Title	**Demonstrate knowledge of the use of ATS and simulation equipment in a tower environment under simulated conditions**		
Level	**5**	**Credits**	**15**

Purpose	People credited with this unit standard are able to: demonstrate knowledge of the basic operational characteristics and limitations of radar for air traffic services (ATS); demonstrate knowledge of radar control for air traffic services; demonstrate knowledge of the various parts of the air traffic management system (ATMS) under simulated conditions; demonstrate knowledge of the basic working principles of equipment in use in air traffic services; and, demonstrate knowledge of equipment used for simulated piloting in an air traffic services environment.

Classification	Aviation > Air Traffic Services

Available grade	Achieved

Guidance Information

1 The Civil Aviation Act 1990 and Civil Aviation Rule Part 65 detail the legislative requirements in relation to this unit standard. This unit standard is aligned to the Civil Aviation Act 1990, Civil Aviation Rule Part 65, which reflects International Civil Aviation Organisation (ICAO) Standards and Recommended Practices as adopted by New Zealand. This unit standard is also aligned to the associated Civil Aviation Advisory Circular (AC) 65 series containing the syllabus for Air Traffic Services Personnel Licences and Ratings, and Parts 65.103(a)(5)(vii), 65.303(a)(2), and 65.203(a)(4)(ii)&(v). Information relating to Civil Aviation Authority of New Zealand (CAA of NZ) Rules can be obtained from the CAA of NZ website on http://www.caa.govt.nz/.

2 Evidence presented for assessment against this unit standard must be in accordance with standard industry texts.

3 The simulated air traffic management requirements covered by this unit standard must be demonstrated in accordance with the Civil Aviation Rules Part 172 and/or Part 175 and other relevant rules, published by the Civil Aviation Authority of New Zealand, PO Box 3555, Wellington 6140, and their subsequent amendments.

4 The management of air traffic services for this unit standard will be simulated. The simulation must be of a high standard and closely reflect the true-to-life visual environment of the sector and emulate or simulate the controller work position components along with environment of the relevant air traffic service unit or sector.

5 *Standard industry texts* include but are not limited to:
State approved documentation,
air traffic services (ATS) provider exposition,
aerodrome emergency plans,
published aviation training manuals or textbooks (including electronic resources).

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of the basic operational characteristics and limitations of radar for air traffic services.

Performance criteria

1.1 The operational characteristics of primary radar and its limitations are explained.

1.2 The operational characteristics of secondary radar and its limitations are explained.

Range may include but is not limited to – secondary surveillance radar (SSR) codes, mode C.

Outcome 2

Demonstrate knowledge of radar control for air traffic services.

Performance criteria

2.1 Methods and requirements for identifying aircraft are described.

Range primary radar identification, secondary radar identification.

2.2 Operation of the tower radar display by the aerodrome controller is described.

Range identification, separation, traffic information.

Outcome 3

Demonstrate knowledge of the various parts of the ATMS under simulated conditions.

Performance criteria

3.1 The various modes of ATMS operations are described.

Range multi-sensor mode, single sensor mode, bypass mode.

3.2 The airspace configuration within the ATMS is described.

Range volume, strip posting areas, sectors, traffic information areas, jurisdictions.

3.3 The accessing and modification of electronic flight plans is demonstrated.

3.4 Utilisation of flight progress strips is demonstrated.

Range pre-departure clearance requests, activation of flight plans, deletion of flight plans.

3.5 Knowledge of strip postings and ownership of flight plans is demonstrated.

3.6 Automatic events that are to be initiated and processed are described.

Range may include but is not limited to – secondary surveillance radar (SSR) code management, handover of control, flight monitoring.

3.7 The operation of the various parts of the controller work position (CWP) is demonstrated within the simulated environment.

Range may include but is not limited to – global menu, situation display, target labels, datablocks, lists, interpolated tracks.

3.8 The various safety net features are described.

Range may include but is not limited to – conflict alert, minimum safety alert warning, restricted area alert.

Outcome 4

Demonstrate knowledge of the basic working principles of equipment in use in air traffic services.

Performance criteria

4.1 Basic working principles of equipment in use in air traffic services are explained.

Range may include but is not limited to – met equipment, surface movement radar, airfield lighting displays, crash alarms, communication equipment, signal lamps.

Outcome 5

Demonstrate knowledge of equipment used for simulated piloting in an air traffic services environment.

Performance criteria

5.1 Simulated piloting equipment used is described.

5.2 Application of simulated piloting equipment is demonstrated.

Replacement information	This unit standard replaced unit standard 23474.

Planned review date	31 December 2027

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	21 November 2013	31 December 2026
Review	2	30 March 2023	N/A

Consent and Moderation Requirements (CMR) reference	0028

This CMR can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.

Comments on this unit standard

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