PART A – SkillsPoint Product Information

Master Product Information

**RTO Code:** **90003**

**Training Product Code:** **MSS50218**

**Release no.** **1**

**Training Product Name:** **Diploma of Environmental Monitoring and Technology**

**Status of Training Product:** Current

**Release Date:** **22/10/2018**

**Category of Product:**  Nationally Recognised Qualification

Accredited Course

Skill Set

Statement of Attainment

Non Nationally Recognised

**SkillsPoint Details**

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**SkillsPoint Project Identifier: MRS\_18\_09\_MSS50218\_CONT**

Master Delivery Information

**Specialist Stream or Industry Identified Stream contained in this TAS:**

**Contamination Industry Specialisation (CTM)**

**Target Student Group Category:**  Pre-employment

Apprentices/Trainees

International Students

Existing Workers

Other (Please specify):

**Mode(s) of Delivery:**  Face to Face Learning

Workplace Training

Online Learning

Blended

Other:

Contents

[PART A – SkillsPoint Product Information 1](#_Toc18068633)

[Master Product Information 1](#_Toc18068634)

[Master Delivery Information 1](#_Toc18068635)

[1. Training Product Overview 3](#_Toc18068636)

[1.1 Training Product Requirements 3](#_Toc18068637)

[1.2 Licensing and/or Regulatory Requirements 3](#_Toc18068638)

[1.3 Qualification Description 3](#_Toc18068639)

[1.4 Pathways 5](#_Toc18068640)

[1.5 Entry Requirements 5](#_Toc18068641)

[1.6 Exit Points 5](#_Toc18068642)

[1.7 Units of Competency 6](#_Toc18068643)

[1.8 Imported Units 8](#_Toc18068644)

[2. Additional Information 9](#_Toc18068645)

[2.1 Environment and Location 9](#_Toc18068646)

[2.2 Language, Literacy and Numeracy 10](#_Toc18068647)

[2.3 Recognition Processes 10](#_Toc18068648)

[2.4 Educational and Support Services 11](#_Toc18068649)

[2.5 WHS Risk Ranking 11](#_Toc18068650)

[2.6 Physical and Learning Resources 12](#_Toc18068651)

[2.7 Industry Engagement 17](#_Toc18068652)

[3. Transition Arrangements 21](#_Toc18068653)

[4. Structure, Delivery and Assessment 21](#_Toc18068654)

[4.1 Volume of Learning 21](#_Toc18068655)

[4.2 Delivery Strategy 22](#_Toc18068656)

[4.3 Assessment 25](#_Toc18068657)

[5. Master TAS Approval 29](#_Toc18068658)

[PART B – Delivery TAS Information 30](#_Toc18068659)

[6. Delivery Details 30](#_Toc18068660)

[6.1 Entry Requirements 30](#_Toc18068661)

[6.2 Additional Student Support at Delivery Location 30](#_Toc18068662)

[6.3 Contextualisation 31](#_Toc18068663)

[7. Third Party Arrangements 31](#_Toc18068664)

[8. Staff Qualifications and Industry Experience 32](#_Toc18068665)

[9. Additional Industry/Community Engagement 34](#_Toc18068666)

[10. Assessment Validation 35](#_Toc18068667)

[10.1 Validation of assessment judgements 35](#_Toc18068668)

[11. Delivery TAS Approval 36](#_Toc18068669)

1. Training Product Overview

### 1.1 Training Product Requirements

**Link to Training Product on**[TGA](http://www.training.gov.au/)**:** **<https://training.gov.au/Training/Details/MSS50218>**

**Number of Core Units:**  **11**

**Number of Elective Units: 9**

**Total Number of Units: 20**

**Packaging Rules:**

Total number of units = 20

- 11 core units

- 9 elective units, consisting of:

- a minimum of 5 units from Group A

The balance of units, to a maximum of 4, may be selected from:

- Group A and B

- Up to 3 units from Group C

Up to 4 units from any endorsed Training Package or accredited course at Diploma level – these units must be relevant to the work outcome.

Note: Units with prerequisites are marked with an asterisk\*. Prerequisite units must be counted in the total number of units required for achievement of the qualification. Refer to individual units for details.

All electives chosen must contribute to a valid, industry-supported vocational outcome.

### 1.2 Licensing and/or Regulatory Requirements

No licensing, legislative, regulatory or certification requirements apply to this qualification at the time of publication.

### 1.3 Qualification Description

This qualification specifies the competencies required to apply a range of methods and technologies to conduct environmental sampling, testing and monitoring in most industry sectors, and to assist environmental scientists, engineers and planners with site assessment, minimising environmental impacts of processes and remediation/rehabilitation of sites.

This qualification applies to environmental officers, environmental protection officers, environmental compliance officers, environmental technicians and similar personnel employed by enterprises and Commonwealth, state/territory and local governments. These personnel often work with environmental scientists, engineers, planners and community groups to manage and conserve natural systems and resources, minimise pollution, remediate/rehabilitate sites and trial practical strategies to protect and improve ecosystems. Their work often involves environmental monitoring and technology, internal auditing and continuous improvements to enhance compliance and minimise the environmental impacts of processes. Government employees may be more involved with external inspection and auditing of enterprises and negotiating appropriate responses to instances of non-compliance.

The qualifications include clear environmental science and technology coverage and will enable environmental officers, compliance officers, technicians and field officers to measure and address impacts on air, water and other external environmental conditions. Other inclusions are the implementation of

legislation, development and implementation of policy as well as reporting requirements and development of strategic operational plans and procedures.

The qualifications address the skilling needs of technicians and paraprofessionals who:

• collect, analyse and report environmental data

• contribute to the assessment of environmental risks and impacts

• develop and/or implement policies, management plans and strategies, and work practices associated with sustainable development, environmental management, waste management, pollution control, rehabilitation and restoration of sites, and catchment areas and regions

• install, operate, and maintain new ‘sustainable’ technologies

• monitor and report environmental/sustainability performance and compliance

• improve the knowledge and skills of workers and community members about environmental management and sustainability.

Job roles targeted by this qualification include environmental officers, environmental protection officers, environmental compliance officers, environmental technicians and similar personnel employed by enterprises and Commonwealth, state/territory/local governments in the sectors listed above. These personnel often work with environmental scientists, engineers, planners and community groups to manage and conserve natural systems and resources, minimise pollution, remediate/rehabilitate sites and trial practical strategies to protect and improve ecosystems. Their work often involves environmental monitoring and technology, internal auditing and continuous improvements to enhance compliance and minimise the environmental impacts of processes. Government employees may be more involved with external inspection and auditing of enterprises and negotiating appropriate responses to instances of non-compliance.

### 1.4 Pathways

**Study Pathways**

The study pathways available to students who undertake this Specialist Stream or Industry Identified Stream include:

**Pathways into this qualification include;**

There are no defined pathways into this qualification.

**Pathways out of this qualification include;**

MSS80218 – Graduate certificate in environmental management, and various qualification in the higher education sector

**Employment Pathways**

The employment pathways available to students who complete this Specialist Stream or Industry Identified Stream include:

The MSS50218 Diploma of Environmental Monitoring and Technology provides technical training across a range of industry sectors, such as:

• environmental monitoring, sampling and field testing (e.g. air, odour, water, soil and noise)

• geotechnical services

• natural resource management

• occupational hygiene monitoring (e.g. air, noise and radiation)

• water supply and treatment, storm and wastewater management

• solid and hazardous waste management

• site remediation and rehabilitation

• resource efficiency (e.g. energy, water and waste auditing).

### 1.5 Entry Requirements

The following **Training Package** entry requirements exist for this course:

There are no entry requirements for this qualification.

### 1.6 Exit Points

A Statement of Attainment will be issued for any unit of competency successfully completed if the full qualification is not completed.

### 1.7 Units of Competency

Consistent with the qualification packaging rules, the units listed below will be delivered and assessed for this training product:

#### Core Units

Table 1 Core Units

| **No.** | **Unit Code and Unit Title** | **Unit Type and Additional Notes** |
| --- | --- | --- |
| **1** | MSL943004 – Participate in laboratory or field workplace safety | Core |
| **2** | MSL952001 – Collect routine site samples | Core |
| **3** | MSL974022 – Undertake environmental field-based monitoring | Core |
| **4** | MSMENV472 – Implement and monitor environmentally sustainable work practices | Core |
| **5** | MSS024014 – Implement environmental management plans and procedures | Core |
| **6** | MSS024015 – Apply an understanding of environmental principles to a site | Core |
| **7** | MSS024016 – Process and present environmental data | Core |
| **8** | MSS025017 – Assist with assessing site environmental indicators | Core  Pre-requisite MSS024015 |
| **9** | MSS025018 – Assess the environmental risk and impact of a project activity or process | Core  Pre-requisite MSS024015 |
| **10** | MSS025019 – Report environmental data | Core  Pre-requisite MSS024016 |
| **11** | MSS025020 – Provide environmental information to customers | Core |

#### Elective Units

Table 2 Elective Units

| **No.** | **Unit Code and Unit Title** | **Unit Type and Additional Notes** | **Packaging Rules**  *(Grouping, Hours and Points, where applicable)* |
| --- | --- | --- | --- |
| **1** | MSS024017 - Collect spatial and discrete environmental data | Elective | Group B |
| **2** | MSL973013 - Perform basic tests | Elective | Group C |
| **3** | MSS024020 - Recognise common geological landforms and samples | Elective | Group B |
| **4** | MSS015034 - Inform and educate organisation and community representatives on sustainability issues | Elective | Group A |
| **5** | MSL975042 - Design and supervise complex environmental field surveys | Elective | Group A  Pre-requisite MSL974022 |
| **6** | MSS025014 - Perform sampling and testing of contaminated sites | Elective | Group A  Pre-requisite MSS024020 |
| **7** | MSS025005 - Produce site maps | Elective | Group A  Pre-requisite MSS024017 |
| **8** | MSS025023 - Plan and conduct environmental project work | Elective | Group A |
| **9** | HLTAID003 - Provide first aid | Elective | Group C |

### 1.8 Imported Units

Details of electives imported from another Training Package or accredited course.

Table 4 Imported Electives

| **No.** | **Unit Code** a**nd Unit Title** | **Release version #** | **Status** | **Release Date** | **SkillsPoint** |
| --- | --- | --- | --- | --- | --- |
| **1** | Nil |  |  |  |  |

2. Additional Information

### 2.1 Environment and Location

The **simulated** work environment will be achieved by:

TAFE NSW will provide a simulated work environment by providing access to;

TAFE NSW Laboratories for completion of laboratory related work meeting OECD GLP requirements

Providing access to computer rooms and programs for document work and data analysis including Microsoft Office programs such as MS Word and MS Excel, MS Access.

Providing access to field sites to undertake environmental monitoring of water, air and soils, noise and collection of meteorological data. Depending on availability and access, these site will be ‘real’ sites with actual monitoring but this is dependent upon company policy and induction access requirement and will be dealt with on a client by client basis.

Where audits are undertaken, students will use real government (or similar quality) audit templates and procedures in accordance with the relevant licensing or regulatory requirements (such as Commonwealth Sustainability reporting requirements and NSW EPA licensing requirements).

Compliance with industry safety requirements is supported through the provision of PPE, Australian Standards and codes of practice, Standard Operating Procedures (SOPs), risk assessments and the legal, ethical and work health and safety (WHS) requirements specific to the work task.

There are a series of defined activities that a team of participants and individuals may achieve in a simulated work environment which is reflective of the practical application of skills in the workplace. These include:

\* Practical tasks

\* Group work

\* Simulated laboratory environment activities including instructor led demonstration of practical tasks using competency dedicated instruments and equipment, followed by student practice.

\* Classroom activities including role plays, research and questioning and discussion.

The ‘Equipment to student’ ratio will vary depending on many factors including the cost of the equipment. In some cases the ratio is 1:1 for simple items such as pH meters, yet where expensive equipment is required, there may only be one item per class. In these cases, it is intended that students gain access to equipment via ‘round-robin’ timetabling so that each student gets access to all relevant equipment. This is no different to industry practice where laboratories have one piece of expensive equipment, which is very common.

**Work placement** will be achieved by:

**Detail:**

Nil

**Eligibility for work placement:**

Nil

**Total Work Placement Hours:** 0

### 

### 2.2 Language, Literacy and Numeracy

Based on the Australian Core Skills Framework ([ACSF](https://www.education.gov.au/download-acsf)), please indicate which performance levels students are expected to be at the commencement of the course for each of the core skills listed in the table below.

For assistance in determining the LLN level of performance please consult with your relevant Learning Support Services.

Table 4 Language, Literacy and Numeracy

| **Level of Performance** | **PL1A&B** | **1** | **2** | **3** | **4** | **5** |
| --- | --- | --- | --- | --- | --- | --- |
| **Learning** |  |  |  |  |  |  |
| **Reading** |  |  |  |  |  |  |
| **Writing** |  |  |  |  |  |  |
| **Numeracy** |  |  |  |  |  |  |
| **Oral communication** |  |  |  |  |  |  |

### 2.3 Recognition Processes

#### Recognition of Prior Learning

Students are able to have their competency from prior learning and work experience recognised in this qualification through the following arrangements.

* Evidence of completing formal training
* Work experience: on the job experience and informal training
* Life experience: community group involvement, family activities, sports, hobbies, leisure activities, unpaid work, organising events, and/or travel.

Applications for RPL will be assessed on an individual basis and may be granted when a portfolio of evidence is assessed in accordance with TAFE NSW Recognition Policy and Procedures and the student is deemed competent for the unit/s of competency for which the application applies. Alternatively, the student may nominate to undertake a challenge assessment for the opportunity to demonstrate competency.

**Credit Transfer**

Students may also apply for credit transfer upon enrolment. The same or equivalent units of competency previously completed through an Australian RTO may be credited towards the new qualification they enrol into.

### 2.4 Educational and Support Services

TAFE NSW provides the following services to ensure a supported and successful learning environment for all students:

* Aboriginal and/or Torres Strait Islander Student Support and Services
* Accessibility and Disability Services
* Personal Counselling
* Vocational Counselling
* Learning Support
* International Student Support
* Scholarships
* Multicultural Support

Detailed current information on these Support Services are made available to staff and students at [TAFE NSW Student Services](http://www.tafensw.edu.au/support). Additionally every student is supported by a dedicated Student Services team at each campus location.

### 2.5 WHS Risk Ranking

Consult the WHS risk register for this course

This Training Product has the following WHS risk ranking Medium risk

Refer to the TAFE NSW Enterprise [Risk Management Policy](https://staff.tafensw.edu.au/documents/2017/11/enterprise-risk-management-policy.pdf/) for more details

### 2.6 Physical and Learning Resources

Specifically, the physical and learning resources listed below are required for the delivery and assessment of this Specialist Stream or Industry Identified Stream for this training product:

Table 5 Physical and Learning Resources

| Type | Resource Requirements |
| --- | --- |
| Facilities | TAFE NSW will provide the following as suitable facilities, including:  - a standard chemical, biological or analytical laboratory , or,  --a computer room (or other access to computers e.g. library services or in the laboratory)  - Access to field sites to perform fieldwork activities  Facilities will include a classroom with computers with relevant software installed for online learning, internet access, desks, chairs, white/chalk board and projector capabilities. |
| Equipment | **MSL943004**  Equipment and resources required for this unit include typical laboratory/field work equipment and materials, PPE, emergency equipment including first aid equipment, eye wash kit or shower and fire extinguisher, workplace procedures.  **MSL952001**  Access is required to instruments, equipment, materials, workplace documentation, procedures and specifications associated with this unit, including, but not limited to: field or production sites to sample and a variety of sample types sampling tools, containers, equipment and procedures.  **MSL974022**  Equipment required for field activities: vehicles, navigation and communication equipment; survey and/or testing equipment, sampling equipment, containers, safety equipment and consumables  **MSL973013**  Use of suitable facilities, equipment and resources, including: a standard laboratory equipped with basic test equipment, common measuring instruments, materials, standard methods, workplace procedures, SDS and equipment manuals.  **MSS024016**  Use of facilities, equipment and resources, including: calculator, computer and relevant software or laboratory information system environmental data sets and records  **MSMENV472**  Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications associated with this unit.  **MSS024015**  Use of facilities, equipment and resources, including: access to sites and vehicle transport, survey equipment, sampling and monitoring equipment, cameras, consumables, maps and flora and fauna keys, documentation, including site information, environmental management plans, codes of practice and field protocols, equipment manuals, workplace procedures and test or survey methods.  **MSS024020**  Use of facilities, equipment and resources, including: access to sites and vehicle transport suitable survey, sampling and testing equipment documentation including: maps and aerial photos; classification charts and tables for rocks, minerals and soils; user manuals, workplace safety procedures, test or survey methods, workplace procedures governing geological sampling and in-field testing  **MSS024017**  Use of facilities, equipment and resources, including: access to sites and vehicle transport sampling or monitoring equipment and instruments, GPS receivers and related GPS software, camera; consumables; calculator, computer and relevant software or laboratory information system, documentation, including site information and history, maps, aerial photos; site environmental management plans, codes of practice and field protocols; equipment manuals, workplace procedures, specifications and test or survey methods.  **MSS024014**  Computing equipment with software for word processing to work with environmental management plans, including templates and other workplace documents.  **MSS025017**  Use of facilities, equipment and resources, including: State of the Environment Reports, national environment protection measures, ANZECC Core Environmental Indicators documentation environmental databases (electronic, web-based and hardcopy) national and state/territory environmental management strategies, guidelines and regulations, documentation, including site information, environmental management plans, codes of practice and workplace procedures.  **MSL975042**  Use of suitable facilities, equipment and resources, including: workplace procedures and field protocols, equipment/instrument manuals, calibration procedures, instrument fault-finding procedures, general maintenance and repair procedures equipment required for field activities, such as vehicles, navigation and communication equipment, survey equipment, sampling/monitoring equipment, containers and animal cages, field test kits and instruments, consumables, safety equipment, first aid and/or survival kits work program, workplace procedures, codes of practice and field protocols and manuals.  **MSS025018**  Use of facilities, equipment and resources, including: organisation environmental management plan for the site or a checklist to guide risk and impact assessment.  **MSS025019**  Use of facilities, equipment and resources, including: calculator, computer and relevant software or laboratory information system environmental data sets and records, documentation, including user manuals; workplace procedures for recording, processing, storing and reporting environmental data; and test or survey methods.  **MSS025020**  Workplace procedures on customer related matters as well as computing equipment with software for word processing and email to work with customer related workplace documents such as email templates or similar.  **MSS015034**  Workplace procedures on customer related matters as well as computing equipment with software for word processing and email to work with customer related workplace documents such as email templates or similar.  **MSS025014**  Access is required to all instruments, equipment, materials, workplace documentation, procedures, and specifications associated with this unit including, but not limited to: access to contaminated sites and vehicles, appropriate sampling containers, sampling/test equipment, analysers, reagents/consumables, digital camera, global positioning system (GPS), logbooks and data loggers, and/or computers and communication equipment, specified PPE, safety equipment and decontamination equipment, workplace procedures, work program, maps, site plans, site sampling plans and test methods, standards, environmental data sets, equipment manuals, safety procedures and safe work methods.  **MSS025005**  Access is required to all instruments, equipment, materials, workplace documentation, procedures, and specifications associated with this unit including, but not limited to: site/project history, maps and aerial photos, guidelines, codes, regulations, and workplace procedures governing data collection, relevant field equipment, GPS receivers and related GPS software, relevant computer software (e.g. GIS) and hardware.  **MSS025023**  Students require the use of facilities, equipment and resources, including: site or project history, background information, project management procedures, tools and software, physical resources required for work activities, including safety equipment, workplace procedures, work program, maps, site plans, site sampling plans and specified sampling and test methods, equipment manuals and safe work procedures.  **HLTAID003**  Assessment resources must include: adult and infant resuscitation manikins in line with ARC Guidelines for the purpose of assessment of CPR procedures, adrenaline auto-injector training device, AED training device, placebo bronchodilator and spacer device, roller bandages, triangular bandages, workplace First Aid kit, workplace injury, trauma and/or illness record, or other appropriate workplace incident report form for written reports, wound dressings |
| Trainer and Assessor Qualifications and Industry Experience | All full time and part time teachers of MSS50218 Diploma of Environmental monitoring and Technology must one of the following credentials to deliver training and assessment:   * TAE40116 Certificate IV in Training and Assessment * TAE40110 Certificate IV in Training and Assessment plus the following units: * either TAELLN411 or TAELLN401A, and * either TAEASS502 or TAEASS502A or TAEASS502B   A diploma or higher level qualification in adult education.  All staff must hold a diploma or higher-level qualification in Environmental monitoring and Technology or equivalent qualification and have current, vocational competency and relevant industry experience, in line with the requirements of the training package. |
| Learning Resources | Each unit to have a set of comprehensive unit notes, class activities, practical task with relevant drawings and instructions, teaching and learning resources, assessments and RPL documents which will be available on the Learning Bank. Supporting resources such as policies, procedures, management plans will be available on the Learning Bank and through a Simulated Organisation developed by TAFE Digital.  Online teaching and learning and assessment capabilities. Software packages such as Laboratory Information Management Systems (LIMS, simulated or real), Microsoft Word, and Microsoft Excel are all available on classroom computers.  Access to library services including books, E-Books, industry journals and magazines, on-line data base specific to trade profile. Access to trade relevant multimedia learning materials. Access to policies and procedures, WHS legislation, regulations and codes of practice, Australian Standards, manufacturer instructions, industry legislation, forms and templates such as checklists, hazard reports, quality assurance, work plans and the like. |

### 2.7 Industry Engagement

Training and assessment practices must be relevant to the needs of industry and informed by industry engagement, this may also influence resources and staff currency. Details below are of the most current engagement activities undertaken for this training product.

Table 6 SkillsPoint Engagement

| No. | Industry/Organisation | Representative Name | Contact Details  (Email/Telephone) | Date of Consultation | How did this engagement influence one or more of the following?   * Qualification/ Course / Skill set selection * Elective selection and/or sequencing * Mode of study * Training Methods * Assessment Methods * Trainer and assessor requirements * Training and assessment resources and equipment * Contextualisation |
| --- | --- | --- | --- | --- | --- |
| **1** | Corporate water authority | Please refer to Industry Engagement Record(s):  MRS\_18\_09\_MSS50218\_IER\_01 | Please refer to Industry Engagement Record(s):  MRS\_18\_09\_MSS50218\_IER\_01 | 7/11/2018 | **Feedback**  Interest was expressed in ensuring students are taught field related techniques pertaining to water samples using Australian Standards 5990 series.  **Action**  TAFE NSW has ensured that all skills and knowledge will be using this and other related standards during fieldwork of water, specifically for the following units;   * MSL952001 * MSL974022 * MSL975042 |
| **2** | Key State government environmental management authority | Please refer to Industry Engagement Record(s):  MRS\_18\_09\_MSS50218\_IER\_02 | Please refer to Industry Engagement Record(s):  MRS\_18\_09\_MSS50218\_IER\_02 | 22/11/2018 | **Feedback**  Particular interest in a Diploma for Environmental Monitoring for the NSW EPA’s Environmental Sampling and Response Team which respond to pollution incidents around the State and require staff who are trained in all aspects of sampling and testing of samples on site.  **Action**  TAFE NSW has included the following units in the Monitoring Industry Specialisation to ensure this is is reflected in graduate outcomes;   * MSL952001 * MSL974022 * MSL973013 * MSS024017 * MSS025022 * MSS025009 * MSL975042 * MSS025021 * MSS025008 |
| **3** | Large multinational environmental consultancy | Please refer to Industry Engagement Record(s):  MRS\_18\_09\_MSS50218\_IER\_03 | Please refer to Industry Engagement Record(s):  MRS\_18\_09\_MSS50218\_IER\_03 | 12/12/2018 | **Feedback**  SGS is a multinational organisation which has staff with a variety of skills around environmental monitoring and contaminated sites as well as laboratory analysis. The particular focus here was on laboratory based units and processes.  **Action**  Several of the units chosen in this course are designed with laboratory testing and analysis in mind. The course includes the following units based around laboratory analysis and processes;   * MSL943004 * MSL973013 * MSS024016 * MSS025022 * MSS025009 * MSS025020 |
| **4** | Regional City Council | Please refer to Industry Engagement Record(s):  MRS\_18\_09\_MSS50218\_IER\_04 | Please refer to Industry Engagement Record(s):  MRS\_18\_09\_MSS50218\_IER\_04 | 18/2/2019 | **Feedback**  Units with practical skills and knowledge were required around environmental management.  **Action**  The following units have been included in the course to ensure that environmental management is focused on;   * MSS024016 * MSMENV472 * MSS024014 * MSS025017 * MSS025018 * MSS025019 * MSS025020 |
| **5** | Small international chemical production manufacturer | Please refer to Industry Engagement Record(s):  MRS\_18\_09\_MSS50218\_IER\_05 | Please refer to Industry Engagement Record(s):  MRS\_18\_09\_MSS50218\_IER\_05 | 18/2/2019 | **Feedback**  The feedback for this client was based around the laboratory analysis of samples that their quality assurance laboratory receives for internal reporting purposes only. This client sends any regulatory samples through to commercial laboratories for analysis, so sample transportation and handling was also important to graduate outcomes.  **Action**  TAFE NSW has included the following units to ensure sampling and basic laboratory testing is included in graduate outcomes;   * MSL952001 * MSL973013 |
| **6** | Medium regional environmental consultancy | Please refer to Industry Engagement Record(s):  MRS\_18\_09\_MSS50218\_IER\_06 | Please refer to Industry Engagement Record(s):  MRS\_18\_09\_MSS50218\_IER\_06 | 6/3/2018 | **Feedback**  C-Based are a small environmental monitoring company and environmental reporting consultancy in the Hunter Valley. They need fieldwork related units for all matrices including air, water, groundwater, soil as well as for noise monitoring and meteorological assessments.  They need strong data capture, transcription, analysis and reporting capabilities in there staff and as such require units that relate in the course.  **Action**  TAFE NSW has included the following fieldwork units in the course to ensure all matrices are taught to create strong graduate outcomes;   * MSL943004 * MSL952001 * MSL974022 * MSS024019 * MSS025009 * MSS025021 * MSS025008   Furthermore, the following data related units are included to ensure data analysis and related skills are taught;MSS024016,MSS025019 |

3. Transition Arrangements

When there is a change to the Training Package that impacts on this TAS, the SkillsPoint will work with Standards and Compliance teams to complete a Transition Plan and notify all staff affected as soon as possible.

TAFE NSW complies with clauses 1.26 and 1.27 of the *Standards for RTOs 2015*. When there are major changes to the Training Package, the SkillsPoint will review the changes made and create a plan to transition to the new training package requirements and cater for completion arrangements for students where possible. The progress of the transition will be implemented by the Delivery, Implementation and Performance and Skills Teams and monitored by Standards and Compliance teams.

Transition arrangements must be completed within 12 months of changes being published on training.gov.au for superseded qualifications and two years for deleted training products.

Does this qualification require the completion of a Transition Plan  Yes  No

If yes, a completed Transition Plan is attached.

4. Structure, Delivery and Assessment

### 4.1 Volume of Learning

**Volume of Learning** includes all activities required to be undertaken by the typical student to achieve learning outcomes. It is comprised of the Amount of Training + the Amount of Assessment + Unstructured Learning.

**Amount of Training** takes into consideration the existing skills, knowledge and experience of students, the mode of delivery, availability of resources and the number of units. It is the **Structured Learning** – formal learning activities, which may consist of

• Lectures or tutorials, on-line tasks and forums

• Learning activities

• Structured workplace experience

• Workshop activities

• Structured prescribed reading

• Prescribed follow-up activities

**Unstructured Learning** may include private study, assignment preparation, work experience and research.

A justification must be included for any differences between the **AQF Volume of Learning indicator** and the total hours in each instance of course delivery. Factors that may reduce volume of learning can include the number of units packaged in the qualification, student having pre-existing knowledge and skills, mode of delivery and clustering of units. For further information see [Fact Sheet - Amount of Training](https://www.asqa.gov.au/news-publications/publications/fact-sheets/amount-training).

The **AQF Volume of Learning indicator** for this product is: Diploma 1200-2400 hours

The **Total Amount of Training Hours** for this product is: 778

The **Total Amount of Assessment Hours** for this Product is: 86

The Total Estimated **Unstructured Learning Hours** for this product are: 460

The **Total Volume of Learning** for this product is: 1324

### 4.2 Delivery Strategy

Details of the Volume of Learning for this training product are outlined below:

Table 7 Volume of Learning - Detail

| **No.** | **Delivery Mode** | **Types of Structured Learning** | **Structured Learning**  **Hours** | **Assessment Hours** | **Unstructured Learning Hours** | **Volume of Learning** |
| --- | --- | --- | --- | --- | --- | --- |
| **1** | Face to face | \* Face to face learning \* Online learning (Moodle)  \* End of chapter topic tests  \* In class practice tasks  \* Group planning tasks  \* Field work | 778 | 86 |  | 864 |
| **2** | Self-directed | \* Review of structured learning  \*Internet based research \* Assessment preparation  \* Review of topic test answers from teacher  \* Industry research and job analysis |  |  | 460 | 460 |
|  | **TOTAL** | | | | | **1324** |

**Outline of Delivery Strategy and Justification for variance in Volume of Learning from the AQF Indicator:**

**Course Purpose**

The Diploma intends to qualify individuals who apply integrated technical and theoretical concepts in a broad range of contexts to undertake advanced skilled or paraprofessional work and as a pathway for further learning. This involves a heavy load of scientific practices and processes as well as following statutory structured workplace procedures.

**Delivery sequence and structure**

**Outline of Delivery Strategy and Justification for variance in Volume of Learning from the AQF Indicator:**

This delivery strategy offers a total volume of learning of 1324 hours. The AQF minimum volume of learning indicator is 1200 – 2400 hours.

The intent of this section is to ensure the program design teams at the local delivery sites and regions structure their program with minimum adherence to the figures given in the MCTAS for Program design.

Varying sites/regions will ensure their Part B is in line with MCTAS and VoL requirements. Each campus/region will have different holidays and study periods and a generic framework as is this section is intentionally not prescriptive for this reason. The intent of this section is to ensure the program design teams at the local delivery sites and regions structure their program with minimum adherence to the figures given in the MCTAS for Program design. Varying sites/regions will ensure their Part B is in line with MCTAS and VoL requirements. Each campus/region will have different holidays and study periods and a generic framework as is this section is intentionally not prescriptive for this reason.

Below is an outline of the delivery strategy for this offering:

**Overview of strategy**

Target Student Group – Pre-employment

This Training and Assessment Strategy has been tailored to meet the needs of students who are ‘pre-employment’ and have no existing experience working in the environmental management industry, which is considered ‘post-school’ or paraprofessional.

It is acknowledged that students entering this qualification will generally have an interest in environmental monitoring or a general interest in environmental management (as opposed to environmental conservation which is from a different training package). Students will generally have limited skills and knowledge in general science and/or geography prior to enrolling that been acquired at high school, through some previous study or life experience, which are deemed to be transferrable to this course.

Although the target student group are new to the environmental management industry sector, it is acknowledged they typically enter the course with some basic organisation & study skills and computing skills, gained through prior study and as a result of life experience in an increasingly technology-savvy world and the need to be able to interact using these technologies as a part of day-to-day life.

Class sizes will have a nominal student to teacher ratio on **average** of 15:1 based on available resources in the classroom environment.

Volume of learning

The volume of learning is determined based on target student group described above in ‘Target Student Group – Pre-employment’.

The training provided to students is based on the principles of Andragogy, and will acknowledge students existing skills, knowledge and experience and where possible will scaffold any learning outcomes based on these, as well as significant industry consultation.

This amount of training and assessment has been determined to ensure all students with an LLN level described under section 2.2 of this TAS document, can successfully complete each unit of competency delivered with minimal, or no need for additional support.

In this delivery strategy, the unit delivery flows in a logical sequence to ensure that initial concepts are learnt and applied which ensure that the appropriate underpinning knowledge and skills are learnt for later units. The unit delivery is in line with semester delivery to ensure adequate time and logical flow.

Course sequence ensures that all pre-requisite material is learnt prior to more senior units ensuring that students learn in the logical sequence the units were intended to be taught in.

Units have been chosen to cover the requisite Competence Fields from the Training Package to ensure that the integrity of the industry specialisation has been adhered to. Units have also been sequenced in the

intended order of the Training Package to ensure that the Training package rules have been met as stringently as possible.

Furthermore, graduate outcomes meet minimum industry requirements and expectation, achieved through real world tasks and processes from relevant government departments where appropriate/applicable.

**Description of Structured learning and assessment**

Structured learning & assessment: in-class

This course duration is three (3) Semesters (54 weeks at 16 hours per week or three days a week).

Students will attend 864 hours (16 hrs per week x 54 weeks) of face-to-face classes over the duration of this course. Within face-to-face classes students will complete 778 hours of structured learning and 86 hours of assessment.

\*\*For specific structured learning and assessment hours for each unit, please refer to ‘Table 8 Delivery and Assessment Schedule’.

Timetabled classes will include face-to-face instructional sessions, demonstrations, role plays, group activities, individual tasks, practical and theory classes, projects, videos, brainstorming, and application of learning from the directed learning tasks and out of class activities.

The facilities provided by TAFE NSW provide students access to simulated work environment and the equipment required to gain a real-world experience of environmental management services that will align with their job role. The simulated environments include practical tasks in field and laboratory environments both on and off campus as well as computer labs.

Timetabled classes will also include assessments tasks that require assessor observation of supervised timed assessments, practical tasks, role plays, simulated workplace activities and project work. All assessment occurs as specified in the assessment event instructions. Assessments will utilise on-campus resources and facilities to assess students in simulated workplace environments. Assessment methods reflect the most suitable means for assessing the required skills, providing students with the best opportunity to demonstrate their competence.

Learning resources are provided to students such as handouts, student learner workbook, unit outlines and assessment guides.

Out-of-class structured learning will include directed activities such as, pre-readings for timetabled classes, completing student workbook activities, practical tasks, participation in group work and forums, viewing of prescribed videos, researching specific information relating to the unit of competency and any homework of tasks set by the teacher.

**Unstructured learning**

This delivery strategy requires all learners to engage in 460 hours of self-paced study, research and practice at home or on campus through the reading of case studies, legislation and other required reading which is monitored by the LMS and will log the hours, with monitoring being completed at the local level.

Unstructured learning is essential for learners to continue to develop a broad understanding of environmental management concepts and application of environmental management skills throughout the course and achieve competency.

Trainers and assessors will progressively engage students during the course through active class discussion, individual mentoring and training and assessment feedback to monitor student engagement and unstructured learning. Online resources are also available for students to engage with during unstructured learning, such as a course Moodle, accounts for Lynda.com tutorials, and studiosity.com tutorial support.

### 4.3 Assessment

*Table 8* below provides a description of the sequencing of units throughout the program. It also outlines the delivery strategy, the mode (face to face, online, workplace, etc.), the hours of training and assessment required and the assessment methodology.

#### Assessment Method Legend

The assessment methods used for this training product are as follows:

**Sk Skills** (role play scenario, presentation, practical, observation)

**Kn Knowledge** (multiple choice, true or false, short answer questions)

**Pro Project** (report, research based project, journal, essay)

**CS Case study** (case study scenario, reflection)

**TLB Training Log Book**

**Prt Portfolio** (samples of work in a workplace environment)

**O Other** (add description)

#### Delivery and Assessment

Table 8 Delivery and Assessment Schedule

| **Sequence.** | **Unit Code and Unit Title** | **Cluster Group #**  **Or Stand Alone** | **Unit Delivery Mode** | **Training and Assessment Hours** | **Unit**  **Start and End dates** | **Assessment:**  **Methods and Weighting**  *(refer to legend)* | **Assessment: Due Dates** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **1** | MSL943004 - Participate in laboratory or field workplace safety (Core) | Stand alone | Blended | T = 16  A = 2 |  | Sk – Practical  Kn – Short answer |  |
| **2** | MSL952001 - Collect routine site samples (Core) | Stand alone | Blended | T = 16  A = 2 |  | Sk – Practical  Kn – Short answer |  |
| **3** | MSL974022 - Undertake environmental field-based monitoring (Core) | Stand alone | Blended | T = 49  A = 5 |  | Sk – Practical  Kn – Short answer |  |
| **4** | MSS024017 - Collect spatial and discrete environmental data | Stand alone | Blended | T = 32  A = 4 |  | Sk – Practical  Kn – Short answer |  |
| **5** | MSS024014 - Implement environmental management plans and procedures (Core) | Stand alone | Blended | T = 32  A = 4 |  | Pro – Research  Kn – Short answer |  |
| **6** | MSS024016 - Process and present environmental data (Core) | Stand alone | Blended | T = 32  A = 4 |  | Kn – Short answer 1  Kn – Short answer 2  Kn – Short answer 3 |  |
| **7** | MSL973013 - Perform basic tests | Stand alone | Blended | T = 49  A = 5 |  | Sk – Practical 1  Sk – Practical 2  Kn – Short answer |  |
| **8** | MSS024015 - Apply an understanding of environmental principles to a site (Core) | Stand alone | Blended | T = 68  A = 4 |  | Pro – Research  Kn – Short answer |  |
| **9** | MSS024020 - Recognise common geological landforms and samples | Stand alone | Blended | T = 32  A = 4 |  | Sk – Practical  Pro - Research  Kn – Short answer |  |
| **10** | MSS015034 - Inform and educate organisation and community representatives on sustainability issues | Stand alone | Blended | T = 49  A = 5 |  | Pro – Research  Pro – Project  Pro - Report |  |
| **11** | MSS025018 - Assess the environmental risk and impact of a project activity or process (Core) | Stand alone | Blended | T = 49  A = 5 |  | Pro – Research 1  Pro – Report 2  Kn – Short answer |  |
| **12** | MSS025019 - Report environmental data (Core) | Stand alone | Blended | T = 32  A = 4 |  | Kn – Short answer  Pro - Report |  |
| **13** | MSL975042 - Design and supervise complex environmental field surveys | Stand alone | Blended | T = 31  A = 5 |  | Sk – Practical observation  Pro – Research  Pro - Report  Kn – Short answer |  |
| **14** | MSS025017 - Assist with assessing site environmental indicators (Core) | Stand alone | Blended | T = 66  A = 6 |  | Sk – Practical  Pro - Research  Kn – Short answer 1  Kn – Short answer 2  Kn – Short answer 3 |  |
| **15** | MSS025014 - Perform sampling and testing of contaminated sites | Stand alone | Blended | T = 66  A = 6 |  | Pro – Research  Pro – Report  Kn – Short answer |  |
| **16** | MSS025005 - Produce site maps | Stand alone | Blended | T = 32  A = 4 |  | Pro – Research  Pro – Report  Sk – Practical  Kn –Short answer |  |
| **17** | MSS025023 - Plan and conduct environmental project work | Stand alone | Blended | T = 49  A = 5 |  | Pro – Research  Pro - Report |  |
| **18** | MSS025020 - Provide environmental information to customers (Core) | Stand alone | Blended | T = 14  A = 4 |  | Kn – Short answer  Pro - Report |  |
| **19** | MSMENV472 - Implement and monitor environmentally sustainable work practices (Core) | Stand alone | Blended | T = 32  A = 4 |  | Pro – Research  Kn – Short answer |  |
| **20** | HLTAID003 - Provide first aid | Stand alone | Blended | T = 32  A = 4 |  | Kn – Short answer  Sk – Practical observation |  |

5. Master TAS Approval

**Product Manager**

Name: asamuelson(Adam.Samuelson@tafensw.edu.au) Adam Samuelson

Signature: Approval was given electronically in DATA (see request 1650):

<https://live.nei.tafensw.edu.au/DATA2/Site/Approvals/step2.aspx?request_id=1650>

Date: 02/09/2019, 12:44 PM 16/8/2019

**Senior Manager, Product Development Support**

Name: jfuller (Joanne.Fuller@tafensw.edu.au)

Signature: Approval was given electronically in DATA (see request 1650):

<https://live.nei.tafensw.edu.au/DATA2/Site/Approvals/step2.aspx?request_id=1650>

Date: 02/09/2019, 01:10 PM

**Head of SkillsPoint**

Name: pfarrow5 (Paul.Farrow3@tafensw.edu.au)

Signature: Approval was given electronically in DATA (see request 1650):

<https://live.nei.tafensw.edu.au/DATA2/Site/Approvals/step2.aspx?request_id=1650>

Date: 02/09/2019, 01:10 PM

PART B – Delivery TAS Information

6. Delivery Details

**Delivery Location**

Campus:

Region:

**Offering Owner**

Name:

ebs Identifier:

**Mode/s of Delivery**

Face to Face Learning

Workplace Training

Online Learning

Blended

Other:

**Details of Target Student Group**

**Duration**

Total Hours:

Total Weeks:

Start and End Date:

### 6.1 Entry Requirements

The following **local entry requirements** exist for this course:

### 6.2 Additional Student Support at Delivery Location

The following additional Student Support is available:

### 6.3 Contextualisation

Following from the Delivery Strategy outlined in Section 4 above, the following arrangements have been made to contextualise delivery of this Training Product to meet the needs of this student group:

7. Third Party Arrangements

Are any training and assessment components for this product delivered by a third party, and if so has the required written agreement been put in place?  Yes  No

If yes, please provide a summary of the third party arrangement:

Have the details of this arrangement been attached?  Yes  No

Have details of this arrangement been provided to TAFE NSW Governance, Legal and Risk?  Yes  No

Has ASQA been notified of this arrangement prior to any delivery commencing?  Yes  No

8. Staff Qualifications and Industry Experience

Insert link to detailed staff matrix.

Table 9 Staff Matrix

| **No** | **Units of Competency Delivering / Assessing**  (multiple units can be grouped together) | **Trainer/ Assessor Name** | **Trainer, Assessor or Both** | **Training and Assessment Qualifications**  **AND**  **Current evidence of ongoing development in training and assessment practice**  *(including correct title, name of provider and date)* | * **Vocational Qualifications** * **Licences** * **Professional development including ongoing exposure and development to maintain currency of industry skills**   *(including correct title, name of provider and date)* |
| --- | --- | --- | --- | --- | --- |
| *Delete this row after completing table* | *RII30915 - Certificate III in Civil Construction (Release 1)*  *RIIBEF201D*  *RIICOM201D*  *RIIOHS201D* | *Joe Bloggs* | Trainer only | * TAE40110 Certificate IV in Training and Assessment – ABC Training 23 November 2016. * VELG Assessment Practices Workshop 5 June 2018. * HTAN Training News Update Breakfast Meeting 26 March 2018. * ASQA Training Provider Briefing Session June 2018 | * BCC30107 - Certificate III in Civil Construction – XYZ Training 17 June 2008. * RII30913 - Certificate III in Civil Construction – Bendigo Kangan Institute – 03 June 2013 * CPCCOHS1001A - Work safely in the construction industry - XYZ Training 3 Sep 2009. * Construction Australia Expo, Brisbane, 11 March 2017 * Australian Building Codes Board Seminar, Canberra, 20 October 2017 * Civil Engineer operating own consultancy from 2005-current. |
| **1** |  |  | Choose an item. |  |  |
| **2** |  |  | Choose an item. |  |  |
| **3** |  |  | Choose an item. |  |  |
| **4** |  |  | Choose an item. |  |  |
| **5** |  |  | Choose an item. |  |  |
| **6** |  |  | Choose an item. |  |  |
| **7** |  |  | Choose an item. |  |  |
| **8** |  |  | Choose an item. |  |  |
| **9** |  |  | Choose an item. |  |  |
| **10** |  |  | Choose an item. |  |  |
| **11** |  |  | Choose an item. |  |  |
| **12** |  |  | Choose an item. |  |  |
| **13** |  |  | Choose an item. |  |  |
| **14** |  |  | Choose an item. |  |  |
| **15** |  |  | Choose an item. |  |  |
| **16** |  |  | Choose an item. |  |  |
| **17** |  |  | Choose an item. |  |  |

9. Additional Industry/Community Engagement

Training and assessment practices must be relevant to the needs of industry and communities and be informed by consultation, this may also influence resources and staff currency. Details below are of further engagement activities undertaken for this training product at a Regional/Local level.

Table 10 Additional Industry/Community Engagement

| **No** | **Industry/Organisation** | **Representative Name** | **Contact Details**  **(Email/Telephone)** | **Date of Consultation** | **How did this engagement influence one or more of the following?**   * Qualification/ Course / Skill set selection * Elective selection and/or sequencing * Mode of study * Training Methods * Assessment Methods * Trainer and assessor requirements * Training and assessment resources and equipment * Contextualisation |
| --- | --- | --- | --- | --- | --- |
| **1** |  |  |  |  |  |
| **2** |  |  |  |  |  |
| **3** |  |  |  |  |  |
| **4** |  |  |  |  |  |
| **5** |  |  |  |  |  |
| **6** |  |  |  |  |  |
| **7** |  |  |  |  |  |
| **8** |  |  |  |  |  |
| **9** |  |  |  |  |  |

10. Assessment Validation

Validation is the quality review of the assessment processes and judgements. Validation involves checking that the assessment tool/s produce/s valid, reliable, sufficient, current and authentic evidence that complies with the appropriate AQF level and the dimensions of competency to enable reasonable judgments to be made as to whether the requirements of the training package or VET accredited courses are met. It includes reviewing a statistically valid sample of the assessments and making recommendations for future improvements to the assessment tool, process and/or outcomes and acting upon such recommendations.

Clause 1.9 and 1.10 of the Standards for RTOs require that the RTO implements a plan for ongoing systematic validation of assessment practices and judgements; the plan needs to ensure that each training product is validated at least once every five years, with at least 50% of products validated within the first three years of each five year cycle.

### 10.1 Validation of assessment judgements

Details of the scheduled validation of judgements for the training product identified in this Training and Assessment Strategy are provided below:

Table 10 Validation of assessment judgements

| **Date of last validation of judgements** | **Codes and names of units validated** | **Number of judgements included in the sample for each unit** | **Have the actions arising from the validation been completed and signed off? If No, please outline below outstanding actions and when they are due for completion** | **Scheduled date of next validation of judgements** |
| --- | --- | --- | --- | --- |
| Click here to enter a date. |  |  | Yes No | Click here to enter a date. |

Location of validation record:

Details confirmed by:

Signature:

11. Delivery TAS Approval

The signatures below indicate that the Delivery Team meets the requirements of the Master Product outlined above. Any additional Contextualisation must be outlined in a Business Case and referred back to the SkillsPoint - details in Part A above.

**Delivery Location**

Campus:

Region:

**Team Leader (or equivalent)**

Name:

Signature:

Date:

**Head of Skills Team**

Name:

Signature:

Date:

**Head of Delivery, Implementation and Performance**

Name:

Signature:

Date: