

Civil Aviation Authority
Finance and Corporate Services
Information Management

[REDACTED]
[REDACTED]

11 June 2009
FOIA reference: F0000850

Dear [REDACTED]

I am writing in respect of your recent application of 3 June 2009 for the release of information held by the Civil Aviation Authority.

Your request:

"Details of any reportable occurrences from 1/1/2000 to date that involve helicopters suffering from turbulence or hot gas ingestion on approach, departure or while in the hover to / from / near offshore helidecks".

In assessing your request in line with the provisions of the Freedom of Information Act 2000, we are pleased to be able to provide the information below.

The CAA's Mandatory Occurrence Reporting Scheme is intended to record reportable occurrences which endangered or which, if not corrected, would have endangered an aircraft, its occupants or any other person. If a report has been submitted involving a turbulence encounter, which has either resulted in injury to any occupant, or the aircraft is deemed to require a 'turbulence check', or the turbulence encountered has resulted in a flight safety hazard, this would be reportable under the CAA's scheme.

We have searched the database for all reportable occurrences that involve "helicopters suffering from turbulence, or hot gas ingestion on approach, departure, or in the hover, to/from/near offshore helidecks", for the dates 01 Jan 2000 to 09 June 2009 inclusive. We have provided a summary of those reports (see attached).

If you are unhappy with how we have dealt with your request in the first instance you may approach the Freedom of Information Case Manager in writing at:-

Rick Chatfield
FOIA & EIR Case Manager
Civil Aviation Authority
Aviation House
Gatwick Airport South
West Sussex
RH6 0YR
rick.chatfield@caa.co.uk

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Telephone 01293 768512 rick.chatfield@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 Freedom of Information Act to appeal against the decision by contacting the Information Commissioner at:-

Information Commissioner's Office
FOI/EIR Complaints Resolution
Wycliffe House
Water Lane
Wilmslow
Cheshire
SK9 5AF
www.ico.gov.uk/complaints.aspx

Should you wish to make further Freedom of Information requests, please use the e-form at <http://www.caa.co.uk/foi>.

Yours sincerely

Rick Chatfield
FoIA & EIR Case 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.

PubRel

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Safety Regulation Group

Safety Investigation & Data Department

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These records were retrieved from the UK CAA Mandatory Occurrence Reporting (MOR) system by a member of SIDD

The MOR system records include information reported to the CAA, information obtained from CAA investigations, and deductions by CAA staff based on the available information. The authenticity of the contents or the absence of errors and omissions cannot be guaranteed. Records in this system commenced on 1 January 1976 coincident with the introduction of Mandatory Occurrence Reporting in the UK, but occurrences reported voluntarily are also included, and no distinction is made between them.

Note: Any data provided from these records are made available on the understanding that they are only to be used for purposes of flight safety and must not be used for other purposes.

SUBJECT: Reportable Occurrences That Involve Helicopters Suffering From Turbulence Or Hot Gas Ingestion On Or Near Offshore Helidecks.
PERIOD : 01 Jan 2000 to 09 June 2009 Inclusive.

A/C Type :	SA365 Dauphin	Occurrence Number :	200302423
Flight Phase :	Landing	Occurrence Date :	18 Apr 2003
Classification :	Occurrences	Location :	Irish Sea
Events :	Turbulence Problems	Location Info :	

Pretitle :

Severe turbulence encountered during landing onto platform.

Precis :

With surface 'wind lanes' appearing to show a wind of approximately 080-085 deg, the P1 elected for a 'straight in' approach to remain clear of turbulence from the platform's flare. A slower than normal approach was made in light to moderate turbulence up to committal point, but just afterwards and while passing over the deck edge, the aircraft experienced a sudden and rapid descent. The collective was rapidly increased to 100% Tq resulting in Nr decay, causing the 'Low Nr' audio warning to be heard over the cabin speaker system. The descent was arrested at approximately 6ft above deck level. A further wind check from the radio operator reported as 090/18. The flight crew elected for 'offset' approach for further approaches onto the platform, which were flown without further incident.

A/C Type :	SA332 Super Puma	Occurrence Number :	200405915
Flight Phase :	Approach	Occurrence Date :	25 Aug 2004
Classification :	Occurrences	Location :	Montrose A

Note: Any data provided from these records are made available on the understanding that they are only to be used for purposes of flight safety and must not be used for other purposes.

Events :	Hard Landing Turbulence Problems	Location Info :	Offshore Helideck
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Pretitle :
Heavy landing.

Precis :
On approach to the hover over the deck of an offshore installation, the aircraft sank rapidly towards the deck. As power was applied to arrest the RoD, the aircraft bounced momentarily before settling on deck towards the rear of the circle. Once settled on deck it was noticed that the turbine exhaust was flowing over the deck. Reported OAT +16deg C, aircraft OAT reading +24deg C, W/V 005/15kt. Approach and landing were made into wind. Aircraft weight on landing and take off 8460kg. On take off 16deg pitch required to establish the hover. On departure 80% torque used.

A/C Type :	SA332 Super Puma	Occurrence Number :	200408390
Flight Phase :	Descent	Occurrence Date :	17 Nov 2004
Classification :	Occurrences	Location :	Sumburgh (SUM)
Events :	Engine Malfunction A/c Equipment / System Failure Emergency Call Diversion /Return Turbulence Problems	Location Info :	Nr

Pretitle :
PAN declared due to chip warning and unassociated electrical warnings following turbulence. Diversion to Sumburgh. Mag plugs contaminated and lighting PCB faulty.

Precis :
Severe turbulence was encountered during descent towards Schiehallion and the ROC/ROD exceeded 2500fpm. Nr2 engine chip light then illuminated with associated warnings and emergency checklist was complied with. A decision was taken to divert to Sumburgh when a second (less severe) period of turbulence was encountered with very heavy rain and gusts. A "De-Ice" warning then illuminated on the CWP and on checking the overhead panel, it was noted that all lights had illuminated (heating, electrics, fire extinguishers, OEI etc.). All electrical flows showed normal indications, which suggested that there were no electrical flow problems. The emergency checklist was consulted but no check covered the actual indications and there were no indications on the CWP other than "De-Ice". A PAN was declared as the warning lights on the overhead panel were now redundant and no indications were found as to the cause of the problem. A descent to 1000ft was made to allow early visual contact by the crew of the Coastguard aircraft that had been scrambled to carry out shepherding duties to Sumburgh. On arrival at Sumburgh the nr2 engine chip detector and mag plugs were inspected. No chips were evident but the mag plugs were being bridged by carbon sludge. There was also evidence of this sludge on the nr5 bearing scavenge plug. Plugs cleaned and oil changed with no further occurrence. The reporter suspects that the severe turbulence may have dislodged the carbon material from the oil system. A recurrent inspection has been raised to check this area after every flight, for the next 50 hours. The reason that the overhead panel warning lights illuminated has been traced to a faulty lighting PCB (p/n FE514COMJ5), which was replaced. This PCB is also the control for the air conditioning exhaust fan. When the fan is switched on all warning lights would illuminate, when switched off they extinguish. Total airframe hours 731.

A/C Type :	SA332 Super Puma	Occurrence Number :	200507149
Flight Phase :	Landing	Occurrence Date :	31 Aug 2005
Classification :	Occurrences	Location :	Brent C
Events :	Turbulence Problems	Location Info :	

Pretitle :
Severe turbulence on oil rig and radiant heat from rig flare.

Precis :

On final approach to the Brent 'C' offshore platform, all checks were completed and the handling pilot (HP) gave a briefing, which included comments on the large flare, platform mounted turbine exhausts and derrick position. Turbulence was expected during the final stages of approach as per the IVLL. An early committal was given as the escape route to the left was no longer available. Shortly thereafter the HP heard the low Nr horn followed by "Overtorque" from the NHP, with an associated sink from the aircraft. The collective was lowered to maintain Nr and the aircraft landed normally from the hover. Once on deck OAT was reading +24 deg C and the radiant heat from the rig flare was intense. IHUMs indicated NG and T4 exceedance from each engine but no overtorque. The reporter notes that the flare from the Brent 'C' was at least 100ft long and that the associated hot air, coupled with the platform's turbine exhausts, was being recirculated around the platform and the helicopter approach path by 25-40kt winds. The Operator has now published an Operations Circular which addresses landing weights for the AS332, EC225 and S92 Aircraft when operating to the Brent C platform. A turbulent sector limitation is identified with restrictions in landing weights applied when the wind strength exceeds 25 kts. The Circular will remain extant until the amendment of the HLL.

A/C Type :	Bell 412	Occurrence Number :	200611494
Flight Phase :	Landing	Occurrence Date :	27 Sep 2006
Classification :	All Other Accidents	Location :	Oil Rig
Events :	Reportable Accident Collision - Ground/Water/Object (Not CFIT Not AD) Turbulence Problems Diversion /Return	Location Info :	Nr Port Harcourt

Pretitle :

AAIB Initial Notification: Turbulence/vibration on landing. M/R blades struck rig leg. Pilot lost sight of helideck. Diverted to adjacent rig. Subject to Nigerian authority investigation.

Precis :

Severe damage to tips of all four main rotor blades. No injuries to eight POB. This occurrence is subject to investigation by the Nigerian Authority. On receipt of their report, the CAA's records will be updated accordingly and the occurrence may be re-opened if further action is deemed necessary.

A/C Type :	SA332 Super Puma	Occurrence Number :	200800236
Flight Phase :	Approach	Occurrence Date :	11 Jan 2008
Classification :	Occurrences	Location :	Buzzard Platform
Events :	Turbulence Problems Loss of A/c Control Contingency Miscellaneous Non-AD Occurrence	Location Info :	Outer Moray Firth

Pretitle :

Go-around due to faster than expected closure rate to offshore rig after incorrect wind speed/direction supplied by rig radio operator.

Precis :

On approach to Buzzard at night, rig wind was given as 180/12, visibility 6nm and cloud base 1000ft. Rig became visible with approx 4nm to run at 700ft over the surface. On approach, handling pilot noticed that closure rate to rig appeared high for wind speed given. Approaching helideck pilot was still unhappy with approach and performed a go-around. Second approach commenced visually when the handling pilot noted that the wind was coming from a more easterly direction. A normal landing was carried out, the wind on deck was 110 to 120deg at approx 10 to 15kts. Buzzard radio operator then confirmed that rig's wind equipment was unserviceable and that he was obtaining wind information from standby vessel. The standby vessel may be a mile away and 200ft lower than the

destination helideck, so there may be significant variations between wind reported at the standby vessel and the helideck landing area. The operator has spoken with the rig operating company to agree that pilots will be advised, when applicable, that reported wind is measured at the standby vessel.

A/C Type :	SA332 Super Puma	Occurrence Number :	200800439
Flight Phase :	Landing	Occurrence Date :	13 Jan 2008
Classification :	Occurrences	Location :	Oil Rig
Events :	Turbulence Problems Loss of A/c Control	Location Info :	

Pretitle :

Aborted landing on offshore platform carried out from 10ft due to severe turbulence leading to loss of cyclic and tail rotor control. Potential hazard.

Precis :

A/c (weight 8.2 tonnes) tasked to land on the FOR A offshore platform with wind velocity (W/V) reported as 190 deg, 37 kts gusting 44 kts. Restricted landing arc on the FOR A in HLL is 175 to 205 deg. Landings are prohibited with W/V above 45 kts and when the W/V is between 25-45 kts the MLW is restricted to 8.9 tonnes. A final approach was flown to the deck with caution as moderate turbulence was expected. Also the FOR A obstacle environment had been altered with the addition of a new turbine housing located approximately 190 degrees from the helideck. At approx 20ft above the deck, severe turbulence resulted in a temporary loss of tail rotor control, which was recovered at approximately 10ft above the deck. This was followed by severe turbulence at 10ft leading to a loss of cyclic and tail rotor control, to the point that the a/c was no longer responding correctly to cyclic and pedal inputs. As an uncontrollable impact with the deck was imminent the landing was aborted and full collective applied to clear the deck and transition to forward flight. The reporter considers that the addition of the new turbine housing on this deck presents an unacceptable risk to the a/c operating within the current HLL limitations. A/c weighed 8.2 tonnes during this approach but in accordance with the HLL a/c could have operated up to 8.9 tonnes. The operator has examined the flight data and determined that the aircraft, though subjected to considerable turbulence, was responding to pilot control inputs and not therefore 'out of control' as reported in the MOR. A Temporary Limitation Notice that was imposed immediately after the occurrence has since been lifted. Additionally, the rig operator has been requested to follow up the rig modification process to determine why rig design 'best practice' (CAP 437) was not followed, and to encourage crews to report unexpected changes to rig helideck areas.

Number of Records : 7