Aerospatiale AS355F1, G-WIRE

AAIB Bulletin No: 11/97 Ref: EW/G97/09/02Category: 2.2

Aircraft Type and Registration:	Aerospatiale AS355F1, G-WIRE
No & Type of Engines:	2 Allison 250-C20F turboshaft engines
Year of Manufacture:	1984
Date & Time (UTC):	9 September 1997 at 1520 hrs
Location:	Aber Gorge, North Wales
Type of Flight:	Aerial Work
Persons on Board:	Crew - 1 - Passengers - None
Injuries:	Crew - None - Passengers - N/A
Nature of Damage:	Extensive to main rotor blades, mast assembly and right-hand landing skid and to National Grid power- line
Commander's Licence:	Airline Transport Pilot's Licence (Helicopters)
Commander's Age:	47 years
Commander's Flying Experience:	8,045 hours (of which 4,034 were on type)
	Last 90 days - 123 hours
	Last 28 days - 49 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot and further AAIB enquiries

The helicopter was being used in support ofa power-line refurbishment project in North Wales. It had returnedto a site adjacent to a power-line tower (pylon) to collect anunderslung load of insulators measuring 3.5 metres in length andweighing 700 kg. This was the second pick-up from the locationat which the weather was clear, with visibilty of more than 20km, scattered cloud at 2500 feet, and a north-westerly to northerlywind of 15 kt. The insulators had initially been positioned onthe other side of the tower but had been moved at the commandersrequest to give better access and take-off route.

The commander positioned the helicopter withthe aid of a marshaller standing approximately 100 metresto the front whilst the ground party connected the load to the10 metres strop attached to the load hook. At this stage thehelicopter was about 15 metres from the tower on a heading parallelto the power-line with the wind from 1 o'clock to 3 o'clock. It was below the level of the

bottom power cables but a verticallift would have kept it clear of the cables after which the normalprocedure would have been to depart with a right turn to the north. The commander assessed that the wind was a steady 15 kt at thistime, as had been the case on the earlier pick-up, although guststo 25 kt had been forecast.

A vertical lift was commenced but, with the load clear of theground and as the commander was about to begin the transitionto forward flight, there was a gust of wind which moved the helicopterto the left. The commander countered with right cyclic but theload had by this time swung to the left which had the effect ofmoving the helicopter, which was still climbing, further to theleft. The commander increased the right control input but therotor blades struck and severed the bottom power cable.

Vibration and noise were not too severe and control was retainedso the commander was able to move the helicopter forward and right. He jettisoned the load clear of all ground crew, and completeda run-on landing after which he shut-down the engines and stoppedthe rotors normally.

The commander stated that the accident was due to an isolatedgust of wind and acknowledged that the load may have been positionedtoo close to the tower and cables. A nearby Royal Air Force Stationconfirmed that gusts to 25 kt had been recorded at the time ofthe accident. The operator's procedures have since been revisedto require greater load clearances from obstacles.