Title	Produce working drawings from developed designs for marine systems		
Level	5	Credits	15

Purpose	People credited with this unit standard are able to identify marine design detail requirements, and produce detail marine drawings and specifications.
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Classification	Boating Industries > Marine Design	
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Available grade	Achieved	48.
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## **Guidance Information**

1 Definition

Design principles referred to in this unit standard incorporate ergonomics, functionality, practicality, scantlings, aesthetics, and design rules.

2 Range

marine systems – deck handling systems, including sail handling, anchoring, and loading systems; internal systems, including hydraulics, pneumatics, plumbing, motive power, fuel, gas, fire fighting, heating, ventilation, air conditioning, lifting, refrigeration, drainage, fresh water, acoustics, and sailing systems. The range excludes electrical and electronic systems.

# Outcomes and performance criteria

#### **Outcome 1**

Identify marine design detail requirements.

### Performance criteria

- 1.1 Design drawing(s) are confirmed against classification and design principles.
- 1.2 Working drawings meet structural requirements and design principles.

## Outcome 2

Produce detail marine drawings and specifications.

### Performance criteria

2.1 Detailed drawings match developed designs and client's requirements.

- 2.2 Structural and functional specifications are checked against developed designs.
- 2.3 Working drawings are produced that meet developed design and client's requirements.
- 2.4 Schedules of quantities and cost estimates are produced to meet working drawings.

This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	19 June 1997	31 December 2025
Revision	2	21 March 2001	31 December 2025
Revision	3	16 April 2004	31 December 2025
Rollover and Revision	4	20 March 2009	31 December 2025
Rollover and Revision	5	26 July 2018	31 December 2025
Review	6	25 August 2022	31 December 2025

Consent and Moderation Requirements (CMR) reference	0136
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This CMR can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.