

City Talk

What should have been a normal landing, even in the dead of winter, turned out to be horrific for the 76 passengers and four air crew aboard the Delta Air Lines flight from Minnesota that led to everyone being left dangling in the air like 'bats in a cave,' before they came to their senses, managed to extricate themselves, jacked for the exits and got out with a little help from the cabin crew, fellow travelers and airport personnel. REUTERS



Hard landing for air travel industry if this keeps up



Nuts and bolts

Edmund Leung

I know what I said just two weeks ago about the American Eagle Bombardier CRJ700's collision with a military Black Hawk helicopter in Washington, but circumstances dictate that we have another conversation about yet another air landing incident.

The latest crash happened in Toronto last Monday when a Delta Air Lines' Bombardier CRJ900 from Minneapolis tried to land at Toronto's Pearson Airport but ended up with its fuselage upside down.

Miraculously, there were no fatalities, though 21 passengers were injured, three critically. This is extremely fortunate for a flight with 76 passengers and four crew members.

Earlier reports said the incident was due to adverse weather.

There was a snowstorm at the time, but the airport continued to operate normally as the sky was generally clear despite occa-

sional gusts and snow. Many other flights had also taken off and landed earlier in the day so it would appear the weather was not abnormal for a Canadian winter.

It will take months to find out what caused the incident, as extracting data from the black boxes will take time so my views here can only represent a simple analysis based on engineering principles and information gleaned from the media.

When a plane gets near a runway, the pilot needs to receive a clear signal from air traffic control before he can attempt to land.

Upon receipt of the signal, he heads for the runway and gradually drops the altitude to reach the designated touchdown point.

An important action he should perform is to "flare" the plane, which is to lift its nose slightly so that the bulk of its weight is borne by the two rear landing gears, which are designed to be robust enough to withstand the shock load, rather than the smaller, single nose landing gear.

The flaring also helps to reduce forward momentum for a smoother landing.

The pilot must also ensure the plane is

not listing to one side to prevent overload, ing one set of landing gear and minimize its tendency to drift from its straight path.

From video footage obtained from another aircraft, the Bombardier hit the tarmac in what appeared to be a hard landing.

It probably broke the landing gear.

The plane then veered sharply to the right, and, with probably the landing gear sheared off, the right wing touched the tarmac and snapped off from the fuselage.

However, this proved to be fortunate as although the wing, carrying a fuel tank, caught fire, it was already separated from the fuselage and so passengers were not affected by the ensuing fire.

As the left wing was still attached, it continued to provide some lifting force.

Together with the forward momentum, it probably caused the fuselage to roll to the right along its longitudinal axis, eventually leading to it flipping over.

The absence of the right wing did not help to balance that lifting force to stop it from rolling over.

From information gathered from

experts, the plane's landing was normal, traveling at about 120 knots, which was at the lower end of the landing speed range for this type of aircraft.

Vertical speed was dropping at less than 200 meters per minute until it reached a height of less than 300 meters, when it suddenly rose to over 300 meters per minute.

We do not know whether this was caused by a sudden change in the weather or a deliberate act by the pilot.

However, experts said that, at this rate, it would not be easy to flare, and the pilot should have aborted it and performed an emergency ascent for a second attempt for a smoother descent.

Video footage also showed the aircraft had swerved to the right upon landing.

But whether this is due to it skidding over snow or ice or whether the pilot steered to the right to face a gust, is unknown. Weather reports showed that, at that instant, there was a gust of over 50 knots blowing at 40 degrees along the axis of the runway.

However, this abrupt change of direction, together with the rolling effect of the

aircraft fuselage with left wing on, could have caused the plane to overturn.

It is natural and easy to blame the pilot for that landing maneuver, but the air traffic controller could have warned the pilot of possible wind shear so the pilot can consider whether to abort the landing.

Thanks to the quick action of the fire brigade, passengers were evacuated in an orderly manner with the help of cabin crew.

So, despite being left hanging in their seats "like bats in a cave," they remained calm and patient and extricated themselves.

This incident is one too many, and the air travel industry, together with the authorities, must get together to investigate not just how this incident occurred but more importantly, find out what they can do to prevent similar near disasters.

The poor passengers have no choice but to entrust their lives and destiny to them as to stop flying on commercial airlines is not a viable alternative.

Veteran engineer Edmund Leung Kwong-ho casts an expert eye over features of modern life

Last chance for rare insights into Happy Valley's storied history

CULTURAL EXCHANGE
BERNARD CHARNWUT CHAN



Happy Valley is one of Hong Kong's most vibrant and historic districts, combining a dynamic blend of cultural significance and urban vitality.

This rich heritage inspired Dr Anita Chung, Tai Kwun's head of heritage, to spotlight the neighborhood in her meticulously curated exhibition, Happy Valley: A Cultural Landscape.

Since opening in November in the former Central police station compound, the exhibition has captivated audiences through its immersive storytelling and thoughtful

exploration of Happy Valley's transformation over time.

It invites visitors to discover the fascinating stories that have shaped this remarkable neighborhood.

Happy Valley's rich history is brought to life through captivating displays and interactive exhibits, showcasing its evolution from a serene valley to one of Hong Kong's most cherished cultural and recreational hubs.

Exhibition highlights trace the district's evolution and feature an interactive topographic model, historic photographs, and rarely seen maps. Multimedia presentations explore pivotal events such as the diversions of watercourses and land reclamation, illus-



trating how these changes laid the foundation for today's vibrant community.

Visitors can also enjoy a newly com-

missioned short film that captures the district's rhythms and charm.

This stunning visual and narrative journey into everyday life is complemented by archival footage from the 1930s and 1970s, providing a rare glimpse into the area's past and creating a compelling dialogue between history and contemporary life.

Visitors are encouraged to explore the exhibition at their own pace, immersing themselves in the diverse aspects of Happy Valley through the lens of their interests.

Whether you are curious about its

history, inspired by its transformation, or drawn to the stories of its people, the exhibition offers a profoundly enriching and thought-provoking journey.

It is part of the Jockey Club's 140th anniversary celebrations. More than just a celebration of Happy Valley, it reflects the significance of urban heritage conservation and highlights how understanding and preserving Hong Kong's history can foster a more inclusive, sustainable and resilient future.

It is a must-see for anyone eager to connect with the city's rich heritage and will end on Sunday. Admission is free.

Bernard Charnwut Chan is chairman of Tai Kwun Culture & Arts Co Ltd