



AVIATION SAFETY SUMMARY JANUARY– MARCH 2020

Introduction

Welcome to the Aviation Safety Summary Report for the summer quarter of 2020, covering the period 1 January to 31 March. This report provides a summary of aviation safety in the period and an overview of the long term safety performance within each aviation sector. The report examines performance in each of the three principal sectors that the Civil Aviation Authority uses to characterise flying activity.

- Commercial passenger (Air transport & Part 115 operations)
- Commercial non-passenger operations (including agricultural operations), and
- Private or recreational operations.

The number of accidents in this quarter was substantially less than in the same quarter last year. All three sectors have experienced a reduced number of accidents. This report covers the period 1 Jan to 31 March, during which the country was in lockdown for only one week. The reduction in accidents is thus not likely to have been due to the Covid-19 restrictions. It will be encouraging if this safety performance improvement can be sustained as more normal operations resume.

Safe flying,

Jack Stanton
Manager Intelligence, Safety & Risk Analysis

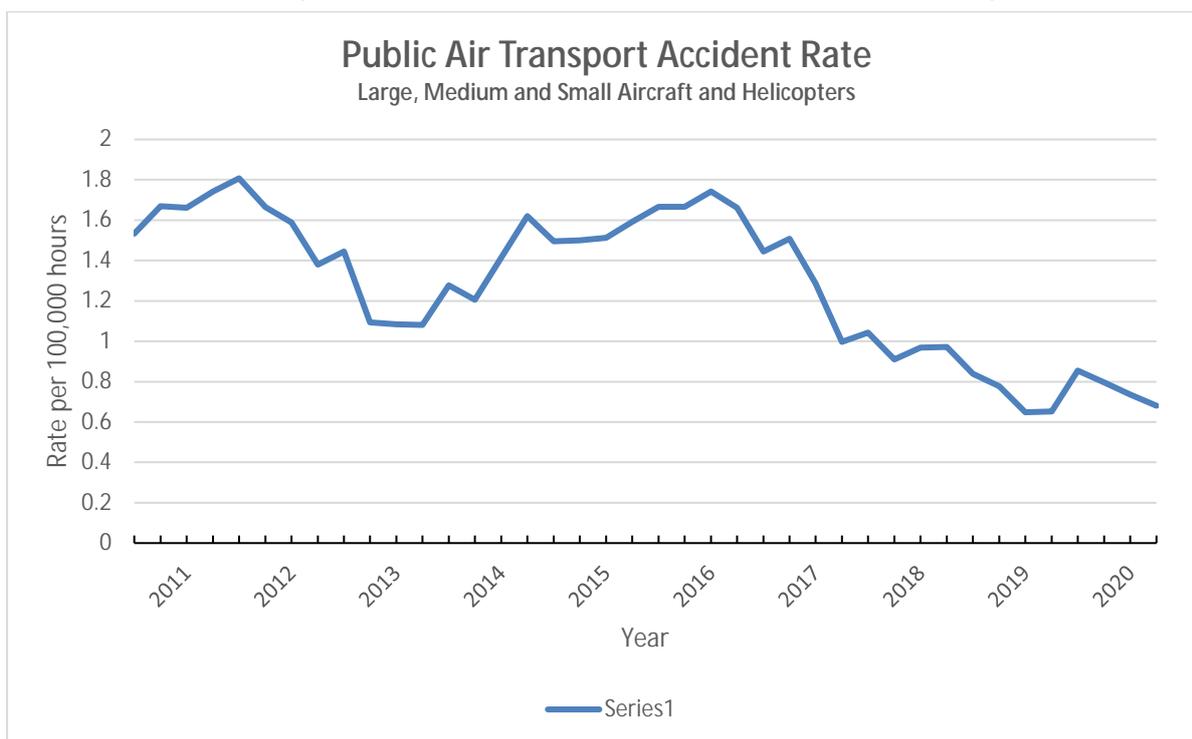
Accidents - 1 January to 31 March 2020					
Commercial Passenger		Commercial Non-Passenger		Private & Recreational	
9	0 Deaths 7 Injuries	4	0 Deaths 2 Injuries	13	1 Deaths 2 Injuries
YTD	9	YTD	4	YTD	13
Last Year	13	Last Year	10	Last Year	28

There were 26 accidents in this quarter, a considerable reduction compared with the 51 accidents in the same quarter last year.

- In the commercial passenger sector there were nine accidents. The accidents in this sector were all from adventure aviation passenger operations.
- In the commercial non-passenger sector there were four accidents, down from 10 at the same time the previous year.
- In private and recreational flying there were 13 accidents with one fatality in the summer quarter. This was lower than the 28 accidents reported in the same quarter last year.

Passenger Air Transport Operations – Accidents

There were no passenger air transport operations accidents in the reporting period.



Public Air Transport Accident Rate

This chart displays the three-year average accident rate for all public air transport operations, which includes passenger transport in large, medium, and small aeroplanes and passenger transport in helicopters. It does not include Part 115 adventure aviation. The accident rate in this sector continues to decline. The current rate of 0.68 accidents

per 100,000 hours in the passenger transport sector represents a reduction of more than 60 percent since 2011.

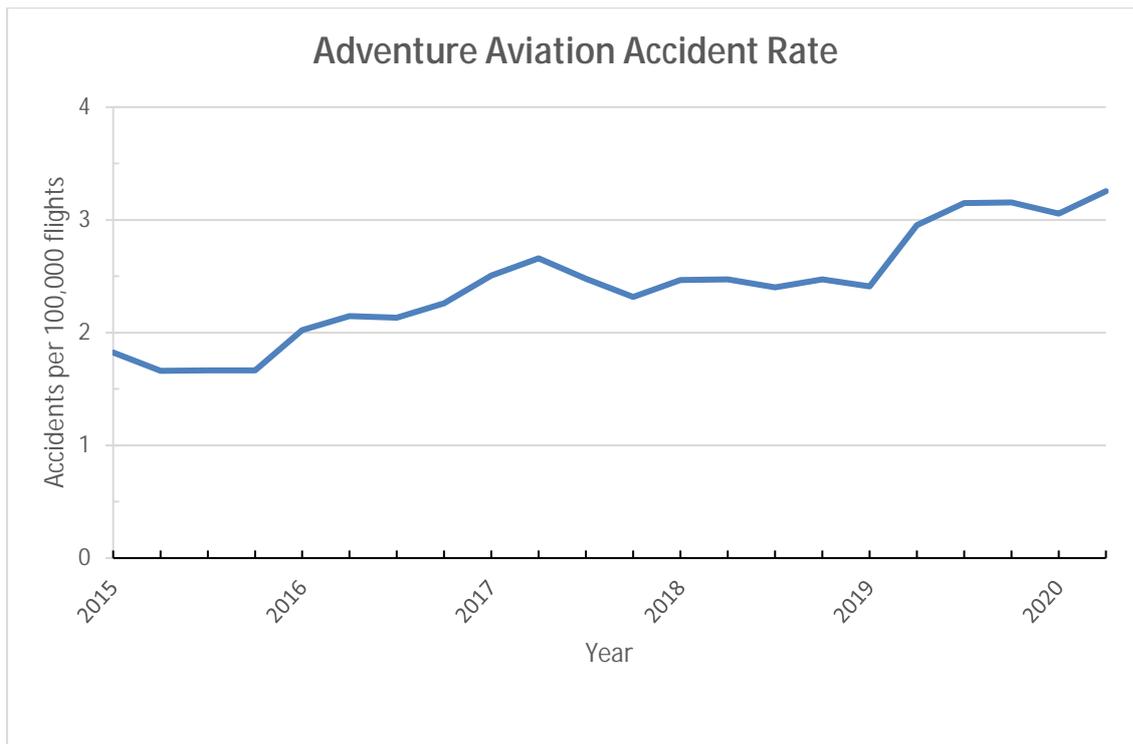
Nature of Accidents this Quarter

While there were no passenger transport accidents in the reporting period (outside of adventure aviation), this industry sector continues to be a key area of focus for the Authority's efforts, consistent with public expectations of safety in air transport.

Part 115 Adventure Aviation – Accidents

There were nine accidents in Part 115 Adventure Aviation this quarter

Ref	Location	Aircraft Model	Fatalities	Injuries	Description
20/758	Taupo	Sigma Tandem	--	--	Passenger shoulder dislocation on deployment CAA RESPONSE: No immediate action
20/669	Jardines	Sigma Micro	--	1	Hard landing due to wind change. Passenger taken to hospital with a fractured back CAA RESPONSE: No immediate action
20/1195	Taupo	Sigma Tandem	--	--	Passenger failed to declare previous shoulder dislocation, shoulder dislocated during descent CAA RESPONSE: No immediate action
20/822	Jardines		--	1	Passenger shoulder dislocation on deployment CAA RESPONSE: No immediate action
20/145	Parakai	Sigma Micro	--	2	Hard landing resulting in pair being taken to hospital. Passenger may require surgery for spine fracture CAA RESPONSE: No immediate action
20/146	Parakai	Sigma Micro	--	--	Tandem skydive master failed to flare correctly, causing them to roll and pax to break ankle on landing CAA RESPONSE: Investigation under way
20/36	Treble Cone Ski Area	Takoo4	--	1	On slide landing pilot caught on uneven ground and sprained/strained ankle. Pilot reported some ankle discomfort but continued to work for the rest of the day and went to medical centre at the end of the day for a check-up. CAA RESPONSE: No immediate action
20/77		Sigma Tandem	--	1	Passenger dislocated shoulder on releasing harness due wind pressure on arms. Passenger had had previous dislocation not disclosed to operator. CAA RESPONSE: No immediate action
20/509	Taupo	Sigma Tandem	--	1	Passenger shoulder dislocated during deployment. Passenger taken to hospital CAA RESPONSE: No immediate action



Adventure Aviation Accident Rate

The adventure aviation accident rate, calculated in accidents per flight/jump has been increasing slightly over the last few years and is now just over three accidents per 100,000 jumps, (or one accident every 33,000 jumps). By comparison to other aircraft operations, many of these accidents are relatively minor, and often relate to passenger behaviour in an unfamiliar environment. Nonetheless they do provide an insight into the risk that needs to be managed in the provision of commercial adventure aviation. The CAA will continue to monitor adventure aviation operators and their efforts to control risk.

Nature of Accidents this quarter

Five of the nine accidents in this quarter dislocated shoulders, often due to a previous injury not declared by the passenger. These are becoming a prevalent feature of commercial tandem skydiving and the CAA will engage with operators to ensure they develop better mitigations for this type of incident.

Commercial Non Passenger Operations- Accidents

Ref	Location	Aircraft Model	Fatalities	Injuries	Description
20/135	Wanganui	152	--	--	Aircraft bounced three times on touchdown and veered to the right because the nose wheel bent. CAA RESPONSE: No immediate action
20/75	Omarama	P2008 JC	--	--	Hard landing following two bounces on nose gear, resulted in nose undercarriage breaking and prop strike. No injuries. Damage to propeller, engine, gearbox and airframe. CAA RESPONSE: No immediate action
20/80	Taharua	AS 350 BA	--	2	Forced landing accident resulting in a very hard landing following lifting strop getting caught in the tail rotor. Substantial damage, injuries to crew. CAA RESPONSE: Health and safety and accident Investigations under way.

Nature of Accidents this Quarter

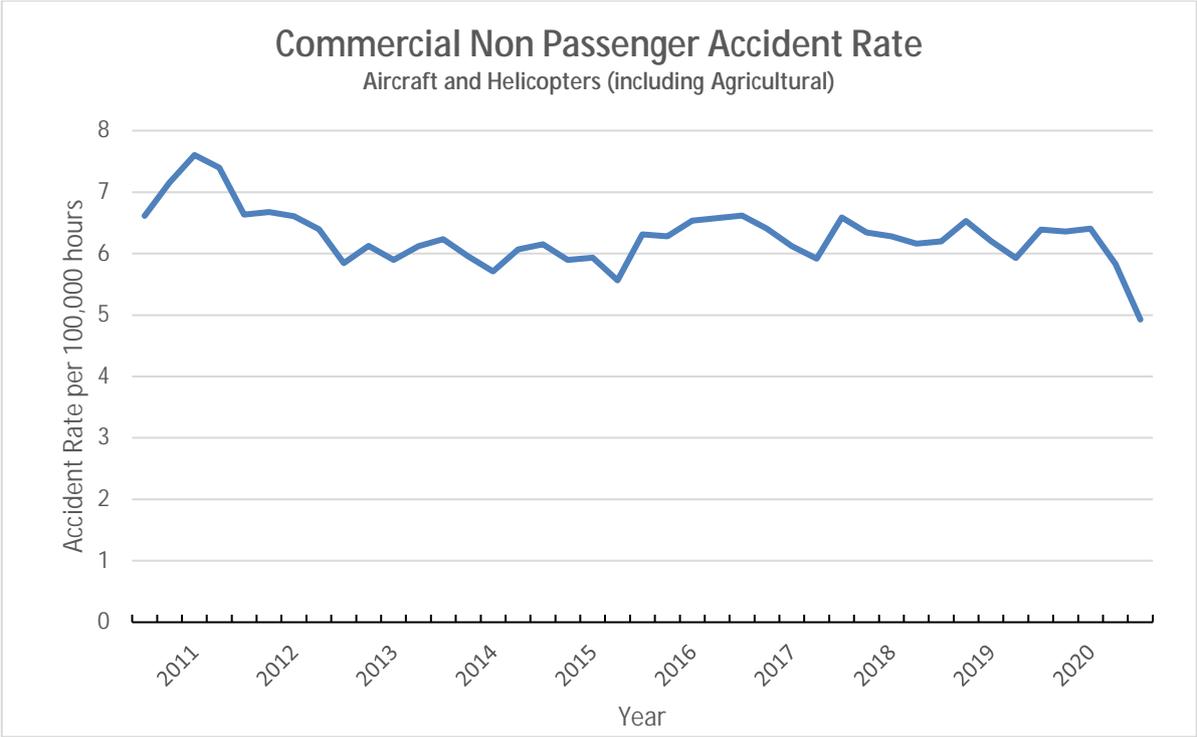
There were three accidents this quarter. Two were minor landing accidents of light aircraft engaged in commercial pilot training operations. In this sector minor landing accidents are a known risk, with mitigations such as limiting occupants to the crew member under training, and limiting landings to selected airfields. The third and most serious accident involved a strop being caught in the tail rotor of a helicopter. Slung-load operation safety is an area of current focus for the CAA and such operations are increasingly under scrutiny.

Commercial Non Passenger Operations (Agricultural) – Accidents

Ref	Location	Aircraft Model	Fatalities	Injuries	Description
20/264	Kuripapango	AS 350 BA	--	--	Precautionary landing accident. During wilding pine spray operation experienced partial engine power loss. Autorotation carried out into available area. Helicopter rolled over on landing. Pilot uninjured. Damage to helicopter. CAA RESPONSE: Investigation under way

Nature of Accidents this Quarter

There was only one accident in agricultural operations. An AS 350 on spraying operations suffered partial power loss and an emergency landing was required. A CAA safety investigation is under way, along with the operator's investigation to determine the cause of the engine power loss.



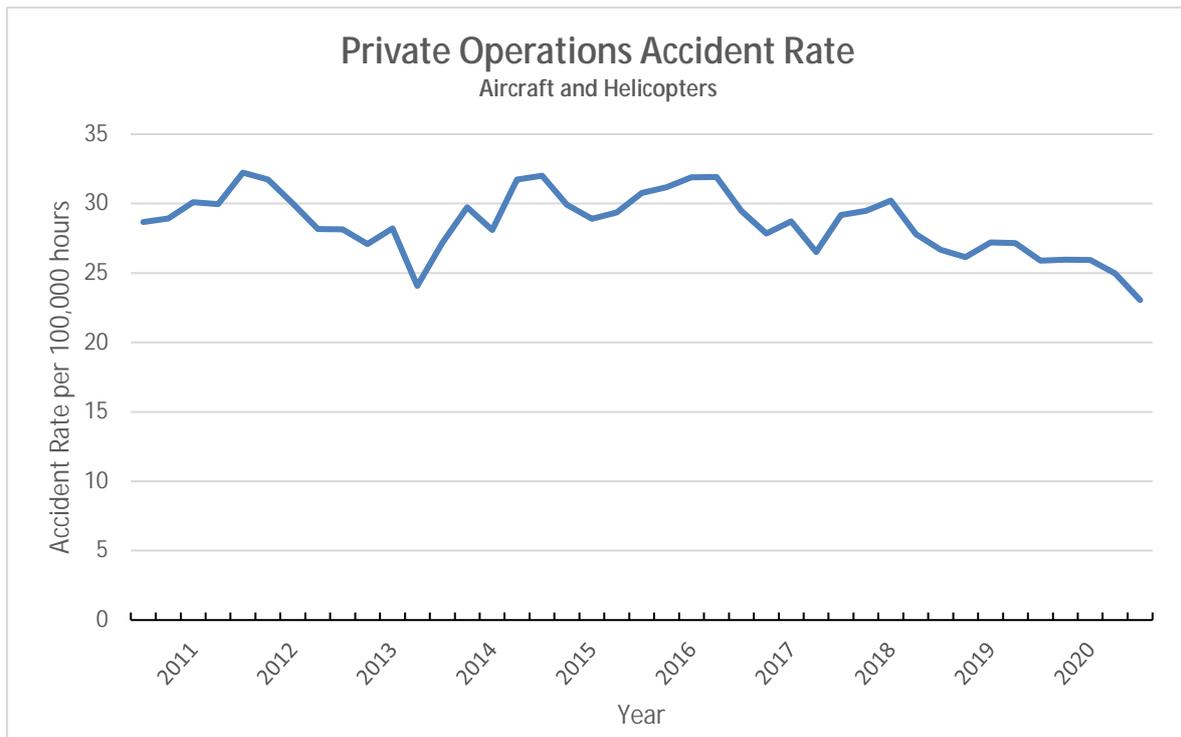
Commercial Non Passenger Accident Rate

This chart shows the three-year averaged accident rate for all commercial non-passenger operations including agricultural aeroplanes and agricultural helicopters and commercial flight training. The overall trend in this sector is improving.

Private & Recreational Operations – Accidents

Ref	Location	Aircraft Model	Fatalities	Injuries	Description
20/214	Haast Pass	180D	--	--	Precautionary landing accident Burkes Flat airstrip. After landing rolled into long grass causing the aircraft to nose over. No injuries, but damage to aircraft (reported to be a write-off) CAA RESPONSE: No immediate action
20/970	Napier	A75N1	--	--	Pilot reported that while landing, the pilot suspected a change in wind conditions occurred which resulted in the tail of the aircraft lifting. He was unable to recover the situation resulting in the aircraft overturning on the runway. CAA RESPONSE: Investigation under way
20/1115	Waipukurau	7ECA	--	--	Minor landing accident. Aircraft nosed over during landing roll out. Damage to the propeller, no injuries. CAA RESPONSE: No immediate action
20/901	Ararimu	G102 Club Astir IIIB	--	--	Heavy out-landing in paddock. Pilot got too low to be able to return to airfield, and mainwheel pushed into fuselage on landing. CAA RESPONSE: No immediate action
20/899	Awatere Valley	Savannah S	--	--	Minor landing accident. Whilst landing on a private farm ag strip the front nose wheel departed the front fork causing the nose gear to collapse under the fuselage; damage to propeller and cowling. No injuries. Found a fatigue fracture below the left and right bolt heads. CAA RESPONSE: No immediate action
20/240	Kaikoura	Shadow Series B-D	--	--	On landing, microlight wheel struck threshold marker, resulting in a broken support strut, and bending the undercarriage back. Pusher prop also struck the ground before a/c came to a stop. Nil injuries. CAA RESPONSE: No immediate action
20/1161	Masterton	Sopwith Pup	--	--	Aircraft lost roll control authority after touchdown, contacted ground with wingtip, undercarriage failed and ended up on nose. No injuries. The pilot was landing on a designated runway when the aircraft began to slowly yaw right. The 'blip switch' was released to produce engine power but it was too late to regain control and the aircraft slowly tipped on to its nose. The replica Sopwith Pup uses an ignition 'blip switch' to turn the engine off and on to control engine rpm. CAA RESPONSE: Under investigation.
20/375	Karioitahi Beach		--	1	Hard landing. Came in for a tops landing, but the pilot approached too far in, encountered rotor which stalled one wing two metres above ground resulting in a hard landing. Pilot suffered fractured right hip and right wrist. CAA RESPONSE: No immediate action
20/106	Waimairi Beach		--	--	Paragliding accident on the beach, pilot taken to hospital with non life-threatening injuries. CAA RESPONSE: No immediate action
20/153	Mt Cheeseman		1	--	After take-off witness reports that the paraglider wing collapsed several times, with the pilot unable to recover. Paraglider impacted terrain. Pilot fatally injured CAA RESPONSE: Investigation under way
20/79	Otaika	Sonex	--	--	Engine failure followed by a forced landing into paddock. Damage to aircraft, no injuries. CAA RESPONSE: No immediate action
20/1680	Seddon		--	1	Paraglider crashed - incident detail and exact location unknown. Injuries: moderate CAA RESPONSE: No immediate action
20/519	Mangatarata	BushCat	--	--	Twenty metres into the take-off roll, tail wheel dropped into a rabbit hole which caused it to switch to 'caster mode'. This resulted in loss of

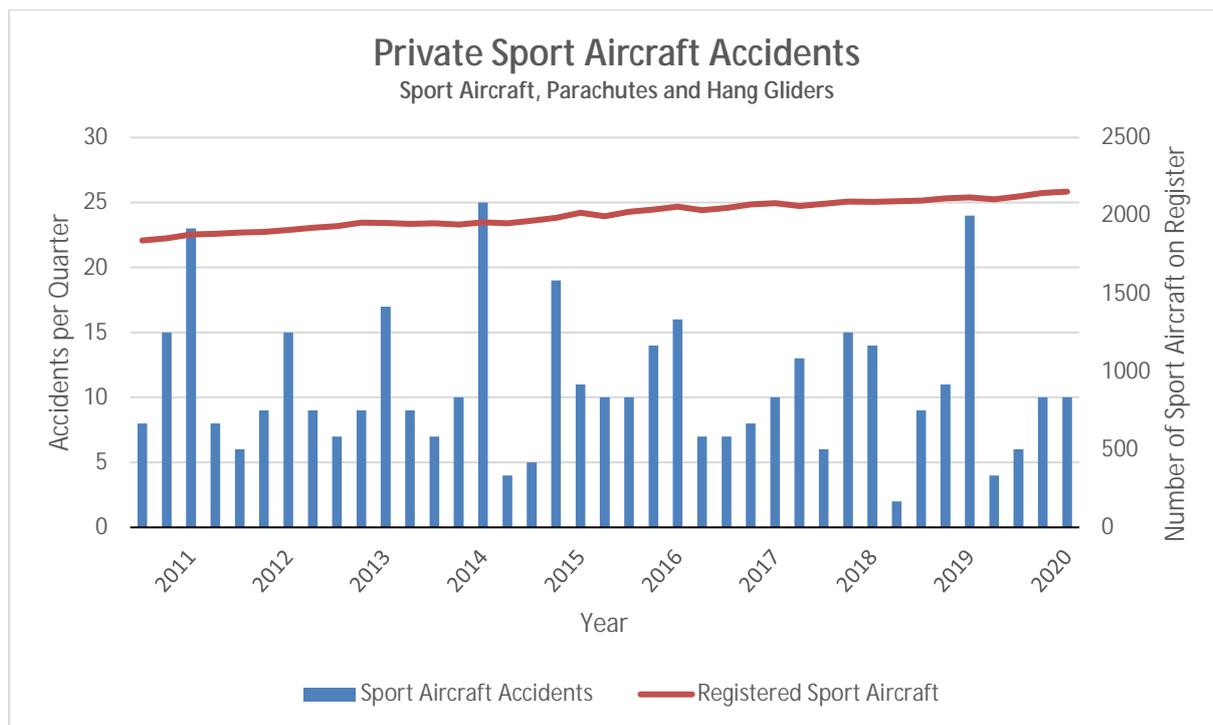
Ref	Location	Aircraft Model	Fatalities Injuries	Description
				directional control from the rudder pedals. Power was reduced and brakes applied to avoid collision with a fence. The plane's tail left the ground, the nose contacted the ground then flipped onto its back. CAA RESPONSE: No immediate action



Private Operations Accident Rate

The number of accidents in private & recreational sector this spring quarter was considerably fewer than last summer (13, against 28 in 2019). The long term safety performance of private operations is steadily improving. Note this graph excludes sport aircraft (gliders, microlights) so only includes 1 of 12 accidents listed in the table of private and recreational sector accidents shown above.

Eleven of the 12 accidents this quarter involved 'sport' aircraft which includes microlights and homebuilt aircraft as well as gliders and parachutes. As sport aircraft are not required to provide activity returns, the following chart compares the number of sport aircraft accidents each quarter with the number of sport aircraft on the register (right-hand axis).



This chart indicates that the number of accidents involving sport aircraft is declining or steady while the number of sport aircraft on the register increases slowly. From this it can be inferred the accident rate in this sector is probably stable or reducing in the long term.

Nature of Accidents this Quarter

Landing events continue to be a prevalent accident type amongst sport aircraft, particularly when landing away from major aerodromes, where surface conditions can be less consistent and more challenging. For some this is part of the attraction of sport flying but these examples serve as a reminder of the inherent risks which must be managed by sport aviation pilots.