Australian Government
Department of Education, Skills and Employment

Companion Volume

RII Resources and Infrastructure Industry Training Package

Companion Volume Implementation Guide (Version 9.0)



pwc



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This Implementation Guide is designed to assist registered training organisations (RTOs), trainers, assessors and automotive workplaces in understanding the purpose and use of RII Resources and Infrastructure Industry Training Package (Version 8.0).

*The Implementation Guide is divided into three sections. The first section is **Overview information** that provides detailed information about the training package and its components, mapping and version control and modification history. The second section is **Implementation information** designed to assist assessors, trainers, RTOs and enterprises in implementing the training package. This section focuses on training package pathways, occupational outcomes, access, equity and health and safety. The third section contains **Links** to such things as resources and contact details.*

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Overview information

1. Version control and modification history

Version number	Release date	Comments
Version 9.0	September 2022	**AISC endorsement of the following RII components** **This Training Package release includes the qualifications, units of competency and skill set noted below.** 2 newly created qualifications: • RII21222 Certificate II in Autonomous Workplace Operations • RII41522 Certificate IV in Autonomous Control and Remote Operations 19 newly created units of competency: • RIIARO201 Work in autonomous operations • RIIARO202 Use data and technology to complete work in autonomous operations • RIIARO308 Use data in an autonomous workplace • RIIARO402 Optimise performance of complex control systems in autonomous operations • RIIARO403 Maintain continuity of operational control • RIIARO404 Improve outcomes within a distributed value chain network • RIIARO405 Optimise automated drilling operations • RIIARO406 Optimise automated haulage operations • RIIARO407 Optimise automated fixed plant operations • RIIARO408 Optimise automated wet processing plant operations • RIIARO409 Optimise automated in-loading and out-loading operations • RIIARO410 Control safety risks in autonomous operations • RIIARO411 Manage situational awareness • RIIBEF403 Collaborate to achieve quality outcomes • RIIBEF404 Undertake informed and dynamic decision making • RIIBEF405 Optimise personal performance • RIICOM202 Contribute to effectiveness of communication and teamwork in an autonomous workplace • RIICOM401 Communicate effectively in a remote work environment • RIIWHS208 Operate within an autonomous workplace functional safety system 1 newly created skill set: • RIISS00075 Work with Data in an Autonomous Workplace Skill Set

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		SSO upgrade for the following RII components. **Qualifications** 1 qualification was updated: • RII41319 Certificate IV in Emergency Response Coordination **Units of competency** 8 units of competency were updated: • RIIARO301 Work safely in autonomous environment • RIIARO303 Operate equipment in autonomous environment • RIIARO304 Coordinate and interact with autonomous systems • RIIARO306 Respond to obstructions to autonomous operations • RIIARO307 Active and deactivate autonomous systems • RIIARO401 Supervise autonomous operations • RIICBS302E Conduct paver screeding operations • RIILAT402E Provide leadership in the supervision of diverse work teams **Skill Sets** 8 skill sets were updated: • RIISS00058 Traffic controller skills set for urban streets and low volume rural roads • RIISS00059 Traffic controller skill set for high volume roads • RIISS00060 Traffic management implementer skill set for urban streets and low volume rural roads • RIISS00061 Traffic management implementer skill set for high volume roads • RIISS00062 Traffic management implementer skill set for motorways and freeways • RIISS00063 Traffic management designer skill set for urban streets and low volume rural roads • RIISS00064 Traffic management designer skill set for high volume roads • RIISS00065 Traffic management designer skill set for motorways and freeways
Version 8.0	January 2021	**AISC endorsement of the following RII components** **This Training Package release includes updates to a number of qualifications, units of competency and skill sets as noted below.** **Qualifications** One newly created qualification: • RII41421 Certificate IV in Civil Infrastructure Asset Management **One revised qualification with minor changes only:** • RII50420 Diploma of Civil Construction Management **Units of competency** **12 newly created units of competency:**

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- RIICAM401 Conduct a condition assessment of road pavements
- RIICAM402 Conduct a condition assessment of roadside infrastructure
- RIICAM403 Conduct a condition assessment of stormwater drainage
- RIICAM404 Conduct a condition assessment of civil structures
- RIICAM405 Conduct a condition assessment of civil foundations
- RIICAM406 Conduct a condition assessment of water and sewerage mains
- RIICAM407 Conduct a condition assessment of underground services
- RIICAM408 Conduct a condition assessment of open spaces
- RIICAM409 Manage civil infrastructure datasets
- RIICAM410 Maintain asset inventories
- RIICAM501 Analyse and interpret civil infrastructure asset datasets
- RIICAM502 Make decisions using civil infrastructure asset data

Skill sets

Nine newly created skill sets:

- RIISS00066 Civil Infrastructure Asset Management - Road Pavements Skill Set
- RIISS00067 Civil Infrastructure Asset Management - Roadside Infrastructure Skill Set
- RIISS00068 Civil Infrastructure Asset Management - Stormwater Drainage Skill Set
- RIISS00069 Civil Infrastructure Asset Management - Civil Structures Skill Set
- RIISS00070 Civil Infrastructure Asset Management - Civil Foundations Skill Set
- RIISS00071 Civil Infrastructure Asset Management - Water and Sewerage Mains Skill Set
- RIISS00072 Civil Infrastructure Asset Management - Underground Services Skill Set
- RIISS00073 Civil Infrastructure Asset Management - Open Spaces Skill Set
- RIISS00074 Civil Infrastructure Asset Management - Analyse Data for Asset Management Decision Making Skill Set

31 skill sets updated to replace superseded units of competency with current versions:

- RIISS00018 Concrete Paving - Automated Paving Guidance System (APGS) Technician Skill Set
- RIISS00019 Concrete Paving - Finisher Skill Set
- RIISS00020 Concrete Paving - General Hand Skill Set
- RIISS00021 Concrete Paving - Hand Texturing and Curing Skill Set
- RIISS00022 Concrete Paving - Joint Sealer Skill Set
- RIISS00023 Concrete Paving - Machine Operator Skill Set
- RIISS00024 Concrete Paving - Saw Cutter Skill Set
- RIISS00025 Concrete Paving - Spotter Recorder Skill Set
- RIISS00026 Concrete Paving - Stringliner Skill Set
- RIISS00027 Concrete Paving - Texture Machine Operator Skill Set
- RIISS00028 Concrete Paving - Tie Bar Inserter Skill Set
- RIISS00029 Leading Hand - Coal Mining Skill Set
- RIISS00031 Mine Surveying Skill Set

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		• RIISS00032 Site Health and Safety Coordinator Skill Set • RIISS00033 Underground Coal Mine Safety Skill Set • RIISS00034 Surface Coal Mine Safety Skill Set • RIISS00035 Underground Shotfiring - Coal Skill Set • RIISS00036 Underground Shotfiring - Metalliferous Skill Set • RIISS00038 Oil and Gas (Off Shore) Rouseabout Skill Set • RIISS00042 Work Zone Traffic Control - Road Labourer Skill Set • RIISS00043 Work Zone Traffic Control - Supervisor Skill Set • RIISS00046 Leading Hand Skill Set • RIISS00047 Stabiliser Support Staff Skill Set • RIISS00048 Operator of Stabiliser Skill Set • RIISS00049 Operator of Spreader Skill Set • RIISS00050 Operator of Stabiliser (using foam bitumen) Skill Set • RIISS00051 Supervision of Diverse Work Teams Skill Set • RIISS00052 Surface Shotfiring Skill Set • RIISS00054 Traffic Controller Skill Set • RIISS00055 Traffic Management Implementer Skill Set • RIISS00056 Traffic Management Designer Skill Set **SSO (Skills Service Organisation) upgrade of the following components.** **Qualifications** Minor updates were made to the following qualification from the RII Resources and Infrastructure Industry Training Package Version 7.1: • RII31820 Certificate III in Drilling Operations **Units of competency** Minor updates were made to the following four units of competency from the RII Resources Infrastructure Industry Training Package Version 7.1: • RIIVEH303F Drive heavy combination vehicle • RIICPL401E Supervise the installation of underground services using open excavation • RIIVEH306E Operate a mine service vehicle • RIIVEH307F Operate a heavy rigid vehicle
Version 7.1	September 2021	Minor upgrade
Version 7.0	March 2021	AISC endorsement
Version 6.0	November 2020	AISC endorsement
Version 5.0	September 2020	AISC endorsement
Version 4.2	June 2020	Minor upgrade
Version 4.1	March 2020	Minor upgrade
Version 4.0	December 2019	AISC endorsement
Version 3.0	December 2018	AISC endorsement
Version 2.0	December 2015	AISC endorsement
Version 1.4	December 2014	Minor upgrade
Version 1.3	April 2014	Minor upgrade
Version 1.2	March 2014	Minor upgrade
Version 1.1	January 2014	Minor upgrade
Version 1.0	November 2013	AISC endorsement

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2. Who is this Guide for?

The Implementation Guide is designed to assist assessors, trainers, registered training organisations (RTOs) and enterprises to deliver nationally endorsed industry training packages.

Nationally endorsed training packages are developed to meet the *Standards for Training Packages* 2012 ratified by Commonwealth and state/territory ministers, and their two accompanying policies which were updated in 2019.

As well as information relevant to all training packages, it provides specific information and advice about the history, structure, key features and application of the *RII Resources and Infrastructure Industry Training Package*.

3. What is in the Guide?

This *RII Resources and Infrastructure Industry Training Package* Implementation Guide provides:

- information relevant to all training packages
- lists of qualifications, skill sets and units of competency
- mapping information for qualifications, skill sets and units of competency
- specific information and advice about the history, structure, key features and application of the RII Resources and Infrastructure Industry Training Package.

4. What is a training package?

A training package is a set of nationally endorsed qualifications, units of competency and their assessment requirements developed for a specific industry or sector. A training package:

- specifies the skills and knowledge required to perform effectively in the workplace
- provides consistent components for training, assessing or recognising skills
- enables nationally recognised qualifications to be awarded through direct assessment of workplace competencies
- promotes flexible modes of training to suit individual and industry requirements
- encourages learning and assessment in a work-related environment that leads to verifiable workplace outcomes
- may also provide support materials.

While a training package *does* specify workplace skills and knowledge requirements, it *does not* suggest how a learner should be trained. Users of training packages, such as trainers or assessors, must develop learning and assessment strategies that support the needs of their particular learners.

Components of PwC's Skills for Australia training packages

Training packages consist of the following endorsed components.

- **Qualifications** that consist of units of competency packaged into meaningful groups to meet workplace roles and aligned to vocational qualification levels identified in the Australian Qualifications Framework (AQF).
- **Units of competency** that specify the standards of performance required in the workplace.
- **Assessment requirements** that specify the performance evidence, knowledge evidence and conditions for assessment for each unit of competency.
- **Credit arrangements** which specify details of existing credit arrangements between vocational and higher education qualifications in accordance with the AQF. Currently no credit arrangements exist between any PwC's Skills for Australia training package qualifications and higher education qualifications.

Training packages may also include non-endorsed components.

- **Skill sets**, which are groups of endorsed units of competency that address a defined industry need or licensing or regulatory requirement.
- **Companion volumes** (including this Implementation Guide), which provide support for delivery and assessment.

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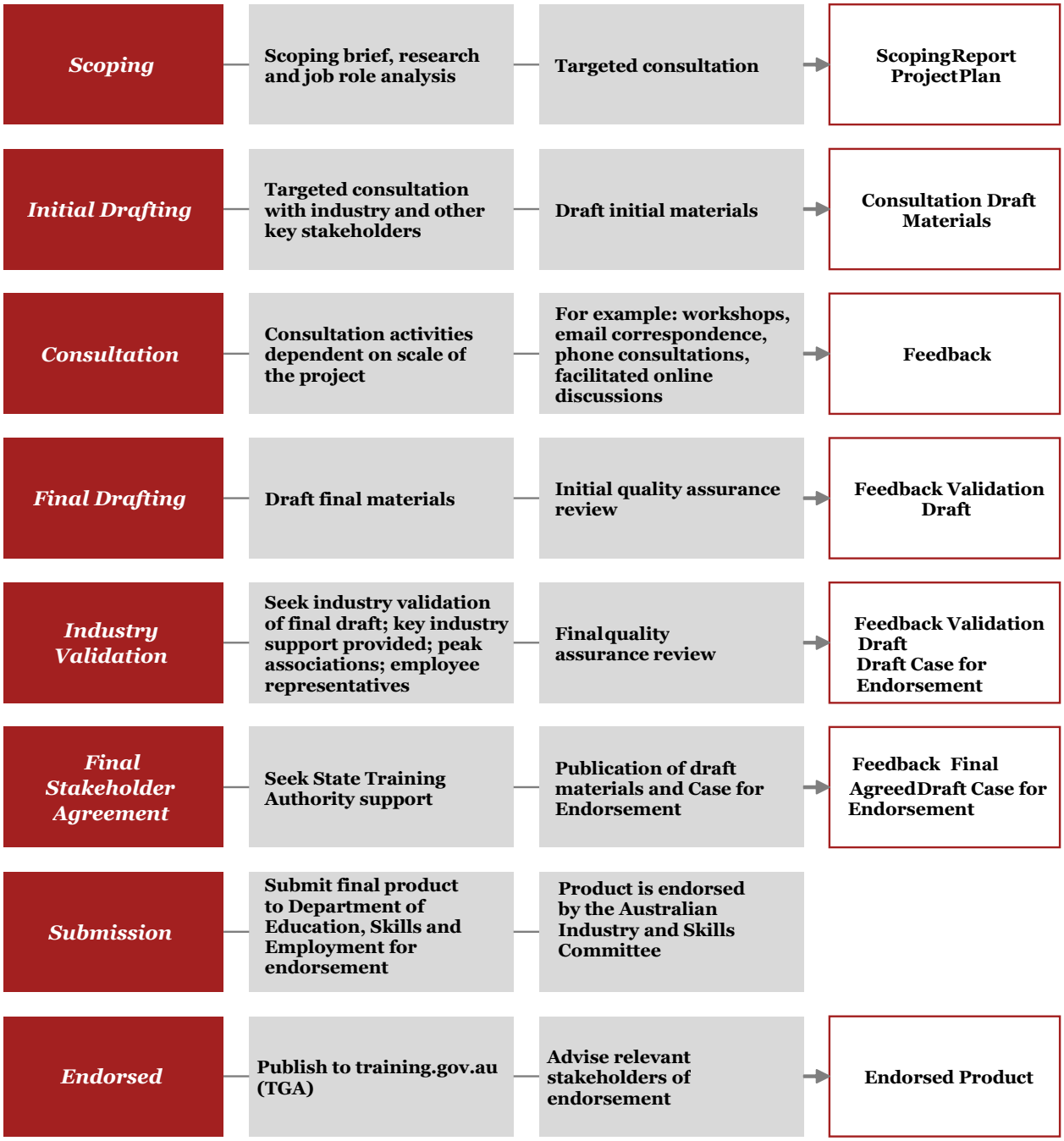
- **User guides**, which provide information about specific components.

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5. Training package development and endorsement process

Nationally endorsed training packages are developed to meet the Standards for Training Packages 2012 ratified by Commonwealth and state/territory ministers, and their two accompanying policies which were updated in 2019. More information about training package standards and policies is available on the Department of Education, Skills and Employment websites: https://www.education.gov.au/ and https://docs.employment.gov.au/documents/training-package-development-and-endorsement-process-policy-0

Training packages are developed to meet the training needs of specific industries and sectors. They differ from education and training courses in that they must be created with industry involvement and extensive national consultation. They are regularly reviewed through a continuous improvement cycle and updated to ensure they remain current and relevant. The following diagram demonstrates PwC's Skills for Australia development/review process.



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6. Who can deliver and assess a qualification?

For the purpose of national recognition, delivery and assessment must be conducted by an RTO with the qualifications or specific units of competency on its scope of registration.

All RTOs must comply with the requirements set out in applicable national frameworks and standards. The current registering bodies, frameworks and standards, and which type of RTO they apply to, are shown in the table on the following page. Users of this Implementation Guide are advised to check the applicable standards for their particular circumstances.

More information relevant to RTO compliance requirements can be found at:

http://www.asqa.gov.au/about/australias-vet-sector/vet-quality-framework

RTOs must make sure that training and assessment complies with the relevant standards. This includes ensuring that training delivery and assessment is conducted by those who:

- have the necessary training and assessment competencies
- have the relevant vocational competencies at least to the level being delivered or assessed
- can demonstrate current industry skills directly relevant to the training/assessment being delivered
- continue to develop their vocational education and training (VET) knowledge and skills, industry currency and trainer/assessor competence.

In some cases, RTOs may need to use team-based or collaborative approaches to bring together all the necessary skills and knowledge to train and assess the full range of skills within a program of vocational training.

Check for specific assessor requirements in the *Assessment conditions* section of the assessment requirements for the unit of competency.

Summary of Frameworks and Standards for RTOs

Registering body	Standards	Applicable RTOs
Australian Skills Quality Authority (ASQA)	Standards for Registered Training Organisations (RTOs) 2015	RTOs that deliver training in the Australian Capital Territory, New South Wales, the Northern Territory, South Australia, Queensland, or Tasmania RTOs in Victoria and Western Australia that offer training to overseas students and/or students (including online courses) in the Australian Capital Territory, New South Wales, the Northern Territory, South Australia, Queensland, or Tasmania
Training Accreditation Council (WA TAC)	Standards for Registered Training Organisations (RTOs) 2015	RTOs that deliver vocational education and training solely in Western Australia and do not intend to apply to be registered on the Commonwealth Register of Institutions and Courses for Overseas Learners (CRICOS)
Victorian Registration and Qualifications Authority (VRQA)	AQTF Essential Conditions and Standards for Initial Registration AQTF Essential Conditions and Standards for Continuing Registration VRQA Guidelines for VET Providers	RTOs that deliver vocational education and training solely in Victoria and/or Western Australia and do not intend to apply to be registered on the Commonwealth Register of Institutions and Courses for Overseas Learners (CRICOS)

7. List of AQF qualifications, Skill Sets and units of competency in RII Resources and Infrastructure Industry Training Package

The RII Resources and Infrastructure Industry Training Package contains:

- 50 AQF-aligned qualifications
- 51 skill sets
- 828 native units of competency

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List of qualifications in RII Resources and Infrastructure Industry Training Package

Qualifications in RII Training Package (Version 9.0)	
Code	**Title**
RII10115	Certificate I in Resources and Infrastructure Operations
RII20120	Certificate II in Resources and Infrastructure Work Preparation
RII20220	Certificate II in Surface Extraction Operations
RII20320	Certificate II in Underground Coal Mining
RII20420	Certificate II in Underground Metalliferous Mining
RII20520	Certificate II in Resource Processing
RII20620	Certificate II in Mining/Field Exploration
RII20720	Certificate II in Civil Construction
RII20819	Certificate II in Bituminous Surfacing
RII20920	Certificate II in Drilling Operations
RII21120	Certificate II in Oil & Gas Drilling (Onshore) and Well Servicing
RII21222	Certificate II in Autonomous Workplace Operations
RII30120	Certificate III in Surface Extraction Operations
RII30220	Certificate III in Underground Coal Operations
RII30320	Certificate III in Underground Metalliferous Mining
RII30420	Certificate III in Resource Processing
RII30520	Certificate III in Mining Exploration
RII30719	Certificate III in Emergency Response and Rescue
RII30820	Certificate III in Civil Construction Plant Operations
RII30920	Certificate III in Civil Construction
RII31220	Certificate III in Civil Foundations
RII31619	Certificate III in Trenchless Technology
RII31820	Certificate III in Drilling Operations
RII32020	Certificate III in Drilling Oil & Gas (Onshore)
RII32220	Certificate III in Well Servicing Operations
RII40120	Certificate IV in Surface Extraction Operations
RII40220	Certificate IV in Surface Coal Mining (Open Cut Examiner)
RII40320	Certificate IV in Underground Metalliferous Mining Operations
RII40420	Certificate IV in Underground Coal Operations
RII40520	Certificate IV in Resource Processing
RII40720	Certificate IV in Civil Construction
RII40820	Certificate IV in Civil Construction Design
RII40920	Certificate IV in Drilling Operations
RII41120	Certificate IV in Drilling Oil & Gas (Onshore)
RII41220	Certificate IV in Well Servicing Operations
RII41319	Certificate IV in Emergency Response Coordination
RII41421	Certificate IV in Civil Infrastructure Asset Management
RII41522	Certificate IV in Autonomous Control and Remote Operations
RII50120	Diploma of Surface Operations Management
RII50315	Diploma of Minerals Processing
RII50420	Diploma of Civil Construction Management
RII50520	Diploma of Civil Construction Design
RII50620	Diploma of Drilling Operations
RII50820	Diploma of Drilling Oil & Gas (Onshore)
RII50920	Diploma of Underground Coal Mining Management

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RII51020	Diploma of Well Servicing Operations
RII60120	Advanced Diploma of Metalliferous Mining
RII60220	Advanced Diploma of Extractive Industries Management
RII60320	Advanced Diploma of Underground Coal Mining Management
RII60415	Advanced Diploma of Drilling Management
RII60520	Advanced Diploma of Civil Construction Design
RII60620	Advanced Diploma of Civil Construction
RII60720	Advanced Diploma of Surface Coal Mining Management

List of Skill Sets in RII Resources and Infrastructure Industry Training Package

Skill sets in RII Training Package (Version 9.0)	
Code	**Title**
RIISS00018	Concrete Paving - Automated Paving Guidance System (APGS) Technician Skill Set
RIISS00019	Concrete Paving - Finisher Skill Set
RIISS00020	Concrete Paving - General Hand Skill Set
RIISS00021	Concrete Paving - Hand Texturing and Curing Skill Set
RIISS00022	Concrete Paving - Joint Sealer Skill Set
RIISS00023	Concrete Paving - Machine Operator Skill Set
RIISS00024	Concrete Paving - Saw Cutter Skill Set
RIISS00025	Concrete Paving - Spotter Recorder Skill Set
RIISS00026	Concrete Paving - Stringliner Skill Set
RIISS00027	Concrete Paving - Texture Machine Operator Skill Set
RIISS00028	Concrete Paving - Tie Bar Inserter Skill Set
RIISS00029	Leading Hand - Coal Mining Skill Set
RIISS00030	Explosion Protected Diesel Engine Systems Maintenance Skill Set
RIISS00031	Mine Surveying Skill Set
RIISS00032	Site Health and Safety Coordinator Skill Set
RIISS00033	Underground Coal Mine Safety Skill Set
RIISS00034	Surface Coal Mine Safety Skill Set
RIISS00035	Underground Shotfiring - Coal Skill Set
RIISS00036	Underground Shotfiring - Metalliferous Skill Set
RIISS00038	Oil and Gas (Off Shore) Rouseabout Skill Set
RIISS00042	Work Zone Traffic Control - Road Labourer Skill Set
RIISS00043	Work Zone Traffic Control - Supervisor Skill Set
RIISS00046	Leading Hand Skill Set
RIISS00047	Stabiliser support staff Skill Set
RIISS00048	Operator of Stabiliser Skill Set
RIISS00049	Operator of Spreader Skill Set
RIISS00050	Operator of stabiliser (using foam bitumen) Skill Set
RIISS00051	Supervision of Diverse Work Teams Skill Set
RIISS00052	Surface Shotfiring Skill Set
RIISS00053	Advanced off-the-road and earthmoving tyre fitting
RIISS00054	Traffic Controller Skill Set
RIISS00055	Traffic Management Implementer Skill Set
RIISS00056	Traffic Management Designer Skill Set
RIISS00057	Construction Materials Testing Skill Set
RIISS00058	Traffic Controller Skill Set for Urban Streets and Low Volume Rural Roads
RIISS00059	Traffic Controller Skill Set for High Volume Roads
RIISS00060	Traffic Management Implementer Skill Set for Urban Streets and Low Volume Rural Roads

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RIISS00061	Traffic Management Implementer Skill Set for High Volume Roads
RIISS00062	Traffic Management Implementer Skill Set for Motorways and Freeways
RIISS00063	Traffic Management Designer Skill Set for Urban Streets and Low Volume Rural Roads
RIISS00064	Traffic Management Designer Skill Set for High Volume Roads
RIISS00065	Traffic Management Designer Skill Set for Motorways and Freeways
RIISS00066	Civil Infrastructure Asset Management - Road Pavements Skill Set
RIISS00067	Civil Infrastructure Asset Management - Roadside Infrastructure Skill Set
RIISS00068	Civil Infrastructure Asset Management - Stormwater Drainage Skill Set
RIISS00069	Civil Infrastructure Asset Management - Civil Structures Skill Set
RIISS00070	Civil Infrastructure Asset Management - Civil Foundations Skill Set
RIISS00071	Civil Infrastructure Asset Management - Water and Sewerage Mains Skill Set
RIISS00072	Civil Infrastructure Asset Management - Underground Services Skill Set
RIISS00073	Civil Infrastructure Asset Management - Open Spaces Skill Set
RIISS00074	Civil Infrastructure Asset Management - Analyse Data for Asset Management Decisions Making Skill Set
RIISS00075	Work with Data in an Autonomous Workplace Skill Set

List of units of competency in RII Resources and Infrastructure Industry Training Package

Units of competency in RII Training Package (Version 9.0)	
Code	**Title**
RIIARO201	Work in autonomous operations
RIIARO202	Use data and technology to complete work in autonomous operations
RIIARO301	Work safely in autonomous environments
RIIARO302	Work safely with remotely piloted aircraft systems
RIIARO303	Operate equipment in autonomous environments
RIIARO304	Coordinate and interact with autonomous systems
RIIARO305	Build and maintain routes for autonomous operations
RIIARO306	Respond to obstructions to autonomous operations
RIIARO307	Activate and deactivate autonomous systems
RIIARO308	Use data in an autonomous workplace
RIIARO401	Supervise autonomous operations
RIIARO402	Optimise performance of complex control systems in autonomous operations
RIIARO403	Maintain continuity of operational control
RIIARO404	Improve outcomes within a distributed value chain network
RIIARO405	Optimise automated drilling operations
RIIARO406	Optimise automated haulage operations
RIIARO407	Optimise automated fixed plant operations
RIIARO408	Optimise automated wet processing plant operations
RIIARO409	Optimise automated in-loading and out-loading operations
RIIARO410	Control safety risks in autonomous operations
RIIARO411	Manage situational awareness
RIIBEF201D	Plan and organise work
RIIBEF201E	Plan and organise work
RIIBEF202E	Identify and rectify site operating problems
RIIBEF301D	Run on-site operations
RIIBEF302E	Monitor site production activities
RIIBEF401E	Manage non-routine and complex technical situations

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RIIBEF402D	Supervise on-site operations
RIIBEF403	Collaborate to achieve quality outcomes
RIIBEF404	Undertake informed and dynamic decision making
RIIBEF405	Optimise personal performance
RIIBEF601E	Conduct business negotiations
RIIBEF602E	Establish and evaluate operational performance management systems
RIIBEF604E	Conduct a feasibility study
RIIBHD301E	Conduct surface blast hole drilling operations
RIIBHD302E	Conduct underground development drilling
RIIBHD303E	Conduct long hole drilling
RIIBHD401D	Supervise blast hole drilling operations
RIIBLA201E	Support shotfiring operations
RIIBLA202F	Support underground shotfiring operations
RIIBLA203E	Conduct mobile mixing of explosives
RIIBLA204E	Store, handle and transport explosives in underground coal mines
RIIBLA205D	Store, handle and transport explosives
RIIBLA205E	Store, handle and transport explosives
RIIBLA301E	Conduct surface shotfiring operations
RIIBLA302D	Conduct shotfiring operations in underground coal mines
RIIBLA302E	Conduct shotfiring operations in underground coal mines
RIIBLA303D	Conduct underground development shotfiring
RIIBLA303E	Conduct underground development shotfiring
RIIBLA304D	Conduct underground production shotfiring
RIIBLA304E	Conduct underground production shotfiring
RIIBLA305D	Conduct secondary blasting
RIIBLA305E	Conduct secondary blasting
RIIBLA307E	Conduct a blast survey
RIIBLA401E	Manage blasting operations
RIIBLA402D	Monitor and control the effects of blasting on the environment
RIIBLA402E	Monitor and control the effects of blasting on the environment
RIIBLA403	Design blasts
RIIBLA602D	Establish and maintain a blasting system
RIIBLA602E	Establish and maintain explosives safety and security management systems
RIICAM401	Conduct a condition assessment of road pavements
RIICAM402	Conduct a condition assessment of roadside infrastructure
RIICAM403	Conduct a condition assessment of stormwater drainage
RIICAM404	Conduct a condition assessment of civil structures
RIICAM405	Conduct a condition assessment of civil foundations
RIICAM406	Conduct a condition assessment of water and sewerage mains
RIICAM407	Conduct a condition assessment of underground services
RIICAM408	Conduct a condition assessment of open spaces
RIICAM409	Manage civil infrastructure datasets
RIICAM410	Maintain asset inventories
RIICAM501	Analyse and interpret civil infrastructure asset datasets
RIICAM502	Make decisions using civil infrastructure asset data.
RIICAR301D	Rehabilitate exploration site

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RIICAR302D	Rehabilitate small mine site
RIICBM201E	Strip pile heads
RIICBM301E	Maintain concrete bridges
RIICBM302E	Install pre-cast girders
RIICBM303E	Install pre-cast parapets
RIICBM304E	Operate bridge inspection units
RIICBM305E	Install pre-cast concrete bridge decks
RIICBM306E	Undertake concreting work on concrete bridges
RIICBM307E	Construct formwork and false work on concrete bridges
RIICBS202E	Hand spread asphalt
RIICBS203D	Safely handle bituminous materials
RIICBS203E	Safely handle bituminous materials
RIICBS207E	Take samples of road surfacing materials
RIICBS301E	Conduct profile planer operations
RIICBS302E	Conduct paver screeding operations
RIICBS303E	Conduct materials transfer vehicle operations
RIICBS304E	Compact asphalt with rollers
RIICBS305E	Conduct asphalt paver operation
RIICBS306E	Conduct micro surfacing operations
RIICBS307E	Conduct bitumen sprayer operations
RIICBS308E	Load aggregate using purpose built loaders
RIICBS309E	Conduct self-propelled aggregate spreader operations
RIICBS310E	Conduct patching operations
RIICBS311E	Produce asphalt products
RIICBS312E	Conduct bitumen tanker operations
RIICBS313	Conduct tack coat spraying operations
RIICBS314	Conduct aggregate spreader box operations
RIICBS315	Roll aggregate in sprayed sealing operations
RIICBS316	Conduct pavement sweeping operations
RIICBS317	Conduct road maintenance operations
RIICBS401E	Supervise asphalt paving and compaction operations
RIICBS402E	Supervise the application of bituminous sprayed treatments
RIICBS403E	Supervise the application of polymer modified binders
RIICBS404E	Supervise the selection and use of bituminous emulsions
RIICBS405E	Supervise micro surfacing operations
RIICBS406E	Supervise pavement profiling operations using a profiler
RIICBS407E	Supervise the manufacture and delivery of hot mix asphalt
RIICBS408E	Supervise the manufacture of cold mixes
RIICBS409E	Supervise the manufacture of polymer modified binders
RIICBS410E	Supervise the manufacture of bituminous emulsions
RIICBS411E	Supervise the manufacture of micro surfacing mixes
RIICCM201D	Carry out measurements and calculations
RIICCM201E	Carry out measurements and calculations
RIICCM202E	Identify, locate and protect underground services
RIICCM203D	Read and interpret plans and job specifications
RIICCM203E	Read and interpret plans and job specifications

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RIICCM204E	Place and fix reinforcement materials
RIICCM205E	Carry out manual excavation
RIICCM205F	Carry out manual excavation
RIICCM206D	Support plant operations
RIICCM206E	Support plant operations
RIICCM207D	Spread and compact materials manually
RIICCM207E	Spread and compact materials manually
RIICCM208D	Carry out basic levelling
RIICCM208E	Carry out basic levelling
RIICCM209D	Carry out concrete work
RIICCM209E	Carry out concrete work
RIICCM210D	Install trench support
RIICCM210E	Install trench support
RIICCM211E	Construct and dismantle fences and gates
RIICCM302	Track directional boring operations
RIICCM303	Conduct vacuum excavations
RIICCR401E	Develop and maintain positive community relations
RIICCR601D	Manage customer relationships
RIICFW301E	Construct underpinning
RIICFW302E	Install temporary and permanent rock anchors
RIICFW303E	Install primary ground supports
RIICFW304E	Conduct pile driving operations
RIICFW305E	Conduct cast in-situ pilings operations
RIICFW306E	Direct pile driving operations
RIICFW307E	Direct cast in-situ piling operations
RIICFW308	Conduct screw piling operations
RIICOM201D	Communicate in the workplace
RIICOM201E	Communicate in the workplace
RIICOM202	Contribute to effectiveness of communication and teamwork in an autonomous workplace
RIICOM301D	Communicate information
RIICOM301E	Communicate information
RIICOM302D	Communicate workplace information
RIICOM401	Communicate effectively in a remote work environment
RIICPL301D	Install water mains pipelines
RIICPL301E	Install water mains pipelines
RIICPL302D	Install stormwater systems
RIICPL302E	Install stormwater systems
RIICPL303D	Install sewer pipelines
RIICPL303E	Install sewer pipelines
RIICPL304D	Install pre-cast gully pits
RIICPL304E	Install pre-cast gully pits
RIICPL305E	Install pre-cast access chambers
RIICPL401E	Supervise the installation of underground services using open excavation
RIICRC201D	Repair potholes
RIICRC201E	Repair potholes
RIICRC202E	Install signs

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RIICRC203D	Install sub-soil drainage
RIICRC203E	Install sub-soil drainage
RIICRC204E	Install and maintain roadside fixtures
RIICRC205E	Install utility poles
RIICRC206E	Install pre-cast concrete crash barriers
RIICRC207E	Install noise barriers
RIICRC208D	Lay pipes
RIICRC208E	Lay pipes
RIICRC209E	Lay reinforced concrete box culverts
RIICRC301E	Maintain drainage systems
RIICRC302E	Place and form concrete kerb, channel and fixtures
RIICRC303E	Lay pavers
RIICRC304E	Maintain sealed roads
RIICRC305E	Conduct road construction paver screeding operations
RIICRC306E	Conduct earthworks
RIICRC307E	Conduct road pavement construction
RIICRC308E	Conduct paver operations
RIICRC309D	Conduct stabiliser operations
RIICRC309E	Conduct stabiliser operations
RIICRC310E	Construct and maintain roads
RIICRC311D	Conduct concrete road paver operations
RIICRC311E	Conduct concrete road paver operations
RIICRC312E	Set up and maintain concrete paver stringlines
RIICRC313E	Conduct concrete road curing and texturing operations
RIICRC314D	Handle concrete materials
RIICRC314E	Handle concrete materials
RIICRC315D	Use concreting materials and equipment
RIICRC315E	Use concreting materials and equipment
RIICRC316D	Place and compact concrete
RIICRC316E	Place and compact concrete
RIICRC317D	Finish concrete pavements
RIICRC317E	Finish concrete pavements
RIICRC318E	Cure concrete
RIICRC319D	Saw and cut concrete pavements to initiate planned cracks
RIICRC319E	Saw and cut concrete pavements to initiate planned cracks
RIICRC320E	Seal concrete pavements
RIICRC321E	Use automated paving guidance systems
RIICRC322D	Receive, check and record concrete deliveries
RIICRC322E	Receive, check and record concrete deliveries
RIICRC323E	Insert tie bars in fresh concrete
RIICRC401E	Supervise flexible pavement construction
RIICRC402E	Supervise rigid pavement construction
RIICRC403E	Supervise the stabilisation of materials
RIICRC404E	Inspect and report on pavement condition
RIICRC405E	Carry out pavement condition measurement
RIICRC406E	Supervise pavement maintenance

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RIICRM201F	Escort mobile works
RIICRM202E	Handle and store road marking materials
RIICRM203E	Conduct pedestrian road marking operations
RIICRM204E	Prepare surfaces for road marking
RIICRM205E	Conduct road marking measuring operations
RIICRM206E	Conduct airless and atomised spraying operations
RIICRM207E	Install raised pavement markers
RIICRM301E	Conduct ride on road marking operations
RIICRM302E	Conduct long line road marking operations
RIICRM303E	Conduct thermo plastic road marking operations
RIICSG401E	Supervise civil concrete structure construction
RIICSG402E	Supervise civil steel structure construction
RIICSG403E	Supervise civil timber structure construction
RIICSG404E	Supervise civil masonry, crib and gabion structure construction
RIICSG405E	Carry out inspections of civil structures
RIICSG406E	Supervise maintenance of civil structures
RIICTB201E	Maintain timber bridges
RIICTB202E	Apply bridge durability treatments
RIICTB203E	Produce bridge drawings and sketches
RIICTB301E	Undertake visual inspections
RIICTB302E	Install temporary support members
RIICTB303E	Erect temporary modular support systems (baileys) on existing bridges
RIICTB304E	Install or replace sub-structure members
RIICTB305E	Install or replace super-structure members
RIICTB306E	Splice and connect timber members
RIICTB307E	Assemble and disassemble temporary modular bridges
RIICTB308E	Install or replace truss members
RIICTB309E	Construct, maintain and remove coffer dams
RIICTB310E	Construct specialised timber deck systems
RIICTC301E	Install tunnelling constructions services
RIICTC302E	Line tunnels
RIICTC303E	Excavate tunnel by machine
RIICTC304E	Muck out tunnel earthworks
RIICTC305E	Construct portals
RIICTC306	Conduct tunnel boring machine operations
RIICTC401E	Supervise tunnel construction
RIICTC402	Supervise tunnel boring machine operations
RIICTT301E	Conduct fluid assisted directional boring
RIICTT302E	Conduct impact moling, ramming and augering operations
RIICTT303E	Control micro tunnelling and pipe-jacking operations
RIICTT304E	Undertake on-line replacement for existing pipeline systems
RIICTT305E	Undertake localised repair and sealing of existing pipeline systems
RIICTT306E	Install cure in-place linings for existing pipeline systems
RIICTT307E	Spray linings for existing pipeline systems
RIICTT308E	Install close-fit linings for existing pipeline systems
RIICTT309E	Install slip lining in existing pipeline systems

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RIICTT310E	Renovate large diameter pipes and chambers
RIICTT401E	Supervise the installation of underground services using trenchless technology
RIICTT402E	Supervise repair and rehabilitation of underground services using trenchless technology
RIICWD501E	Prepare detailed design of foundations
RIICWD502E	Prepare detailed design of lighting
RIICWD503E	Prepare traffic management plans and traffic guidance schemes
RIICWD504E	Prepare detailed design of environmental controls
RIICWD505E	Prepare detailed design of landscaping
RIICWD506E	Prepare detailed design of canals
RIICWD507D	Prepare detailed geotechnical design
RIICWD508E	Prepare detailed design of rural roads
RIICWD509E	Prepare detailed design of urban roads
RIICWD510E	Prepare detailed design of busways
RIICWD511E	Prepare detailed design of sub-divisions
RIICWD512E	Prepare detailed design of motorways and interchanges
RIICWD513E	Prepare detailed design of rail civil infrastructure
RIICWD514E	Prepare detailed design of dams
RIICWD515E	Prepare detailed design of airfield civil works
RIICWD516E	Prepare detailed design of bicycle ways
RIICWD517E	Prepare detailed design of industrial hardstands
RIICWD518E	Prepare detailed design of open car parks
RIICWD519E	Prepare detailed design of intermodal facilities civil works
RIICWD520E	Prepare detailed design of rigid pavements
RIICWD521E	Prepare detailed design of flexible pavements
RIICWD522E	Prepare stabilised material mix design
RIICWD523E	Prepare asphalt mix design
RIICWD524E	Prepare design of spray seal surfacing
RIICWD525E	Select pavement surfacing
RIICWD526E	Prepare detailed traffic analysis
RIICWD527E	Prepare detailed design of traffic signals
RIICWD528E	Prepare detailed design of traffic management systems
RIICWD529E	Prepare detailed design of underground services
RIICWD530E	Prepare detailed design of surface drainage
RIICWD531E	Prepare detailed design of subsurface drainage
RIICWD532E	Prepare detailed design of tunnels
RIICWD533E	Prepare detailed design of civil concrete structures
RIICWD534E	Prepare detailed design of civil steel structures
RIICWD535E	Prepare detailed design of civil timber structures
RIICWD536E	Prepare detailed design of civil masonry, crib and gabion structures
RIICWD537E	Prepare detailed design of marine structures civil works
RIICWD538	Prepare traffic management plans and traffic guidance schemes for high volume roads
RIICWD539	Prepare traffic management plans and traffic guidance schemes for motorways and freeways
RIICWD601E	Manage civil works design processes
RIICWM401E	Supervise civil works
RIICWM402E	Supervise civil works contractors
RIICWM501E	Implement civil construction plans

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RIICWM502E	Implement civil works maintenance programs
RIICWM503E	Prepare civil works cost estimates
RIICWM504E	Prepare civil works bill of quantities
RIICWM505E	Prepare civil works schedule of rates
RIICWM601E	Establish civil construction plans
RIICWM602E	Establish civil works maintenance programs
RIIDES301D	Inspect, test and maintain diesel engine systems and their ancillary systems
RIIDES302D	Inspect, test and maintain joints on diesel engine systems
RIIDES303D	Inspect, test and maintain cooling systems on diesel engine systems
RIIDES304D	Inspect, test and maintain inlet systems on diesel engine systems
RIIDES305D	Inspect, test and maintain exhaust systems on diesel engine systems
RIIDES306D	Inspect, test and maintain safety shutdown systems on diesel engine systems
RIIDES307D	Test, determine the cause and rectify excessive emission levels on diesel engine systems
RIIDML401E	Supervise demolitions
RIIEGS201D	Operate in isolated and remote situations
RIIEGS202E	Conduct field work
RIIEGS301D	Operate and maintain instruments and field equipment
RIIEGS301E	Operate and maintain instruments and field equipment
RIIEGS302D	Plan and undertake field trip
RIIEGS303E	Provide geological field assistance
RIIEGS304E	Mobilise equipment and materials
RIIEGS305E	Navigate in remote or trackless areas
RIIENV201D	Identify and assess environmental and heritage concerns
RIIENV201E	Identify and assess environmental and heritage concerns
RIIENV301E	Conduct atmospheric monitoring
RIIENV302E	Apply environmentally sustainable work practices
RIIENV401E	Supervise dust and noise control
RIIENV402E	Implement and monitor environmental policies
RIIENV501D	Implement and maintain environmental management plan
RIIENV501E	Implement and maintain environmental management plans
RIIENV502E	Undertake process or project environmental impact assessments
RIIENV601D	Establish and maintain the environmental management system
RIIENV601E	Establish and maintain the environmental management system
RIIERR201E	Conduct fire team operations
RIIERR202E	Contribute to the control of emergencies and critical situations
RIIERR203D	Escape from hazardous situations unaided
RIIERR203E	Escape from hazardous situations unaided
RIIERR204E	Provide aided rescue to endangered personnel
RIIERR205D	Apply initial response First Aid
RIIERR301E	Respond to work site incidents
RIIERR302E	Respond to local emergencies and incidents
RIIERR303E	Operate in self-contained regenerative oxygen breathing apparatus
RIIERR304D	Control emergencies and critical situations
RIIERR305E	Control underground fires
RIIERR306E	Conduct underground searches
RIIERR307E	Extricate casualties from underground incidents

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RIIERR308E	Extricate and transport people involved in incidents
RIIERR309D	Establish and operate from fresh air base
RIIERR310D	Provide support for rescue operations
RIIERR401E	Apply and monitor emergency preparedness and response systems in surface operations
RIIERR402D	Apply and monitor underground coal mine emergency preparedness and response systems
RIIERR402E	Apply and monitor underground coal mine emergency preparedness and response systems
RIIERR403E	Lead rescue teams
RIIERR404D	Apply and monitor underground Metalliferous mine emergency preparedness and response systems
RIIERR405	Control emergencies and critical situations
RIIERR406	Provide support for rescue operations
RIIERR501E	Implement underground coal mine emergency preparedness and response systems
RIIERR503D	Implement emergency preparedness and response systems
RIIERR504E	Manage major incidents and emergencies
RIIERR601E	Establish and maintain mine emergency preparedness and response systems
RIIERR602E	Establish and maintain underground coal mine emergency preparedness and response systems
RIIFIA401E	Manage financial records
RIIGOV201D	Comply with site work processes/procedures
RIIGOV201E	Comply with site work processes/procedures
RIIGOV401D	Apply, monitor and report on compliance systems
RIIGOV401E	Apply, monitor and report on compliance systems
RIIGOV501D	Identify, implement and maintain legal compliance requirements
RIIGOV501E	Identify, implement and maintain legal compliance requirements
RIIGOV601D	Establish, maintain and develop a statutory compliance management system
RIIGOV601E	Establish, maintain and develop a statutory compliance management system
RIIHAN201E	Operate a forklift
RIIHAN203D	Conduct lifting operations
RIIHAN203E	Conduct lifting operations
RIIHAN204D	Load and unload cargo/goods
RIIHAN205D	Secure cargo
RIIHAN206E	Transport plant, equipment and personnel
RIIHAN208D	Perform dogging
RIIHAN208E	Perform dogging
RIIHAN209E	Perform basic rigging
RIIHAN210D	Perform intermediate rigging operations
RIIHAN211D	Conduct basic scaffolding operations
RIIHAN212E	Conduct non-slewing crane operations
RIIHAN213E	Work effectively in the drilling industry
RIIHAN301E	Operate elevating work platform
RIIHAN302D	Conduct intermediate scaffolding operations
RIIHAN304E	Conduct slewing crane operations
RIIHAN305D	Operate a gantry or overhead crane
RIIHAN307E	Operate a vehicle loading crane
RIIHAN308F	Load and unload plant
RIIHAN309F	Conduct telescopic materials handler operations
RIIHAN310E	Conduct crane operations underground
RIIHAN311F	Conduct operations with integrated tool carrier

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RIIHAN401D	Organise and monitor wharf/terminal operations
RIIIMG301D	Maintain site records
RIIIMG301E	Maintain site records
RIILAT401D	Provide leadership in the supervision of Indigenous employees
RIILAT401E	Provide leadership in the supervision of Indigenous employees
RIILAT402D	Provide leadership in the supervision of diverse work teams
RIILAT402E	Provide leadership in the supervision of diverse work teams
RIILAT601E	Manage group processes
RIIMCO201D	Conduct spreader operations
RIIMCO302D	Conduct surface miner operations
RIIMCO303E	Conduct auger miner operations
RIIMCP202D	Conduct rail dispatch operations
RIIMCP301D	Monitor plant operations for coal preparation
RIIMCU201D	Operate power tram
RIIMCU202D	Conduct tracked vehicle/plant operations
RIIMCU203D	Conduct wheeled vehicle operations (non-articulated)
RIIMCU204D	Conduct wheeled vehicle operations (articulated)
RIIMCU205D	Conduct rotational drilling
RIIMCU206D	Install, maintain and recover gas drainage systems
RIIMCU207D	Install, maintain and recover electrical services
RIIMCU208E	Conduct basic strata control operations
RIIMCU209E	Conduct roadway maintenance
RIIMCU210D	Conduct stonedusting operations
RIIMCU211D	Install and maintain explosion barriers
RIIMCU212E	Construct and maintain basic ventilation devices
RIIMCU213E	Conduct feeder breaker operations
RIIMCU214E	Conduct ventilation operations
RIIMCU215D	Operate longwall ancillary equipment
RIIMCU216D	Maintain lamp cabin operations
RIIMCU217	Apply spontaneous combustion management measures
RIIMCU218	Work safely with polymeric chemicals in underground coal mining
RIIMCU301E	Conduct specialised strata control operations
RIIMCU302F	Construct and maintain ventilation devices
RIIMCU303E	Conduct continuous miner operations
RIIMCU304E	Conduct shuttle car operations
RIIMCU305E	Conduct outburst mining operations
RIIMCU306E	Conduct shearer operations
RIIMCU307E	Conduct longwall face equipment operations
RIIMCU308E	Install and recover longwall equipment
RIIMCU309E	Operate breaker line supports
RIIMCU310E	Conduct flexible conveyor train (FCT) operations
RIIMCU311E	Monitor control processes
RIIMCU312	Conduct polymeric chemical operations in underground coal mining
RIIMCU313	Mix and pump polymeric chemicals in underground coal mining
RIIMCU314	Transport and store polymeric chemicals in underground coal mining
RIIMCU401E	Conduct special roadway operations

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RIIMCU403E	Apply and monitor the gas management plan
RIIMCU404E	Apply and monitor the gas drainage management plan
RIIMCU405D	Apply and monitor the outburst management plan
RIIMCU406E	Apply and monitor the inrush management plan
RIIMCU407E	Apply and monitor the strata management plan
RIIMCU408E	Apply the spontaneous combustion management plan
RIIMCU409	Apply and monitor polymeric chemical management plans
RIIMCU501E	Implement the spontaneous combustion management plan
RIIMCU502E	Implement the gas management plan
RIIMCU503D	Implement the gas drainage management plan
RIIMCU504D	Implement the outburst management plan
RIIMCU505E	Implement the inrush management plan
RIIMCU506E	Implement the strata management plan
RIIMCU601E	Establish and maintain spontaneous combustion management systems
RIIMCU602E	Establish and maintain gas management systems
RIIMCU603D	Establish and maintain the gas drainage management plan
RIIMCU604D	Establish and maintain the outburst management plan
RIIMCU605E	Establish and maintain inrush management systems
RIIMCU606E	Establish and maintain the mining method and strata management systems
RIIMEX201E	Suppress dust in open-cut environments
RIIMEX203D	Break oversize rock
RIIMEX204D	Conduct workboat/barge operations
RIIMEX301D	Conduct dredging operations
RIIMEX302D	Assess ground conditions
RIIMEX303	Conduct local geotechnical risk control in surface operations
RIIMEX401D	Apply pit plan
RIIMEX402E	Supervise dredging operations
RIIMEX403E	Supervise canal construction
RIIMEX404E	Apply and monitor systems for stable mining
RIIMEX405E	Apply and monitor systems and methods of surface coal mining
RIIMEX406D	Apply and monitor mine transport systems and production equipment
RIIMEX407	Apply and monitor the ground control management plan
RIIMEX408	Supervise overburden dump operations
RIIMEX501D	Implement pit plan
RIIMEX502D	Implement systems and methods of mining
RIIMEX503E	Manage dredging operations
RIIMEX504	Implement the ground control management plan
RIIMEX601D	Plan pit development
RIIMEX602D	Establish and maintain surface mining ground control and slope stability systems
RIIMEX603D	Establish and maintain underground mining ground control and stable mining systems
RIIMEX604D	Establish and maintain surface product haulage and transport systems
RIIMPG301D	Control and monitor automated plant/machinery
RIIMPO201E	Operate roller/compactor underground
RIIMPO205E	Operate roller/compactor
RIIMPO206D	Conduct bulk water truck operations
RIIMPO208F	Operate support equipment

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RIIMPO210E	Conduct underground truck operations
RIIMPO301E	Conduct hydraulic excavator operations
RIIMPO302E	Conduct hydraulic shovel operations
RIIMPO303E	Conduct rope shovel operations
RIIMPO304E	Conduct wheel loader operations
RIIMPO305F	Conduct coal stockpile dozer operations
RIIMPO306D	Operate plant/machinery on live stockpiles
RIIMPO307E	Conduct wheel grader operations in underground mines
RIIMPO308F	Conduct tracked dozer operations
RIIMPO309F	Conduct wheeled dozer operations
RIIMPO310F	Conduct grader operations
RIIMPO312E	Conduct scraper operations
RIIMPO313E	Conduct face loader operations
RIIMPO315E	Conduct tractor operations
RIIMPO316E	Conduct self-propelled compactor operations
RIIMPO317F	Conduct roller operations
RIIMPO318F	Conduct civil construction skid steer loader operations
RIIMPO319E	Conduct backhoe/loader operations
RIIMPO320F	Conduct civil construction excavator operations
RIIMPO321F	Conduct civil construction wheeled front end loader operations
RIIMPO322E	Conduct civil construction tracked front end loader operations
RIIMPO323E	Conduct civil construction dozer operations
RIIMPO324F	Conduct civil construction grader operations
RIIMPO325E	Conduct civil construction scraper operations
RIIMPO326E	Conduct water vehicle operations
RIIMPO327E	Conduct pipe layer operations
RIIMPO328E	Conduct continuous bucket trencher operations
RIIMPO329F	Conduct dragline operations
RIIMPO331E	Conduct operations with stockpile dozer
RIIMPO333E	Conduct underground load, haul and dump truck operations
RIIMPO334E	Conduct skid steer loader operations using attachments
RIIMPO335E	Conduct skid steer loader operations without attachments
RIIMPO336E	Conduct belly dump truck operations
RIIMPO337E	Conduct articulated haul truck operations
RIIMPO338E	Conduct rigid haul truck operations
RIIMPO339A	Conduct side tipper operations
RIIMPO401D	Supervise mobile plant operations
RIIMPO402D	Apply the principles of earthworks construction
RIIMPO403D	Monitor interaction of heavy and light vehicles and mining equipment
RIIMPO501D	Implement, monitor, rectify and report on mobile plant and equipment systems
RIIMPO502D	Manage the interaction of heavy and light vehicles and mining equipment
RIIMSM307D	Install and maintain ventilation systems and equipment
RIINHB201E	Load, secure and unload drilling equipment and materials
RIINHB202E	Set up and pack up drill sites
RIINHB203E	Support drilling processes
RIINHB205F	Assist continuous flight auger drilling

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RIINHB206E	Assist large diameter auger drilling
RIINHB208E	Assist diamond core drilling
RIINHB210E	Assist surface directional drilling
RIINHB211E	Assist mud rotary drilling
RIINHB217E	Assist horizontal direction drilling
RIINHB218E	Assist grouting and cementing operations
RIINHB219E	Assist with reverse circulation drilling
RIINHB220	Assist coil tube drilling
RIINHB221	Assist rotary air drilling
RIINHB222	Assist sonic drilling operations
RIINHB223	Prepare, run and cement casing
RIINHB301E	Set up and prepare for drilling operations
RIINHB302D	Conduct reaming
RIINHB303D	Install product pipe
RIINHB304E	Conduct reverse circulation drilling operations
RIINHB305E	Conduct continuous flight auger drilling
RIINHB306E	Conduct large diameter auger drilling
RIINHB307D	Conduct conventional core drilling
RIINHB308D	Conduct wireline core drilling
RIINHB309E	Conduct guided boring
RIINHB310D	Conduct surface directional drilling
RIINHB311E	Conduct mud rotary drilling operations
RIINHB312D	Conduct raise boring
RIINHB315D	Conduct top-hole hammer drilling
RIINHB316D	Conduct underground in-seam directional drilling
RIINHB317D	Install underground in-seam directional drilling standpipes
RIINHB318D	Install and operate water and gas control equipment
RIINHB320D	Construct monitoring bores
RIINHB322E	Construct multiple aquifer production bores
RIINHB323D	Conduct horizontal directional drilling
RIINHB324E	Conduct grouting or cementing operations
RIINHB325E	Construct single aquifer bores
RIINHB326	Conduct coil tube drilling
RIINHB327	Conduct cyber chair drilling operations
RIINHB328	Conduct rotary air drilling
RIINHB329	Conduct sonic drilling operations
RIINHB330	Conduct down-hole hammer drilling
RIINHB401E	Plan and supervise the mobilisation of equipment, crew and materials
RIINHB402E	Supervise drilling operations
RIINHB403D	Supervise geotechnical drilling operations
RIINHB411E	Construct artesian (flowing) aquifer bores
RIINHB412D	Construct geothermal wells
RIINHB501F	Plan drilling
RIIOGD201D	Assist in maintaining rig safety and emergency procedures
RIIOGD202D	Carry out equipment and basic rig maintenance
RIIOGD202E	Carry out equipment and basic rig maintenance procedures

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RIIOGD203F	Prepare and operate drilling fluid systems
RIIOGD204F	Perform rig floor operations
RIIOGD205E	Support blow out prevention operations
RIIOGD206E	Assist and monitor well control operations
RIIOGD209F	Operate and maintain ancillary equipment
RIIOGD301E	Conduct and maintain derrick operations
RIIOGD302F	Assist in running casing
RIIOGD303F	Trip pipe
RIIOGD304D	Apply effective coal seam gas control practices
RIIOGD305E	Apply blow out prevention operational procedures
RIIOGD401E	Rig up, conduct pre-spud operations and rig down
RIIOGD402E	Participate in nippling-up and pressure tests
RIIOGD403E	Conduct drilling operations
RIIOGD404E	Coordinate air drilling operations
RIIOGD405E	Carry out well control and blow out prevention operations
RIIOGD501F	Manage rig operations
RIIOGD502E	Plan and evaluate rig operations
RIIOGD503E	Oversee drilling operations
RIIOGD504D	Manage drilling operations
RIIOGD504E	Manage drilling operations
RIIOGD505E	Manage drilling and well servicing induction and orientation
RIIOGD506D	Manage rig move and camp move
RIIOGD507D	Manage and monitor rig-up and rig-up to spud operations
RIIOGD508D	Manage well completion and abandonment
RIIOGD601D	Manage multiple drilling operations
RIIOGF302E	Operate drilling fluids and mud pits
RIIOGN201F	Carry out rig lease operations
RIIOGN302F	Operate mud pumps
RIIOGN303D	Operate mud systems
RIIOGN303E	Operate, monitor and maintain mud systems
RIIPBE201D	Conduct aeration process
RIIPBE202D	Conduct digestion process
RIIPBE203D	Conduct precipitation operations
RIIPBE204D	Conduct reduction process
RIIPBE301D	Conduct calcinations activities
RIIPBE302D	Conduct bacterial oxidation
RIIPBE303D	Conduct filtering process
RIIPBE304D	Conduct heavy media separation
RIIPBE305D	Conduct high tension separation
RIIPBE306D	Conduct leaching process
RIIPBE308D	Conduct thickening and clarifying process
RIIPBE309D	Conduct wet gravity separation
RIIPBE310D	Conduct flotation process
RIIPBE311D	Conduct magnetic separation
RIIPEO201E	Conduct conveyor operations
RIIPEO202E	Provide deck support for conveyor-car high wall mining operations

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RIIPEO203D	Conduct stacker operations
RIIPEO204D	Conduct shore side mooring operations
RIIPEO205D	Conduct ship loading operations
RIIPEO206D	Lay and recover cables and hoses
RIIPEO207E	Carry out conveyor system shift
RIIPEO208E	Extend, retract and maintain conveyor componentry
RIIPEO301E	Conduct conveyor-car high wall mining operations
RIIPEO302E	Operate and monitor ore car dumpers
RIIPGP201D	Conduct pump operations
RIIPGP202D	Handle reagents
RIIPGP203D	Operate compressors
RIIPGP301D	Conduct drying activities
RIIPGP302D	Monitor and operate auxiliary plant and equipment
RIIPHA201D	Operate raw material feed systems
RIIPHA301D	Conduct milling/grinding
RIIPHA302D	Operate and monitor filter processes
RIIPRE301D	Conduct electrowinning/electro-refining operations
RIIPRE302D	Conduct elution processes
RIIPRE303D	Conduct gold room operations
RIIPRM501E	Implement, monitor, rectify and report on contracts
RIIPRO201D	Conduct crushing operations
RIIPRO202D	Conduct screening and conveying operations
RIIPRO203D	Operate programmable logic control systems
RIIPRO204D	Bulk package and store product
RIIPRO205D	Conduct blending plant operations
RIIPRO301D	Conduct crushing and screening plant operations
RIIPRO302D	Perform process control room operations
RIIPRO303D	Conduct sand wash plant operations
RIIPRO401D	Supervise processing operations
RIIPRO402D	Supervise recycled materials operations
RIIPRO501D	Implement site processing plant operations
RIIPRO502D	Develop, implement and maintain process control systems
RIIPSM302D	Cast ingots
RIIPSM304D	Operate furnaces
RIIQUA201D	Maintain and monitor site quality standards
RIIQUA201E	Maintain and monitor site quality standards
RIIQUA401E	Apply a quality management system on site
RIIQUA501E	Implement, monitor and develop quality management plans
RIIQUA601D	Establish and maintain a quality system
RIIQUA601E	Establish and maintain a quality system
RIIRAI401D	Apply and monitor mine services and infrastructure systems
RIIRAI402D	Apply and monitor site plant and resource management plan
RIIRAI501D	Implement mine transport systems and production equipment
RIIRAI502D	Develop and implement site plant and resource management plan
RIIRAI503D	Implement site services and infrastructure systems
RIIRAI504D	Select and install surface plant and equipment

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RIIRAI505D	Implement the surface mine mechanical plant management plan
RIIRAI506D	Implement, monitor, rectify and report on inventory control system
RIIRAI507D	Implement the underground coal mine mechanical plant management plan
RIIRAI508E	Implement mine services systems
RIIRAI509D	Implement mine fixed plant and infrastructure systems
RIIRAI510D	Implement, monitor, rectify and report on interfaces between electrical and mechanical componentry
RIIRAI601D	Establish and maintain the site infrastructure and fixed plant systems
RIIRAI602D	Establish and maintain mine mechanical plant, services and infrastructure systems
RIIRAI603E	Establish and maintain mine transport systems and production equipment
RIIRAI604E	Establish and maintain mine services and infrastructure systems
RIIRAI605D	Establish and maintain an underground mine mechanical plant management system
RIIRAI607D	Establish quarry operations
RIIRAI608D	Establish quarry development
RIIRAI609D	Establish and maintain electrical installations, reticulation and protection system
RIIRAI610D	Establish & maintain mechanical standard/engineering practices for transport/ production equiptment
RIIRAI611D	Establish and maintain a surface mine mechanical plant management system
RIIRAI612D	Establish and maintain underground product haulage and transport systems
RIIRIS201D	Conduct local risk control
RIIRIS201E	Conduct local risk control
RIIRIS202D	Respond to site based spills
RIIRIS202E	Respond to site based spills
RIIRIS301D	Apply risk management processes
RIIRIS301E	Apply risk management processes
RIIRIS401E	Apply site risk management system
RIIRIS402D	Carry out the risk management process
RIIRIS402E	Carry out the risk management process
RIIRIS403D	Manage and coordinate spill response
RIIRIS403E	Manage and coordinate spill response
RIIRIS501E	Implement and maintain management systems to control risk
RIIRIS601D	Establish and maintain the risk management system
RIIRIS601E	Establish and maintain risk management systems
RIIRTM201E	Position, set-up and operate variable message signs
RIIRTM202E	Position, set-up and operate portable traffic signals
RIIRTM203E	Work as a safety observer/spotter
RIIRTM301E	Operate truck or trailer mounted attenuators
RIISAM201D	Handle resources and infrastructure materials and safely dispose of nontoxic materials
RIISAM201E	Handle resources and infrastructure materials and safely dispose of nontoxic materials
RIISAM202E	Isolate and access plant
RIISAM203D	Use hand and power tools
RIISAM203E	Use hand and power tools
RIISAM204D	Operate small plant and equipment
RIISAM204E	Operate small plant and equipment
RIISAM205D	Cut, weld and bend materials
RIISAM205E	Cut, weld and bend materials
RIISAM207E	Apply operational maintenance skills
RIISAM208E	Perform plant operational maintenance

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RIISAM209E	Carry out operational maintenance
RIISAM212E	Service mine plant and equipment
RIISAM213E	Position and set up mobile lighting
RIISAM215E	Carry out drilling industry operational maintenance
RIISAM301F	Test operational functions of vehicles and equipment
RIISAM303E	Shutdown dredge for operator maintenance
RIISAM304E	Install, commission and maintain major conveyor equipment and systems
RIISAM306E	Service and maintain conveyors, feeders and hoppers
RIISAM307E	Service and maintain crushers
RIISAM308E	Service and maintain screens
RIISAM309E	Service and maintain pumps
RIISAM315A	Manage tyre, wheel and rim assembly applications
RIISAM401E	Apply site plant, equipment and infrastructure maintenance management plans
RIISAM403E	Commission/recommission plant
RIISAM404	Monitor oil and gas equipment maintenance
RIISAM501E	Implement and maintain the site plant, equipment and infrastructure maintenance plans
RIISAM502E	Manage general drilling equipment maintenance
RIISAM601E	Establish and maintain plant, equipment and infrastructure maintenance systems
RIISDM501D	Conduct mine surveying operations
RIISRM301E	Blend stockpile materials
RIISRM302E	Conduct stockpile reclaiming operations
RIISRM303E	Move and position materials to form stockpiles
RIISRM304E	Maintain stockpiles
RIISRM401D	Apply and monitor the site stockpile management plan
RIISRM501E	Implement stockpile management plans
RIISRM502E	Design stockpile formations and reclaiming systems
RIISRM601D	Establish and maintain the stockpile management system
RIISRM601E	Establish and maintain stockpile management systems
RIISTD201D	Read and interpret maps
RIISTD201E	Read and interpret maps
RIISTD202D	Collect routine site samples
RIISTD202E	Collect routine site samples
RIISTD301D	Take environmental samples and measurements
RIISTD302E	Process data and maintain accurate records
RIISTD401	Monitor quarry laboratory operations and the quality of results
RIIUMM201D	Install ground support
RIIUMM202D	Install and maintain vent
RIIUMM203D	Prepare and perform manual scaling operations
RIIUMM303D	Conduct hand held mining
RIIUMM304D	Construct and maintain underground roads
RIIUMM305D	Install and remove a secondary fan
RIIUMM306D	Conduct mechanical scaling
RIIUMM307D	Maintain underground stockpiles
RIIUND201D	Install, maintain and recover reticulation systems
RIIUND202E	Operate from elevated work platform underground
RIIUND204D	Refuel vehicles/machines underground

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RIIUND205E	Respond to a workforce incident
RIIUND206D	Install hand held underground ground support
RIIUND207E	Conduct underground lifting operations
RIIUND208E	Conduct skip operations
RIIUND209E	Operate automated winder
RIIUND301E	Operate manual winder
RIIUND302E	Conduct cage operations
RIIUND303E	Operate winder for shaft sinking
RIIUND305D	Recover underground equipment
RIIUND307D	Assessment Requirements for RIIUND307D Conduct tele-remote operations
RIIUND309D	Conduct mechanical underground ground support drilling and installation
RIIUND310E	Apply shotcrete underground
RIIUND401E	Apply and monitor the ventilation management plan
RIIUND501E	Implement the ventilation management plan
RIIUND601E	Establish and maintain ventilation management systems
RIIUND602D	Establish and maintain mine services systems
RIIUND603D	Manage, operate and maintain the mine ventilation system
RIIVEH201E	Operate a light vehicle
RIIVEH202F	Operate a medium vehicle
RIIVEH203E	Operate a light vehicle underground
RIIVEH302E	Operate multi-combination vehicle
RIIVEH303F	Drive heavy combination vehicle
RIIVEH304E	Conduct tip truck operations
RIIVEH305F	Operate and maintain a four wheel drive vehicle
RIIVEH306E	Operate a mine service vehicle
RIIVEH307F	Operate a heavy rigid vehicle
RIIWBP201E	Treat and dispose of rejects and tailings
RIIWBP202E	Distribute tailings
RIIWBP203E	Monitor tailings dam environments
RIIWBP401D	Apply and monitor site waste and by-products management plan
RIIWBP501D	Implement site waste and by-product management plan
RIIWBP502D	Plan and monitor recycled material operations
RIIWHS201D	Work safely and follow WHS policies and procedures
RIIWHS201E	Work safely and follow WHS policies and procedures
RIIWHS202D	Enter and work in confined spaces
RIIWHS202E	Enter and work in confined spaces
RIIWHS204E	Work safely at heights
RIIWHS205E	Control traffic with stop-slow bat
RIIWHS206	Control traffic with portable traffic control devices and temporary traffic signs
RIIWHS207	Control traffic on high volume roads
RIIWHS208	Operate within an autonomous workplace functional safety system
RIIWHS301D	Conduct safety and health investigations
RIIWHS301E	Conduct safety and health investigations
RIIWHS302D	Implement traffic management plan
RIIWHS302E	Implement traffic management plans
RIIWHS303	Position, set up and program portable traffic control devices

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RIIWHS304	Implement traffic management plans on high volume roads
RIIWHS305	Implement traffic management plans on motorways and freeways
RIIWHS401E	Supervise work in confined spaces
RIIWHS402E	Examine and maintain mine safety
RIIWHS403D	Apply the mine work health and safety management plan
RIIWHS403E	Apply the work health and safety management system
RIIWHS404D	Implement and monitor health and hygiene management systems
RIIWHS404E	Implement and monitor health and hygiene management systems
RIIWHS405D	Maintain standard procedures and safe working practices
RIIWHS601D	Establish and maintain the WHS management system
RIIWHS601E	Establish and maintain the WHS management system
RIIWMG201D	Conduct dewatering activities in surface operations
RIIWMG202D	Conduct dewatering operations in underground mining operations
RIIWMG203D	Drain and dewater civil construction site
RIIWMG203E	Drain and dewater civil construction sites
RIIWMG301E	Control construction site water tables
RIIWMG302D	Reclaim and treat water
RIIWMG401D	Apply and monitor the site water management plan
RIIWMG501D	Implement the site water management plan
RIIWMG601D	Establish and maintain water management system
RIIWSV203E	Prepare equipment for well servicing air operations
RIIWSV301F	Conduct and maintain well servicing derrick operations
RIIWSV302E	Trip production string for well servicing operations
RIIWSV303E	Operate fluid systems
RIIWSV304D	Prepare well servicing fishing operations
RIIWSV304E	Prepare well servicing fishing operations
RIIWSV401E	Rig up and rig down for well servicing operations
RIIWSV402D	Conduct well servicing milling operations
RIIWSV403E	Participate in well servicing nippling-up and pressure test
RIIWSV404D	Conduct fishing operations
RIIWSV501D	Manage well servicing induction and orientation
RIIWSV502E	Manage well completion and rig release
RIIWSV503E	Manage and monitor rig-up operations

8. *Mapping to previous version of the training package*

Mapping information can be useful for delivery and assessment as it:

- explains the extent of changes to assist users in identifying how previous training materials can be adapted
- shows whether the outcomes of the previous and current versions are equivalent or not equivalent
- shows newly created components as well as any components deleted from the training package.

Key to mapping tables below		
E	Equivalent	Where the workplace outcomes of the superseded and superseding training package components are equivalent.
NE	Not equivalent	Where a training package component is superseded, and the workplace outcome of the component has changed.

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NC	Newly created	Where the training package component has been created to address an emerging skill or task required by industry.
D	Deleted	Where a training package component is deleted as the skill or task is no longer required by industry.

Qualification mapping

The table below maps those *RII Resources and Infrastructure Industry Training Package* qualifications affected by the update from Version 8.0 to Version 9.0.

Qualification mapping information: Version 8.0 to Version 9.0			
Code and title RII Version 8.0	**Code and title RII Version 9.0**	**Comments**	**Equivalence to previous**
N/A	RII21222 Certificate II in Autonomous Workplace Operations	Newly created qualification.	NC
RII41319 Certificate IV in Emergency Response Coordination	RII41319 Certificate IV in Emergency Response Coordination	Qualification updated to replace superseded unit with current version in the elective bank.	E
N/A	RII41522 Certificate IV in Autonomous Control and Remote Operations	Newly created qualification.	NC

No further qualifications were created, deleted or changed in the update from Version 8.0 to Version 9.0. Those qualifications not included in the mapping table above are listed in the Qualifications in RII Resources and Infrastructure Industry Training Package table.

Skill set mapping

The table below maps those *RII Resources and Infrastructure Industry Training Package* skill sets affected by the update from Version 8.0 to Version 9.0.

Code and title RII Version 8.0	Code and title RII Version 9.0	Comments	Equivalence to previous
RIISS00058 Traffic Controller Skills Set for Urban Streets and Low Volume Rural Roads	RIISS00058 Traffic Controller Skills Set for Urban Streets and Low Volume Rural Roads	Minor update of skill set. Amendments made to wording of performance criteria to better reflect intent.	E
RIISS00059 Traffic Controller Skill Set for High Volume Roads	RIISS00059 Traffic Controller Skill Set for High Volume Roads	Minor update of skill set. Amendments made to wording of performance criteria to better reflect intent.	E
RIISS00060 Traffic Management Implementer Skill Set for Urban Streets and Low Volume Rural Roads	RIISS00060 Traffic Management Implementer Skill Set for Urban Streets and Low Volume Rural Roads	Minor update of skill set. Amendments made to wording of performance criteria to better reflect intent.	E
RIISS00061 Traffic Management Implementer Skill Set for High Volume Roads	RIISS00061 Traffic Management Implementer Skill Set for High Volume Roads	Minor update of skill set. Amendments made to wording of performance criteria to better reflect intent.	E
RIISS00062 Traffic Management Implementer Skill Set for Motorways and Freeways	RIISS00062 Traffic Management Implementer Skill Set for Motorways and Freeways	Minor update of skill set. Amendments made to wording of performance criteria to better reflect intent.	E
RIISS00063 Traffic Management Designer Skill Set for Urban Streets and Low Volume Rural Roads	RIISS00063 Traffic Management Designer Skill Set for Urban Streets and Low Volume Rural Roads	Minor update of skill set. Amendments made to wording of performance criteria to better reflect intent.	E
RIISS00064 Traffic Management Designer Skill Set for High Volume Roads	RIISS00064 Traffic Management Designer Skill Set for High Volume Roads	Minor update of skill set. Amendments made to wording of performance criteria to better reflect intent.	E

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RIISS00065 Traffic Management Designer Skill Set for Motorways and Freeways	RIISS00065 Traffic Management Designer Skill Set for Motorways and Freeways	Minor update of skill set. Amendments made to wording of performance criteria to better reflect intent.	E
N/A	RIISS00075 Work with Data in an Autonomous Workplace Skill Set	Newly created skill set.	NC

No further skill sets were created, deleted or changed in the update from Version 8.0 to Version 9.0. Those skill sets not included in the mapping table above are listed in the Skill sets in RII Resources and Infrastructure Industry Training Package table.

Unit mapping

The table below maps those *RII Resources and Infrastructure Industry Training Package* units of competency affected by the update from Version 8.0 to Version 9.0.

Unit mapping information: Version 8.0 to Version 9.0			
Code and title RII Version 8.0	**Code and title RII Version 9.0**	**Comments**	**Equivalence to previous**
N/A	RIIARO201 Work in autonomous operations	Newly created unit.	NC
N/A	RIIARO202 Use data and technology to complete work in autonomous operations	Newly created unit.	NC
RIIARO301 Work safely in autonomous environments	RIIARO301 Work safely in autonomous environments	Minor update of unit of competency. Amendments made to wording of elements and performance criteria to better reflect intent.	E
RIIARO303 Operate equipment in autonomous environments	RIIARO303 Operate equipment in autonomous environments	Minor update of unit of competency. Amendments made to wording of elements and performance criteria to better reflect intent.	E
RIIARO304 Coordinate and interact with autonomous systems	RIIARO304 Coordinate and interact with autonomous systems	Minor update of unit of competency. Amendments made to wording of elements and performance criteria to better reflect intent.	E
RIIARO306 Respond to obstructions to autonomous operations	RIIARO306 Respond to obstructions to autonomous operations	Minor update of unit of competency. Amendments made to wording of elements and performance criteria to better reflect intent.	E
RIIARO307 Activate and deactivate autonomous systems	RIIARO307 Activate and deactivate autonomous systems	Minor update of unit of competency. Amendments made to wording of elements and performance criteria to better reflect intent.	E
N/A	RIIARO308 Use data in an autonomous workplace	Newly created unit.	NC
RIIARO401 Supervise autonomous operations	RIIARO401 Supervise autonomous operations	Minor update of unit of competency. Amendments made to wording of elements and performance criteria to better reflect intent.	E
N/A	RIIARO402 Optimise performance of complex control systems in autonomous operations	Newly created unit.	NC
N/A	RIIARO403 Maintain continuity of operational control	Newly created unit.	NC
N/A	RIIARO404 Improve outcomes within a distributed value chain network	Newly created unit.	NC
N/A	RIIARO405 Optimise automated drilling operations	Newly created unit.	NC
N/A	RIIARO406 Optimise automated haulage operations	Newly created unit.	NC

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N/A	RIIARO407 Optimise automated fixed plant operations	Newly created unit.	NC
N/A	RIIARO408 Optimise automated wet processing plant operations	Newly created unit.	NC
N/A	RIIARO409 Optimise automated in-loading and out-loading operations	Newly created unit.	NC
N/A	RIIARO410 Control safety risks in autonomous operations	Newly created unit.	NC
N/A	RIIARO411 Manage situational awareness	Newly created unit.	NC
N/A	RIIBEF403 Collaborate to achieve quality outcomes	Newly created unit.	NC
N/A	RIIBEF404 Undertake informed and dynamic decision making	Newly created unit.	NC
N/A	RIIBEF405 Optimise personal performance	Newly created unit.	NC
RIICBS302E Conduct paver screeding operations	RIICBS302E Conduct paver screeding operations	Minor update of unit of competency. Amendments made to wording of performance criteria to better reflect intent.	E
N/A	RIICOM202 Contribute to effectiveness of communication and teamwork in an autonomous workplace	Newly created unit.	NC
N/A	RIICOM401 Communicate effectively in a remote work environment	Newly created unit.	NC
RIILAT402E Provide leadership in the supervision of diverse work teams	RIILAT402E Provide leadership in the supervision of diverse work teams	Minor update of unit of competency. Amendments made to wording of performance criteria to better reflect intent.	E
N/A	RIIWHS208 Operate within an autonomous workplace functional safety system	Newly created unit.	NC

No further units of competency were created, deleted or changed in the update from Version 8.0 to Version 9.0. Those units of competency not included in the above mapping table are listed in the *Units in RII Resources and Infrastructure Industry Training Package* table.

The 'Compare Content Tool' available on the *training.gov.au* (TGA) website allows users to access more detailed information on changes between training product versions. To watch a video on how to use this tool visit https://www.youtube.com/watch?v=EjhNe3Bu0H4.

9. List of imported and prerequisite units in RII Resources and Infrastructure Industry Training Package

Imported units in the training package

A range of units of competency has been imported into the *RII Resources and Infrastructure Industry Training Package* to provide greater flexibility, choice and transferability of skills within the industry.

Imported units of competency in RII Training Package V9.0 qualifications		
Code	**Title**	**Host Training Package**
AHCNAR201	Carry out natural area restoration works	AHC Agriculture, Horticulture and Conservation and Land Management
AHCNAR303	Implement revegetation works	AHC Agriculture, Horticulture and Conservation and Land Management

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AHCSAW201	Conduct erosion and sediment control activities	AHC Agriculture, Horticulture and Conservation and Land Management
AHCSAW301	Construct conservation earthworks	AHC Agriculture, Horticulture and Conservation and Land Management
AURKTJ011	Remove, inspect and fit earthmoving and off-the-road tyres	AUR Automotive Retail, Service and Repair
AURKTJ012	Remove, inspect and fit earthmoving and off-the-road wheel and rim assemblies	AUR Automotive Retail, Service and Repair
BSBCRT411	Apply critical thinking to work practices	BSB Business Services
BSBCUS401	Coordinate implementation of customer service strategies	BSB Business Services
BSBCUS501	Manage quality customer service	BSB Business Services
BSBDIV301	Work effectively with diversity	BSB Business Services
BSBESB401	Research and develop business plans	BSB Business Services
BSBESB403	Plan finances for new business ventures	BSB Business Services
BSBESB404	Market new business ventures	BSB Business Services
BSBESB406	Establish operational strategies and procedures for new business ventures	BSB Business Services
BSBFIM501	Manage budgets and financial plans	BSB Business Services
BSBFIN401	Report on financial activity	BSB Business Services
BSBFIN501	Manage budgets and financial plans	BSB Business Services
BSBFLM303	Contribute to effective workplace relationships	BSB Business Services
BSBHRM413	Support the learning and development of teams and individuals	BSB Business Services
BSBHRM522	Manage employee and industrial relations	BSB Business Services
BSBHRM523	Coordinate the learning and development of teams and individuals	BSB Business Services
BSBHRM525	Manage recruitment and onboarding	BSB Business Services
BSBINM401	Implement workplace information system	BSB Business Services
BSBINM501	Manage an information or knowledge management system	BSB Business Services
BSBINM601	Manage knowledge and information	BSB Business Services
BSBINN301	Promote innovation in a team environment	BSB Business Services
BSBINN502	Build and sustain an innovative work environment	BSB Business Services
BSBINS309	Maintain business records	BSB Business Services
BSBINS402	Coordinate workplace information systems	BSB Business Services
BSBINS501	Implement information and knowledge management systems	BSB Business Services
BSBINS601	Manage knowledge and information	BSB Business Services
BSBITU111	Operate a personal digital device	BSB Business Services
BSBLDR403	Lead team effectiveness	BSB Business Services
BSBLDR411	Demonstrate leadership in the workplace	BSB Business Services
BSBLDR413	Lead effective workplace relationships	BSB Business Services
BSBLDR602	Provide leadership across the organisation	BSB Business Services
BSBLED401	Develop teams and individuals	BSB Business Services
BSBLED501	Develop a workplace learning environment	BSB Business Services
BSBMGT401	Show leadership in the workplace	BSB Business Services
BSBMGT402	Implement operational plan	BSB Business Services
BSBMGT403	Implement continuous improvement	BSB Business Services
BSBMGT516	Facilitate continuous improvement	BSB Business Services
BSBMGT517	Manage operational plan	BSB Business Services
BSBMGT605	Provide leadership across the organisation	BSB Business Services
BSBMGT608	Manage innovation and continuous improvement	BSB Business Services
BSBMGT616	Develop and implement strategic plans	BSB Business Services
BSBMGT617	Develop and implement a business plan	BSB Business Services

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BSBOPS304	Deliver and monitor a service to customers	BSB Business Services
BSBOPS402	Coordinate business operational plans	BSB Business Services
BSBOPS404	Implement customer service strategies	BSB Business Services
BSBOPS502	Manage business operational plans	BSB Business Services
BSBOPS505	Manage organisational customer service	BSB Business Services
BSBOPS601	Develop and implement business plans	BSB Business Services
BSBPEF201	Support personal wellbeing in the workplace	BSB Business Services
BSBPEF401	Manage personal health and wellbeing	BSB Business Services
BSBPEF402	Develop personal work priorities	BSB Business Services
BSBPEF501	Manage personal and professional development	BSB Business Services
BSBPMG424	Apply project human resources management approaches	BSB Business Services
BSBPMG427	Apply project procurement procedures	BSB Business Services
BSBPMG430	Undertake project work	BSB Business Services
BSBPMG530	Manage project scope	BSB Business Services
BSBPMG531	Manage project time	BSB Business Services
BSBPMG532	Manage project quality	BSB Business Services
BSBPMG533	Manage project cost	BSB Business Services
BSBPMG534	Manage project human resources	BSB Business Services
BSBPMG535	Manage project information and communication	BSB Business Services
BSBPMG536	Manage project risk	BSB Business Services
BSBPMG537	Manage project procurement	BSB Business Services
BSBPMG540	Manage project integration	BSB Business Services
BSBPMG605	Direct quality management of a project program	BSB Business Services
BSBPMG609	Direct procurement and contracting for a project program	BSB Business Services
BSBPMG632	Manage program risk	BSB Business Services
BSBPUR301	Purchase goods and services	BSB Business Services
BSBRKG403	Set up a business or records system for a small business	BSB Business Services
BSBSMB402	Plan small business finances	BSB Business Services
BSBSMB403	Market the small business	BSB Business Services
BSBSMB404	Undertake small business planning	BSB Business Services
BSBSMB420	Evaluate and develop small business operations	BSB Business Services
BSBSTR401	Promote innovation in team environments	BSB Business Services
BSBSTR402	Implement continuous improvement	BSB Business Services
BSBSTR501	Establish innovative work environments	BSB Business Services
BSBSTR502	Facilitate continuous improvement	BSB Business Services
BSBSTR601	Manage innovation and continuous improvement	BSB Business Services
BSBSTR602	Develop organisational strategies	BSB Business Services
BSBSUS201	Participate in environmentally sustainable work practices	BSB Business Services
BSBSUS211	Participate in sustainable work practices	BSB Business Services
BSBSUS301	Implement and monitor environmentally sustainable work practices	BSB Business Services
BSBSUS401	Implement and monitor environmentally sustainable work practices	BSB Business Services
BSBSUS411	Implement and monitor environmentally sustainable work practices	BSB Business Services
BSBSUS601	Lead corporate social responsibility	BSB Business Services
BSBTEC101	Operate digital devices	BSB Business Services
BSBTWK201	Work effectively with others	BSB Business Services
BSBTWK301	Use inclusive work practices	BSB Business Services
BSBTWK502	Manage team effectiveness	BSB Business Services
BSBWHS301	Maintain workplace safety	BSB Business Services
BSBWHS401	Implement and monitor WHS policies, procedures and programs to meet legislative requirements	BSB Business Services

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BSBWHS403	Contribute to implementing and maintaining WHS consultation and participation processes	BSB Business Services
BSBWHS411	Implement and monitor WHS policies, procedures and programs	BSB Business Services
BSBWHS413	Contribute to implementation and maintenance of WHS consultation and participation processes	BSB Business Services
BSBWHS501	Ensure a safe workplace	BSB Business Services
BSBWHS521	Ensure a safe workplace for a work area	BSB Business Services
BSBWHS616	Apply safe design principles to control WHS risks	BSB Business Services
BSBWOR203	Work effectively with others	BSB Business Services
BSBWOR404	Develop work priorities	BSB Business Services
BSBWOR501	Manage personal work priorities and professional development	BSB Business Services
BSBWOR502	Lead and manage team effectiveness	BSB Business Services
BSBXBD401	Capture and store big data	BSB Business Services
BSBXBD402	Test big data samples	BSB Business Services
BSBXBD403	Analyse big data	BSB Business Services
BSBXBD404	Use big data for operational decision making	BSB Business Services
BSBXBD405	Develop procedures for managing big data	BSB Business Services
BSBXBD406	Present big data insights	BSB Business Services
BSBXBD407	Protect big data integrity	BSB Business Services
BSBXBD408	Implement and review procedures for managing big data	BSB Business Services
BSBXTW301	Work in a team	BSB Business Services
BSBXTW401	Lead and facilitate a team	BSB Business Services
CPCCCM2007	Use explosive power tools	CPC Construction, Plumbing and Services
CPCCLDG3001A	Licence to perform dogging	CPC Construction, Plumbing and Services
CPCCLRG3001A	Licence to perform rigging basic level	CPC Construction, Plumbing and Services
CPCCLSF2001A	Licence to erect, alter and dismantle scaffolding basic level	CPC Construction, Plumbing and Services
CPCCLSF3001A	Licence to erect, alter and dismantle scaffolding intermediate level	CPC Construction, Plumbing and Services
CPCCSF2004	Place and fix reinforcement materials	CPC Construction, Plumbing and Services
CPCCWHS2001	Apply WHS requirements, policies and procedures in the construction industry	CPC Construction, Plumbing and Services
CPPSIS3015	Collect basic surveying data	CPP Property Services
CPPSIS3016	Provide field support services for surveying and spatial projects	CPP Property Services
CPPSIS5032	Capture new spatial data	CPP Property Services
CPPSIS5035	Obtain and validate spatial data	CPP Property Services
CPPSIS5036	Integrate spatial datasets	CPP Property Services
FBPOPR1010	Carry out manual handling tasks	FBP Food, Beverage and Pharmaceutical
FWPCOT2236	Fall trees manually (basic)	FWP Forest and Wood Products
FWPCOT2239	Trim and cut felled trees	FWP Forest and Wood Products
FWPFGM3212	Fall trees manually (intermediate)	FWP Forest and Wood Products
HLTAID003	Provide first aid	HLT Health
HLTAID006	Provide advanced first aid	HLT Health
HLTAID011	Provide First Aid	HLT Health
ICTCBL334	Install underground enclosures and conduit	ICT Information and Communications Technology
ICTDAT401	Evaluate organisational compliance with data ethics legislation	ICT Information and Communications Technology

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ICTDAT402	Clean and verify data	ICT Information and Communications Technology
ICTDBS407	Monitor physical database implementation	ICT Information and Communications Technology
ICTDBS413	Determine database requirements	ICT Information and Communications Technology
ICTDBS414	Complete database backup and restore	ICT Information and Communications Technology
ICTDBS418	Monitor and administer databases	ICT Information and Communications Technology
ICTICT312	Use advanced features of applications	ICT Information and Communications Technology
LGACOM401A	Administer contracts	LGA Local Government
LGACOM402A	Arrange contracts	LGA Local Government
LGACOM409A	Prepare tender documentation	LGA Local Government
LGACOM410A	Prepare response to tenders	LGA Local Government
LGADMIN417A	Conduct community consultations	LGA Local Government
LGAPLA005	Protect heritage and cultural assets	LGA Local Government
LGAWORK401A	Develop works maintenance schedule	LGA Local Government
LGAWORK402A	Prepare for operational works	LGA Local Government
LGAWORK403A	Manage civil plant and resources	LGA Local Government
LGAWORK501A	Prepare preliminary design for operational works	LGA Local Government
LGAWORK502A	Prepare detailed works project documentation	LGA Local Government
LGAWORK503A	Undertake project investigation	LGA Local Government
MEM23004A	Apply technical mathematics	MEM Manufacturing and Engineering
MEM23007A	Apply calculus to engineering tasks	MEM Manufacturing and Engineering
MEM30005A	Calculate force systems within simple beam structures	MEM Manufacturing and Engineering
MEM30006A	Calculate stresses in simple structures	MEM Manufacturing and Engineering
MEM30012A	Apply mathematical techniques in a manufacturing engineering or related environment	MEM Manufacturing and Engineering
MEM30031A	Operate computer-aided design (CAD) system to produce basic drawing elements	MEM Manufacturing and Engineering
MEM30032A	Produce basic engineering drawings	MEM Manufacturing and Engineering
MEM30033A	Use computer-aided design (CAD) to create and display 3-D models	MEM Manufacturing and Engineering
MSL913004	Plan and conduct laboratory/field work	MSL Laboratory Operations
MSL924003	Process and interpret data	MSL Laboratory Operations
MSL925004	Analyse data and report results	MSL Laboratory Operations
MSL943003	Work safely with instruments that emit ionising radiation	MSL Laboratory Operations
MSL952001	Collect routine site samples	MSL Laboratory Operations
MSL953003	Receive and prepare samples for testing	MSL Laboratory Operations
MSL954004	Obtain representative samples in accordance with sampling plan	MSL Laboratory Operations
MSL973013	Perform basic tests	MSL Laboratory Operations
MSL973014	Prepare working solutions	MSL Laboratory Operations
MSL973018	Prepare trial batches for evaluation	MSL Laboratory Operations
MSL973021	Conduct field-based acceptance tests for construction materials	MSL Laboratory Operations
MSL973022	Conduct laboratory-based acceptance tests for construction materials	MSL Laboratory Operations
MSL974016	Perform physical and mechanical tests	MSL Laboratory Operations
MSL974017	Prepare, standardise and use solutions	MSL Laboratory Operations

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MSL974019	Perform chemical tests and procedures	MSL Laboratory Operations
MSL974026	Perform tests to determine the properties of construction materials	MSL Laboratory Operations
MSL975031	Supervise sampling, inspections and testing at construction sites	MSL Laboratory Operations
MSL975044	Perform complex tests to measure engineering properties of materials	MSL Laboratory Operations
MSMENV172	Identify and minimise environmental hazards	MSM Manufacturing
MSMPER200	Work in accordance with an issued permit	MSM Manufacturing
MSMPER300	Issue work permits	MSM Manufacturing
MSMSUP101	Clean workplace or equipment	MSM Manufacturing
MSMWHS201	Conduct hazard analysis	MSM Manufacturing
MSMWHS217	Gas test atmospheres	MSM Manufacturing
NWPNET016	Inspect sewer or stormwater line	NWP National Water
NWPNET017	Supervise and report on conduit inspections	NWP National Water
NWPNET037	Inspect sewer or stormwater assets	NWP National Water
PMAOMIR320	Manage incident response information	PMA Chemical, Hydrocarbons and Refining
PMAOMIR418	Coordinate incident response	PMA Chemical, Hydrocarbons and Refining
PMAOMIR444	Develop incident containment tactics	PMA Chemical, Hydrocarbons and Refining
PMAOPS202	Operate fluid mixing equipment	PMA Chemical, Hydrocarbons and Refining
PMAOPS205	Operate heat exchangers	PMA Chemical, Hydrocarbons and Refining
PMAOPS208	Operate chemical separation equipment	PMA Chemical, Hydrocarbons and Refining
PMAOPS223	Operate and monitor valve systems	PMA Chemical, Hydrocarbons and Refining
PMAOPS230	Monitor, operate and maintain pipeline stations and equipment	PMA Chemical, Hydrocarbons and Refining
PMAOPS246	Operate separation equipment	PMA Chemical, Hydrocarbons and Refining
PMAOPS247	Operate powered separation equipment	PMA Chemical, Hydrocarbons and Refining
PMAOPS343	Transfer bulk fluids into/out of storage facility	PMA Chemical, Hydrocarbons and Refining
PMAOPS338	Communicate and monitor pipeline activities	PMA Chemical, Hydrocarbons and Refining
PMAOPS342	Conduct pipeline pigging	PMA Chemical, Hydrocarbons and Refining
PMAOPS343	Transfer bulk fluids into/out of storage facility	PMA Chemical, Hydrocarbons and Refining
PMAOPS411	Manage plant shutdown and restart	PMA Chemical, Hydrocarbons and Refining
PMASUP236	Operate vehicles in the field	PMA Chemical, Hydrocarbons and Refining
PMASUP441	Decommission plant	PMA Chemical, Hydrocarbons and Refining
PMAWHS211	Prepare equipment for emergency response	PMA Chemical, Hydrocarbons and Refining
PMBWELD301	Butt weld polyethylene plastic pipelines	PBM Plastics, Rubber and Cablemaking
PMBWELD302	Electrofusion weld polyethylene pipelines	PBM Plastics, Rubber and Cablemaking
PPMSTM320	Manage steam boiler start up	PPM Pulp & Paper Manufacturing Industry Training Package
PPMSTM330	Shut down and bank steam boiler	PPM Pulp & Paper Manufacturing Industry Training Package

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PSPPCM023	Manage strategic contracts	PSP Public Sector Training Package
PUAAMS007	Coordinate search and rescue operations	PUA Public Safety
PUAEME001	Provide emergency care	PUA Public Safety
PUAEME002	Manage injuries at emergency incident	PUA Public Safety
PUAEMR011	Manage and evaluate emergency management exercises	PUA Public Safety
PUAEQU001	Prepare, maintain and test response equipment	PUA Public Safety
PUAFIR207	Operate breathing apparatus open circuit	PUA Public Safety
PUAFIR210	Prevent injury	PUA Public Safety
PUAFIR306	Identify, detect and monitor hazardous materials at an incident	PUA Public Safety
PUAFIR324	Render hazardous materials incidents safe	PUA Public Safety
PUALAW001	Protect and preserve incident scene	PUA Public Safety
PUAMAN002	Administer allocation of resources	PUA Public Safety
PUAMAN008	Manage physical resources	PUA Public Safety
PUAOPE013	Operate communications systems and equipment	PUA Public Safety
PUAOPE015	Conduct briefings and debriefings	PUA Public Safety
PUASAR022	Participate in a rescue operation	PUA Public Safety
PUASAR024	Undertake road crash rescue	PUA Public Safety
PUASAR025	Undertake confined space rescue	PUA Public Safety
PUASAR027	Undertake land search rescue	PUA Public Safety
PUASAR032	Undertake vertical rescue	PUA Public Safety
TAEASS301	Contribute to assessment	TAE Training and Education
TAEASS401	Plan assessment activities and processes	TAE Training and Education
TAEASS402	Assess competence	TAE Training and Education
TAEASS403	Participate in assessment validation	TAE Training and Education
TAEDEL301	Provide work skill instruction	TAE Training and Education
TAEDEL301A	Provide work skill instruction	TAE Training and Education
TLIA0003	Complete and check import/export documentation	TLI Transport and Logistics
TLIC3004	Drive heavy rigid vehicle	TLI Transport and Logistics
TLID2022	Conduct weighbridge operations	TLI Transport and Logistics
TLID3011	Conduct specialised forklift operations	TLI Transport and Logistics
TLIE2007	Use communications systems	TLI Transport and Logistics
TLIE3004	Prepare workplace documents	TLI Transport and Logistics
TLIL1001	Complete workplace orientation/induction procedures	TLI Transport and Logistics
TLIL4059	Implement asset management systems	TLI Transport and Logistics
TLILIC0002	Licence to operate a vehicle loading crane (capacity 10 metre tonnes and above)	TLI Transport and Logistics
TLILIC0003	Licence to operate a forklift truck	TLI Transport and Logistics
TLILIC0005	Licence to operate a boom-type elevating work platform (boom length 11 metres or more)	TLI Transport and Logistics
TLILIC0006	Licence to operate a bridge and gantry crane	TLI Transport and Logistics
TLILIC0008	Licence to operate a non-slewing mobile crane (greater than 3 tonnes capacity)	TLI Transport and Logistics
TLILIC0010	Licence to operate a slewing mobile crane (up to 20 tonnes)	TLI Transport and Logistics
TLILIC2016	Licence to drive a heavy rigid vehicle	TLI Transport and Logistics
TLILIC3017	Licence to drive a heavy combination vehicle	TLI Transport and Logistics
TLILIC3018	Licence to drive a multi-combination vehicle	TLI Transport and Logistics
TLIP5036	Manage assets	TLI Transport and Logistics
TLIW5002	Manage rail assets and interfaces	TLI Transport and Logistics
UEPOPS316	Operate and monitor boiler steam/water cycle	UEP Electricity Supply

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Prerequisite units in RII Resources and Infrastructure Industry Training Package

Unit code and title	Prerequisite unit code and title
CPCCCM2007 Use explosive power tools	CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry
CPCCLRG3001A Licence to perform rigging basic level	CPCCLDG3001A Licence to perform dogging
CPCCLSF3001A Licence to erect, alter and dismantle scaffolding intermediate level	CPCCLSF2001A Licence to erect, alter and dismantle scaffolding basic level
CPCCSF2004 Place and fix reinforcement materials	CPCCWHS2001 Apply OHS requirements, policies and procedures in the construction industry
MEM09002 Interpret technical drawing	MEM12023 Perform engineering measurements MEM12024 Perform computations MEM13015 Work safely and effectively in manufacturing and engineering MEM16006 Organise and communicate information
MEM09011 Apply basic engineering design concepts	MEM09002 Interpret technical drawing MEM12023 Perform engineering measurements MEM12024 Perform computations MEM13015 Work safely and effectively in manufacturing and engineering MEM16006 Organise and communicate information
MEM12023 Perform engineering measurements	MEM13015 Work safely and effectively in manufacturing and engineering MEM16006 Organise and communicate information
MEM12024 Perform computations	MEM13015 Work safely and effectively in manufacturing and engineering MEM16006 Organise and communicate information
MEM16006 Organise and communicate information	MEM13015 Work safely and effectively in manufacturing and engineering
MEM23007A Apply calculus to engineering tasks	MEM23004A Apply technical mathematics
MEM30005A Calculate force systems within simple beam structures	MEM30012A Apply mathematical techniques in a manufacturing engineering or related environment
MEM30006A Calculate stresses in simple structures	MEM30012A Apply mathematical techniques in a manufacturing engineering or related environment
MEM30033A Use computer-aided design (CAD) to create and display 3-D models	MEM30031A Operate computer-aided design (CAD) system to produce basic drawing elements
MSMPER300 Issue work permits	MSMWHS201 Conduct hazard analysis
MSL925004 Analyse data and report results	MSL924003 Process and interpret data
MSL974026 Perform tests to determine the properties of construction materials	MSL973022 Conduct laboratory-based acceptance tests for construction materials
MSL975031 Supervise sampling, inspections and testing at construction sites	MSL954004 Obtain representative samples in accordance with sampling plan MSL973021 Conduct field -based acceptance tests for construction materials
MSL975044 Perform complex tests to measure engineering properties of materials	MSL973022 Conduct laboratory -based acceptance tests for construction materials MSL974026 Perform tests to determine the properties of construction materials
MSMPER300 Issue work permits	MSMWHS201 Conduct hazard analysis
PUAEME002 Manage injuries at emergency incident	PUAEME001 Provide emergency care
PUAFIR207 Operate breathing apparatus open circuit	PUAFIR210 Prevent injury
PUAFIR306 Identify, detect and monitor hazardous materials at an incident	PUAFIR207 Operate breathing apparatus open circuit
PUAFIR324 Render hazardous materials incidents safe	PUAFIR207 Operate breathing apparatus open circuit
PUAMAN008 Manage physical resources	PUAMAN002 Administer allocation of resources

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PUASAR022 Participate in a rescue operation	HLTAID003 Provide first aid
PUASAR024 Undertake road crash rescue	HLTAID003 Provide first aid PUASAR022 Participate in a rescue operation
RIICBM302E Install pre-cast girders	CPCCLDG3001A Licence to perform dogging
RIICBM305E Install pre-cast concrete bridge decks	CPCCLDG3001A Licence to perform dogging
RIICTC402 Supervise tunnel boring machine operations	RIICTC306 Conduct tunnel boring machine operations
RIICWD538 Prepare traffic management plans and traffic guidance schemes for high volume roads	RIICWD503E Prepare traffic management plans and traffic guidance schemes
RIICWD539 Prepare traffic management plans and traffic guidance schemes for motorways and freeways	RIICWD503E Prepare traffic management plans and traffic guidance schemes
RIIERR305E Control underground fires	RIIERR303E Operate in a self-contained regenerative oxygen breathing apparatus PUAFIR207 Operate breathing apparatus open circuit
RIIERR307E Extricate casualties from underground incidents	RIIERR303E Operate in a self-contained regenerative oxygen breathing apparatus PUAFIR207B Operate breathing apparatus open circuit
RIIERR308E Extricate and transport people involved in incidents	RIIERR303E Operate in a self-contained regenerative oxygen breathing apparatus PUAFIR207B Operate breathing apparatus open circuit
RIINHB223 Prepare, run and cement casing	RIIOGD204F Perform rig floor operations
RIIWHS207 Control traffic on multilane roads and signalised intersections	RIIWHS205E Control traffic with stop-slow bat
RIIWHS304 Implement traffic management plans on multilane roads and signalised intersections	RIIWHS302E Implement traffic management plans
RIIWHS305 Implement traffic management plans on motorways and freeways	RIIWHS302E Implement traffic management plans

10. Regulation and licensing implications for implementation

Regulation or licensing issues are identified in the *Application* section of units of competency and the *Qualification description* section of qualifications. If there are no requirements, the following statement will appear: No licensing, legislative or certification requirements apply to this unit/qualification at the time of publication.

Relevant legislation and regulatory requirements

In developing the RII Resources and Industry training package components, legislative and regulatory requirements were considered. Legislative and regulatory requirements differ between States and Territories in Australia and are subject to change. RTOs are responsible for ensuring that delivery and assessment incorporates the appropriate requirements.

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Implementation information

11. Key features of training package and Resources and Infrastructure industry

The industry at a glance

The Mining, Drilling and Civil Infrastructure (MDCI) sector encompasses a broad range of businesses and workers involved in mining, drilling, quarrying and civil infrastructure. The activities undertaken by these businesses are broad in nature, ranging from extracting and processing resources on a mine site or oil rig to operating plant and equipment to support and maintain civil infrastructure works.

The breadth of activities in the sector means that most individuals, businesses and organisations interact with, and benefit from, the sector in some way. This can be seen through the construction of roads, bridges and railways that connect our cities or the billions of dollars in revenue generated from exporting minerals, metals and petroleum overseas.

Civil infrastructure

Workers in this sub-sector are involved in constructing and maintaining civil infrastructure works. Civil infrastructure generally refers to infrastructure excluding commercial and residential buildings, such as roads, railways, bridges, dams and pipelines.

Coal mining

Workers in this sub-sector are involved in open cut (surface) and underground coal mining and processing.

Drilling

Workers in this sub-sector are involved in onshore and offshore drilling for oil and gas, as well as drilling associated with mineral exploration and production, geothermal energy production, water wells, civil infrastructure and agriculture.

Extractive (quarrying)

Workers in this sub-sector are involved in extracting raw materials used in building and construction, including sand, rock, gravel and limestone.

Metalliferous mining

Workers in this sub-sector are involved in open cut (surface) and underground mining and processing minerals including iron ore, copper, nickel, gold, silver, zinc, lithium, uranium and mineral sands.

12. Looking to the future

The broad scope of the Resources and Infrastructure Industry Training Package presents both challenges and opportunities for the MDCI sector, and in addition, the unpredictable COVID-19 environment will force industry to adapt quickly to changing environments. As a result:

- Employers perceive an opportunity for the training package to be tailored towards retraining and reskilling those who move into the resource sector, as technical skills developed outside the sector are often not applicable.
- Stakeholders suggest that it is difficult for employers to attract and retain skilled workers in downturn periods, therefore there is opportunity for the training package to assist MDCI workers to transition between job roles as demand shifts.

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13. Industry sectors and occupational outcomes of qualifications

Sectors in the RII Resources and Infrastructure Training Package

Unit sector unit and competency fields are given a specific code for the purpose of accurate mapping and grouping. The RII Training Package contains the following sectors:

Industry sectors represented in RII Training Package		
Area	**Unit sector (alpha code)**	**Description This code is used to indicate:**
General fields of competence applicable to all sectors	RIIARO	Specialist units of competency developed for application in autonomous and remote operations environments.
	RIIBEF	Specialist units of competency developed for application in business effectiveness environments.
	RIICCR	Specialist units of competency developed for application in customer and community relations environments.
	RIICOM	Specialist units of competency developed for application in communication environments.
	RIIENV	Specialist units of competency developed for application in environment environments.
	RIIFIA	Specialist units of competency developed for application in financial administration and management environments.
	RIIGOV	Specialist units of competency developed for application in governance and compliance environments.
	RIIIMG	Specialist units of competency developed for application in information management environments.
	RIILAT	Specialist units of competency developed for application in leadership and teamwork environments.
	RIIPRM	Specialist units of competency developed for application in project management environments.
	RIIQUA	Specialist units of competency developed for application in quality environments.
	RIIRIS	Specialist units of competency developed for application in risk management environments.
	RIIWHS	Specialist units of competency developed for application in work health and safety environments.
Technical fields of competence applicable to all sectors	RIIBHD	Specialist units of competency developed for application in blasting hole drilling environments.
	RIIBLA	Specialist units of competency developed for application in blasting environments.
	RIIERR	Specialist units of competency developed for application in emergency response and rescue environments.
	RIIHAN	Specialist units of competency developed for application in load handling environments.
	RIISAM	Specialist units of competency developed for application in service and maintenance environments.
	RIISTD	Specialist units of competency developed for application in sampling, testing and data processing and recording environments.
	RIIVEH	Specialist units of competency developed for application in vehicle operations environments.
Technical fields of competence applicable to more than 2 sectors	RIICAR	Specialist units of competency developed for application in conservation and rehabilitation environments.
	RIICTT	Specialist units of competency developed for application in trenchless technology environments.
	RIIMEX	Specialist units of competency developed for application in materials extraction environments.
	RIIMPO	Specialist units of competency developed for application in mobile plant operations environments.

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	RIIPEO	Specialist units of competency developed for application in plant and equipment operations environments.
	RIIPRO	Specialist units of competency developed for application in processing (general) environments.
	RIIRAI	Specialist units of competency developed for application in resources and infrastructure environments.
	RIISDM	Specialist units of competency developed for application in spatial data management environments.
	RIISRM	Specialist units of competency developed for application in stockpile and reclaim material environments.
	RIIUND	Specialist units of competency developed for application in underground mining environments.
	RIIWBP	Specialist units of competency developed for application in waste and by-products environments.
	RIIWMG	Specialist units of competency developed for application in water management environments.
Civil Construction	RIICAM	Specialist units of competency developed for application in civil infrastructure asset management environments.
	RIICBM	Specialist units of competency developed for application in bridge construction and maintenance (general) environments.
	RIICBS	Specialist units of competency developed for application in bituminous surfacing environments.
	RIICCM	Specialist units of competency developed for application in civil works (common units) environments.
	RIICFW	Specialist units of competency developed for application in foundation works environments.
	RIICPL	Specialist units of competency developed for application in underground services environments.
	RIICRC	Specialist units of competency developed for application in road and pavements construction and maintenance (general) environments.
	RIICRM	Specialist units of competency developed for application in road marking environments.
	RIICSG	Specialist units of competency developed for application in civil structures (general) environments.
	RIICTB	Specialist units of competency developed for application in timber bridge construction and maintenance environments.
	RIICTC	Specialist units of competency developed for application in tunnel construction environments.
	RIICWD	Specialist units of competency developed for application in civil works design environments.
	RIICWM	Specialist units of competency developed for application in civil works (management and supervision) environments.
	RIIDML	Specialist units of competency developed for application in demolitions environments.
	RIIRTM	Specialist units of competency developed for application in road and traffic management environments.
Coal Mining	RIIDES	Specialist units of competency developed for application in coal mining (diesel engine systems maintenance) environments.
	RIIMCO	Specialist units of competency developed for application in coal mining (open cut) environments.
	RIIMCP	Specialist units of competency developed for application in coal mining (coal preparation) environments.
	RIIMCU	Specialist units of competency developed for application in coal mining (underground) environments.
	RIIPEO	Specialist units of competency developed for application in coal mining (general) environments.
Metalliferous Mining	RIIEGS	Specialist units of competency developed for application in exploration and field work environments.
	RIIMPG, RIIPHA, RIIPGP, RIIPBP	Specialist units of competency developed for application in processing (general) environments.

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	RIIMSM	Specialist units of competency developed for application in metalliferous mining (small mines) environments.
	RIIPBE, RIIMPG	Specialist units of competency developed for application in beneficiation environments.
	RIIPSM	Specialist units of competency developed for application in smelting environments.
	RIIUMM	Specialist units of competency developed for application in metalliferous mining (underground) environments.
Drilling	RIINHB	Specialist units of competency developed for application in drilling (general) environments.
	RIIOGD, RIIOGF, RIIOGN	Specialist units of competency developed for application in drilling (oil and gas) environments.
	RIIWSV	Specialist units of competency developed for application in drilling (well servicing) environments.

Occupational outcomes of qualifications

There are currently no national credit arrangements between qualifications in the RII Resources and Infrastructure Industry Training Package and higher education programs due to the diversity of business, commerce and accounting curriculum across universities.

Achievement of AQF qualifications provides opportunities for individuals to pursue and achieve their career goals. Qualifications can be achieved in various ways, including:

- off-the-job training, e.g. attending classroom-based learning programs
- on-the-job training, e.g. apprenticeships, traineeships
- skills recognition
- credit transfer.

The qualification pathways shown on the following pages provide insight into the resources and infrastructure industry career pathways and entry-level career options. The following information and tables show possible occupational outcomes for qualifications in the training package and includes pathways between qualifications.

The qualification pathway tables are provided for each sector and can be used for a variety of purposes, for example:

- the recognition of job roles;
- increasing the knowledge of qualification structures for those already in the sector;
- increasing the knowledge of career options for those entering the industry;
- succession planning; and
- relating vocations to qualifications or skill sets.

14. *Mandatory entry requirements*

Generally, individuals may commence a qualification or skill set as long as they have the knowledge, skills or experience required for entry. Industry feedback has determined that particular entry requirements are required to maximise the successful completion of some qualifications by learners.

The table below shows those qualifications in the *RII Resources and Infrastructure Industry Training Package* with specific entry requirements.

RII qualifications with entry requirements		
Code and title	**Entry requirements**	**Rationale**
RII30220 Certificate III in Underground Coal Operations	Successful completion of the following or equivalent: • RIICOM201E Communicate in the workplace • RIIERR203E Escape from hazardous situation unaided • RIIERR205D Apply initial response first aid	Industry has identified these nine units of competency are essential for all occupational outcomes relating to underground coal mining.

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	• RIIGOV201E Comply with site work processes/procedures • RIIMCU217 Apply spontaneous combustion management measures • RIIMCU208E Conduct basic strata control operations • RIIMCU214E Conduct ventilation operations • RIIRIS201E Conduct local risk control • RIIWHS201E Work safely and follow WHS policies and procedures	

The table below shows those skill sets in the *RII Resources and Infrastructure Training Package* with specific entry requirements.

RII skill sets with entry requirements		
Code and title	**Entry requirements**	**Rationale**
RIISS00059 Traffic Controller Skill Set for High Volume Roads	This skill set may only be undertaken in addition to: • completion of RIISS00058 Traffic Controller Skill Set for Urban Streets and Low Volume Rural Roads or the equivalent units of competency; and • at least three months experience applying skills and knowledge relevant to the above mentioned skill set in a temporary traffic management workplace; and • at least 80 hours experience working in a temporary traffic management workplace in the preceding three months.	Industry has identified these experience and competency as essential for all occupational outcomes for traffic controllers working on high volume roads.
RIISS00061 Traffic Management Implementer Skill Set for High Volume Roads	This skill set may only be undertaken in addition to: • completion of either of the following skill sets or the equivalent units of competency – RIISS00060 Traffic Management Implementer Skill Set for Urban Streets and Low Volume Rural Roads; or – RIISS00062 Traffic Management Implementer Skill Set for Motorways and Freeways; and • at least three months experience applying skills and knowledge relevant to the above mentioned skill sets in a temporary traffic management workplace; and • relevant experience setting up at least 12 temporary traffic management types in the preceding 12 months, including: – high speed or high volume roads; and – at least two of the following types: o pedestrian and cyclist controls o construction sites o lane closures o shoulder closures o night works o use of portable traffic control devices o motorways or freeways.	Industry has identified these experience and competency as essential for all occupational outcomes for traffic management implementers working on high volume roads.
RIISS00062 Traffic Management Implementer Skill Set for Motorways and Freeways	This skill set may only be undertaken in addition to: • completion of either of the following skill sets or the equivalent units of competency: – RIISS00060 Traffic Management Implementer Skill Set for Urban Streets and Low Volume Rural Roads; or – RIISS00061 Traffic Management Implementer Skill Set for High Volume Roads; and • at least three months experience applying skills and knowledge relevant to the above mentioned skill sets in a temporary traffic management workplace; and • relevant experience setting up at least 12 temporary traffic management designs in the preceding 12 months, including: – high speed roads; and – at least two of the following design types: o pedestrian and cyclist controls o construction sites o lane closures	Industry has identified these experience and competency as essential for all occupational outcomes for traffic management implementers working on motorways and freeways.

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	○ shoulder closures ○ night works ○ use of portable traffic control devices ○ motorways or freeways.	
RIISS00063 Traffic Management Designer Skill Set for Urban Streets and Low Volume Rural Roads	This skill set may only be undertaken in addition to: ● completion of any of the following skill sets or the equivalent units of competency with at least 12 months experience applying the relevant skills and knowledge in a temporary traffic management workplace: – RIISSS00058 Traffic Controller Skill Set for Urban Streets and Low Volume Rural Roads; or – RIISSS00059 Traffic Controller Skill Set for High Volume Roads; or – RIISSS00060 Traffic Management Implementer Skill Set for Urban Streets and Low Volume Rural Roads; or – RIISSS00061 Traffic Management Implementer Skill Set for High Volume Roads; or – RIISSS00062 Traffic Management Implementer Skill Set for Motorways and Freeways; or ● a tertiary qualification in a civil construction, traffic engineering or road design related field.	Industry has identified these experience and competency as essential for all occupational outcomes for traffic management designers working on low volume roads.
RIISS00064 Traffic Management Designer Skill Set for High Volume Roads	This skill set may only be undertaken in addition to: ● completion of either of the following skill sets or the equivalent units of competency: – RIISS00053 Traffic Management Designer Skill Set for Urban Streets and Low Volume Rural Roads; or – RIISS00065 Traffic Management Designer Skill Set for Motorways and Freeways; and ● at least twelve months experience applying skills and knowledge relevant to the above mentioned skill sets in a temporary traffic management workplace; and ● relevant experience preparing at least 4 different traffic management plan design types in the preceding 12 months, including: – pedestrian and cyclist controls; and – intersections; and – lane closures; and – at least one of the following design types: ○ construction sites ○ shoulder closures ○ high speed roads ○ designs using portable traffic control devices ○ roundabouts ○ public transport interfaces ○ motorways or freeways.	Industry has identified these experience and competency as essential for all occupational outcomes for traffic management designers working on high volume roads.
RIISS00065 Traffic Management Designer Skill Set for Motorways and Freeways	This skill set may only be undertaken in addition to: ● completion of either of the following skill sets or the equivalent units of competency: – RIISS00063 Traffic Management Designer Skill Set for Urban Streets and Low Volume Rural Roads; or – RIISS00064 Traffic Management Designer Skill Set for High Volume Roads; and ● at least twelve months experience applying skills and knowledge relevant to the above mentioned skill sets in a temporary traffic management workplace; and ● relevant experience preparing at least four different traffic management plans and traffic guidance scheme design types in the preceding 12 months, including: – lane closures; and – high speed roads; and – at least one of the following design types: ○ pedestrian and cyclist controls ○ intersections ○ signalised intersections	Industry has identified these experience and competency as essential for all occupational outcomes for traffic management designers working on motorways and freeways.

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	○ construction sites ○ shoulder closures ○ designs using portable traffic control devices ○ roundabouts ○ public transport interfaces ○ motorways or freeways.	
RIISS00075 Work in an Autonomous Workplace Skill Set	This skill set may only be undertaken in addition to: Completion of RIIARO308 Use data in an autonomous workplace or equivalent.	Industry has identified these experience and competency as essential for all occupational outcomes for work in an autonomous workplace skill set.

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15. Pathways advice

A pathway is the route or course of action taken to get to a destination. A training pathway generally means the learning activities or experiences used to attain the competencies needed to achieve career goals. There is no single pathway that applies to everyone; each individual has specific needs and goals.

Qualification pathways and occupational outcomes

There are currently no national credit arrangements between qualifications in the RII Resources and Infrastructure Training Package and higher education programs due to the diversity of business, commerce and accounting curriculum across universities.

Achievement of AQF qualifications provides opportunities for individuals to pursue and achieve their career goals. Qualifications can be achieved in various ways, including:

- off-the-job training, e.g. attending classroom-based learning programs
- on-the-job training, e.g. apprenticeships, traineeships
- skills recognition
- credit transfer.

Skill set pathways

Skill set pathways information in RII Training Package (Version 8.0)		
Code	**Title**	**Pathways Information**
RIISS00018	Concrete Paving Automated Paving Guidance System (APGS) Technician Skill Set	This Skill Set can provide credit towards RII30920 Certificate III Civil Construction and other qualifications that allow for selection of these units.
RIISS00019	Concrete Paving Finisher Skill Set	This Skill Set can provide credit towards RII30920 Certificate III Civil Construction and other qualifications that allow for selection of these units.
RIISS00020	Concrete Paving General Hand Skill Set	This Skill Set can provide credit towards RII30920 Certificate III Civil Construction and other qualifications that allow for selection of these units.
RIISS00021	Concrete Paving Hand Texturing and Curing Skill Set	This Skill Set can provide credit towards RII30920 Certificate III Civil Construction and other qualifications that allow for selection of these units.
RIISS00022	Concrete Paving Joint Sealer Skill Set	This Skill Set can provide credit towards RII30920 Certificate III Civil Construction and other qualifications that allow for selection of these units.
RIISS00023	Concrete Paving Machine Operator Skill Set	This Skill Set can provide credit towards RII30920 Certificate III Civil Construction and other qualifications that allow for selection of these units.
RIISS00024	Concrete Paving Saw Cutter Skill Set	This Skill Set can provide credit towards RII30920 Certificate III Civil Construction and other qualifications that allow for selection of these units.
RIISS00025	Concrete Paving Spotter Recorder Skill Set	This Skill Set can provide credit towards RII30920 Certificate III Civil Construction and other qualifications that allow for selection of these units.
RIISS00026	Concrete Paving Stringliner Skill Set	This Skill Set can provide credit towards RII30920 Certificate III Civil Construction and other qualifications that allow for selection of these units.
RIISS00027	Concrete Paving Texture Machine Operator Skill Set	This Skill Set can provide credit towards RII30920 Certificate III Civil Construction and other qualifications that allow for selection of these units.
RIISS00028	Concrete Paving Tie Bar Inserter Skill Set	This Skill Set can provide credit towards RII30920 Certificate III Civil Construction and other qualifications that allow for selection of these units.
RIISS00029	Leading Hand - Coal Mining Skill Set	This Skill Set can provide credit towards RII40520 Certificate IV in Resource Processing or RII40220 Certificate IV in Surface Coal Mining (Open Cut Examiner) and other qualifications that allow for selection of these units.

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RIISS00030	Explosion Protected Diesel Engine Systems Maintenance Skill Set	This Skill Set can provide credit towards RII40420 Certificate IV in Underground Coal Operations and other qualifications that allow for selection of these units.
RIISS00031	Mine Surveying Skill Set	This Skill Set can provide credit towards RII40420 Certificate IV in Underground Coal Operations and other qualifications that allow for selection of these units.
RIISS00032	Site Health and Safety Coordinator Skill Set	This Skill Set can provide credit towards RII40120 Certificate IV Surface Extraction Operations and other qualifications that allow for selection of these units.
RIISS00033	Underground Coal Mine Safety Skill Set	This Skill Set can provide credit towards RII20120 Certificate II in Resources and Infrastructure Work Preparation and other qualifications that allow for selection of these units.
RIISS00034	Surface Coal Mine Safety Skill Set	This Skill Set can provide credit towards RII20120 Certificate II in Resources and Infrastructure Work Preparation and other qualifications that allow for selection of these units.
RIISS00035	Underground Shotfiring - Coal Skill Set	This Skill Set can provide credit towards RII30220 Certificate III in Underground Coal Operations and other qualifications that allow for selection of these units.
RIISS00036	Underground Shotfiring - Metalliferous Skill Set	This Skill Set can provide credit towards RII30320 Certificate III in Underground Metalliferous Mining and other qualifications that allow for selection of these units.
RIISS00038	Oil and Gas (Off Shore) Rouseabout Skill Set	This Skill Set can provide credit towards RII20920 Certificate II in Drilling Operations and other qualifications that allow for selection of these units.
RIISS00042	Work Zone Traffic Control - Road Labourer Skill Set	This Skill Set can provide credit towards RII20120 Certificate II in Resources and Infrastructure Work Preparation and other qualifications that allow for selection of these units.
RIISS00043	Work Zone Traffic Control - Supervisor Skill Set	This Skill Set can provide credit towards RII30920 Certificate III in Civil Construction and other qualifications that allow for selection of these units.
RIISS00046	Leading Hand Skill Set	This Skill Set can provide credit towards RII40720 Certificate IV in Civil Construction and other qualifications that allow for selection of these units.
RIISS00047	Stabiliser Support Staff Skill Set	This Skill Set can provide credit towards RII20120 Certificate II in Resources and Infrastructure Work Preparation and other qualifications that allow for selection of these units. The units of competency must be assessed in the context of the work zone road stabilisation environment.
RIISS00048	Operator of Stabiliser Skill Set	This Skill Set can provide credit towards RII20120 Certificate II in Resources and Infrastructure Work Preparation and other qualifications that allow for selection of these units. The units of competency must be assessed in the context of the work zone road stabilisation environment.
RIISS00049	Operator of Spreader Skill Set	This Skill Set can provide credit towards RII20120 Certificate II in Resources and Infrastructure Work Preparation and other qualifications that allow for selection of these units. The units of competency must be assessed in the context of the work zone road stabilisation environment.
RIISS00050	Operator of Stabiliser (using foam bitumen) Skill Set	This Skill Set can provide credit towards RII20120 Certificate II in Resources and Infrastructure Work Preparation and other qualifications that allow for selection of these units. The units of competency must be assessed in the context of the work zone road stabilisation environment.
RIISS00051	Supervision of Diverse Work Teams Skill Set	This Skill Set can provide credit toward RII40220 Certificate IV in Surface Coal Mining (Open Cut Examiner) and other qualifications that allow for selection of these units.
RIISS00052	Surface Shotfiring Skill Set	This Skill Set can provide credit towards RII30120 Certificate III in Surface Extraction Operations and other qualifications that allow for selection of these units.

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RIISS00053	Advanced offtheroad and earthmoving tyre fitting	This Skill Set can provide credit towards RII30115 Certificate III in Surface Extraction Operations,RII30220 Certificate III in Underground Coal Operations and other qualifications that allow for selection of these units.
RIISS00054	Traffic Controller Skill Set	This Skill Set can provide credit towards RII20120 Certificate II in Resources and Infrastructure Work Preparation and other qualifications that allow for selection of these units.
RIISS00055	Traffic Management Implementer Skill Set	This Skill Set can provide credit towards RII20120 Certificate II in Resources and Infrastructure Work Preparation and other qualifications that allow for selection of these units.
RIISS00056	Traffic Management Designer Skill Set	This Skill Set can provide credit towards RII30920 Certificate III in Civil Construction and other qualifications that allow for selection of these units.
RIISS00062	Construction Materials Testing Skill Set	The Skill Set can provide credit towards RII40115 Certificate IV in Surface Extraction Operations and other qualifications that allow for selection of the units.
RIISS00066	Civil Infrastructure Asset Management - Road Pavements Skill Set	This Skill Set can provide credit towards RII41421 Certificate IV in Civil Infrastructure Asset Management and other qualifications that allow for selection of these units.
RIISS00067	Civil Infrastructure Asset Management - Roadside Infrastructure Skill Set	This Skill Set can provide credit towards RII41421 Certificate IV in Civil Infrastructure Asset Management and other qualifications that allow for selection of these units.
RIISS00068	Civil Infrastructure Asset Management - Stormwater Drainage Skill Set	This Skill Set can provide credit towards RII41421 Certificate IV in Civil Infrastructure Asset Management and other qualifications that allow for selection of these units.
RIISS00069	Civil Infrastructure Asset Management - Civil Structures Skill Set	This Skill Set can provide credit towards RII41421 Certificate IV in Civil Infrastructure Asset Management and other qualifications that allow for selection of these units.
RIISS00070	Civil Infrastructure Asset Management - Civil Foundations Skill Set	This Skill Set can provide credit towards RII41421 Certificate IV in Civil Infrastructure Asset Management and other qualifications that allow for selection of these units.
RIISS00071	Civil Infrastructure Asset Management - Water and Sewerage Mains Skill Set	This Skill Set can provide credit towards RII41421 Certificate IV in Civil Infrastructure Asset Management and other qualifications that allow for selection of these units.
RIISS00072	Civil Infrastructure Asset Management - Underground Services Skill Set	This Skill Set can provide credit towards RII41421 Certificate IV in Civil Infrastructure Asset Management and other qualifications that allow for selection of these units.
RIISS00073	Civil Infrastructure Asset Management - Open Spaces Skill Set	This Skill Set can provide credit towards RII41421 Certificate IV in Civil Infrastructure Asset Management and other qualifications that allow for selection of these units.
RIISS00074	Civil Infrastructure Asset Management - Analyse Data for Asset Management Decision Making Skill Set	The units provide credit towards RII41421 Certificate IV in Civil Infrastructure Asset Management, RII50420 Diploma of Civil Construction Management and other qualifications that allow for selection of these units.
RIISS00075	Work with Data in an Autonomous Workplace Skill Set	This Skill Set can provide credits towards RII21222 Certificate II in Autonomous Workplace Operations and any other qualifications that allow for the selection of this unit.

16. Access and equity considerations

Access and equity relate to the approaches used to make sure training and assessment practices consider and respond to the individual support needs of learners so that potential learning barriers are eliminated or minimised. Individual support needs that learners could present with could relate to their:

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- age
- gender
- cultural or ethnic background
- disability
- sexuality
- language, literacy or numeracy skills
- employment status
- geographical location.

The design and content of this training package support equitable access and progression for all learners. It is the responsibility of the RTO delivering and assessing qualifications to:

- ensure that training and assessment processes and methods do not disadvantage individual learners
- determine the support needs of individual learners and to provide access to any educational and support services necessary.

Some practical ways that access and equity issues could be addressed include:

- modifying assessment processes and techniques for learners who are located at a distance from a campus location
- checking that materials are culturally appropriate for learners
- activities and assessments are suitable for the language, literacy and numeracy skill levels of learners (while meeting the requirements of the unit of competency).

Considerations specific to learners with disability

A legislative and regulatory framework underpins and supports the delivery of VET across Australia. Under this framework, VET providers must take steps to ensure that learners with recognised disabilities can access and participate in education and training on the same basis as learners without disabilities.

RTOs have obligations to support learners with disability under the Standards for RTOs 2015, *Disability Discrimination Act 1992*, and the Disability Standards for Education 2005. RTOs need to provide advice and information to learners with disability about the suitability of a course, any inherent requirements for the course, reasonable adjustments that can be made, and support that is available.

Training and assessment practices must give due consideration to learners with disability, and in particular recognise the diverse range of disabilities and individualised impact that disability has on learners. Disability is broad and diverse, and can include physical and learning disabilities, chronic medical condition, or mental illness. RTOs must take an individualised approach to supporting learners with disability, recognising that each learner's disability will be specific to that person, and will have a specific impact on their learning experience. An individual's disability may necessitate the implementation of specific supports to allow them to participate in learning.

It is recommended to ask universally (and also on an individual basis) whether a person requires adjustments to undertake their course. Make it clear that all personal information will be handled confidentially and that this question is only asked for the purposes of being able to offer support and arrange reasonable adjustments. Learners with disability do not have to disclose their disability, but by making it clear that disclosure is only for the purposes of providing support so they can access and participate in VET equally, learners are more likely to feel comfortable disclosing. If a learner does choose to disclose, they must be consulted to determine what supports or reasonable adjustments should be put in place for them.

It is important that all staff are made aware of what their responsibilities are in negotiating and implementing adjustments and supports.

Examples of educational and support services that can assist learners with disability meet course requirements include:

- offering study support and skills programs, including language, literacy and numeracy (LLN) programs
- providing equipment, resources and/or programs to increase access for learners with disability
- using trained support staff including specialist teachers, note-takers and interpreters

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- flexible scheduling and delivery of training and assessment, including allowing longer time where appropriate, and adjusting delivery methods and communication techniques
- providing learning and assessment materials in alternative formats.

Reasonable adjustment for learners with disability

Reasonable adjustments can be made to the learning environment, training delivery, learning resources and/or assessment tasks to accommodate the support needs of a learner with disability. The purpose of reasonable adjustments is to make it possible for learners to participate fully. It is not to give learners with additional or different needs an advantage over others, to change course standards or outcomes, or to guarantee success.

A reasonable adjustment in learning and assessment activity needs to be justifiable and uphold the integrity of the unit/qualification. An adjustment is reasonable if it can accommodate the learner's support needs while also considering factors such as the views of the learner, the potential effect of the adjustment on the learner and others, the costs and benefits of making the adjustment. Reasonable adjustments should be negotiated on an individualised basis, recognising that each person with disability will have specific learning needs and requirements for adjustment.

Inherent requirements are the fundamental parts of a course that must be met by all learners in order for them to be deemed competent. They are the abilities, skills and knowledge learners need to undertake the course — those components which, if removed, would compromise the learning outcomes. Learners with disability should be provided with reasonable adjustments to enable them to meet these inherent requirements, provided this would not cause unjustifiable hardship to the RTO. However, if a learner cannot meet the inherent requirements, even with adjustments, then they cannot undertake the course. Learners should be given as much information as possible to allow them to make informed decisions about whether they will be able to meet inherent course requirements.

Adjustments must:

- be discussed with and agreed to by the learner with disability
- benefit the learner with disability
- maintain the integrity of the competency standards
- be a reasonable expectation in a workplace or training and assessment environment.

Adjustments are not required if they could:

- cause the RTO unjustifiable hardship
- harm other learners.

Making reasonable adjustments requires the RTO to balance the need for change with the expense or effort involved in making this change. If an adjustment requires a disproportionately high expenditure or disruption, it is not likely to be reasonable.

Reasonable adjustments can encompass a range of areas including the physical environment, teaching delivery and format, utilisation of assistance equipment and reduction of study load. Examples of reasonable adjustments that can assist learners with disability to participate fully in training and assessment include:

- accessible classrooms
- changes to class scheduling
- note-taking or interpreting support
- modification to presentation mediums and techniques or teaching practices
- course materials, information and learning tasks in alternative formats
- alternative assessment formats, timeframes or tasks
- availability of assistive technologies or specialised equipment
- allowing a carer or support person to be present in the learning environment.

Additional resources

The following resources can provide further information about different types of disability, as well as additional guidance and support for meeting the needs of learners with disability:

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- the Australian Disability Clearinghouse on Education and Training (ADCET)
- the Australian Human Rights Commission
- National Disability Coordination Officers.

RTO support services, access and equity or disability departments can also provide guidance on supporting and including learners with disability.

An overview of some specific types of disability, their possible impacts, and teaching and assessment strategies to assist learners with these impacts, can be found at: https://www.adcet.edu.au/inclusive-teaching/specific-disabilities/.

Some practical examples for implementing reasonable adjustments to address different learner needs can be found at:
http://www.ndco.stepscs.net.au/uploads/5/0/2/0/5020317/7._reasonable_adjustments_sept2014.pdf.

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17. Foundation skills

Foundation skills are the non-technical skills that support an individual's participation in the workplace, in the community and in education and training. They describe the language, literacy, numeracy (LLN) and employment skills that are essential to performance and are explicitly identified in the foundation skills field of a unit of competency, which:

- identifies the essential foundation skills that are not explicit in the performance criteria of the unit
- describes the application of each skill in context of the performance criteria
- should be considered as an integrated part of the unit for assessment purposes.

The language, literacy and numeracy skills are represented by the five core skills set out in the Australian Core Skills Framework (ACSF): Learning, reading, writing, oral communication and numeracy.

The employment skills are described using either:

- the skills set out in the employability skills framework: Teamwork, Initiative and enterprise, Planning and organising, Problem solving, Self-management, and Technology; or
- the core skills for work set out in the Core Skills for Work developmental framework: Navigate the world of work, Interact with others, and Get the work done.

Foundation skills should be considered as an integrated part of the unit for delivery and assessment purposes.

18. Health and safety implications in the industry

Work health and safety (WHS) requirements are covered either by:

- embedding requirements in the elements/performance criteria of units of competency
- including specific WHS units in qualifications.

In jurisdictions where model *WHS* laws have not been implemented, RTOs are advised to contextualise units of competency by referring to the existing WHS legislative requirements.

19. Resource and equipment requirements

RTOs must make sure that all resources and equipment required to train and assess units of competency are available.

Details of specific resources, including equipment and materials essential for assessment, are listed in the Assessment conditions sections of the assessment requirements for each unit of competency.

20. Legal considerations for learners in the workplace/on placements

Legal requirements that apply to specific industries and VET vary across each state and territory and can regularly change. Contact the relevant state or territory department/s to check what legal requirements apply.

21. Other information relevant to implementing the training package

Requirements for assessors

Assessor requirements are identified in the *Assessment Conditions* section of assessment requirements for each unit of competency. All assessors must meet the requirements set by the applicable registering body (refer to the section 'Who can deliver and assess a qualification?' in this Guide).

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Training and assessment in simulated environments

Units of competency in the *RII Resources and Infrastructure Industry Training Package* may be delivered and assessed in the workplace or in a simulated workplace environment.

To maintain the integrity of training and assessment RTOs, trainers and assessors need to keep pace with industry technologies and ensure that learning activities and assessments accurately reflect workplace activities. RTOs will need regular contact with industry to ensure the currency and validity of all activities conducted in simulated environments.

All assessors must consider relevant care and due diligence when assessing units of competency.

Workplace simulation criteria

In conducting training and assessment in a simulated workplace environment, trainers and assessors must make sure that the simulated environment gives the learner the opportunity to meet the following critical criteria:

1 ***Quality*** – The work is of the standard required in the industry.

2 ***Productivity*** – The work is performed within a timeframe appropriate in the industry.

3 ***Safety*** – The work is performed in a manner that meets industry safety standards.

Where simulations meet these criteria, RTOs can be confident that learners are 'work ready' on successful completion of units of competency.

Simulations should provide opportunities for integrated assessment of competence that include:

- performing the task (task skills)
- managing a number of tasks (task management skills)
- dealing with workplace irregularities such as unexpected problems, breakdowns and changes in routine (contingency management skills)
- fulfilling the responsibilities and expectations of the job and workplace, including working with others (job/role environment skills)
- transferring competency to new contexts.

To further enhance the validity of assessment processes using simulation, the assessor should consider:

- assessments covering a range of interconnected units of competency
- use of assessment checklists to ensure that all performance evidence and knowledge evidence requirements have been met
- use of self-assessment, peer assessment and debriefing activities
- use of authentic workplace documentation.

Assessment activities must be realistic and reasonable in terms of scale.

Australian apprenticeships

Apprenticeships and traineeships are legally binding training arrangements between an employer and an employee that combine training with paid employment.

Apprenticeships and traineeships are established and administered by *State or Territory Training Authorities (STAs)*. STAs are the government departments in each state or territory responsible for the operation of the VET system (including Australian Apprenticeships).

The Australian Apprenticeships website offers information about apprenticeships and traineeships, and includes links to the websites for STAs. Visit www.australianapprenticeships.gov.au for more information.

The following *RII Resources and Infrastructure Industry Training Package* qualifications are suitable as an Australian traineeship or apprenticeship pathway:

- RII20220 Certificate II in Surface Extraction Operations

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- RII20320 Certificate II in Underground Coal Mining
- RII20420 Certificate II in Underground Metalliferous Mining
- RII20520 Certificate II in Resource Processing
- RII20720 Certificate II in Civil Construction
- RII20920 Certificate II in Drilling Operations
- RII21120 Certificate II in Oil & Gas Drilling (Onshore) and Well Servicing
- RII30920 Certificate III in Civil Construction
- RII31220 Certificate III in Civil Foundations
- RII31619 Certificate III in Trenchless Technology
- RII31820 Certificate III in Drilling Operations
- RII32020 Certificate III in Drilling Oil/Gas (Onshore)
- RII32220 Certificate III in Well Servicing Operations
- RII40120 Certificate IV in Surface Extraction Operations
- RII40720 Certificate IV in Civil Construction
- RII40920 Certificate IV in Drilling Operations.

VET for secondary school students

VET programs enable school students to acquire workplace skills and knowledge while till at secondary school.

Successful achievement of a VET program provides a school student with a nationally recognised AQF qualification, usually as part of a senior secondary certificate.

VET programs are packaged and delivered in various ways across Australia. The three main delivery arrangements used are:

- schools hold RTO status
- school sectoral bodies (such as Boards of Studies or regional offices) hold RTO status on behalf of a group of schools
- schools work together in partnership with RTOs.

In some state and territory school systems, school students who work part-time in an appropriate workplace may use this to fulfil work placement requirements. Virtual or simulated work placements may also be legitimate.

No qualifications from the *RII Resources and Infrastructure Industry Training Package* are suitable for delivery to secondary school students.

RTOs are advised to check requirements with the relevant authorities in their State or Territory.

Training and assessment issues for the school sector

Implementation of the *RII Resources and Infrastructure Training Package* within the school sector, while encouraged, needs to ensure:

- the currency of skills and knowledge of those who train and assess school students – particularly as expressed in the Standards for RTOs
- access to current industry equipment, facilities and training resources so that students acquire a realistic view of workplace realities and conditions
- comprehensive coverage of foundation skills, performance and knowledge as outlined in the unit of competency and assessment requirements for each unit of competency
- current and realistic learning and assessment experiences.

Cross-sector skills

Cross-sector units of competency are considered for inclusion within RII qualifications, however due to the specific technical nature of the Resources and Infrastructure Industry and the strict regulatory and licencing requirements, cross-sector units of competency are often not suitable for use in the Training Package.

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Qualifications

Qualifications are created by packaging units of competency into combinations that meet workplace roles. Qualifications come with 'packaging rules' which set out the overall requirements for delivering the qualification, including the number of core units, and the number and source of elective units.

Qualifications are aligned to AQF qualification types. VET qualifications are at levels 1, 2, 3, 4, 5, 6, and 8 of the AQF. The AQF provides a comprehensive, nationally consistent framework for all qualifications in post-compulsory education and training in Australia. In the VET sector it assists national consistency for all trainees, learners, employers and providers by enabling national recognition of qualifications and Statements of Attainment.

For a full explanation of the AQF, see the AQF website: http://www.aqf.edu.au.

Qualification structure

The structure of qualifications is based on templates prescribed by the *Standards for Training Packages 2012*.

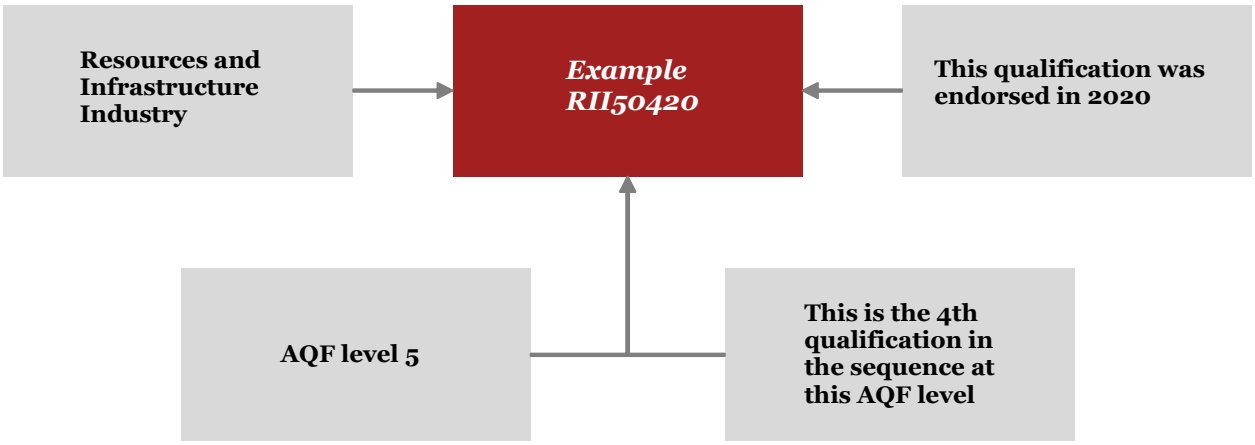
Qualification code

Each qualification has a unique eight-character code:

- the first three letters identify the training package
- the first number identifies the qualification level
- the next two numbers identify a qualification's position in the sequence of qualifications at that level
- the last two numbers identify the year in which the qualification was endorsed.

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Using RII50420 as an example:



Qualification title

The title reflects the qualification outcomes and complies with the number of characters specified in the Australian Vocational Education and Training Management Information Statistical (AVETMIS) Standard (no more than 100 characters).

Qualification description

This field describes the qualification outcomes, together with any licensing, legislative, regulatory or certification considerations.

Entry requirements

This is an optional field that specifies any mandatory entry requirements.

Packaging rules

This field:

- specifies the total number of units of competency required to achieve the qualification
- specifies the number of core and elective units
- lists all core and elective unit codes and titles, including prerequisite units where they apply.

Qualification mapping information

This field specifies the code and title of any equivalent qualification.

Links

This field provides a link to the Companion Volume Implementation Guide.

Skill sets

Skill sets consist of one or more endorsed units of competency that have been packaged together to address a defined industry need or specific licensing or regulatory requirement. Skill sets are not qualifications.

Skill set structure

Skill sets themselves are non-endorsed components of training packages (however, they consist of endorsed units of competency). They use a standard format.

Skill set code

This is a unique code in the format: <Training package code> < SS> <five digit code> e.g. RIISS00001.

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Skill set name

The title reflects the skill set outcomes.

Description

This field explains how the skill set meets the industry need or regulatory requirement.

Pathways information

This field explains the skill set's relationship with a qualification.

Suggested title and words for Statement of Attainment

This field provides advice on a suitable title and words to use on a Statement of Attainment.

Target group

This field explains the types of individuals who will benefit from completing the skill set.

Links

This field provides a link to the Companion Volume Implementation Guide.

Units of competency

Units of competency are the nationally agreed statements of the skills and knowledge required for effective performance in a particular job or job function.

Units of competency describe work outcomes as agreed by industry. As such, they do not describe the procedures necessary to perform a particular role, but rather, identify the skills and knowledge, as outcomes, that contribute to the whole job function. Each unit of competency describes:

- a specific work activity and what it involves
- particular skills (and level of skills) that are needed to perform the work activity
- conditions under which the work activity may be conducted
- knowledge and skills required to perform the work activity
- foundation skills essential to performing the work activity
- how learners can show they are competent in the work activity
- performance and knowledge evidence that must be considered in assessing competency of the unit
- conditions under which evidence for assessment must be gathered.

Units of competency are not aligned to levels within the AQF because they can be included across a range of qualification levels. However, the qualification in which a unit is first packaged in a training package is indicated by the first digit in the unit code.

What is competency?

The broad concept of industry competency is the ability to perform particular tasks and duties to the standard of performance expected in the workplace.

Competency covers all aspects of workplace performance and involves:

- performing individual tasks
- managing a range of different tasks
- responding to contingencies or breakdowns
- dealing with the responsibilities of the workplace, including working with others.

Workplace competency is the ability to apply relevant skills and knowledge consistently over time and in the required workplace situations and environments.

Competency standards are determined by industry to meet industry skill needs and focus on what is expected of a competent individual in the workplace.

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Unit of competency structure

Units of competency are based on templates prescribed by the *Standards for Training Packages 2012*. Under these Standards, a unit of competency comprises two separate documents, i.e. a unit of competency document and an assessment requirements document.

Unit code

Each unit of competency has a unique code, which is assigned when the training package is endorsed, or when new units of competency are added to an endorsed training package:

- the first three characters identify the training package
- the next three characters indicate the competency stream or group
- the first number indicates the AQF qualification in which the unit is first packaged
- the next two numbers identify a unit's position in the sequence of units in that competency stream or group.

Unit title

The title describes the unit outcome and complies with the length specified in the AVETMIS Standard (no more than 100 characters).

Unit application

This field describes how the unit is practically applied, who would typically use it and the unit of competency's relationship to licensing, legislative or certification requirements.

Prerequisite units

This is an optional field that specifies any unit(s) in which the learner must already be competent prior to the achieving competency in this unit.

Unit sector

This field is used to categorise units of competency in relation to industry sectors or types of work.

Elements of competency

Elements of competency describe the outcomes of the significant functions and tasks that make up the competency. Elements describe actions or outcomes that are demonstrable and assessable.

Performance criteria

Performance criteria specify the required performance in relevant tasks, roles, skills (including foundation skills) and the applied knowledge that enables competent performance.

Foundation skills

This field describes the language, literacy, numeracy and employment skills that are essential to performance.

Range of conditions

This is an optional field that specifies different work environments and conditions that may affect performance. Range is restricted to essential operating conditions and any other variables essential to the work environment, so it is quite different from the previous Range statement.

Links

This field provides a link to the Companion Volume Implementation Guide.

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Assessment requirements

Title

This field uses the format: Assessment Requirements for [Unit of Competency Code and Title]

Performance evidence

Performance evidence, as the name implies, specifies what individuals must do to show that they satisfy the performance standards in the unit of competency.

Knowledge evidence

Knowledge evidence, as the name implies, specifies what individuals must know in order to carry out the work tasks described in the unit of competency safely and effectively.

Assessment conditions

This field describes mandatory conditions for assessment, e.g. details of equipment and materials; contingencies; physical conditions; relationships with other people; timeframes. It also specifies assessor requirements.

Links

This field provides a link to the Companion Volume Implementation Guide.

Contextualisation of units of competency by RTOs

RTOs may contextualise units of competency to reflect local skill needs. Contextualisation could involve additions or amendments to the unit of competency to suit particular delivery methods, learner profiles, or specific enterprise requirements. Any contextualisation must ensure the integrity of the outcome of the unit of competency is maintained.

Industry requirements, as described in training or job specifications, can be used to contextualise a unit of competency.

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Links

Companion volumes/ training package information

All Companion Volumes can be found on the VETNet website:

https://vetnet.gov.au/Pages/default.aspx

PwC's Skills for Australia

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Department of Education, Skills and Employment

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https://www.employment.gov.au/

State and Territory Training Authority

Australian Capital Territory
https://www.education.act.gov.au/

New South Wales
http://www.dec.nsw.gov.au/

Northern Territory
https://business.nt.gov.au/

Queensland
https://training.qld.gov.au/

South Australia
https://statedevelopment.sa.gov.au/

Tasmania
http://www.skills.tas.gov.au/

Victoria
http://www.education.vic.gov.au/

Western Australia
http://www.dtwd.wa.gov.au

General

Australian Industry and Skills Committee
https://www.aisc.net.au/

Australian Apprenticeships
www.australianapprenticeships.gov.au

Australian Qualifications Framework: Second edition, January 2013
http://www.aqf.edu.au/

Australian Skills Quality Authority (ASQA)
http://www.asqa.gov.au

TGA website, training packages
http://www.training.gov.au/

Training Accreditation Council (Western Australia)
http://www.tac.wa.gov.au

Victorian Registration and Qualifications Authority (VRQA)
http://www.vrqa.vic.gov.au/

About PwC's Skills for Australia

This Guide has been developed by PwC's Skills for Australia. As a Skills Service Organisation, PwC's Skills for Australia is responsible for working with industry to identify skills needs and to develop training products and services to fill those needs.

PwC's Skills for Australia is authorised and funded by the Australian government to produce training packages for its nine industries:

- Automotive retail, service and repair
- Business services
- Creative arts and culture
- Financial services
- Information and communications technology
- Naval shipbuilding
- Printing and graphic arts
- Resources and infrastructure
- Training and education

Visit www.skillsforaustralia.com for more information.

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