

**Qualification title:** New Zealand Diploma in Aeronautical Maintenance Certification (Level 6) with strands in Aeroplane, Rotorcraft, Powerplant Piston, Powerplant Turbine, Electrical, Instrument, and Radio.

**Qualification number:** 2907

**Date of review:** 23<sup>rd</sup> June 2022

This report refers to all graduates awarded this qualification prior to: **31<sup>st</sup> December 2021**

**Final decision on consistency of the qualification: National consistency is confirmed**

#### **Threshold:**

This qualification is intended for experienced aeronautical engineers to enable them to certify aircraft maintenance work according to New Zealand Civil Aviation Authority (NZCAA) regulations. The threshold to determine sufficiency with the graduate profile was determined as evidence of graduates being able to:

- Apply a detailed knowledge of the theoretical and practical aspects in the areas of aircraft engineering, aircraft materials, avionics, air law, human factors, mathematics and physics, and electrical fundamentals, as defined and specified in NZCAA Rule Part 66 and applicable Advisory Circulars, with the ability to combine and apply the separate elements of knowledge in a logical and comprehensive manner

and:

- Make decisions on and manage, within the category of their chosen strand, as defined and specified in CAA Rule Part 66 and applicable Advisory Circulars, part or all of one or more well defined and undefined aeronautical engineering activities including detailed description, operation, component location, removal/installation, and troubleshooting procedures to maintenance manual level, and making judgements regarding the scope, processes, and quality of maintenance for release to service certification.

Reflecting the fact that this qualification is required to meet tightly prescribed NZCAA Rules, the threshold statement is the prescribed graduate profile outcomes (GPOs). NZCAA Rules, in turn, comply with the requirements of the International Civil Aviation Organisation.

#### **Education Organisations with sufficient evidence**

The following education organisations have been found to have sufficient evidence.

MOE Number	Education Organisation	Final rating
#9068	ServiceIQ	Sufficient
#6011	Nelson Marlborough Institute of Technology	Sufficient

## Final Consistency Review Report

### Introduction

This 240 credits Level 6 qualification comprises 155 core credits plus 85 credits in one of 7 specific strands. It is designed to recognise graduates who are experienced aeronautical engineering trades personnel who are licenced by NZCAA to certify aircraft maintenance. All aircraft maintenance operations are required to have staff holding an Aircraft Maintenance Engineers Licence (AMEL). This qualification provides academic recognition for those who have met these tightly regulated licencing requirements.

All learners are employed within the industry and operate in a tightly controlled environment where each job must be conducted as per current standard operating procedures and is formally signed off by both the trainee and their licenced supervisor. Aircraft maintenance records are legally binding documents retained for the life of the aircraft and subject to discovery and investigation in the event of an operational incident.

All licence assessments (and thus all theoretical assessments for this qualification) are undertaken on behalf of the NZCAA by an external examination provider, ASPEQ, which is owned by the industry and tightly overseen and audited by the NZCAA. In addition, graduates are required to have at least five years practical engineering experience and provide an evidence portfolio which is evaluated by NZCAA.

The diploma is awarded by two providers who have worked to ensure that the unit standards are fully aligned with NZCAA's AMEL requirements and continue to ensure they are up to date.

It is also noted that much of the practical work required as part of the licencing process is covered by level 4 unit standards comprising the Level 4 New Zealand Certificate in Aeronautical Engineering (Applied Skills) that are actively moderated by the tertiary education organisations (TEOs) involved.

There are a total of 193 graduates for the scope of the review. Learners are in full-time employment and take several years to complete licencing requirements and thus the qualification. However, they often complete multiple specialist strands. To date, these 193 graduates have completed 444 strands, with Aeroplane and Powerplant Turbine being the most popular strands.

### Evidence

The education organisations provided a range of evidence to demonstrate that their graduates met the graduate profile outcomes.

The criteria used to judge the evaluation question were:

- The nature, quality and integrity of the evidence presented by the education organisation
- How well the organisation has analysed, interpreted and validated the evidence, and used the understanding gained to achieve actual or improved consistency
- The extent to which the education organisation can reasonably justify and validate claims and statements relating to the consistency of graduate outcomes.

Examples of evidence included:

## Final Consistency Review Report

- A description of the highly regulated environment within which trainees complete workplace practical tasks to current standard operating procedures and formally record those tasks
- The processes of examinations that are contracted out to a third party (ASPEQ) by NZCAA and then audited by that statutory authority
- Details of how the programme of study is tightly aligned to current NZCAA regulatory requirements
- Feedback from graduates and employers about their perceptions of the graduate outcomes attained.

### **How well does the self-assessment and supporting evidence provided by the education organisation demonstrate that its graduates match the graduate outcomes at the appropriate threshold?**

Both educational organisations provided portfolios of evidence demonstrating how consistency is not only achieved but is an essential practice requirement. The regulatory context in which workplace training is legally required to take place and the use of an NZCAA contracted and audited third party agency to conduct all theory assessments provides the maximum possible assurance that the graduates have acquired the necessary knowledge and skills. Both the learners and their supervisors may be legally liable if any work does not follow current procedures and requirements.

Overall, the self-assessment and supporting evidence supplied by these organisations were found sufficient and demonstrate that their graduates meet the required graduate outcomes.

### **Special Focus** (includes special focus on a strand or outcome)

None

### **Examples of good practice**

By its very nature, this is an industry-led qualification whose graduates are required to meet - and be accountable for meeting - stringent regulatory requirements in their routine work practice. The qualification has been explicitly designed to recognise these requirements.

Educational organizations have established close working relationships with the industry and are actively looking to promote the AMEL and this qualification.

### **Issues and concerns**

None

### **Recommendations to Qualification Developer**

The qualification was initially due for review by December 2020 but this was delayed by both the Reform of Vocational Education (RoVE) and COVID-19. As part of the RoVE reforms, the responsibility for the qualification has now passed to the Ringa Hora Workforce Development

## **Final Consistency Review Report**

Council. Advisory group meetings are now planned for July. Given the overarching regulatory framework, no major changes to the qualification are anticipated.