-16" this should read, "the new "Red Zone" between 200 micrograms per cubic metre and 2000 micrograms per cubic metre forecast concentrations of ash"

On the eighth line, "30 nautical mile buffer" should be replaced with, "60 nautical mile buffer", and the word "then", later on the same line, should be deleted.

**Extract number 54, "Extract from meeting note between SoS, NATS, CAA and airline reps" 20 April 2010**

In the opening paragraph there is reference to a "30 nautical mile buffer zone" whereas the Met Office informs me that the buffer zone was 60 nautical miles and surrounded the "black" zone and not the "red" zone.

**Extract number 58, "Summary of NACME minutes" 21 April 2010 14.30hrs**

Two short passages have been redacted from the third and fourth paragraphs under section 27 of the Freedom of Information Act 2000 (prejudice to international relations). This is a qualified exemption, which means that the information must nevertheless be disclosed unless, *"in all the circumstances of the case, the public interest in maintaining the exemption outweighs the public interest in disclosing the information."* A public interest test has been carried out and the factors taken into consideration in the decision to withhold this information are set out in **Annex A** below.

**Extract number 60, "Extract from note of telephone conversation between the Secretary of State, Richard Deakin (NATS) and [name redacted] (Met Office) dated 21 April 2010**

In the third bullet point, "A diversion" should be replaced with, "One aircraft diversion".

**National Airspace Crisis Management Executive (NACME) minutes**

In addition to the information set out above or contained in the documents accompanying this letter, the Department is also in possession of the minutes, prepared by the Civil Aviation Authority (CAA), of meetings of the National Airspace Crisis Management Executive (NACME). Some of the issues discussed at the NACME meetings fall within the scope of your requests. The CAA has already published copies of the NACME minutes on its website at [www.caa.co.uk/docs/1357/F000999Reply.pdf](http://www.caa.co.uk/docs/1357/F000999Reply.pdf). Under Section 21 of the Act, we are not required to disclose information which is already reasonably accessible to an applicant. However, certain sections of the minutes that are published on the CAA web-site were redacted prior to publication for the reasons given by the CAA at the time. I have now reviewed those redactions in line with the Department's obligations under the Freedom of Information Act and, where necessary, the Environmental Information Regulations. In a number of cases, the redacted passages are not relevant to your present requests, but where they may fall within scope I have undertaken a public interest

test to determine whether any of the previously redacted passages can now, given the passage of time, be released. The considerations taken into account in continuing to withhold certain parts of the NACME minutes are set out in **Annex A** below.

As a general point, it should be noted that the NACME minutes were prepared at a time of intense activity and it was not possible for the Group's secretariat to circulate the draft minutes to participants to verify their accuracy. As a result, while the minutes may provide a broad outline of the discussions that took place, passages may not always accurately reflect the positions of participating organisations, or may require further clarification to explain attributed comments. Further, throughout the minutes, where the names of specific individuals have been redacted, the Department agrees with the CAA's decision that these should be withheld in accordance with the provisions of the Data Protection Act and Section 40 of the Freedom of Information Act 2000 as they relate to staff that are not in senior, public facing roles or their seniority could not be determined from the information provided.

Turning to previously redacted passages that are considered to fall within the scope of your requests:

i) Conference call on 15 April 2010 - 14.00 hrs

The final paragraph of the "NATS update" section reads,

*"The NATS Volcanic Ash risk had been updated 3-months ago and mitigations were cognisant with other nations".*

ii) Conference call on 16 April 2010 - 08.30 hrs

The final paragraph of the "Military ATM Update" section has been withheld in accordance with Regulation 26 of the Freedom of Information Act (FOI) 2000. Section 26 provides an exemption if the disclosure of information under the Act would, or would be likely to, prejudice the capability, effectiveness or security of any relevant forces in the defence of the British Islands or of any colony. One of the participants in the NACME conference calls was the Ministry of Defence and some of the information contained in the records of these meetings relates to operational arrangements or the capabilities of assets used or concerning the defence of the UK.

iii) Conference call on 16 April 2010 - 14.00 hrs

In the "CAA update" section after, "The SRG risk register work was under way", the next paragraph reads,

*"A new VFR NOTAM had been issued in align with the NATS information".*

iv) Conference call on 18 April 2010 - 08.30 hrs

The opening paragraph in the "Current situation" reads,

*"The Met Office is not happy with the current graphic and think there is an error with the model - it thinks the FL200/350 line is inaccurate. Met Office also assessing how long ash should remain in the model. A meeting is ongoing to assess the accuracy of the model".*

This passage requires further explanation as the Met Office has stated that this was not its view. The first sentence merely explains how a forecaster uses observations (usually satellite), to add value to the model output. The second and third sentences in no way reflected a perceived weakness in the model, but more a continuous process of verification and improvement.

v) Conference call on 20 April 2010 - 12.00 hrs

The final paragraph of the "Air Traffic Update" section reads,

*"[Text redacted under section 27 FOIA - International relations] UK think this is a sensible way to operate and flights that are operating in contaminated airspace are operating illegally"*

[It is unclear from the minutes whether, as this comment was unattributed, it represented a personal opinion or the position of one of the participating bodies represented at the meeting.]

In the same meeting notes, two paragraphs in the "Eurocontrol Update" section have been withheld from disclosure under section 27 of the Freedom of Information Act. Section 27 provides an exception if the disclosure of information under the Act would, or would be likely to prejudice relations between the UK and any other State, international organisation or the interests of the UK abroad. Details of the considerations taken into account in the public interest test undertaken before the decision to withhold these paragraphs are set out in the second table in **Annex A** below.

vi) Conference call on 20 April 2010 - 14.30 hrs

The content of the second half of the first paragraph of the "CAA Update" has been withheld under section 27 of the Freedom of Information Act 2000. Details of the factors taken into account when undertaking the public interest test are set out in **Annex A** below.

vii) Conference call on 20 April 2010 - 20.30 hrs

The content of the fourth paragraph in the "CAA Update" section has been withheld under section 27 of the Freedom of Information Act. Details of the factors taken into account when undertaking the public interest test are set out in **Annex A** below.

viii) Conference call on 21 April 2010 - 08.30 hrs

In the "CAA Update" section, the previously redacted final part of the third paragraph reads,

*"... there was some confusion and a lack of understanding over the background to the CAA's "change of mind". This had not been reported well and needed to be addressed with the level of background work that had been done."*

#### ix Conference call on 21 April 2010 - 18.30 hrs

In the "NATS Update" section, the second part of the second paragraph reads,

*"This hadn't happened but the NATS line was that if the airspace was safe to fly in it was safe to hold in."*

#### **Conclusion**

As noted above, the numerous questions and sub-questions raised in your various requests for information have involved considerable work on behalf of officials from the Department and this has resulted in the cost limit (equivalent to 24 hours' work) having already been significantly exceeded. Section 12 of the Act (the full text of which is attached at **Annex B**) does not oblige the Department to comply with requests that exceed this limit and you will be aware that further questions raised in your requests have yet to be answered in full. However, given that significant additional time and expense will be needed to complete a full review of the documentation held by the Department against these outstanding questions, I regret to inform you that as the cost limit has already been significantly exceeded we will not be devoting any further resources to your current requests. However, in the interests of answering the generality of your outstanding questions, I would make the following observations:

Insofar as such information has not already been provided, either in this or my previous letter of 20 August, I have yet to identify any further conditions, regulations, orders, directions, instructions, plans, policies or guidance given to the CAA or NATS by the Department in respect of,

- i) the circumstances, basis or extent of when UK airspace should be closed to commercial passenger aircraft, and/or
- ii) the rate of flow of air traffic in UK airspace restrictions, and/or
- iii) the provision of IFR air traffic services in UK airspace should be restricted or withdrawn

on safety or other grounds during the period specified due to the actual or potential presence of volcanic ash in UK airspace. I would however draw your attention to the International Civil Aviation Organisation's (ICAO) Volcanic Ash Contingency Plan for the European Region (previously disclosed), which may be of assistance. Further, Paragraph 2.30 of Annex 11 to the Chicago Convention requires that,

"Air traffic services authorities shall develop and promulgate contingency plans for implementation in the event of disruption, or potential disruption, of air traffic services and related supporting services in the airspace for which they are responsible for the provision of such services. Such contingency plans shall be developed with the assistance of ICAO as necessary, in close coordination with the air traffic services authorities responsible for the provision of services in adjacent portions of airspace and with airspace users concerned."



In addition, paragraph 15.8.2 of PANS-ATM requires that,

"Each State shall develop appropriate procedures and contingency routings for avoidance of volcanic ash clouds that meets the circumstances of the State and fulfil its obligations to ensure the safety of aircraft."

In keeping with the spirit and effect of the Freedom of Information Act, all information is assumed to be releasable to the public unless exempt. The Department will, therefore, be simultaneously releasing to the public the information you requested.

You may wish to be aware that the Department is currently establishing a Volcanic Ash Official Record (VAOR) - a record of all stages of the DfT's response to the Eyjafjallajökull volcanic ash incident from 14 April to 24 May 2010. This searchable database will, once complete, assist us in meeting any future EIR or Fol requests efficiently.

If you are unhappy with the way the Department has handled your request or with the decisions made in relation to your request you may complain within two calendar months of the date of this letter by writing to the Department's Information Rights Unit at:

Zone D/04  
Ashdown House  
Sedlescombe Road North  
Hastings  
East Sussex TN37 7GA  
E-mail: [FOI-Advice-Team-DFT@dft.gsi.gov.uk](mailto:FOI-Advice-Team-DFT@dft.gsi.gov.uk)

Please see attached details of DfT's complaints procedure and your right to complain to the Information Commissioner.

If you have any queries about this letter, please contact me. Please remember to quote the reference number above in any future communications.

Yours faithfully,

### **Your right to complain to DfT and the Information Commissioner**

You have the right to complain within two calendar months of the date of this letter about the way in which your request for information was handled and/or about the decision not to disclose all or part of the information requested. In addition a complaint can be made that DfT has not complied with its FOI publication scheme.

Your complaint will be acknowledged and you will be advised of a target date by which to expect a response. Initially your complaint will be re-considered by the official who dealt with your request for information. If, after careful consideration, that official decides that his/her decision was correct, your complaint will automatically be referred to a senior independent official who will conduct a further review. You will be advised of the outcome of your complaint and if a decision is taken to disclose information originally withheld this will be done as soon as possible.

If you are not content with the outcome of the internal review, you have the right to apply directly to the Information Commissioner for a decision. The Information Commissioner can be contacted at:

Information Commissioner's Office  
Wycliffe House  
Water Lane  
Wilmslow  
Cheshire  
SK9 5AF

## ANNEX A

<b>Exemption in full</b>	
<p><u>Section 27 (1) of the Freedom of Information Act 2000</u></p> <p>Information is exempt information if its disclosure under this Act would, or would be likely to, prejudice:</p> <ul style="list-style-type: none"><li>(a) relations between the United Kingdom and any other State</li><li>(b) relations between the United Kingdom and any international organisation or international court</li><li>(c) the interests of the United Kingdom abroad, or</li><li>(d) the promotion or protection by the United Kingdom of its interests abroad.</li></ul>	
<p>Ground for proposed redaction from,</p> <ul style="list-style-type: none"><li>i) Extract 58 of the "Extracted documents" document,</li><li>ii) the "CAA Update" section of the NACME minutes from the meeting held at 12.00 hrs on 20 April 2010,</li><li>iii) the "Eurocontrol update" section of the NACME minutes from the meeting held at 12.00hrs on 20 April 2010, and</li><li>iv) the "CAA Update" section of the NACME minutes from the meeting held at 14.30 hrs on 20 April 2010.</li></ul> <p>The redactions refer to discussions with or between the UK and other States and/or international bodies which, if the matters were disclosed, might jeopardise the UK's relationship with those other States/international bodies and the ability to work closely with such bodies in the future.</p>	
<b>Public interest test factors for disclosure</b>	<b>Public interest test factors against disclosure</b>
<ul style="list-style-type: none"><li>1. There is a general public interest in disclosure of information</li><li>2. To release the information could help to promote accountability and transparency in Government decision making; facilitate a better understanding of the decisions made by public authorities; and further the understanding of, and participation in, the public debate of issues of the day.</li></ul>	<ul style="list-style-type: none"><li>1. The redacted information relates to discussions between the UK and/or member organisations of NACME, including the CAA, NATS and the UK Government, concerning the UK's position in relation to other States and international bodies. The disclosure of such information would be likely to prejudice the UK's interests by jeopardising the UK's relationship with other States and international bodies and the ability to work closely with</li></ul>

3. The decision to impose flow rate restrictions in UK airspace affected large numbers of people and had a considerable financial impact on airlines and the travel and tourism industry.	<p>such bodies in the future.</p> <p>2. There is a strong public interest in maintaining the UK's relationship with other States and international bodies to ensure that the UK can continue to work with such bodies effectively in future to the benefit of the UK.</p> <p>3. In the case of the NACME minutes, these were never formally approved by the participating member organisations.</p>
<p style="text-align: center;"><b><u>Decision</u></b></p> <p>To withhold the redacted information, as the arguments for withholding that information outweigh those in favour of disclosing it.</p>	

<p style="text-align: center;"><b>Exemption in full</b></p> <p style="text-align: center;"><u>Section 26 (1) of the Freedom of Information Act 2000</u></p> <p>Information is exempt information if its disclosure under this Act would, or would be likely to, prejudice:</p> <p>(a) the defence of the British Islands or of any colony, or</p> <p>(b) the capability, effectiveness or security of any relevant forces.</p> <p>Ground for proposed redaction from the "Military ATM Update section of the NACME minutes from the meeting held at 08.30 hrs on 16 April 2010.</p> <p>The redacted section makes reference to the capability of UK military assets used in the defence of the UK, which need to remain classified.</p>	
<b>Public interest test factors for disclosure</b>	<b>Public interest test factors against disclosure</b>
<p>1. There is a general public interest in disclosure of information</p> <p>2. To release the information could help to promote accountability and transparency in Government decision making; facilitate a better understanding of the decisions made</p>	<p>1. One of the participants in the NACME conference calls was the Ministry of Defence and some of the information contained in the records of these meetings relates to operational arrangements or the capabilities of assets used in the defence of the UK.</p>

<p>by public authorities; and further the understanding of, and participation in, the public debate of issues of the day.</p> <p>3. The decision to impose flow rate restrictions in UK airspace affected large numbers of people and had a considerable financial impact on airlines and the travel and tourism industry.</p>	<p>2. There is a strong public interest in ensuring that information concerning the capability of UK defence assets remains classified in order to avoid risk of prejudice to their effectiveness or security.</p> <p>3. There would be no contribution made to the understanding of the actions of the CAA, NATS or DfT by the release of this information.</p>
<p style="text-align: center;"><b><u>Decision</u></b></p> <p>To withhold the redacted information, as the arguments for withholding that information outweigh those in favour of disclosing it.</p>	

## **Annex B**

### **Section 12 exemption:**

#### **Exemption where cost of compliance exceeds appropriate limit**

(1) Section 1(1) does not oblige a public authority to comply with a request for information if the authority estimates that the cost of complying with the request would exceed the appropriate limit.

(2) Subsection (1) does not exempt the public authority from its obligation to comply with paragraph (a) of section 1(1) unless the estimated cost of complying with that paragraph alone would exceed the appropriate limit.

(3) In subsections (1) and (2) “the appropriate limit” means such amount as may be prescribed, and different amounts may be prescribed in relation to different cases.

(4) The Secretary of State may by regulations provide that, in such circumstances as may be prescribed, where two or more requests for information are made to a public authority—

(a) by one person, or

(b) by different persons who appear to the public authority to be acting in concert or in pursuance of a campaign,

the estimated cost of complying with any of the requests is to be taken to be the estimated total cost of complying with all of them.

(5) The Secretary of State may by regulations make provision for the purposes of this section as to the costs to be estimated and as to the manner in which they are to be estimated.