

Aligned Irrigation Pathway Map – Levels 3 to 5

Possible complex apprenticeship								
New Zealand Certificate in Irrigation Technology (Level 3) [Ref:5316] 65 credits	New Zealand Certificate in Irrigation Technology (Level 4) [Ref: 5317] 70 credits	New Zealand Certificate in Irrigation System Management (Level 4) [Ref: 2556] 40 credits		New Zealand Certificate in Irrigation System Performance Assessment (Level 4) [Ref: 2555] 40 credits		New Zealand Certificate in Irrigation System Design (Level 5) [Ref: 2557] 100 credits		Focus Area (with Purpose Context) Footnotes
		SS1 Establish irrigation system requirements for commercial use (10 cr) (L4) replaces 28934			SS1 Establish irrigation system requirements for commercial use (10 cr) (L4) replaces 28934			1
		SS2 Manage Irrigation Scheduling and Assess Seasonal Efficiency (15 cr) (L4) replaces 28935			SS7 Develop an irrigation system solution (15 cr) (L5) replaces 28932			2

¹ L4: Establish irrigation systems

Identify and describe client objectives and site factors (e.g., land use, soil type, water availability).

Determine irrigation water requirements using environmental, agronomic, and legislative considerations.

Support planning decisions to meet site-specific irrigation needs.

² L4: Manage irrigation systems

Develop and adjust irrigation schedules based on crop stages, soil moisture, and climate data.

Monitor system runtime and seasonal application totals.

Evaluate scheduling effectiveness and water use efficiency.

L5: Design and layout solution

Prepare site layout and system schematics.

Incorporate water source, terrain, zoning, and distribution logic.

Translate client needs into a practical and efficient design.

Aligned Irrigation Pathway Map – Levels 3 to 5

Possible complex apprenticeship								
New Zealand Certificate in Irrigation Technology (Level 3) [Ref:5316] 65 credits	New Zealand Certificate in Irrigation Technology (Level 4) [Ref: 5317] 70 credits	New Zealand Certificate in Irrigation System Management (Level 4) [Ref: 2556] 40 credits		New Zealand Certificate in Irrigation System Performance Assessment (Level 4) [Ref: 2555] 40 credits		New Zealand Certificate in Irrigation System Design (Level 5) [Ref: 2557] 100 credits		Focus Area (with Purpose Context) Footnotes
GPO 1: Safely install, test and operate a simple irrigation system. (30 credits) GPO 3: Identify, repair and replace, and report faults or faulty components in a simple irrigation system. (20 credits)	GPO 3: Identify faults using hydraulic pressure fundamentals and provide solutions. (20 credits) GPO 4: Identify, repair and replace, and report faults or faulty components, in a complex irrigation system. (10 credits)	SS3 Manage Site-Specific Irrigation Systems (15 cr) (L4) replaces 28936					SS8 Design irrigation pipe systems (15 cr) (L5) replaces 28932 SS9 Design irrigation pump systems (20 cr) (L5) replaces 28932 SS10 Integrate electrical controls in irrigation system design (15 cr) (L5) replaces 28932	3

³ **L4: Manage site specific irrigation systems**

Operate, monitor, and maintain irrigation systems for optimal performance.

Identify and troubleshoot faults.

Maintain records of maintenance and operating procedures.

L5: Design components requirements

Design main-line and lateral layouts.

Perform hydraulic calculations (friction loss, velocity, flow).

Select appropriate materials and fittings.

Select and size pumps based on duty requirements.

Assess energy needs and cost-efficiency.

Integrate pump controls and protection devices.

Incorporate timers, valves, and sensor automation.

Select control system components based on functional requirements.

Design for reliability, expandability, and safety.

Aligned Irrigation Pathway Map – Levels 3 to 5

Possible complex apprenticeship									
New Zealand Certificate in Irrigation Technology (Level 3) [Ref:5316] 65 credits	New Zealand Certificate in Irrigation Technology (Level 4) [Ref: 5317] 70 credits	New Zealand Certificate in Irrigation System Management (Level 4) [Ref: 2556] 40 credits		New Zealand Certificate in Irrigation System Performance Assessment (Level 4) [Ref: 2555] 40 credits		New Zealand Certificate in Irrigation System Design (Level 5) [Ref: 2557] 100 credits		Focus Area (with Purpose Context) Footnotes	
GPO 4: Organise own workflow effectively. (5 credits)	GPO 5: Organise and implement irrigation projects using project management skills, health and safety knowledge, and taking financial impacts into consideration. (10 credits)	SS4 Carry out an irrigation system performance assessment (15 cr) (L4) replaces 28925						SS11 Manage irrigation installation contracts (10 cr) (L5) replaces 28933	4
	GPO 1: Install, commission, and operate a complex irrigation system.	SS5 Assess, Interpret and Report on Irrigation System Performance (15 cr) (L4) replaces 28926						SS12 Document irrigation testing and	5

⁴ **L4: Carry out irrigation performance assessments**

Conduct field assessments (e.g., pressure, flow, DU/CU calculations).

Use performance benchmarks to evaluate system condition.

Identify opportunities for improvement or upgrades.

L5: Installation contracts

Interpret contract specifications and scope.

Coordinate installation activities with contractors.

Monitor progress and ensure compliance with design.

⁵ **L4: Review irrigation performance assessments**

Analyse field data from system assessments.

Compare findings to system specifications or performance standards.

Prepare structured technical reports with recommendations.

L5: Document and commission

Aligned Irrigation Pathway Map – Levels 3 to 5

Possible complex apprenticeship								
New Zealand Certificate in Irrigation Technology (Level 3) [Ref:5316] 65 credits	New Zealand Certificate in Irrigation Technology (Level 4) [Ref: 5317] 70 credits	New Zealand Certificate in Irrigation System Management (Level 4) [Ref: 2556] 40 credits		New Zealand Certificate in Irrigation System Performance Assessment (Level 4) [Ref: 2555] 40 credits		New Zealand Certificate in Irrigation System Design (Level 5) [Ref: 2557] 100 credits		Focus Area (with Purpose Context) Footnotes
		commissioning process (10 cr) (L5) replaces 28933						
GPO 2: Follow and implement design drawings, specifications, quantity schedules and operation manuals. (10 credits)	GPO 2: Follow and implement design drawings, specifications, quantity schedules and operation manuals and mark-up as-built drawings for complex irrigation systems.	SS6 Plan an irrigation system performance assessment (10 cr) (L4) replaces 28926			SS3 Manage Site-Specific Irrigation Systems (15 cr) (L5) replaces 28933		6	

Prepare as-built drawings and user documentation.

Oversee commissioning tasks including testing and calibration.

Confirm system meets design and client requirements.

⁶ L4: Plan irrigation performance assessments

Identify system type and context.

Select appropriate testing methods and equipment.

Prepare a plan for conducting assessments safely and accurately.

L5: Develop and evaluate

Create system-specific operation and maintenance manuals.

Provide training resources for users.

Use performance data to review system effectiveness over time.

Example only any combination can work if it does not exceed 40 credits

Level 4 Micro-credentials	Level 5 Micro-credentials
Determine Irrigation System Requirements (10 credits) <ul style="list-style-type: none"> SS1 Establish irrigation system requirements for commercial use (10 cr) (L4) 	Design Irrigation Pipe and Pump Systems (35 credits) <ul style="list-style-type: none"> SS3 Design irrigation pipe systems (15 cr) (L5) SS4 Design irrigation pump systems (20 cr) (L5)
	Oversee Irrigation Installation and Commissioning (20 credits) <ul style="list-style-type: none"> SS6 Manage irrigation installation contracts (10 cr) (L5) SS7 Document irrigation testing and commissioning process (10 cr) (L5)
Existing Micro-credentials - sit in parallel as opposed to being in the same pathway	5004 Irrigation - Full Pipe Water Measurement Device Installation and Commission (Micro-credential) (5 credits) <ul style="list-style-type: none"> 27445 Select, oversee installation, and commission a full pipe water measurement device, Level 5; Credits 5
	5002 Irrigation - Full Pipe Water Measurement Device Verification (Micro-credential) (5 credits) <ul style="list-style-type: none"> 27556 Carry out a full pipe water measurement device verification, Level 5; Credits 5
	5003 Irrigation - Water Measurement Telemetry System Installation and Commission (Micro-credential) (5 credits) <ul style="list-style-type: none"> 33324 Carry out a water measurement telemetry system installation and commission, Level 5; Credits 5

Level	Qualification	Role Profile	Focus
Level 3	New Zealand Certificate in Irrigation Technology [Ref: 5316]	Irrigation Installer	Work safely and effectively as irrigation system installers, or technicians, under limited supervision
Level 4	New Zealand Certificate in Irrigation Technology [Ref: 5317]	Irrigation Installer/technician	Install and maintain complex irrigation systems
Level 4	NZ Certificate in Irrigation System Management [Ref: 2556]	Irrigation operator/technician	System operation, scheduling, maintenance, and basic supervision
Level 4	NZ Certificate in Irrigation System Performance Assessment [Ref: 2555]	Field technician/assessor	Independent system performance assessment and reporting

Level 5	NZ Certificate in Irrigation System Design [Ref: 2557]	Irrigation designer/project manager	System design, documentation, commissioning, and performance evaluation
----------------	--	-------------------------------------	---