

SERIOUS INCIDENT

| | |
|--|--|
| Aircraft Type and Registration: | Airbus A300b4-622R(F), D-AEAD |
| No & Type of Engines: | 2 Pratt and Witney PW4158 turbofan engines |
| Year of Manufacture: | 1991 |
| Date & Time (UTC): | 26 February 2019 at 2302 hrs |
| Location: | London Heathrow Airport |
| Type of Flight: | Commercial Air Transport (Cargo) |
| Persons on Board: | Crew - 3 Passengers - None |
| Injuries: | Crew - None Passengers - N/A |
| Nature of Damage: | None reported |
| Commander's Licence: | Airline Transport Pilots Licence |
| Commander's Age: | Not relevant |
| Commander's Flying Experience: | Not relevant |
| Information Source: | Aircraft Accident Report Form submitted by the pilot |

Synopsis

The aircraft's takeoff clearance was cancelled because a maintenance vehicle that had been manoeuvring on an adjacent taxiway entered the runway. The vehicle driver had become disorientated.

History of the flight

Temporary work was due to take place overnight on several taxiways in close proximity to Runway 09R, which included an entry point onto the runway. The work was planned to start after the night flight curfew came into force at 2330 hrs and, before it could commence, the work area was to be protected by a series of cones and glim¹ lights placed across the taxiways involved.

The coning-off work was due to be done by two contractors operating from their company vehicle. Both contractors held A Class airside driving permits, which allowed them to drive on airside roadways and aprons, but not on taxiways or runways. As was normal practice, the contractors were permitted to drive on taxiways for the purpose of doing the work if accompanied by a suitably qualified member of the airport's operations staff. Both of the contractors had laid cones on previous occasions, including for this area of work the night before the incident, and had been supervised by a number of different operations staff in doing so.

Footnote

¹ A type of mobile and temporary battery-operated lighting used on aerodrome manoeuvring areas.

The procedure for coning-off sections of taxiway was laid out in the airport's Airside Local Operating Procedures (ALOP). This included the requirement for a member of the airport's operations staff to position Bolton barriers² across any access points onto the runway, to act as a final safety barrier in stopping people or vehicles straying onto the runway. The instructions did not state at which point in the procedure the Bolton barriers needed to be in place.

About an hour before the work was due to commence, the contractors had attended a general brief about the work to be done that night. This did not include any detail of the proposed coning-off work to be done but the two contractors were told to follow the airport operations department vehicle when it arrived shortly before 2330 hrs. The operations vehicle was driven by a Senior Airfield Officer (SAO) who had been given the task of supervising the coning-off work and placing Bolton barriers across the runway access point within the work area. The SAO's vehicle was equipped with an illuminated 'Follow Me' sign which he had intended to switch on but had overlooked.

The SAO drove out to the works area, followed by the contractors. He was concerned that an aircraft due to depart shortly before the night curfew may need to use some of the taxiways being coned-off and decided to delay starting the work. On arriving at the work area he therefore parked his vehicle to wait for the aircraft to depart. The contractors were unaware of this decision and on reaching the area had placed a row of cones and lights across the first taxiway to be coned off. This was close to where the SAO had parked and, when they had finished, the contractors expected to see the SAO drive on to the next point to be coned-off. When the SAO's vehicle didn't move, the contractors assumed they were expected to continue on their own, as they had done with other supervisors in the past, and drove on. The SAO saw the contractors drive off and chased after them in his vehicle, sounding his horn to get their attention, but without success.

The contractors expected to see the Bolton barriers delineating the entrance to the runway but, when they couldn't, became disorientated and drove onto the active runway. At this time an aircraft was lining up at the threshold of the runway, some distance away, and had been given clearance to take off. The SAO immediately contacted ATC to advise them of the runway incursion and ATC cancelled the takeoff clearance before the aircraft had started its takeoff roll. The contractors, realising they were on the runway, turned around and vacated the runway as quickly as possible.

Additional information

Training for the A Class airside driving permit does not include information on manoeuvring area or runway markings and lighting, although it does include training on the markings delineating roadways and aprons from manoeuvring areas.

Footnote

² A barrier made up of a number of red and white reflective panels, normally towed into position by a vehicle, used to block taxiways and runway access points. Several barriers may be joined together to obtain the desired length.

Briefing material provided by the contracting company undertaking the work included information on setting up cones and the care required when working in proximity to a runway. The contractor driving the vehicle at the time of the occurrence had signed to show he had read and understood the briefing material some months before the incident. However, the standard of his English may have affected his ability to both read and understand the documents.

Investigation by the airport operator

The incident was investigated by the airport's safety department, as a result of which a number of actions were taken.

It was considered that, as most drivers undergoing training for the A Class driving permit would never need to drive in the vicinity of a runway, the existing training was adequate. However, the airport has now produced a runway safety guide for those drivers required to drive, escorted, on manoeuvring areas. The guide is intended to enable drivers with an A class permit to recognise runway entry points and their associated safety features, such as illuminated red stop bars, runway guard amber lights, signs and ground markings.

A Temporary Advice Notice (TAN) has been issued, amending the ALOP taxiway closure procedures by requiring, where necessary, Bolton barriers to be in place before the commencement of any work by contractors. Also, an associated Safety Alert was issued to companies working at the airport advising them of the amendment.

Analysis

Both parties were apparently sufficiently comfortable with the task of closing off the taxiways that neither sought to discuss how they would go about it with the other before commencing. This resulted in a difference in expectations between the SAO and the contractors and demonstrates the importance of ensuring that both those being supervised, and their supervisors, have a clear understanding of each other's intentions.

The airport has now provided additional information to enable drivers to better understand hazards when driving away from roadways and aprons. It is important that this information is not only available to, but also understood by, those for whom it is intended.

This incident highlights the safety benefits of placing Bolton barriers across runway access points to avoid vehicles entering it accidentally. Although the instruction in force at the time did not require the barriers to be put in place before starting any work, the SAO had intended to do this early in the process. The revised ALOP now require this and may reduce the opportunity for another runway incursion in similar circumstances.

Safety actions

- A runway safety guide has been produced by Heathrow Airport Limited for issue to contractors holding A Class driving permits but driving airside on manoeuvring areas and runways.
- A Temporary Advice Notice (Airside_ASD_TAN_0119) has been published updating procedures for setting up work sites adjacent to runways, including the requirement to place Bolton barriers across runway access points prior to any work commencing.
- A Safety Alert (ASWorks_SA_017) has been issued to contractors at the airport advising of the updated procedures.