Final Report

B777-300ER PH-BVO

Runway Incursion at Changi Airport

2 June 2025

TIB/AAI/CAS.248

Transport Safety Investigation Bureau
Ministry of Transport
Singapore

21 August 2026

The Transport Safety Investigation Bureau of Singapore

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ABBREVIATIONS

ANSP	Air Navigation Services Provider
AOM	Airline Operation Manual (of Aircraft A operator)
ASMGCS	Advanced Surface Movement Guidance and Control System
ATCO	Air Traffic Control Officer
PF	Pilot Flying
PM	Pilot Monitoring
QAR	Quick Access Recorder
RHP	Runway Holding Position
RWC	Runway Controller
SBL	Stop Bar Lights

SYNOPSIS

On 2 June 2025, a Boeing B777 aircraft was taxiing to the runway holding position on Taxiway T1 (RHP T1) for Runway 20C at Changi Airport when an aircraft was approaching the runway to land. The Runway Controller (RWC) issued landing clearance to this approaching aircraft. The B777 flight crew, mistaking the landing clearance as a take-off clearance for them and misperceiving the stop bar lights as OFF, crossed RHP T1. RWC noticed the runway incursion and instructed the approaching aircraft to go around.

The Transport Safety Investigation Bureau of Singapore classified this occurrence as an incident.

FLIGHT DETAILS

Aircraft type	:	Boeing 777-300ER
Operator	:	KLM Royal Dutch Airlines
Aircraft registration	:	PH-BVO
Date and time of incident	:	2 June 2025, 17:01hrs
Location of occurrence	:	Singapore Changi Airport, Runway 20C
Type of flight	:	Commercial Air Transport (passenger), scheduled
Persons on board	:	376

1 FACTUAL INFORMATION

All times used in this report are Singapore Local Time (LT). Singapore Local Time is eight hours ahead of UTC.

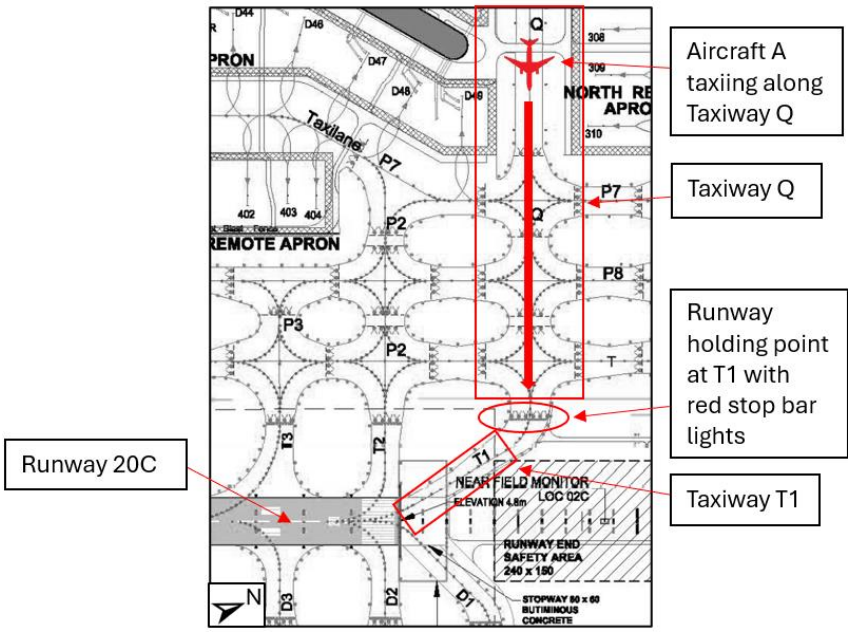
1.1 History of the flight

1.1.1 A Boeing B777 (Aircraft A, callsign “K-L-M Eight Three Five”), after pushback, started taxiing at 16:55 to Runway 20C at Changi Airport, Singapore, for departure. According to Aircraft A flight crew, they were not under any time pressure for the departure. The flight crew comprised a Captain and a First Officer. The Captain (hereinafter referred to as PF) who was the Pilot-In-Command (PIC) was performing the Pilot Flying duties, and the First Officer (hereinafter referred to as PM) the Pilot Monitoring duties.

1.1.2 While Aircraft A was taxiing on Taxiway Q, the ground controller instructed Aircraft A flight crew to change their operating radio frequency to the Tower frequency on which the Runway 20C runway controller (hereinafter referred to as RWC) was operating.

1.1.3 At this time there were only two other aircraft that RWC was controlling: Aircraft B (callsign “Red Cap Seven One Five”), which was on the approach to Runway 20C for landing, and Aircraft C (callsign “Singapore Eight Zero Six”), which was taxiing onto Runway 20C ahead of Aircraft A and had already been given clearance to take off.

1.1.4 At 16:59:33 while Aircraft A was still taxiing on Taxiway Q (see **Figure 1**), PM contacted and informed RWC that they were ready for departure. Prior to this, RWC had issued to Aircraft B a clearance to continue approach. Aircraft A flight crew were not aware that Aircraft B was on the approach as they were not yet listening in on the Tower frequency.



(Source: Aerodrome Chart extracted from Aeronautical Information Publication dated 17 April 2025)(AIP)
(Annotation: TSIB)

Figure 1: Map showing Aircraft A taxiing along Taxiway Q

1.1.5 Subsequently, RWC instructed Aircraft A flight crew to hold at the runway holding position on Taxiway T1 (RHP T1) by transmitting "K-L-M Eight Three Five Singapore Tower Good Afternoon Hold at Holding Point Tango One". PM acknowledged RWC's instruction by transmitting "Hold Short Tango One K-L-M Eight Three Five". This transmission ended at 16:59:44. At this moment, Aircraft A was still some distance away from RHP T1. It continued to move, albeit slowing down.

1.1.6 From 16:59:44, there was a period of 66 seconds of silence over the radio until 17:00:50 (see paragraph 1.1.8). During this period Aircraft A continued taxiing towards RHP T1 and was slowing down from 14 to 3.5 knots. The investigation team learnt from Aircraft A flight crew after the occurrence that they had seen Aircraft C taking off from Runway 20C but did not see any aircraft landing on Runway 20C.

1.1.7 When approaching RHP T1, Aircraft A flight crew saw that the stop bar lights (SBL) at RHP T1 were ON. Their aircraft was still slowing down and taxiing at about 4 knots. According to Aircraft A flight crew, when their aircraft was about to reach RHP T1, the red illumination of the SBL at RHP T1 was "hardly visible"

and appeared to be OFF[1]. Aircraft A flight crew continued taxiing towards RHP T1.

1.1.8 In the meantime, Aircraft B was on final approach. At 17:00:50, RWC transmitted to Aircraft B "Red Cap Seven One Five Surface Wind Two Zero Zero Degrees at One Zero Knots Runway Two Zero Centre Cleared to Land" and this transmission ended at 17:00:56. Immediately after RWC's transmission and before Aircraft B flight crew could acknowledge RWC's instruction, PM at 17:00:56 read back to RWC "Cleared for Take-off Two Zero Centre K-L-M Eight Three Five Roger on the Wind" and ended the transmission at 17:00:59.

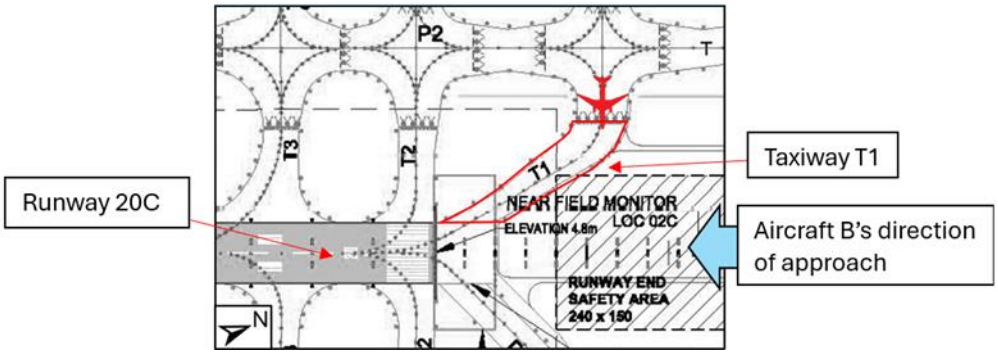
1.1.9 Aircraft A flight crew believed that the SBL had been switched OFF[2], and as they believed take-off clearance had been given, they did not see the need to stop at RHP T1[3]. PF increased the engines' thrust and Aircraft A picked up speed. According to Aircraft A flight crew, when they were still on Taxiway Q (which was perpendicular to Runway 20C) and before they moved past RHP T1, they saw that the runway was clear and did not see any aircraft on the approach path.

1.1.10 RWC heard the wrong readback by PM and saw that Aircraft A had continued moving forward and crossed the RHP T1 towards Runway 20C. At 17:00:59, RWC immediately transmitted "Negative that was for Red Cap Seven One Five K-L-M Eight Three Five to Hold at Holding Point Tango One" to inform Aircraft A flight crew that the previous transmission was for Aircraft B and to instruct Aircraft A to hold at RHP T1. Aircraft A flight crew did not immediately respond to RWC.

1.1.11 At 17:01:04, Aircraft B flight crew heard their callsign being mentioned in RWC's transmission (see paragraph) and queried RWC by saying "Uh Say Again for Red Cap Seven One Five". Aircraft B was then about 3.8NM away from Runway 20C threshold and Aircraft B flight crew saw Aircraft A but could not be sure whether Aircraft A had crossed RHP T1.

[1] According to the records obtained from the Control Tower, the SBL at RHP T1 had remained ON the whole time.
[2] The investigation team learnt from Aircraft A flight crew after the occurrence that, from hindsight, they believed that they perceived the SBL as OFF possibly because of the strong reflection of the setting sun (which was behind the aircraft) masking the illumination of the SBL and this influenced their subsequent actions.
[3] Aircraft A flight crew were aware that they could only cross any red stop bar lights (SBL) installed at runway holding positions (RHPs) if (a) take-off or line up clearance had been given by RWC and (b) the SBL were OFF.

1.1.12 RWC did not reply to Aircraft B flight crew but instead transmitted “K-L-M Eight Three Five Hold Position” at 17:01:06. At 17:01:10, PM queried RWC if this transmission was for them while Aircraft A was approaching the SBL of RHP T1, by transmitting “Confirm K-L-M Eight Three Five”. Soon after this, Aircraft A crossed RHP T1 (see **Figure 2**). As aircraft A crossed the SBL onto Taxiway T1 (which forms the runway strip and is a protected area around the runway where clearance is needed before entry), the Advanced Surface Movement Guidance and Control System (ASMGCS) generated a runway incursion audio alarm. RWC heard a transmission but could not make out who the caller was or what was said as the ASMGCS audio alarm had interfered with the intelligibility of the transmission.



(Source: AIP) (Annotation: TSIB)

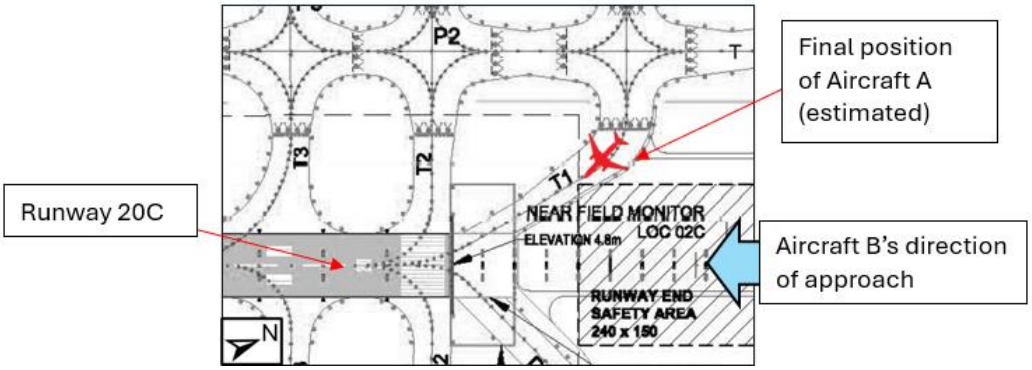
Figure 2: Aircraft A entered Taxiway T1 and triggered the runway incursion alarm

1.1.13 RWC intended for Aircraft B to go around as a runway incursion had occurred. At this time Aircraft B was about 3.5NM away from the runway threshold. To ensure that Aircraft B’s go-around path did not infringe with Aircraft C’s departure path, RWC first transferred control of Aircraft C to the Departure Controller. After this RWC instructed Aircraft B, which was then about 3NM from the runway threshold, to go around. Aircraft B acknowledged the instruction and executed the go-around. Aircraft A flight crew heard RWC’s go-around instruction to Aircraft B but could not see Aircraft B.

1.1.14 While RWC was issuing instructions to Aircraft C and Aircraft B, Aircraft A was slowing down[4] on Taxiway T1. At 17:01:28, PM sought clarification from RWC as to whether they were cleared for take-off by transmitting “Uh Tower K-L-M

[4] The engine thrust of Aircraft A was not at idle.

Eight Three Five Confirm Uh We Are Cleared for Take-off". At 17:01:31, RWC transmitted "Negative to Hold your Position Instructions were to hold at Holding Point Tango One". Aircraft A flight crew immediately brought Aircraft A to a stop on Taxiway T1 at 17:01:33 (see **Figure 3**) but did not reply to RWC. RWC not having received a readback from Aircraft A, called Aircraft A flight crew at 17:01:39. PM answered at 17:01:42 that Aircraft A was holding position.



(Source: AIP) (Annotation: TSIB)

Figure 3: Final position of Aircraft A

1.1.15 RWC then informed Aircraft A flight crew that the previous clearance instruction was for Aircraft B to land and not a clearance for Aircraft A to take off. PM acknowledged the RWC's information.

1.1.16 Subsequently, RWC instructed Aircraft A to vacate the runway and informed Aircraft A flight crew that a runway incursion had occurred. PF immediately told RWC that they were not informed that another aircraft (i.e. Aircraft B) had a callsign similar to theirs. PF also told RWC that the latter was speaking too fast and requested RWC to repeat the last instruction. RWC repeated the last instruction, which was for Aircraft A flight crew to vacate the runway.

1.1.17 After Aircraft A had vacated the runway, it taxied back to RHP T1 and was subsequently cleared by RWC for take-off.

1.2 Injuries to persons

1.2.1 There was no injury to any person.

1.3 Damage to aircraft

1.3.1 There was no damage to the aircraft.

1.4 Personnel information

1.4.1 Aircraft A Pilot-in-command (PIC)

Age	56
Licence type	ATPL
Issuing authority	Ministry of Infrastructure and Water Management / European Union
Licence validity	Valid till 30 June 2026
Medical certificate	Class 1
Medical certificate validity	Valid till 1 October 2025
Medical operational proviso	Reading glasses correction +1.5
Last Base Check date	14 Aug 2024
Last Line Check date	5 January 2025
Total flying hours	20,499 hrs
Aircraft types flown	A310, B747, MD11, B777 & B787
Total hours on type	7,884 hrs
Flying in last 90 days	111 hrs 31 mins
Flying in last 7 days	12 hrs 40 mins
Flying in last 24 hours	0 hr
Duty time in last 48 hours	1 hr 6 mins
Rest period in last 48 hours	46 hrs 54 mins

1.4.2 Aircraft A First Officer (FO)

Age	55
Licence type	ATPL
Issuing authority	Ministry of Infrastructure and Water Management / European Union
Licence validity	Valid till 31 May 2026
Medical certificate	Class 1
Medical certificate validity	Valid till 1 March 2026
Medical operational proviso	Correction for near vision
Last Base Check date	25 April 2025
Last Line Check date	19 December 2024
Total flying hours	18,790 hrs

Aircraft types flown	JS31, B747, B757, B767, B777, B787
Total hours on type	7,754 hrs
Flying in last 90 days	96 hrs 49 mins
Flying in last 7 days	12 hrs 40 mins
Flying in last 24 hours	0 hr
Duty time in last 48 hours	1 hr 6 mins
Rest period in last 48 hours	46 hrs 54 mins

1.4.3 Runway Controller (RWC)

Age	36
ATCO licence validity	Valid till 30 June 2029
Ratings	Changi 12 February 2015
Total experience	Changi 10 yrs 3 mths
Experience in position manned	Changi 10 yrs 3 mths
Duty time in last 48 hours	10.5 hrs
Rest period in last 48 hours	37.5 hrs

1.5 Meteorological information

1.5.1 Around the time of the incident, the sun was setting, the weather was clear, the visibility was greater than 10 km. The setting sun was at the rear right of Aircraft A when Aircraft A was approaching RHP T1.

1.6 Communications

1.6.1 Radio traffic on Tower frequency

1.6.1.1 Following the incident, Aircraft A flight crew submitted an air safety report to the Safety Department of Aircraft A operator, in which they stated that the Tower frequency was very busy. However, the investigation team noted that there were no transmissions at all from 16:59:44 to 17:00:50, and there was no issue of the Tower frequency being busy prior to the issuance of the landing clearance to Aircraft B.

1.6.2 Clarity of RWC's instructions

1.6.2.1 The air safety report submitted by Aircraft A flight crew in paragraph 1.6.1.1 also stated RWC was speaking too fast and that RWC's communication was

unclear. However, Aircraft A flight crew did not ask RWC to slow down or repeat any unclear transmissions prior to the occurrence.

1.6.2.2 The DSB reviewed the ATC recording and opined that the RWC's transmissions were difficult to understand.

1.6.2.3 The Air Navigation Service Provider (ANSP) considered RWC's transmissions to be clear and that, when attending to an urgent situation like a runway incursion, it was understandable that a persons' speech rate may tend to increase.

1.6.3 ATC phraseology

1.6.3.1 ICAO's Manual of Radiotelephony provides guidance to ATCOs to correct the flight crew if an aircraft's readback of a clearance or instruction is incorrect. For example, the controller shall transmit "NEGATIVE I SAY AGAIN", followed by the correct instruction.

1.6.4 Callsign similarity

1.6.4.1 As mentioned in paragraph 1.1.16, Aircraft A PF told RWC that they were not informed that another aircraft (i.e. Aircraft B) had a callsign similar to theirs. In the air safety report submitted following the incident, the Aircraft A flight crew stated that they had been aware of a warning contained in the company's internal document on Changi Airport, Singapore, regarding another flight (GA835) potentially operating with a similar callsign. This warning did not relate to Aircraft B, whose callsign was "Red Cap Seven One Five".

1.6.4.2 The investigation team and the Safety Department of Aircraft A operator agree that the callsigns of Aircraft A "K-L-M Eight Three Five" and Aircraft B "Red Cap Seven One Five" were dissimilar.

1.6.4.3 According to the ANSP, it is not a practice to inform flight crews of other traffic in their vicinity, unless under specific operational circumstances (e.g. when applying conditional clearance).

1.7 Aerodrome information

1.7.1 Runway information

1.7.1.1 There are two operational runways, Runway 1 (20R/02L) and Runway 2 (20C/02C) at Changi Airport. The traffic on each runway is handled by a dedicated runway controller. At the time of occurrence, both runways were used for departure and arrival.

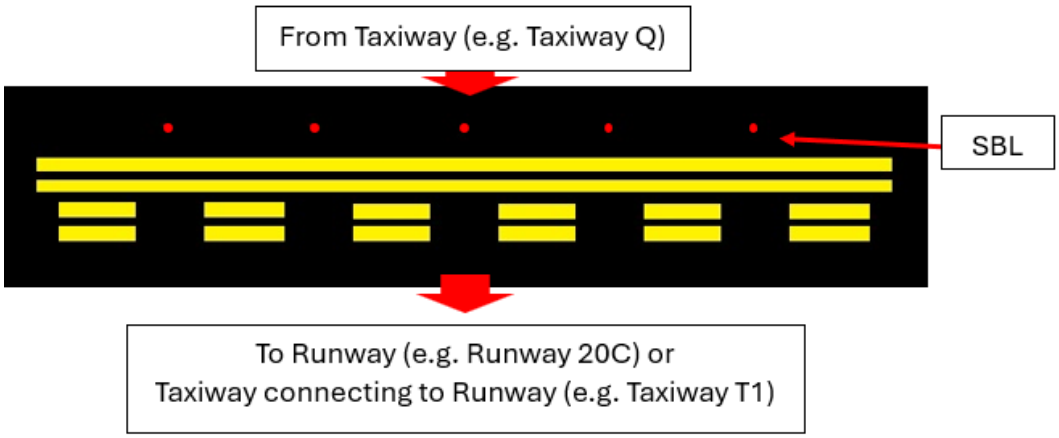
1.7.2 Advanced Surface Movement Guidance and Control System (ASMGCS)

1.7.2.1 The ASMGCS is a tool for air traffic controllers to augment visual observation of traffic on the aircraft manoeuvring area and to provide surveillance of traffic on those parts of the manoeuvring area which cannot be seen from the control towers.

1.7.2.2 RWC has an ASMGCS terminal which comprises a control screen, a speaker, a keyboard and a mouse. The ASMGCS presents traffic information on the control screens and generates an aural alarm and a visual alert when there is a runway incursion. The ASMGCS also shows the ON/OFF status of the various lights on the aerodrome (e.g. SBL, taxiway edge lights, taxiway centreline lights).

1.7.3 Runway holding positions (RHPs)

1.7.3.1 RHPs are demarcated with two solid yellow lines and two broken yellow lines painted across a taxiway. At Changi Airport, RHP markings are supplemented with a row of SBL (see paragraph 1.7.4) across the taxiway (see **Figure 4**) and these are always in operation.



(Source: TSIB)

Figure 4: RHP markings and SBL

1.7.4 Stop bar lights (SBL)

1.7.4.1 At Changi Airport, SBL are installed at the RHPs and at junctions along the taxiway. Each fitting for a stop bar light comprises a set of four red unidirectional light emitting diodes (LEDs) (see **Figure 5**) and shows red in the direction of approach to the runway. When the RHP SBL are switched ON, no aircraft (or vehicle) shall cross the SBL towards the runway, even if ATC had given a clearance to enter the runway.

(Source: Aerodrome operator)

Figure 5: Stop bar light at RHP T1

1.7.4.2 There was no system fault logged for the SBL at RHP T1 at the time of the occurrence. No other flight crews operating around the time of the incident reported difficulty seeing the red illumination of the SBL at RHP T1. Initially when approaching RHP T1, Aircraft A flight crew saw the red illumination of the SBL.

1.7.4.3 Both the ANSP's Air Traffic Services Manual (ATSM) and ICAO's Procedures for Air Navigation Services – Air Traffic Management (PANS-ATM) state that an air traffic controller should first de-activate the SBL before issuing clearance for an aircraft to cross the RHP. At the time of the incident, the SBL were not switched OFF for Aircraft A as RWC did not issue a clearance for Aircraft A to cross RHP T1.

1.7.4.4 At Changi Airport, the switch that controls the SBL also activates or deactivates a Microwave Barrier Detector (MBD) that is located near the SBL at every RHP. When an aircraft taxies past a RHP with the red SBL illuminated, the MBD will detect the aircraft, and a runway incursion alarm will be triggered. There will also be a visual alert to a runway controller on the ASMGCS control screens at the Control Tower. The runway incursion audio alarm generated by the

ASMGCS mentioned in paragraph 1.1.12 evidenced that the SBL were ON when Aircraft A crossed RHP T1.

1.8 Flight recorders

1.8.1 The flight data and cockpit voice recorders of Aircraft A were not obtained by the TSIB as the aircraft had already departed when the incident was reported to the TSIB. The TSIB requested and obtained the QAR data from the Aircraft A operator.

1.9 Aircraft A operator's instructions for flight crews

1.9.1 An extract of the taxi procedures from the operator's Airline Operating Manual (AOM) relevant to this occurrence are as follow:

(a) Read back all clearances. If any crew member is in doubt regarding the clearance, verify taxi routing with the assigned clearance or request clarification. Stop the aeroplane if the clearance is in doubt.

(b) Do not permit to be rushed by Air Traffic Control.

(c) Approaching the take-off runway, perform the Take-off briefing.

(d) Verify that the runway is clear (both directions) and clearance is received prior to entering or crossing a runway.

(e) Orders to stop taxiing aircraft may only be given by Air Traffic Control.

(f) Commanders of taxiing aircraft, when summoned to stop, shall immediately contact Air Traffic Control for clarification of the origin of request.

2 ANALYSIS

This runway incursion occurred because Aircraft A flight crew believed they had been given the take-off clearance (which was not the case) and that the SBL had been switched OFF (which was also not the case), and decided to proceed towards the runway. The investigation looked into the following:

(a) Mistaking landing clearance for take-off clearance

(b) Misperceiving the SBL as OFF

(c) Communications between RWC and Aircraft A flight crew

(d) RWC's response to incorrect readback

2.1 Mistaking landing clearance for take-off clearance

2.1.1 Before arriving at RHP T1, Aircraft A flight crew was not aware that Aircraft B was on final approach. When RWC issued a landing clearance to Aircraft B, i.e. "Red Cap Seven One Five Surface Wind Two Zero Zero degrees at One Zero Knots Two Zero Centre Cleared to Land", PM immediately responded to RWC with "Cleared for Take-off K-L-M Eight Three Five Roger on the Wind". The PF then increased the thrust of their engines and Aircraft A continued to taxi towards the SBL at RHP T1.

2.1.2 Aircraft A flight crew saw only one aircraft (i.e. Aircraft C) taking off on the runway and no aircraft landing, and had assumed that the runway was used only for take-offs. The investigation team believes that Aircraft A flight crew might have assumed they were next in line for departure and was expecting the next clearance from RWC could only be a take-off clearance for Aircraft A. This expectation could have led them to mistake RWC's landing clearance for Aircraft B as a take-off clearance for their aircraft.

2.2 Misperceiving the SBL as OFF

2.2.1 There was no evidence that the SBL had been turned OFF during the occurrence. Aircraft A flight crew had seen the SBL illuminated while they were approaching RHP T1. However, as the aircraft came closer to RHP T1, the flight crew perceived the SBL to be OFF.

2.2.2 The investigation team understands from the Aircraft A flight crew after the occurrence that the strong reflection of the setting sun (which was behind the aircraft) might have masked the illumination of the SBL, making them believe that the SBL were OFF. The investigation team opines that this was possible. The occurrence highlights that flight crews should be mindful that the perception of SBL status can be influenced by environmental conditions, e.g. the sun. If in doubt, flight crews should ascertain the status of the SBL with the air traffic controllers.

2.3 Communications between RWC and Aircraft A flight crew

2.3.1 Aircraft A flight crew said they had difficulty understanding RWC's transmissions and perceived that RWC was speaking too fast. In accordance with the operator's AOM, flight crew should stop the aircraft if ATC's instructions were not clear. However, prior to the runway incursion, at no time did Aircraft A flight crew stop the aircraft and seek clarification from RWC.

2.3.2 DSB opined that RWC's transmissions were difficult to understand. The investigation team reviewed the air traffic recordings and opined that RWC speech rate and clarity were not abnormal when communicating with Aircraft A, B and C prior to the runway incursion. There was no instance where Aircraft A, B and C flight crews asked RWC to repeat any instructions. The investigation team also opined that it is normal for people's speech rate to increase when dealing with an urgent situation such as a runway incursion.

2.4 RWC's response to incorrect readback

2.4.1 When Aircraft A mistook the landing clearance for Aircraft B as a take-off clearance and transmitted a wrong readback, RWC immediately transmitted "Negative that was for Red Cap Seven One Five K-L-M Eight Three Five to Hold at Holding Point Tango One" (see paragraph 1.1.10) with intentions to correct the incorrect readback.

2.4.2 The investigation team opines that in this occurrence, using two callsigns within a transmission when trying to correct an incorrect readback was not ideal and likely caused confusion to Aircraft A and B flight crews. This was evident when Aircraft B flight crew immediately sought clarification from RWC as to whether the transmission was for them. The confusion could have been avoided if

Aircraft B's callsign had not been included in RWC's transmission when correcting Aircraft A flight crew's readback.

3 CONCLUSIONS

From the information gathered, the following findings are made. These findings should not be read as apportioning blame or liability to any particular organisation or individual.

3.1 Aircraft A flight crew mistook Aircraft B's landing clearance as their take-off clearance. They assumed that the runway was used only for take-offs and that any instructions from the runway controller must be pertaining to take-off.

3.2 Aircraft A flight crew perceived the SBL as OFF when the SBL were ON likely because of the strong reflection of the setting sun (which was behind the aircraft) masking the illumination of the SBL.

3.3 Aircraft A flight crew did not adhere to the Aircraft A operator's procedures to stop the aircraft and seek clarification from RWC when they opined that RWC was speaking too fast and RWC's instructions were unclear.

3.4 RWC reacted promptly in correcting the wrong readback by Aircraft A but likely caused confusion to Aircraft A and B flight crews by including their two callsigns in the transmission.

4 SAFETY ACTIONS

Arising from discussions with the investigation team, the organisation(s) has/have taken the following safety action.

4.1 Safety actions by the ANSP

4.1.1 The ANSP conducted runway safety briefings for all Aerodrome ATCOs on 2 June 2025 to reinforce controller awareness, enhance situational vigilance, and promote operational consistency.

4.1.2 The ANSP started briefing all ATCOs from 16 July 2026, that including more than one callsign in a single instruction may increase the risk of human-factors related confusion, particularly where there is potential ambiguity over the intended recipient. All ATCOS were briefed by 23 July 2026.

4.1.3 The ANSP started sharing with operators[5] on lessons learnt from this incident at Runway Safety Team (RST) meetings[6] from 4 June 2025 and on 20 June 2025 completed reminding all runway users to comply strictly to the following safety requirements:

(a) All operators must maintain strict adherence to ATC instructions. Only respond to and follow instructions specifically addressed to you. When in doubt, always check and confirm with ATC. Confusion over ATC instructions meant for other operators has led to potentially hazardous situations.

(b) Runway entry protocols must be strictly observed. Entry onto any runway is permitted only under explicit ATC instruction and after visual confirmation that red stop bar lights have been deactivated. This dual verification process is essential for preventing runway incursions.

(c) Go-around instructions from ATC to the approaching aircraft must be executed immediately, unless aircraft performance limitations prevent a safe execution of the go-around. This is a critical safety directive that helps maintain separation and prevents potential conflicts.

[5] "Operators" is used by ANSP as a standard terminology to describe all intended runway and taxiway users.
[6] The Runway Safety Team (RST) is a multi-stakeholder collaborative body, co-chaired by the ANSP and the airport operator, with members from aircraft operators and service providers, to collectively identify hazards, share safety data and implement preventive measures to ensure safe runway operations.

(d) Under no circumstances should aircraft operators allow their aircraft, while operating on the taxiways, to cross illuminated red stop bar lights at runway holding positions. Disregarding illuminated red stop bar lights on the taxiways poses an unacceptable safety risk and has been identified as a key precursor to runway incursions.

4.2 Safety actions by the Aircraft A operator

4.2.1 The operator has completed a study of runway incursions in its operations.

4.2.2 The operator is reviewing its procedures and practices by comparing its existing defences and the recommendations from the Industry Study titled Global Action Plan for the Prevention of Runway Incursions (2024).

5 SAFETY RECOMMENDATIONS

A safety recommendation is for the purpose of preventive action and shall in no case create a presumption of blame or liability.

It is recommended that:

5.1 Aircraft A operator remind its flight crews to seek clarification if air traffic control transmissions are unclear or difficult to understand. [TSIB Recommendation RA-2026-006]

5.2 Aircraft A operator remind its flight crews that environmental conditions may affect their perception of the stop bar lights and that, if the status of the lights is in doubt, they should verify with the air traffic controllers. [TSIB Recommendation RA-2026-007]