Aviation Safety Investigation Report 198901562

Aerospatiale AS350B

19 December 1989

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NOTE: All air safety occurrences reported to the ATSB are categorised and recorded. For a detailed explanation on Category definitions please refer to the ATSB website at www.atsb.gov.au.

Occurrence Number: 198901562 Occurrence Type: Accident

Location: 4 km SSW of Williamsford TAS

Date: 19 December 1989 **Time:** 1400

Highest Injury Level: Serious

Injuries:

	Fatal	Serious	Minor	None
Crew	0	0	1	1
Ground	0	1	2	-
Passenger	0	0	0	1
Total	0	1	2	2

Aircraft Details: Aerospatiale AS350B

Registration: VH-HRX **Serial Number:** 1592

Operation Type: Aerial Work Damage Level: Substantial

Departure Point: 3 km W of Williamsford

TAS

Departure Time: 1350

Destination: 3 km W of Williamsford

estination: TAS

Approved for Release: 20th June 1990

Circumstances:

The pilot was operating into a modified platform located in mountainous terrain and built on a steep slope. He had landed there about ten times in the previous forty eight hours, in support of a geological survey team. The weather at the time was fine, with occasional gusts of wind. The pilot held the helicopter skids lightly on the platform, parallel to the heavy loose planks making up the platform, and side on to the slope. It was estimated that the tips of the main rotor blades were about 1.5 metres vertically clear of the slope, with the cyclic control in the neutral position and the rotors at normal operating rpm. One man was present in the rear cabin to receive trays of core samples from four others who carried the trays to the helicopter. The pilot was unable to remember exactly what happened, but the man receiving the core trays into the cabin clearly remembers a very strong wind gust which caused the tail of the helicopter to suddenly swing towards the slope. He was also aware of the cabin moving slightly towards the slope because a core tray suddenly became harder to reach. He was also aware of the left side of the helicopter suddenly lifting slightly prior to massive vibrations consistent with rotor strikes. The main rotor blades clipped the tops of small stumps before striking the ground forward of the stumps. The rotor strikes were so severe that the main rotor and gearbox assembly were torn out of the helicopter and flung 10 metres down the slope. Sudden stoppage forces shattered the engine reduction gearbox and the free turbine, parts of which penetrated the the rear luggage compartment. The rear of the engine caught fire briefly. Injuries sustained by ground personnel occurred as they ran for cover. The helicopter remained upright on the platform. The site did not meet the approved helicopter landing site standards prescribed by the Civil Aviation Authority.

Significant Factors:

The following factors were considered relevant to the development of the accident

- 1. The helicopter landing site contained obstructions likely to interfere with the manoeuvring of the helicopter.
- 2. The helicopter was affected by a strong gust of wind.
- 3. The pilot was unable to prevent the rotor blades striking obstructions at the site.
- 4. It is highly probable that the right side skid settled between the insecure planks of the platform.