41093 Test the integrity of aerodrome pavement

Kaupae | Level	4
Whiwhinga | Credit	5
Whāinga | Purpose	People credited with this skill standard are able to carry out testing to ensure the integrity of aerodrome pavement, ensuring a focus on safety, compliance, and coordination.

Hua o te ako me Paearu aromatawai \| Learning outcomes and assessment criteria

Hua o te ako | Learning outcomes	**Paearu aromatawai |** Assessment criteria
1. Test the integrity of aerodrome pavement.	a. Calibrate and set up aerodrome pavement testing equipment.
	b. Conduct a pre-test check of documentation, personnel, and equipment.
	c. Conduct a pavement integrity test.
	d. Record pavement integrity test results on database.

Pārongo aromatawai me te taumata paearu \| Assessment information and grade criteria

Assessment specifications:

Checks and calibration of test equipment could include active gauge, spare gauge, beam gauge, battery and buzzer.

Test equipment set up could include leg adjustment, rigidity of fittings, dial gauge, pivot axle.

Test result data could include defect dates, airport areas, slab inspection sheets.

Assessments must be conducted in an active airport environment to ensure practical application to reflect the standards of an aviation workplace.

Evidence presented for assessment against this skill standard must be in accordance with enterprise procedures.

Definitions:

Aerodrome means any defined area of land or water intended or designed to be used either wholly or partly for the landing, departure, and surface movement of aircraft; and includes any building, installations, and equipment on or adjacent to any such area used in connection with the aerodrome or its administration.

Airport refers to aerodrome as per Civil Aviation Rules.

Reference to *enterprise procedures* means that all activities must comply with the requirements contained in the current airport exposition, current airport company manuals and procedures, and any relevant legislative and/or regulatory requirements, which may include but are not limited to: Civil Aviation Act 2023, relevant Civil Aviation Rules, New Zealand Defence Force (NZDF) Policy.

Pavement in the context of an aerodrome refers to a rigid, durable, and flexible surface designed to support a load placed upon it, and will normally consist of concrete, asphalt, or a composite material.

Ngā momo whiwhinga* | *Grades available

Achieved

Ihirangi waitohu | Indicative content

Introduction to aerodrome pavement testing

- Purpose and importance of pavement integrity testing in aviation safety and operations.
- Overview of aerodrome pavement types.
- Familiarisation with applicable Civil Aviation Rules and Advisory Circulars.

Equipment familiarisation and calibration

- Types of pavement testing equipment (e.g. active gauge, spare gauge, beam gauge, dial gauge, battery, buzzer, falling weight deflectometers, ground penetrating radar).
- Equipment assembly and calibration procedures.
- Manufacturer specifications and tolerances.
- Equipment setup: leg adjustment, rigidity of fittings, pivot axle alignment.

Pre-test preparation

- Documentation requirements (e.g. authorisation of works form, site access and safety documentation).
- Personnel briefing protocols and communication procedures.
- Equipment positioning and pre-test checks (e.g. beam gauge alignment, pavement cross-fall measurement, plate height and dial gauge setup, use of dump truck or equivalent load simulation).

Conducting pavement integrity tests

- Test procedures and sequencing (e.g. start point, intermediate, and final readings).
- Monitoring and recording readings.
- Troubleshooting anomalies in test results.

Data recording and analysis

- Use of enterprise database systems for data entry.
- Selecting correct menu options for data input.
- Mapping and collating data prior to entry.
- Inputting defect dates, airport areas, and slab inspection data.
- Calculating defect ratings and determining pavement condition ratings.

Quality assurance and reporting

- Ensuring accuracy and completeness of test records.
- Reporting findings in accordance with enterprise procedures.
- Communicating results to relevant stakeholders.

Rauemi | Resources

CAA Advisory Circular AC139-3 Aerodrome Inspection Programme and Condition Reporting

CAA Advisory Circular AC139-5 Operational Safety During Works on Aerodromes

CAA Advisory Circular AC139-9 Notification of aerodrome data and information

CAA Advisory Circular AC139-10 Control of Obstacles

Civil Aviation Rule Part 139 Aerodromes – Certification, Operation and Use

NOTAM Guidelines for Operators and Originators

Enterprise procedures.

Pārongo Whakaū Kounga | Quality assurance information

Ngā rōpū whakatau-paerewa | Standard Setting Body	Ringa Hora Services Workforce Development Council
Whakaritenga Rārangi Paetae Aromatawai | DASS classification	Service Sector > Aviation > Airport Operations
Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga | CMR	0112

Hātepe | Process	**Putanga |** Version	**Rā whakaputa |** Review Date	**Rā whakamutunga mō te aromatawai |** Last date for assessment
Rēhitatanga | Registration	1	18 December 2025	N/A
Kōrero whakakapinga | Replacement information	This skill standard replaced unit standard 11667.		
Rā arotake | Planned review date	31 December 2030		

Please contact Ringa Hora Services Workforce Development Council qualifications@ringahora.nz to suggest changes to the content of this skill standard.