41095 Inspect, identify, and repair aerodrome pavement defects

Kaupae | Level	4
Whiwhinga | Credit	8
Whāinga | Purpose	People credited with this skill standard are able to inspect, identify environmental and loading factors, and repair aerodrome pavement defects, ensuring a focus on safety, compliance, coordination, and communication.

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

Hua o te ako | Learning outcomes	**Paearu aromatawai |** Assessment criteria
1. Inspect and identify aerodrome pavement defects.	a. Inspect aerodrome pavement for defects.
	b. Identify environmental and loading factors.
2. Maintain and repair aerodrome defects.	a. Maintain and repair aerodrome pavement defects to meet enterprise requirements.

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

Assessment specifications:

Aerodrome pavement inspections could include weekly, monthly, annual survey.

Defects could include holes, spalls, cracks, discolouration, minor impact damage, honeycombing.

Environmental factors could include discolouration, cavitations, water retention, chemical contaminants, heat, cold.

Loading factors could include runway aircraft loads, structures.

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

Aerodrome pavement inspection

- Purpose and importance of pavement inspections in aviation safety.
- Types of aerodrome pavements (e.g. rigid, flexible, composite).
- Inspection frequencies and methods (e.g. visual, tactile, survey-based).
- Use of personal protective equipment (PPE) and safety protocols (e.g. high-visibility clothing, radio communications).
- Awareness of aircraft and vehicle movement during inspections.
- Classification of pavement defects: holes, spalls, cracks, discolouration, impact damage, honeycombing and surface irregularities.
- Documentation and reporting procedures.
- Runway creep: causes, detection, and reporting.

Environmental and loading factors

- Environmental influences on pavement condition: water retention, cavitation, chemical contamination, temperature extremes (heat/cold) and their effects.
- Loading factors: aircraft types and weights, frequency and distribution of loads, structural stress and fatigue.
- Relationship between environmental/loading factors and defect formation.

Pavement maintenance and repair

- Monitoring pavement quality over time.
- Identifying and responding to multiple or recurring defects.
- Techniques for mitigating environmental damage: redirecting water runoff, removing contaminants, applying waterproofing membranes or bonding agents, use of shrinkage-compensating materials.
- Repair methods for different defect types.
- Annual validation processes for major defects.
- Reporting and record-keeping in line with enterprise procedures.

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 11669.		
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.