

41031 Manage irrigation installation pre-construction and contract preparation

Kaupae Level	5
Whiwhinga Credit	15
Whāinga Purpose	<p>This skill standard is for people working in, or intending to gain skills in, managing the end-to-end processes for irrigation system installation.</p> <p>People credited with this skill standard will be able to prepare initial project estimate, determine technical compliance requirements, confirm supply and costs, and develop contract documentation to ensure projects are financially scoped, technically compliant and contract ready.</p> <p>This skill standard provides a foundation for further training in irrigation project management, contract administration and has been developed to align with the New Zealand Certificate in Irrigation System Design (Level 4) [Ref: 2557].</p>

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

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
1. Prepare an initial project estimate for irrigation installation.	a. Identify the main components and scope of the irrigation installation from the design brief.
	b. Develop a preliminary cost and timeline estimate based on project requirements.
	c. Explain estimate assumptions using historical data, supplier pricing, or construction knowledge.
2. Determine technical and compliance requirements as used in the design.	a. Gather and review all design documents, including specifications for pumps, pipes, controllers, and layout.
	b. Identify relevant legislation, codes of practice, consent conditions, and regulatory requirements.
	c. Confirm that all information is complete and suitable to support pricing and contract documentation.

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
3. Confirm supply and costs for irrigation installation.	a. Source and compare quotes for materials and installation services.
	b. Confirm total projected costs for labour, materials, transport, and risk contingencies.
	c. Explain cost breakdowns to support contract pricing and budgeting decisions.
4. Develop contract documentation for irrigation installation.	a. Develop a scope of work for installation identifying critical risks during the construction phase.
	b. Develop contract terms covering responsibilities, deliverables, timelines, pricing, and payment conditions.
	c. Determine which compliance, performance standards, dispute resolution, and health and safety clauses required for inclusion in the final contract.

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

Assessment specifications:

Akōnga/learners must be assessed in the context of a commercial irrigation systems, using naturally occurring evidence.

Activities can be assessed against existing, new or modified irrigation systems.

The irrigation system is for an agricultural or horticultural property, sports turf surface, landscape, golf course, amenities and wastewater.

All assessment activities and evidence must meet the requirements of worksite procedures, accepted industry practice and any subsequent amendments to legislation.

Evidence for all outcomes must be presented in accordance with: New Zealand Piped Irrigation Systems Design Code of Practice; and Irrigation; available from the Irrigation New Zealand website, <http://irrigationnz.co.nz/> and any subsequent amendments.

Providers must give due consideration to embedding ngā kaupapa (principles) o Te Tiriti o Waitangi when designing delivery activities relevant to this standard. These principles are outlined in [Guidelines for Providers: Embedding Tirohanga Māori](#).

Providers must give due consideration to the needs and values of Pacific peoples and other cultural groups when designing delivery activities relevant to this standard, ensuring practices are inclusive and equitable. This may include treating the Awa as a living entity, engaging with local iwi to understand cultural narratives relevant to the river's behaviour, and arranging a blessing before work commences.

Definition:

Worksite procedures refer to documented procedures used by the organisation carrying out the work and applicable to the tasks being carried out. They may include but are not limited to standard operating procedures, site safety procedures, equipment operating procedures, quality assurance procedures, housekeeping standards, procedures to comply with legislative and local body requirements.

Ngā momo whiwhinga | Grades available

Achieved.

Ihirangi waitohu | Indicative content**Initial Estimate**

- Design brief components
- Initial cost estimation
- Design scope and documentation
- Installation scope
- Supplier pricing estimates
- Historical pricing trends and forecasting
- Pricing assumptions and estimation
- Unit rates and allowance cost planning
- Documentation cost-related data.

Design and Compliance

- Technical documents:
 - Pump curves
 - Pipe sizes
 - Controller specifications
 - Layout drawings and interpretations.
- Resource Management Act
- Building Act
- Health and Safety at Work Act.
- Consents and approvals
- Codes of Practice
- Site-specific compliance considerations
- Local and regional regulatory requirements.

Cost Confirmation

- Supplier and contractor quotations for material and labour
- Market rate benchmarking
- Cost comparison methods
- Delivery, installation, contingency, sub-contracting cost components, techniques for validating and updating estimates, cross-checking final costs against initial estimates.

Contract Construction

- Scope of work in contracts
- Risks, responsibilities, tasks, deliverables, weather conditions, unforeseen site conditions
- Contract terms and structure: Payment arrangement, timelines and scheduling, performance requirements, health and safety obligations
- Legal clauses: Liability provisions, dispute resolution mechanisms, compliance references, retentions and financial security
- Contract documentation: Components of complete contract package, requirements for tender and signing.

Rauemi | Resources

Legislation relevant to this skill standard includes but is not limited to:

- Irrigation New Zealand website (codes of practice), <http://irrigationnz.co.nz/>;
 - Health and Safety at Work Act 2015 [Health and Safety at Work Act 2015 No 70 \(as at 05 April 2025\), Public Act Contents – New Zealand Legislation](#);
 - Resource Management Act 1991 [Resource Management Act 1991 No 69 \(as at 05 April 2025\), Public Act Contents – New Zealand Legislation](#);
 - National Policy Statement for Freshwater Management 2014 [National Policy Statement for Freshwater Management | Ministry for the Environment](#);
 - Public Works Act 1981 [Public Works Act 1981 No 35 \(as at 05 April 2025\), Public Act Contents – New Zealand Legislation](#);
 - Resource Management (National Environmental Standards for Freshwater) Regulations 2020 [Resource Management \(National Environmental Standards for Freshwater\) Regulations 2020 \(LI 2020/174\) \(as at 01 January 2025\) Contents – New Zealand Legislation](#);
 - National Environmental Monitoring Standards (NEMS) [National Environmental Monitoring Standards » National Environmental Monitoring Standards \(NEMS\)](#);
 - Site specific water resource consent or water supply agreement, weather data [Home | NIWA](#);
 - Descriptions and soil profile data sheets [S-Map Online | Manaaki Whenua - Landcare Research](#);
- and any subsequent amendments or replacements.

Pārongo Whakaū Kouna | Quality assurance information

Ngā rōpū whakatau-paerewa Standard Setting Body	Muka Tangata – People Food and Fibre Workforce Development Council
Whakaritenga Rārangi Paetae Aromatawai DASS classification	Engineering and Technology > Water Industry > Irrigation
Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga CMR	0052

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	N/A		
Rā arotake Planned review date	31 December 2030		

Please contact Muka Tangata – People Food and Fibre Workforce Development Council at qualifications@mukatangata.nz to suggest changes to the content of this skill standard.