

INCIDENT

Aircraft Type and Registration:	Bell 206B, G-TOYZ	
No & Type of Engines:	1 Allison 250-C20J turboshaft engine	
Year of Manufacture:	1986 (Serial no: 3949)	
Date & Time (UTC):	5 September 2022 at 1110 hrs	
Location:	West Usk Lighthouse, Newport, Gwent	
Type of Flight:	Commercial Air Transport (Passenger)	
Persons on Board:	Crew - 1	Passengers - 4
Injuries:	Crew - None	Passengers - None Other - 1
Nature of Damage:	Ties securing a sign were broken	
Commander's Licence:	Commercial Pilot's Licence	
Commander's Age:	27 years	
Commander's Flying Experience:	422 hours (of which 311 were on type) Last 90 days - 136 hours Last 28 days - 73 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot and other enquiries by the AAIB	

Synopsis

During a landing of a Bell 206B Jet Ranger, the combination of downwash and wind caused a sign to detach and strike a waiting passenger, who suffered minor injuries. The sign was not secured properly because the ground crew were distracted and under time pressure. The operator took action to improve the security of the sign, introduce site safety checks and increase the distance between the landing helicopter and waiting passengers.

History of the flight

On 4 September 2022, the operator's staff set up a temporary site in a field at West Usk Lighthouse for the operation of helicopter sightseeing flights (Figure 1). This consisted of a passenger parking, waiting and briefing area delineated by a rope cordon with a gate to 'airside'. A sign was displayed next to the gate and was used as part of passenger briefings before they were escorted to board the helicopter.

During the site set-up cows escaped on to the site from an adjacent field and needed to be removed and secured. The site set-up was then running late, and passengers were arriving and parking in incorrect locations. The sign was secured with two plastic cable ties on the top corners when normally it would be secured with plastic cable ties on all four corners. The sign measured 800 mm x 575 mm x 10 mm and weighed 2 kg (Figure 2).

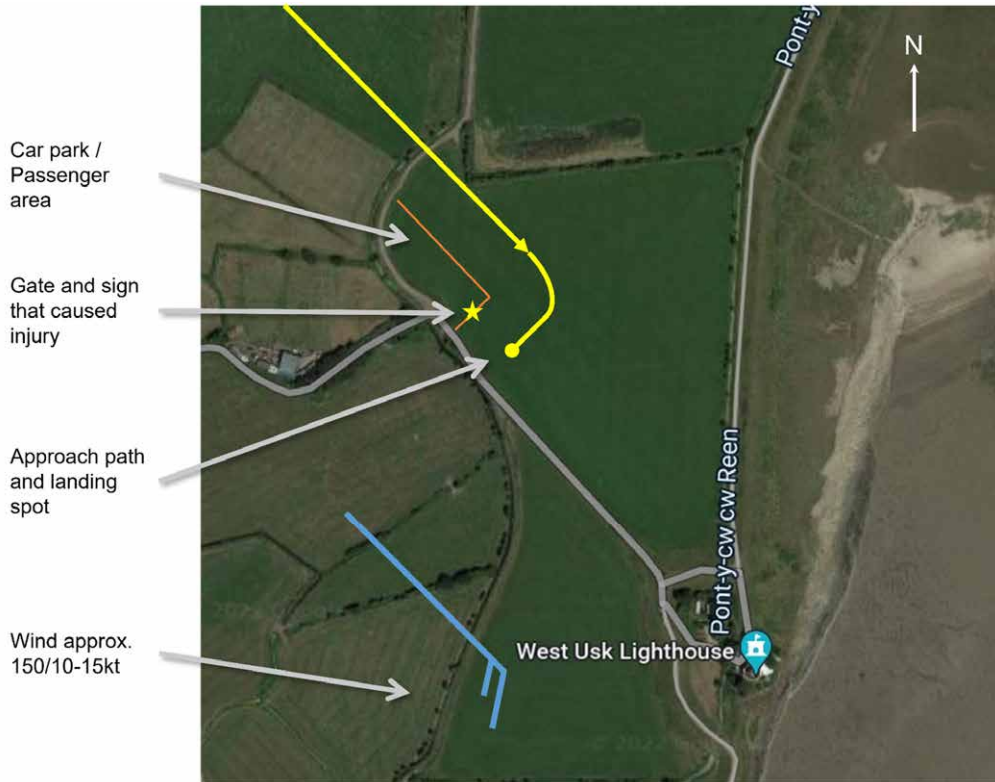


Figure 1

Site layout at West Usk Lighthouse (reproduced from pilot's sketch, not to scale and showing approximate approach path and landing position) © 2022 Google



Figure 2

Sign that became detached (Image used with permission)

The cordon and sign were left set up overnight. The strongest wind recorded at Cardiff and Bristol Airports overnight was 15 kt. There was a strong wind warning in place for Cardiff Airport for winds of 15 – 20 kt with possible gusts of 25 – 30 kt.

The next day, on 5 September 2022, G-TOYZ (Figure 3) commenced flying with no check of the security of the sign. The TAFs for nearby Cardiff and Bristol Airports predicted winds of 150° at 9 kt and 160° at 10 kt respectively, and both predicted a 40% chance of occasional stronger wind of 15 kt from 1300 hrs. The pilot conducted eight uneventful flights in G-TOYZ. All landings were in the same place. The pilot reported that the wind speed had then increased to about 10 - 15 kt and, while landing on the ninth flight at approximately 1110 hrs, the cable ties broke and the sign became detached. The sign struck a passenger who was waiting to board, causing a cut to their lower leg that required stitches. No one had noticed the sign was not secured well or any movement in the sign before the accident.



Figure 3

G-TOYZ (Image used with permission)

Analysis

The operator's ground staff were distracted and under time pressure during the site set-up and did not secure the sign as well as usual. The helicopter downwash and prevailing wind acting on the sign were sufficient to break the plastic cable ties, and the sign became detached. It is possible that the sign was exposed to strong winds when left overnight and there was no process to check the safety of the site prior to each day's operation.

Safety actions

The operator took immediate action on the day to increase the distance between the landing helicopter and the passenger area.

The operator issued a flying staff instruction that required the sign to be secured with two cable ties on each corner and ordered metal lanyards to secure the sign in future (Figure 4).

The flying staff instruction also required the ground team leader to check the safety of the site before the first flight of the day and before each start of the helicopter engine.



Figure 4

New method of securing the sign (Image used with permission)

Conclusion

A sign was not secured properly because the ground crew were distracted and under time pressure. During a landing, the combination of downwash and wind caused the sign to detach and strike a waiting passenger who suffered minor injuries.