**Contribute to sustainable practices in a construction environment (Micro-credential)**

**Level 4, 10 credits**

**Micro-credential number** (ID: 129391-1)

**Reporting Code** [Ref: 5387-1]

**Waihanga Ara Rau Construction and Infrastructure   
Workforce Development Council (6046)**

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# Listing

## Title

|  |
| --- |
| Contribute to sustainable practices in a construction environment (Micro-Credential) |

## Level and credits

|  |  |
| --- | --- |
| 4 | 10 |

## Classification (NZSCED)

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| --- |
| 040399 Architecture and Building>Building>Building not elsewhere classified |

## Purpose

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| --- |
| The purpose of this micro-credential is to recognise the skills and knowledge needed to contribute to sustainable practices, and to critically evaluate emerging technologies that improve sustainable practices in a construction environment.  *A construction environment* is any environment where construction, modification, or maintenance of buildings, structures, or infrastructure assets takes place.  This micro-credential is intended for people currently working in a construction environment, or those with foundational experience who are building their capability in sustainable practices. It is suitable for workers across the construction and infrastructure trades, including material suppliers and people interested in environmental impact and sustainability in construction. Learners do not need to be in a leadership role or have advanced experience.  The micro-credential supports the goals of whānau, hapū, iwi, and communities by encouraging construction practices that are environmentally, economically, and socially responsible. It also helps prepare workers to evaluate technologies that support kaitiakitanga (guardianship of the environment) and continuous improvement in the sector.  *New or emerging technology* may relate to material technologies, technologies influencing methods of work, legislative changes leading to technological changes, and/or digital technologies relevant to a specific construction environment or general construction practice that leads to positive sustainable outcomes. This may include technologies that are newly developed, recently introduced to the construction sector, or simply new to the learner or their workplace. |

## Outcome

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| On successful completion of this micro-credential, learners/ākonga will be able to contribute to environmental, economic, and social sustainability in a construction environment, and evaluate a new or emerging technology for improving sustainable practices. |

## Education pathway

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| This micro-credential may lead to further study in construction or infrastructure related qualifications at Level 4 or above. |

## Cultural, community or employment pathway

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| On successful completion of this micro-credential, learners/ākonga may:   * contribute meaningfully to construction projects that care for the environment, use resources wisely and support the wellbeing of people and communities. * work in jobs that support responsible environmental practices in a construction environment. * help whānau, hapū, iwi, and hapori to use new construction technologies in ways that support sustainable practices and reflect the principles of kaitiakitanga and manaakitanga. |

## Assessment standards or skill standards

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ID | Title | Level | Credit | Version |
| 40293 | Contribute to sustainable practices in a construction environment | 4 | 5 | 1 |
| 40309 | Evaluate a new or emerging technology for a construction environment | 4 | 5 | 1 |

## 

## Review period

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| --- |
| August 2028 |

# Approval

## Learning outcomes

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| On successful completion of this micro-credential, learners/ākonga will gain knowledge and skills to be able to:   * Contribute to environmentally sustainable practices in a construction environment. * Contribute to economically sustainable practices in a construction work programme. * Contribute to socially sustainable practices in a construction team. * Evaluate a new or emerging technology for improving sustainable practices in a construction environment.   See - Appendix 1 - Component Descriptors. |

## Need and acceptability

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| This micro-credential is strongly supported by a diverse group of stakeholders representing construction, infrastructure, waste management, health and safety, research, local government, and training. Their endorsement demonstrates both the clear industry need for this training and the relevance and usefulness of its content.  The support reflects core sector values, including sustainability, health and safety, innovation, and workforce development. It also aligns with kaupapa that uphold Te Tiriti o Waitangi and integrate Te Ao Māori, consistent with the principles of *Te Hono o Te Kahurangi*.  Attestations from stakeholders are attached to this application. |

## Admission

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| There are no mandatory entry requirements for this micro-credential. However, learners/ākonga will need access to a construction environment. |

## Credit recognition and transfer, recognition of prior learning

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| --- |
| It is expected those seeking accreditation for delivery of this micro-credential will develop and implement regulations, policies, and processes within a quality management system (QMS) that assist learners to have their relevant learning recognised and credited.  The provisions for awarding credit will need to cover:   * cross-crediting (from another assessment standard, micro-credential, or programme within the organisation) * credit transfer (from another assessment standard, skill standard, micro-credential or programme awarded by another organisation) * recognition of prior learning (credit awarded for informal or uncertificated learning). |

## Length and Structure

**Length**

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| --- |
| This micro-credential requires 100 hours of learning and assessment. The 2 component descriptors may be delivered concurrently. Providers may determine duration in line with the notional hours implied by the credit value. |

**Structure**

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| The micro-credential has two components:   1. Contribute to sustainable practices in a construction environment. 2. Evaluate a new or emerging technology for a construction environment.   Learners begin by exploring environmental, economic, and social sustainability. This includes understanding how construction impacts water, air, soil, plants, animals, and cultural values. They also learn about using materials, time, and resources wisely, as well as supporting teamwork through inclusion, good communication and wellbeing.  The second part focuses on identifying and evaluating emerging construction technologies, including how to find credible information and assessing their benefits, limitations and potential impacts on sustainable impacts to their work and work environment.  Throughout the programme, mātauranga Māori and inclusive practices may be woven through learning experiences, including group discussion, practical examples, and case studies.  See details in - Appendix 1 - Component Descriptors. |

## Assessment methods

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| Please refer to Appendix 1 – Micro-credential Component Descriptors attached to this application for information on assessment methods.  NZQA’s *Aromatawai and the Principles of Assessment* will guide the development of quality assessment practices for this micro-credential. All assessment must be fair, valid, consistent, and appropriate to the learning outcomes.  To be awarded this micro-credential, learners must demonstrate competence in all learning outcomes.  Assessment is through practical demonstration and self-reflection. Learners may complete a self-reflection on how well they have met the learning outcomes, including what they did differently or would improve.  **Component 1**  Assessment may be through practical demonstration.  Learners will demonstrate practices that support environmental, economic, and social sustainability in a construction environment. Tasks may include:   * Following actions in an environmental protection plan (EPP). * Using materials efficiently and reducing waste. * Contributing to a positive and culturally respectful team environment.   For a learning or assessment context:   * If a learner is already working on a site with an EPP, they can use that plan. * If no EPP exists, the **provider should simulate one** or give an example (e.g., a mock EPP with site-specific actions) so learners can still demonstrate understanding and apply actions.   **Component 2**  Learners will research and evaluate new or emerging technologies using credible industry sources. Tasks may include:   * Summarising how the technology could be used. * Identifying the benefits and limitations. * Reflecting on the technology’s potential impact on sustainability, efficiency, or construction site practices.   Self-reflection activities may also be used, delivered online, in staff-led sessions, or through self-directed learning. Providers may contextualise assessments to reflect their learners' environments and work practices.  Waihanga Ara Rau manages moderation requirements in accordance with the current, or any superseded versions of CMR 0048.  [https://www.waihangaararau.nz/assurance/moderation](https://protect.checkpoint.com/v2/r04/___https://www.waihangaararau.nz/assurance/moderation___.Y3A0YTpuenFhMTY0NDM1NzI0NDQxNTpjOm86YzRhNDZkNWFjOGFjNjA0OTFhNzZmMWUwYmVhMDAyZDk6Nzo2OThjOmNjNTU2ZmRlOGQ2OGY2ZDJhMTVkMWM0MWQ3YTIzODE4NDUyYTk1NDA2MDViM2YzN2ZkYmQxM2U3ZGMyMjg2MDI6cDpUOk4).  **Pre-assessment and post assessment moderation**  Providers will meet the requirements of the skill standards and the current, or any superseded versions of CMR 0048 for pre and post assessment moderation of assessments.  Providers will follow the assessment and moderation policies in their quality management system (QMS).  National external moderation (NEM) of this micro-credential’s skill standards will be captured as part of the processes outlined in the Waihanga Ara Rau annual assurance plans. |

## Completion

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| Components 1 and 2 must be completed to be awarded this micro-credential.  Please refer to Appendix 1 – Micro-credential Component Descriptors attached to this application for further information on the sequential learner progression through this micro-credential. |

## Review process

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| Waihanga Ara Rau has regular engagement with industry stakeholders, to ensure the review of the content of the micro-credential and to ensure it remains fit for purpose. A report on the outcomes for stakeholders will be completed at the end of the review period, published, and shared with relevant stakeholders.  To ensure this micro-credential is delivered as intended, Providers are expected to have review processes in place to ensure regular review of the provision of the micro-credential to measure and monitor the quality of outcomes for learners and stakeholders, particularly for Māori and Pāsifika learners. |

**Appendix 1 - Component Descriptors**

##### Component Title 1:

##### Contribute to sustainable practices in a construction environment

|  |  |  |  |
| --- | --- | --- | --- |
| **Level** | 4 | **Credits** | 5 |
| **Mode** | Face to face / blended / online | **Duration (weeks)** | 2.5  (or 4 if delivered concurrently with Component 2) |
| **Learning outcomes** | On successful completion of this component, learners will be able to:  LO 1: Contribute to environmentally sustainable practices in a construction environment.  LO 2: Contribute to economically sustainable practices in a construction work programme.  LO 3: Contribute to socially sustainable practices in a construction team. | | |
| **Topics** | * Environmental sustainability – water, air, soil, fauna, and flora, cultural significance, standard compliance (e.g. ISO 14001), following actions in an environmental protection plan (EPP). * Economic sustainability – time, materials, resources. * Social sustainability – contributions on site, inclusion, diversity, communication, conflict resolution, wellbeing. * Business requirements for sustainability, contractual expectations. * Local iwi and council expectations. * Rāhui definition and appropriate responses * Hazardous materials management – identification and handling of hazardous materials; Safety Data Sheets (SDS). | | |
| **Suggested resources** | * REBRI Waste Minimisation Toolkit * Multilingual on-site waste sorting signage kits * Resource recovery map * Guidance on waste minimisation planning * Trade Competency Profile on core sustainability capabilities * BRANZ e-learning module on sustainable principles * ISO 14001:2015 Environmental management systems — Requirements with guidance for use | | |
| **Methods** | Learning may take place through practical, work-based tasks, simulations, and guided instruction. Learners may also take part in discussions and reflections. Real-world videos and examples can be used to show best practice on-site. Providers are encouraged to support peer learning, reflective practice, and contextualise activities in a construction environment.  For a learning or assessment context:   * If a learner is already working on a site with an EPP, they can use that plan. * If no EPP exists, the **provider should simulate one** or give an example (e.g., a mock EPP with site-specific actions) so learners can still demonstrate understanding and apply actions. | | |
| **Standard** | Skill standard 40293: Contribute to sustainable practices in a construction environment (Level 4, 5 credits) | | |

##### Component Title 2:

##### Evaluate a new or emerging technology for a construction environment

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| --- | --- | --- | --- |
| **Level** | 4 | **Credits** | 5 |
| **Mode** | Face to face / blended / online | **Duration (weeks)** | 2.5  (or 4 if delivered concurrently with Component 2) |
| **Learning outcomes** | On successful completion of this component, learners will be able to:  LO 1: Evaluate a new or emerging technology for a construction environment. | | |
| **Topics** | * Construction information sources and networks. * Credible suppliers for construction. * Formal (non-qualification) and informal training opportunities for construction. * Developments in construction over time. * New and emerging construction materials. * Impact of automation and sustainability on new work methods. * Digital technologies of influence to the construction trade. * New or emerging legislative requirements related to construction. * New or emerging technologies — e.g. prefabrication, QR code tracking for site logistics and deliveries, Building Information Modelling (BIM), lean principles to reduce waste and improve workflow * Benefits and limitations of the new or emerging technology * Mentoring and knowledge sharing. | | |
| **Methods** | Learning may take place through practical, work-based tasks, simulations, and guided instruction. Learners may also take part in discussions and reflections. Real-world videos and examples can be used to show best practice on-site. Providers are encouraged to support peer learning, reflective practice, and contextualise activities in a construction environment. | | |
| **Standard** | Skill standard 40309: Evaluate a new or emerging technology for a construction environment (Level 4, 5 credits) | | |