

## PART 1.3 – NARRATIVE OF EVENTS

All times local (Zulu plus 1 hour).

### Background.

1. **Overview.** On 25 Aug 11, Chinook HC Mk 3 ZH898, callsign Pegasus 2, departed RAF Odiham at 1335 hrs as part of a formation of 2 aircraft, to conduct a programmed training sortie as part of the Operational Conversion Flight (OCF) syllabus. The crew of ZH898 consisted of 2 student pilots, 2 student crewmen, a Qualified Helicopter Instructor (QHI), a Qualified Helicopter Crewman Instructor (QHCI) and a service passenger. The formation planned to fly to Abingdon airfield via a training field before completing a change of student crew and reversing the route back to RAF Odiham. The aim was to introduce the student crews to tactical formation at low level (below 500ft minimum separation distance) in both lead and trail positions; including staged descents from 500ft above ground level (AGL) to 50ft AGL on each of the four legs. The outbound leg to Abingdon was flown without incident. Following the student crew change at Abingdon, the aircraft departed with Pegasus 1 leading the formation. At approximately 1455 hrs, in the vicinity of Uffington (Grid SU296892) Pegasus 2 overflew a pair of horse riders. One rider fell from her horse and suffered serious injuries. The fallen rider was observed by the non-operating student pilot who was positioned in the rear cabin. The formation climbed to an appropriate height to investigate and render assistance. Having requested support from the emergency services, and content the situation was being attended to, the formation returned to RAF Odiham.

Witness 1  
Witness 2  
Witness 3  
Exhibit 4  
Exhibit 8  
Exhibit 24  
Exhibit 37  
Exhibit 38

2. **Aircraft history.** Two Chinook HC Mk 3 aircraft, ZH902 and ZH901 were allocated to Pegasus formation for the sortie. On start, ZH901 was found to be unserviceable (U/S) so the spare aircraft, ZH898, was taken by the crew of Pegasus 2. ZH898 had a Before Flight (BF) service at 0500 hrs, with the F705(Chinook) signed by the F700C Co-ordinator at 1205 hrs. ZH902 had a BF at 0800 hrs and the F700C was signed as co-ordinated at 1130 hrs. Both captains reported their aircraft's RADALTs as being serviceable, having routinely tested them before flight and confirmed as such during the rotors running crew change conducted by the crew of ZH898 on completion of the sortie.

Witness 1  
Witness 2  
Exhibit 3  
Exhibit 4  
Exhibit 35  
Exhibit 36

### 3. Crew background.

a. The QHI, who was the captain of ZH898, commenced training on the Chinook in Jun 05. He was awarded Limited Combat Ready (LCR) in Feb 06 and qualified as a Combat Ready (CR) pilot following an operational tour in Afghanistan in 07. He completed the QHI course in Dec 10 and had been instructing on the OCF for 5 ½ months as a B2 at the time of the incident. His total flying hours amounted to 1792, with 166 instructional hours between the aircraft and the simulator.

Exhibit 41  
Exhibit 42  
Exhibit 46  
Exhibit 66

b. The QHCI of Pegasus 2 joined the Chinook Force straight from initial training, achieving LCR status in Mar 05. Awarded CR status in Nov 05, he attained 6 years operational experience before attending the QHCI course in Jan 11. He had been instructing for 56 days at the time of the incident, with 22 hours instructional time logged from a total flying experience of 2340 hours.

Exhibit 41  
Exhibit 54  
Exhibit 67



## **RESTRICTED—SERVICE INQUIRY**

- c. The student handling pilot at the time of the incident had many years fixed wing aviation experience, primarily from the Jaguar aircraft. He had recorded 78 hours flying time on Chinooks and had flown rotary aircraft since Dec 09. He had 3600 hours total flying experience. Witness 7  
Exhibit 41
- d. The non-operating pilot was an ab initio student with 329 total flying hours, with 81 hours Chinook. Exhibit 41
- e. The No 1 student crewman had recorded 87 hours of Chinook flying and 188 hours total flying. Exhibit 55
- f. The No 2 student crewman had recorded 99 hours of Chinook flying and 193 hours total flying. Exhibit 56
4. **Sortie background.** Conducted by the Chinook OCF of 18 (B) Sqn at RAF Odiham, Number 41 Chinook Long (CL) course had commenced in May 11 and was running approximately 2 weeks behind schedule at the time of the incident. The programmed sortie, introduction to formation (CL OP 04), was generated on STARS on 17 Aug 11. This sortie included an additional training objective of Low Flying (LF) to not below 50ft AGL. Witness 7  
Exhibit 24  
Exhibit 26
5. **Previous 24 hours.** The majority of the crewmembers had flown the previous day with the last landing reported at 1534 hrs. One crewman had been organising an Air Training Corps summer camp at nearby Bramley Training Area, following his normal working day, however he had returned home and was in bed by 2230 hrs. All crews stated that they were fully rested when they commenced duty on 25 Aug 11. Witness 1  
Witness 2  
Witness 3  
Witness 7  
Witness 9-14  
Witness 17
6. **Sortie preparation, brief and authorisation.** Following the morning brief, which all crews attended, the QHIs nominated two training fields, Galtee A & E, and Abingdon airfield as features the student crew should use to plan the sortie route. The planning was conducted by the student crews; the maps were produced on the Advanced Mission Planning Aid (AMPA) (Fig 1.3-1). The formation brief was conducted at 1130 hrs by the students, with crews splitting for individual aircraft briefs on completion. Both aircraft QHIs, who were the captains of the 2 aircraft, further elaborated on the intended sortie, including discussion on flight down to 50ft AGL. Authorisation was achieved through an extended out brief by both aircraft captains with the Duty Authoriser (DA). Authorisation sheets were generated on STARS and detailed the requirements for operation down to 50ft AGL, 30ft minimum separation criteria (MSC) and the inclusion of a service passenger on Pegasus 2. Witness 1  
Witness 2  
Witness 3  
Witness 4  
Witness 7  
Witness 9-14  
Witness 17  
Exhibit 3  
Exhibit 4  
Exhibit 7  
Exhibit 8



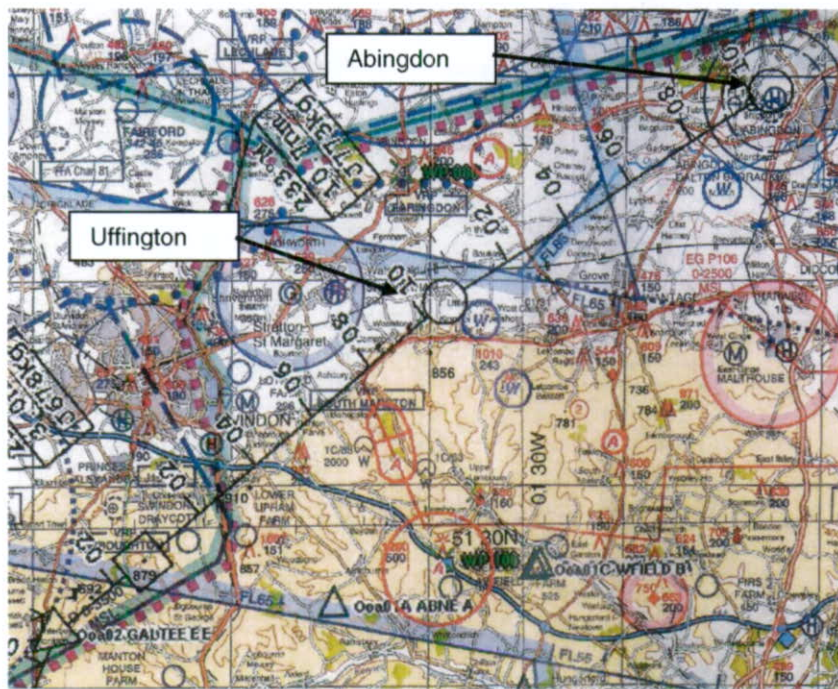


Fig 1.3-1. Relevant section of Pegasus formation's planned return route.

7. **Sortie pre-incident events.** The weather was greater than 10 km visibility and cloud base above 3000ft. As a result of the change of aircraft prior to departure, the formation lifted 37 minutes later than planned and departed on their planned route. With RADALTs set in accordance with standard operating procedures (SOPs), the formation stepped down in height, initially instructing formation station keeping at 500ft AGL then progressively lowering their height to 100ft AGL. Finally the height was reduced to not below 50ft AGL. The aircraft then conducted a pre-planned swap of the lead and continued along a similar height profile without incident to Abingdon. Having completed 20 minutes of general handling at Abingdon, and executed a front seat student crew change, Pegasus formation departed the airfield at approximately 1445 hrs. Pegasus 1 was leading the formation on the reverse of the outbound route.

Exhibit 5  
Exhibit 7  
Exhibit 37  
Witness 1  
Witness 2

8. **Rider pre-incident events.** The two riders involved in the incident met at 1400 hrs, at stables just south west of Uffington, for a 1 hour local ride on minor roads around the village. One rider was dressed in a high visibility jacket. At approximately 1415 hrs while outbound to Woolstone they observed a pair of Chinooks flying in a north easterly direction, 200-400m northwest of their position (Fig 1.3-2). At 1455 hrs they were returning to Uffington from the west, along a minor road that had a high hedgerow on the northern side.

Witness 5  
Witness 6



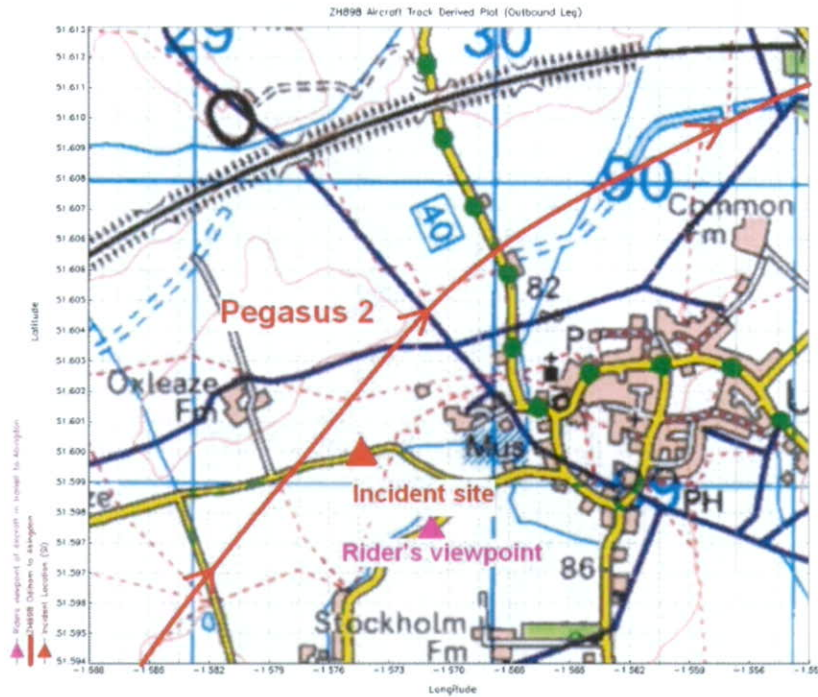


Fig 1.3-2. Plotted trace of ZH898 outbound track.

### Incident sequence

9. **Incident events.** The horse riders heard a helicopter and, through a gap in the hedge, one of them observed an aircraft pass clear to the north of their position. They then heard a second aircraft approaching but could not identify its location. At approximately 1455 hrs, Pegasus formation was transiting in a south westerly direction, just north of Uffington (Grid SU296892), operating at pilot reported RADALT heights between 80ft AGL – 100ft AGL with ZH898 offset to the left of the lead aircraft. Unaware of the riders' location, with their section of road obscured by the tall hedgerow, ZH898 directly overflew the riders' position (Fig 1.3-3).

Exhibit 37

Exhibit 37  
Witness 1  
Witness 2  
Witness 5  
Witness 6



Exhibit 58

Fig 1.3-3. Incident location.



10. **Post incident actions.** The non-operating student pilot, who was positioned in the forward starboard door, and the only member of either crew to observe the incident, reported that he had seen a rider fall from a horse directly below them. On hearing this the aircraft captain immediately directed the handling pilot to climb to 1000ft and similarly advised Pegasus 1 to climb to 500ft, adding that they had ‘..just knocked someone off a horse.’ Pressing the ‘MARK FIX’ button on the Control Display Navigation Unit (CDNU) to store the approximated grid of the incident, he requested the No 2 crewmen plot the location. Mindful of causing further disturbance he declared his intention to return to the site at 1000ft to confirm the incident. With Pegasus 1 holding 2nm clear to the west and now at 1000ft, ZH898 returned to the grid location. Noting a rider had been unseated from her horse, and was being attended to by the other rider and passers-by, the aircraft captain transmitted a radio message to Benson Approach requesting assistance from the emergency services. Believing he could no longer be of assistance overhead the incident site he advised Benson Approach he was terminating his sortie to return to base and requested that his intentions were passed to 18(B) Sqn at RAF Odiham. Joining the formation lead aircraft, ZH898 led the formation back to base at 1000ft.

Exhibit 37  
Witness 1  
Witness 2  
Witness 3

11. **Return to RAF Odiham.** The crew of ZH898 made initial contact with the RAF Odiham Approach controller at 1509 hrs and requested instructions from the 18(B) Sqn DA. At 1512 hrs the Approach controller advised Pegasus formation to conduct a rotors running re-fuel (RRRF) prior to a rotors running crew change (RRCC). Having arrived back at base at 1520 hrs they taxied for the southern refuel point, with ZH898 going straight for a RRRF and Pegasus 1 landing on the southern grass to await their turn. At 1542 hrs, with ZH898 having completed a RRCC, (with the new crew assuming the callsign Vortex 554) and with Pegasus 1 taxiing to conduct a RRCC, the Tower controller advised both aircraft to return to dispersal to shut down. Following confusion between Vortex 554 and Pegasus 1 the 18(B) Sqn DA, passed a message via the Tower controller, advising both callsigns to remain at RAF Odiham but continue rotors running to await further instructions. Support Helicopter Force HQ (SHFHQ) using the unrecognised callsign ‘Domain’, then advised both callsigns to return to dispersal and shut down to preserve the evidence. Confirmation was sought by the crews of both Vortex 554 and Pegasus 1 and a subsequent message from the 18(B) Sqn DA, via the Tower controller, was passed to confirm both callsigns were required to shut down. Having completed the aircraft technical documentation both captains reported to 18(B) Sqn, by which time the Station Flight Safety Officer (SFSO) had impounded the sortie authorisation sheets and the charts used during the sortie. The crew made hot statements and the ZH898 Data Acquisition Processing Unit (DAPU)/ Health and Usage Monitoring System (HUMS) cards were removed. These were forwarded to QinetiQ Boscombe Down for data extraction.

Exhibit 20  
Exhibit 33  
Exhibit 64  
Witness 1  
Witness 2  
Witness 8  
Witness 15  
Witness 16

#### **Low flying complaints.**

12. Three low flying complaints were recorded from this incident. One from the second horse rider at the incident, one from a friend of the injured rider from the nearby village of Baulking (two miles north east of Uffington), one further complaint from another horse-owning resident of Uffington.

Exhibit 1a  
Exhibit 1b  
Exhibit 1c

13. To ensure impartiality the Panel chose not to review the independent Defence Flying Complaint Investigation Team’s report into these flying complaints.