



Defence  
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# **Service Inquiry**

Puma XW229

11 Oct 15

Defence Accident  
Investigation Branch

**PART 1.1 – COVERING NOTE**

SI/18/15/XW229

15 Sep 16

DG DSA

**SERVICE INQUIRY INVESTIGATION INTO ACCIDENT INVOLVING A PUMA HC MK 2 XW229 AT HEADQUARTERS RESOLUTE SUPPORT, KABUL, AFGHANISTAN ON 11 OCT 15**

1. The Service Inquiry Panel assembled at Farnborough, on the 15 Oct 15 by order of the DG DSA for the purpose of investigating the accident involving Puma HC Mk2 XW229 on 11 Oct 15 and to make recommendations in order to prevent recurrence. The Panel has concluded its inquiries and submits the provisional report for the Convening Authority's consideration.

2. The following inquiry papers are enclosed:

Part 1 (The Report)

Part 1.1 Covering Note

Part 1.2 Convening Orders & TORs

Part 1.3 Narrative of Events

Part 1.4 Analysis and Findings

Part 1.5 Recommendations

Part 1.6 Convening Authority Comments

Part 2 (The Record of Proceedings)

Part 2.1 Diary of Events

Part 2.2 List of Witnesses

Part 2.3 Witnesses Statements

Part 2.4 List of Attendees

Part 2.5 List of Exhibits

Part 2.6 Exhibits

Part 2.7 List of Annexes

Part 2.8 Annexes

Part 2.9 Schedule of matters Not Germane

Part 2.10 Master Schedule

**PRESIDENT**

██████████  
Commander Royal Navy  
President  
XW229 SI

**MEMBERS**

██████████  
Major  
Engineering Member  
XW229 SI

██████████  
Squadron Leader  
Aircrew Member  
XW229 SI

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## **PART 1.2**

### **Convening Order including Terms of Reference**

#### **Glossary**



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# Service Inquiry Convening Order

15 Oct 15

SI President  
SI Members

Hd Defence AIB  
DSA Legad

Copy to:

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PSO/CAS  
PSO/Comd JFC  
MA/CJO

MA/D MAA  
MA/Comd JHC  
Stn Cdr Benson

## DSA DG/SI/05/15 – CONVENING ORDER FOR THE SERVICE INQUIRY INTO THE AIRCRAFT ACCIDENT INVOLVING PUMA MK2 XW229 ON 11 OCT 15 AT 1625(D) IN KABUL, AFGHANISTAN.

1. A Service Inquiry (SI) is to be held under Section 343 of Armed Forces Act 2006 and in accordance with JSP 832 – Guide to Service Inquiries (Issue 1.0 Oct 08).
2. The purpose of this SI is to investigate the circumstances surrounding the subject aircraft accident and to make recommendations in order to prevent recurrence.
3. The SI Panel will formally convene at the Defence Accident Investigation Branch (Defence AIB), Farnborough at 0930Z on Thu 15 Oct 15 prior to deploying to theatre.
4. The SI Panel comprises:
  - President: Cdr [REDACTED] RN [REDACTED]
  - Members: Sqd Ldr [REDACTED] RAF [REDACTED]  
Maj [REDACTED] REME [REDACTED]
5. The legal advisor to the SI is Maj [REDACTED] (DSA Legad) and technical investigation/inquiry assistance is to be provided by the Defence Accident Investigation Branch (Defence AIB).
6. The SI is to investigate and report on the facts relating to the matters specified in its Terms of Reference (TOR) and otherwise to comply with those TOR (at Annex). It is to record all evidence and express opinions as directed in the TOR.



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7. Attendance at the SI by advisors/observers is limited to the following:

**Head Defence AIB – Unrestricted Attendance.**

**Defence AIB investigators in their capacity as advisors to the SI Panel – Unrestricted Attendance<sup>1</sup>.**

**██████████ and ██████████, RAFCAM HF Psychologists – Unrestricted Attendance**

**USA Military Observer – name tbc**

**French Military Observer – name tbc**

8. On return from theatre the SI Panel will work initially from the Defence Accident Investigation Branch facilities at Farnborough and Boscombe Down. Permanent working accommodation, equipment and assistance suitable for the nature and duration of the SI will be requested by the SI President in due course.

9. Reasonable costs will be borne by DG DSA under UIN ██████████.

*Original Signed*

R F Garwood  
AM  
DG DSA – Convening Authority

Annex:

A. Terms of Reference for the SI into aircraft occurrence involving Puma Mk2 XW229 on 11 Oct 15 at 1625(D) in Kabul, Afghanistan.

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<sup>1</sup> On a case by case basis as authorised by Hd Defence AIB.

**TERMS OF REFERENCE FOR THE SERVICE INQUIRY INTO THE AIRCRAFT ACCIDENT INVOLVING PUMA MK2 XW229 ON 11 OCT 15 AT 1625(D) IN KABUL, AFGHANISTAN.**

1. As the nominated Inquiry Panel for the subject SI, you are to:
  - a. Investigate and, if possible, determine the cause of the occurrence, together with any contributory, aggravating and other factors and observations.
  - b. Ascertain whether the personnel involved were acting in the course of their duties.
  - c. Examine what policies, orders and instructions were applicable and whether they were complied with.
  - d. Determine the state of serviceability of the aircraft and relevant equipment.
  - e. Establish the level of training, relevant competencies, qualifications and currency of the individuals involved in the activity.
  - f. Review the levels of authority and supervision covering the task during which the incident occurred.
  - g. Identify if the levels of planning and preparation were commensurate with the activities' objectives.
  - h. Investigate and comment on relevant fatigue implications of individuals' activities prior to the matter under investigation.
  - i. Determine any relevant equipment deficiencies.
  - j. Confirm that the aircraft post-crash management procedures were adequate and carried out correctly.
  - k. Determine and comment on any broader organizational and/or resource factors.
  - l. Assess whether the security of personnel, equipment or information was compromised and if so to what degree.
  - m. Ascertain the value of loss/damage to the Service.
  - n. Assess any Health and Safety at Work and Environmental Protection implications in line with JSP 375 and JSP 418.
  - n. Report and make appropriate recommendations to DG DSA.
2. You are to ensure that any material provided to the Inquiry by the United States, or any other foreign state, is properly identified as such, and is marked and handled in accordance with MOD

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security guidance. This material continues to belong to those nations throughout the SI process. Before the SI report is released to a third party, authorization should be sought from the relevant authorities in those nations to release, whether in full or redacted form, any of their material included in the SI report, or amongst the documents supporting it. The relevant NATO European Policy (NEP) or International Policy and Plans (IPP) team should be informed early when dealing with any US or other foreign state material.

3. During the course of your investigations, should you identify a potential conflict of interest between the CA and the Inquiry, you are to pause work and take advice from your DSA Legal Advisor, Hd Defence AIB and DG DSA. Following that advice it may be necessary to reconvene reporting directly to MOD PUS.



**PART 1.2 – GLOSSARY OF TERMS**

|       |   |
|-------|---|
| ACA   | Airspace Control Authority                      |
| ACO   | Airspace Control Order                          |
| ACP   | Airspace Control Plan                           |
| ACP   | Auto-Pilot Caution Panel                        |
| ADS   | Air System Document Set                         |
| AFCS  | Automatic Flight Control System                 |
| AFG   | Aircrew Flying Guide                            |
| AFT   | Annual Flying Task                              |
| AGL   | Above Ground Level                              |
| AH    | Airbus Helicopters                              |
| AHRS  | Attitude and Heading Reference System           |
| AIB   | Accident Investigation Branch                   |
| AIDU  | Aeronautical Information Documents Unit         |
| AIL   | Advance Information Leaflet                     |
| AIP   | Aeronautical Information Publication            |
| AIRAC | Aeronautical Information Regulation And Control |
| ALARP | As Low As Reasonably Practicable                |
| ALM   | Air Load Master                                 |
| AMSL  | Above Mean Sea Level                            |
| ANA   | Afghan National Army                            |
| AO    | Area of Operations                              |
| AOB   | Angle of Bank                                   |
| AP    | Auto-Pilot                                      |
| APG   | Aviation Procedures Guide                       |
| ARM   | Accident Route Matrix                           |
| ASMP  | Air Safety Management Plan                      |
| ASMS  | Air Safety Management System                    |
| ATC   | Air Traffic Control                             |
| ATEC  | Aircraft Test and Evaluation Centre             |
| ATO   | Air Tasking Order                               |
| ATP   | Allied Tactical Publication                     |
| AUM   | All Up Mass                                     |
| AVAD  | Automatic Voice Alert Device                    |
| AWC   | Air Warfare Centre                              |
| BALCS | Body Armour Load Carriage System                |
| BDOC  | Base Defence Operations Centre                  |
| C2    | Command and Control                             |
| CAS   | Calibrated Airspeed                             |
| CAT   | Category  |



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|            |   |
|------------|---|
| CCTV       | Closed Circuit Television                                   |
| CEP        | Communications Ear Plug                                     |
| CFACC      | Combined Forces Air Component Commander                     |
| CFIT       | Controlled Flight into Terrain                              |
| CI         | Command Instruction   |
| CLE        | Clearance with Limited Evidence                             |
| CofC       | Chain of Command  |
| CofG       | Centre of Gravity   |
| COMBRITFOR | Commander British Forces                                    |
| COS(OPS)   | Chief of Staff (Operations)                                 |
| CR         | Combat Ready  |
| CRM        | Crew Resource Management                                    |
| CRR        | Consolidated Risk Register                                  |
| CTAF       | Common Traffic Advisory Frequency                           |
| CVFDR      | Combined Voice and Flight Data Recorder                     |
| CWP        | Caution/Warning Panel (also known as Central Warning Panel) |
| DA         | Density Altitude  |
| DAS        | Defensive Aids Suite  |
| DASOR      | Defence Air Safety Occurrence Report                        |
| DDH        | Delivery Duty Holder  |
| DE&S       | Defence Equipment and Support                               |
| DHAN       | Duty Holder Advice Note                                     |
| DHUD       | Day Head Up Display   |
| DMS        | Dynamic Mission Simulator                                   |
| D-NAC(A)   | Deputy-NATO Air Commander (Afghanistan)                     |
| DNVG       | Display Night Vision Goggles?                               |
| DSG        | Detachment Support Group                                    |
| EA         | Energy Attenuating  |
| EASA       | European Aviation Safety Agency                             |
| EQ         | Environmental Qualification                                 |
| ET         | Environmental Training                                      |
| FAR        | Federal Airworthiness Regulation                            |
| FLT        | Flight  |
| FM         | Frequency Modulation  |
| FOB        | Flying Order Book   |
| FOV        | Field Of View   |
| FP         | Force Protection  |
| FRC        | Flight Reference Cards                                      |
| Ft         | Feet  |
| FY         | Financial Year  |



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|         |   |
|---------|---|
| GDAS    | Graphical Data Analysis System                      |
| GPMG    | General Purpose Machine Gun                         |
| HF      | Human Factors                                       |
| HFACS   | Human Factors Analysis Classification System        |
| HKIA(N) | Hamid Karzai International Airport (North)          |
| HKIA(S) | Hamid Karzai International Airport (South)          |
| HLS     | Helicopter Landing Site                             |
| HMD     | Helmet Mounted Display                              |
| HMS     | Health Monitoring System                            |
| HP      | Handling Pilot                                      |
| HQ      | Headquarters  |
| HQRS    | Headquarters RESOLUTE SUPPORT                       |
| Hr      | Hours   |
| IECD    | In Ear Communication Device                         |
| IFR     | Instrument Flight Rules                             |
| ICAO    | International Civil Aviation Organisation           |
| IOC     | Initial Operating Capability                        |
| JARTS   | Joint Aircraft Recovery and Transportation Squadron |
| JHC     | Joint Helicopter Command                            |
| Kg      | Kilogram  |
| Km      | Kilometre   |
| Kts     | Knots (Aeronautical)                                |
| LCA     | Lateral Cyclic Authority                            |
| LEP     | Life Extension Programme                            |
| LHS     | Left Hand Seat                                      |
| LZ      | Landing Zone  |
| MAA     | Military Aviation Authority                         |
| MATZ    | Military Aerodrome Traffic Zone                     |
| MF700   | MOD Form 700  |
| MGBP    | Main Gear Box Pressure                              |
| MIG     | Materials Integrity Group                           |
| MOB     | Main Operating Base                                 |
| MOD     | Ministry Of Defence                                 |
| MRB     | Main Rotor Blade                                    |
| MRGB    | Main Rotor Gear Box                                 |
| NAS     | Naval Air Squadron                                  |
| NATO    | North Atlantic Treaty Organisation                  |
| Nf      | Power Turbine rotation speed                        |
| NHP     | Non-Handling Pilot                                  |
| NKC     | New Kabul Compound                                  |



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|          |  |
|----------|--|
| Nm       | Nautical Mile  |
| Nr       | Main Rotor rotation speed                            |
| OCC      | Operational Capability Certificate                   |
| ODH      | Operating Duty Holder                                |
| PCM      | Post Crash Management                                |
| PCMIO    | Post Crash Management Incident Officer               |
| PDT      | Pre-Deployment Training                              |
| PJHQ     | Permanent Joint Headquarters                         |
| PPR      | Prior Permission Required                            |
| PT       | Project Team   |
| PTDS     | Persistent Threat Detection System                   |
| PTF      | Puma Training Flight                                 |
| PTL      | Project Team Leader                                  |
| QA       | Quality Assurance                                    |
| RAF      | Royal Air Force                                      |
| RAFCAM   | Royal Air Force Centre of Aviation Medicine          |
| RHS      | Right Hand Seat                                      |
| RMP      | Royal Military Police                                |
| RNAS     | Royal Navy Air Station                               |
| ROZ      | Restricted Operations Zone                           |
| RSOI     | Reception, Staging, Onward Integration               |
| RtL      | Risk to Life   |
| RTS      | Release to Service                                   |
| RTSA     | Release to Service Authority                         |
| RW       | Rotary Wing  |
| RWAMMWAS | Rotary Wing Aircrew Moving Map Wires Alerting System |
| RWOETU   | Rotary Wing Operational Evaluation and Training Unit |
| RWTES    | Rotary Wing Test and Evaluation Squadron             |
| SAS      | Stability Augmentation System                        |
| SA       | Situation Awareness                                  |
| SOC      | Soccer Field Helicopter Landing Site                 |
| SOP      | Standard Operating Procedure                         |
| SQN      | Squadron   |
| SRF      | Sortie Report Form                                   |
| STANAG   | Standardisation Agreement                            |
| STANO    | Standards Officer                                    |
| SUA      | Special Use Airspace                                 |
| TAD      | TORAL Aviation Detachment                            |
| TASI     | Training and Standardisation Instructions            |
| TES      | Theatre Entry Standard                               |





|            |   |
|------------|---|
| TOA        | Transfer of Authority                     |
| TOR        | Terms of Reference                        |
| TQ         | Theatre Qualification                     |
| TR         | Tail Rotor                                |
| TRB        | Tail Rotor Blade                          |
| TRDS       | Tail Rotor Drive Shaft                    |
| TRiM       | Trauma Risk Management                    |
| TTP        | Training, Tactics and Procedures          |
| UASRR      | Unified Air Safety Risk Register          |
| US         | United States                             |
| USAF       | United States Air Force                   |
| VAMP 27    | Ventilated Aviator Moulded Plug 27dB      |
| VFR        | Visual Flight Rules                       |
| W&M        | Weight and Moment                         |
| WSOP (ALM) | Weapons System Operator (Air Load Master) |



**PART 1.3 – NARRATIVE OF EVENTS**

All times Local (ZULU plus 4.5 hours).

**Synopsis**

1.3.1 On 11 Oct 15 at 1623 hours (hrs), a Royal Air Force Puma HC Mk2 Helicopter, tail number XW229, struck the tether<sup>1</sup> of a Persistent Threat Detection System (PTDS) aerostat and crashed onto a road junction within the confines of the NATO Headquarters in Kabul, Afghanistan.

Exhibit 1  
Exhibit 2

1.3.2 The aircraft was the subordinate element of a formation of two Puma aircraft conducting administrative tasking in support of the NATO Mission in Afghanistan.

Exhibit 3  
Exhibit 4  
Exhibit 5

1.3.3 Two crew members (Aircraft Captain and Crewman) and 3 passengers (2 United States (US) military and one French civilian) were killed. The third crew member (Co-pilot) and 3 additional passengers (one US military, one US civilian and one Lithuanian military) suffered various major injuries. One Turkish military bystander sustained major injuries<sup>2</sup>.

Exhibit 6

**Narrative**

1.3.4 On 11 Oct 15 two Pumas were operating as a formation with the callsign ██████████ in support of Operation TORAL<sup>3</sup>; lead aircraft (ZJ955) was ██████████ (A21), the number 2 (XW229) was ██████████ (A22). The day's tasking consisted of 4 scheduled sorties with the first launch at 09:10 hrs and the final landing planned for approximately 1625 hrs.

Exhibit 3  
Exhibit 5  
Exhibit 7  
Exhibit 8

1.3.5 At around 1500 hrs, on completion of the third planned sortie, the formation arrived back at the TORAL Aviation Detachment (TAD)<sup>4</sup>, which was situated on the southern side of Hamid Karzai International Airport (HKIA)<sup>5</sup>, before shutting down for refuelling. At approximately 1510 hrs the crews received an additional task from TAD Operations to transport 2 UK military passengers from the TAD to New Kabul Compound (NKC)<sup>6</sup> in order to collect forensic evidence from a Vehicle Borne Improvised Explosive Device attack against a UK military convoy earlier that day.

Exhibit 9  
Exhibit 11  
Witness 3  
Exhibit 12

1.3.6 Having completed this additional task without incident, A21 and A22 resumed their original tasking at 1617 hrs, approximately 10 mins later than planned.

Exhibit 4  
Exhibit 9  
Exhibit 10

1.3.7 This task was the fourth scheduled sortie of the day involving the transfer of multinational passengers (civilian and military) between numerous Helicopter Landing Sites (HLS) within Kabul. Previous sorties had each lasted approximately 50 mins and this sortie was expected to be similar in duration. Passenger embarkation was not undertaken at the normal loading point due to an on-going

Exhibit 4  
Exhibit 13  
Witness 5  
Witness 3

<sup>1</sup> The tether acted in a mooring capacity as well as providing electrical feeds to/from the aerostat.  
<sup>2</sup> Categorized 'major' due to time in hospital.  
<sup>3</sup> Operation TORAL was the UK's contribution to the NATO mission in Afghanistan – Operation RESOLUTE SUPPORT.  
<sup>4</sup> The TAD was the operating and accommodation facility for the UK Puma detachment.  
<sup>5</sup> The elevation of HKIA was 5877ft Above Mean Sea Level (AMSL).  
<sup>6</sup> NKC was a NATO compound in Kabul.



crash response exercise<sup>7</sup> on the airfield; the different embarkation point required the use of minibuses to move passengers between the HKIA North (N) terminal<sup>8</sup> and the aircraft.

1.3.8 Six passengers were loaded onto each aircraft. However, the transfer of passengers from the minibuses inadvertently resulted in a swap of the manifested passengers between aircraft.

1.3.9 The formation departed HKIA (N) at 1617 hrs initially following the track of Runway 29 before turning to the South East for the 2.4 nm (4.5 km)<sup>9</sup> transit towards HLS SOCCERFIELD (SOC) at Headquarters RESOLUTE SUPPORT (HQRS)<sup>10</sup>. The formation route and key locations are shown in Figure 1.3.1. The aircraft flew 'Trail Formation' which allowed A22 to operate between 2 rotor spans and 2 km from the lead aircraft; the formation transited at a height of 500 ft Above Ground Level (AGL). The reported meteorological conditions at SOC were; wind variable 4 kts, visibility 10 km or greater with no cloud reported.

Witness 5  
Exhibit 5

Exhibit 10  
Exhibit 12  
Exhibit 14

Exhibit 15  
Exhibit 16

Exhibit 10

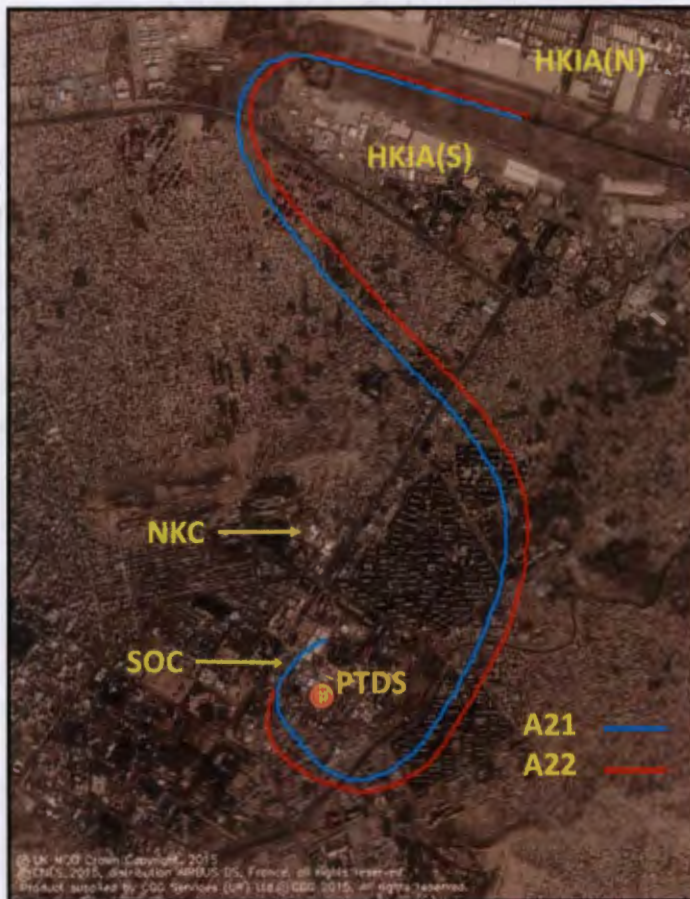


Figure 1.3.1 - Formation route and key locations

<sup>7</sup> The exercise was a Civilian Afghan Airport Authority activity not involving the TAD.  
<sup>8</sup> All passengers routinely departed/arrived at HKIA from a designated passenger handling facility that was located on the north side of the airfield.  
<sup>9</sup> Direct line distance.  
<sup>10</sup> Operation RESOLUTE SUPPORT was the NATO operation in Afghanistan, HQRS is the NATO HQ in Kabul.



1.3.10 Once in the vicinity of HQRS, A21 and A22 established themselves to the east of SOC on a downwind leg<sup>11</sup> orientated south south-west. The formation then completed a right hand turn onto a north north-east final approach path but having descended to approximately 160 ft<sup>12</sup> AGL, elected not to land due to the presence of people playing football at the northern end of the field; they then conducted a go-around.

Exhibit 10  
Witness 3

Exhibit 2  
Exhibit 34

1.3.11 After overflying SOC and routing to the north-east, both aircraft climbed to 500 ft AGL and turned to follow a track similar to the previous downwind leg with A22 remaining in trail formation. During their transit south for a further approach, it became apparent that the HLS was still occupied and A21 conducted a right-hand orbit at 500 ft AGL to the south-east of the HQRS compound. The south eastern corner of the HQRS compound housed the PTDS and associated infrastructure; on 11 Oct 15, the PTDS aerostat, Figure 1.3.2, was operating at a height of 2200 ft AGL.

Exhibit 10  
Witness 3  
Exhibit 17  
Exhibit 18  
Exhibit 19  
Exhibit 34



Figure 1.3.2 - HQRS PTDS in the 'down' position

1.3.12 As the formation passed to the south of the HQRS compound, and as A21 turned through north into a holding orbit, A22 lost sight of the lead aircraft. Shortly afterwards A22 increased its Angle of Bank during a right hand turn and was seen by observers on the ground to impact the PTDS tether.

Exhibit 10  
Exhibit 20  
Exhibit 21  
Exhibit 34

1.3.13 During the orbit, A21 Crewman's attention was drawn to A22 who appeared to be overhead the eastern compound wall and conducting a 'fly by' of the HLS. A21's Crewman assumed that A22 was checking to see if the HLS was clear. Three seconds later A22 transmitted a Mayday call on the inter-aircraft frequency, until this moment, the crew of A21 were unaware that A22 had collided with the PTDS tether.

Exhibit 10  
Exhibit 34  
Witness 5

1.3.14 A further short Mayday call was transmitted 12 seconds later by A22 followed by a transmission of "Throttles". The aircraft was witnessed losing height

Exhibit 10  
Exhibit 2

<sup>11</sup> A downwind leg is generally parallel and opposite to the landing direction.

<sup>12</sup> A21 descended to approximately 160 ft AGL and A22 descended to approximately 175 ft AGL.



and described as being uncontrolled; it impacted the ground within the HQRS compound.

1.3.15 A22 was observed from the ground to have struck the PTDS tether mid-way along the Main Rotor Blades (MRBs) on the right hand side of the aircraft. The tether parted and the PTDS aerostat drifted to the North West; the lower section of tether fell into the PTDS operating site. Eye witnesses reported that immediately prior to the impact with the ground, A22's MRBs were rotating but the Tail Rotor was stationary.

1.3.16 A22 impacted the ground between buildings within the HQRS compound. The location within HQRS is shown in Figure 1.3.3; the aircraft is pictured in Figure 1.3.4. There was no immediate post-crash fire and a considerable number of personnel on the ground assisted in the rescue of the crew and passengers, the first of which was on scene within 15 seconds. As rescue activity progressed the initial responders were joined by the HQRS Fire Service and medical personnel. Numerous hand held fire extinguishers were discharged to mitigate the risk of fire due to leaking fuel; A22 had approximately 350 kg of fuel on board at the time of the accident. Rescue activities continued for approximately 1.5 hours until all crew and passengers were extracted from the aircraft.

Witness 5  
Exhibit 22  
Witness 4  
Exhibit 21  
Exhibit 19  
Exhibit 17  
Exhibit 23

Exhibit 2  
Exhibit 10  
Exhibit 24

Exhibit 25

Exhibit 26



**Figure 1.3.3 - Location of A22 crash site**





**Figure 1.3.4 - Aircraft post-accident**

1.3.17 Following extraction from the aircraft, casualties were taken to the HQRS medical facility for triage. Thereafter, and dependent on the nature of their injuries, they were transferred to medical facilities at HKIA(N) or Bagram Air Base.

Exhibit 6  
Exhibit 27

1.3.18 Post-accident, A21 remained airborne providing a confirmatory Mayday call to Kabul Air Traffic Control Tower and TAD Ops, as well as acting as a communication relay, before landing at SOC to discharge passengers.

Exhibit 10  
Exhibit 28  
Witness 1  
Witness 3

1.3.19 After departure from SOC, A21 climbed to 2000 ft AGL due to concerns about the location of the untethered PTDS aerostat, and held in the overhead before being advised by TAD Ops to return to HKIA. A21 landed at the TAD at 1645 hrs.

Exhibit 28  
Exhibit 29  
Witness 3

**Post-Crash Management**

1.3.20 Post-Crash Management activity was coordinated by a member of the HQRS staff. Once the initial emergency response had finished the site was handed over to the HQRS Base Defence Operations Centre for the ensuing cordon and control. NATO troops were used for the guard force and cordon party throughout with a permanent UK military presence on the crash site being initially provided by the Royal Military Police (RMP) and then the resident infantry battalion. Except where authorised and necessary, the wreckage remained undisturbed between the end of the emergency response and the arrival of the Defence Accident Investigation Branch (AIB) investigators on 13 Oct 15. The initial collection and preservation of evidence was coordinated by the RMP Special Investigation Branch, the Post-Crash Management Incident Officer and TAD staff.

Exhibit 26



**Casualties**

1.3.21 The aircraft Captain and Crewman died as a result of the accident, the Co-pilot sustained major injuries. Three passengers were killed, 2 US Air Force (USAF) personnel and one dual nationality UK/French civilian contractor. The remaining passengers, one USAF, one US civilian contractor and one Lithuanian military all suffered various major injuries. One Turkish military bystander sustained major injuries.

Exhibit 6

1.3.22 The deceased USAF personnel were repatriated to the USA on 14 Oct 15 and the UK and French deceased to the UK on 20 Oct 15. The French national was subsequently repatriated to France. The injured USAF passenger was transferred to Ramstein Air Force Base in Germany on 12 Oct 15 and the Co-pilot to the UK on 13 Oct 15. The Lithuanian casualty was also flown to Ramstein, arriving on 15 Oct 15. The injured US contractor returned to work on the 13 Oct 15 before returning to the US.

Exhibit 27

**Salvage operations**

1.3.23 A Joint Aircraft Recovery and Transportation Squadron (JARTS) team arrived on site 16 Oct 15 and carried out initial assessments of recovery actions and possible routes for movement of wreckage. On completion of Defence AIB evidence gathering on 19 Oct 15, JARTS prepared the wreckage for transportation under the guidance of Defence AIB investigators. Due to transport limitations, access to the crash site and Force Protection considerations for road movement, the wreckage was cut into sections to facilitate transportation. The wreckage was moved by road over 2 nights on 20 and 21 Oct 15 to a secure hangar at HKIA (N). It was subsequently recovered using a RAF C17 to RAF Brize Norton and moved to MOD Boscombe Down on 3 Nov 15 for detailed investigation.

Exhibit 30

**Aircraft and infrastructure damage**

1.3.24 On impact with the ground the aircraft suffered extensive damage. Further significant damage occurred during the rescue response as elements of the airframe were cut away to facilitate the extraction of casualties; this secondary damage was caused by individual actions to manually move airframe structure or by HQRS Fire Service personnel using specialist cutting equipment.

Exhibit 25  
Exhibit 31  
Exhibit 32

1.3.25 Damage to HQRS infrastructure was limited to the MRBs striking an accommodation building's roof and an air conditioning unit. There was some contamination of the HQRS drainage system due to fuel spillage and the extensive use of fire suppressing agents during the immediate response.

Exhibit 2  
Exhibit 26  
Exhibit 32