



MSM Manufacturing Training Package Release 3.0

Case for Endorsement

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Prepared on behalf of the Process Manufacturing, Recreational Vehicle and Laboratory IRC for the Australian Industry and Skills Committee (AISC)

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Required information

A. Administrative details of the Case for Endorsement

Name of allocated IRC

The Process Manufacturing, Recreational Vehicle and Laboratory Industry Reference Committee (IRC) is presenting the case for approving Release 3.0 of the MSM Manufacturing Training Package.

Name of SSO

IBSA Manufacturing, a Skills Service Organisation (SSO), is submitting this Case for Endorsement on behalf of Process Manufacturing, Recreational Vehicle and Laboratory IRC.

This work has been completed under Activity Order IBSA/TPD/2016-2017/008, executed in February 2017. Details of the activities to be completed as part of this activity order can be found in Appendix A.

The Case for Endorsement, outlines how the new/modified components will support implementation of the November 2015 COAG Industry and Skills Council training package reforms summarised at:

www.education.gov.au/vocational-education-and-training-reform.

B. Description of work and request for approval

Description of work undertaken and why

Enrolment figures for the PMC Manufactured Mineral Products Training Package indicate there are low levels of implementation of this Training Package, across the sector. This trend has been consistent over the last 5 years, with significant components of the package showing zero enrolments. The work was undertaken to determine what the valued components of this package are, update components to ensure they reflect current industry requirements, remove obsolete components, and consider if qualifications in the MSM Manufacturing Training Package would better meet industry needs.

Work involved:

- reviewing PMC Manufactured Mineral Products units and qualifications to ensure they meet:
 - Standards for Training Packages 2012
 - Training Package Products Policy
 - Training Package Development and Endorsement Process Policy
 - industry needs
- mapping between PMC and MSM training package components
- creating industry defined and supported national training products
- creating improved career pathways and workforce development opportunities
- supporting the COAG Industry and Skills Council reforms to training packages.

Decision being sought from the AISC

This submission presents the Case for Endorsement for the MSM Manufacturing Training Package Release 3.0.

The components submitted for endorsement include:

- 36 new units of competency (reviewed and repackaged from PMC Manufactured Mineral Products Training Package into the MSM Manufacturing Training Package – See Appendix B for full list)

- 1 new qualification, MSM30318 Certificate III in Manufactured Mineral Products (reviewed and repackaged from PMC Manufactured Mineral Products Training Package into the MSM Manufacturing Training Package)

Component included but does not require endorsement:

- MSM30116 Certificate III in Process Manufacturing

The above qualification is included as it is proposed that the following 6 revised units of competency are added to the elective bank:

- MSMPMC308 Operate slip casting equipment
- MSMPMC309 Finish products after firing
- MSMPMC310 Hand mould products
- MSMPMC311 Operate a firing kiln
- MSMPMC312 Operate glass finishing equipment
- MSMPMC403 Set up and optimise glass forming process.

These units do not directly relate to the revised Certificate III in Manufactured Mineral Products, outcomes of the updated qualification are now tailored to the cement, concrete, quarry and asphalt industries. Enrolment data shows the above units are commonly used and must be imported as electives to other qualifications. It is proposed these units are repackaged into the more general Certificate III in Process Manufacturing that is designed for use across the manufactured mineral products sector but is designed for workers unable to meet the technical requirements.

As part of this Case for Endorsement, a number of training package components are proposed to be deleted, this includes:

- PMC Manufactured Mineral Products Training Package
- Five qualifications:
 - PMC20116 Certificate II in Manufactured Mineral Products
 - PMC40116 Certificate IV in Manufactured Mineral Products
 - PMC50116 Diploma of Manufactured Mineral Products
 - PMC60116 Advanced Diploma of Manufactured Mineral Products
 - PMC80116 Graduate Certificate in Refractories Engineering
- 45 units of competency:
 - PMC552005 Process greenware/green products
 - PMC552006 Operate an autoclave
 - PMC552021 Operate manual glazing equipment
 - PMC552022 Prepare materials for clay and ceramic production
 - PMC552031 Operate extrusion equipment
 - PMC552032 Operate pressing equipment
 - PMC552040 Operate glass melting process
 - PMC552041 Operate process ovens
 - PMC552042 Operate blown insulation equipment
 - PMC552043 Operate float forming equipment
 - PMC552044 Operate fibre forming equipment
 - PMC552045 Operate container forming equipment
 - PMC552046 Operate glass printing equipment
 - PMC552047 Operate primary annealing equipment
 - PMC552049 Operate on-line stacking and assembly equipment
 - PMC552054 Spin concrete pipes
 - PMC552070 Operate forming equipment
 - PMC552072 Produce fibrous plasterboard
 - PMC552090 Use and maintain tools and equipment for refractory operations
 - PMC552091 Prepare for, install and repair refractory brickwork/blockwork

- PMC552092 Prepare for and install mouldable refractory materials
- PMC552093 Prepare for and cast refractory materials
- PMC552095 Prepare for, install and repair ceramic fibre
- PMC553021 Set up and tune glazing equipment
- PMC553041 Set up and optimise glass furnace process
- PMC553042 Set up and optimise secondary process
- PMC553070 Design and construct moulds for fibrous plaster products
- PMC553072 Model fibrous plaster products
- PMC553080 Set up and optimise finishing process
- PMC554020 Design and prepare models, moulds and dies
- PMC554090 Undertake simple refractory design
- PMC554091 Analyse refractory failures
- PMC555030 Analyse equipment performance
- PMC555031 Choose materials for an application
- PMC556031 Design structural/mechanical components
- PMC557001 Manage trials
- PMC557090 Select refractory materials for an application
- PMC557091 Design a refractory lining
- PMC557092 Specify and interpret refractory tests
- PMC557093 Design a refractory/ceramic component
- PMC557094 Investigate refractory failures
- PMC557095 Specify and monitor the installation of monolithic/castable refractories
- PMC557096 Specify and monitor the installation of block/precast refractories
- PMC557097 Specify and monitor repairs to refractory installations
- PMC557098 Specify refractory installation systems

C. Evidence of Industry support

Details about the project were made available on the IBSA website at <https://ibsa.org.au/consultation-project/manufactured-mineral-products-2017-project/> for the life of the project. Stakeholder engagement was achieved through a variety of methods, including:

- the IRC to ensure appropriate and adequate industry consultation occurred, monitoring project progress and validating outcomes and draft training package components
- formation of a Technical Advisory Committee (TAC) to provide technical advice and sector expertise around the detail of the training package components developed and reviewed
- specific technical advice was sought from highly skilled and experienced industry specialists on the TAC as a group and on an individual basis to target specific areas of expertise
- two rounds of public consultation (total of 8 weeks) where materials, and a supporting consultation paper that summarised changes, could be accessed via the IBSA website and all relevant stakeholders alerted, this included:
 - a distribution list of key industry organisations
 - State/Territory Training Authorities and Industry Training Advisory Bodies (ITABs)
 - all RTO's with qualifications on scope of delivery.

The IBSA website included an option for interested parties to sign up for project updates and 132 email addresses were subscribed by the end of the project.

All interested parties were emailed to alert them when drafts were available for public review. Key stakeholders were contacted by phone to alert them of the opportunity to provide input and discuss particular issues.

Research Findings

The PMC Manufactured Minerals Products Training Package was originally developed to cater for workforce development needs in the manufactured mineral products sectors, which includes production operations in the following areas:

- cement, concrete products, glass, clay and ceramic, fibre cement and precast concrete products
- glass bottles and jars
- concrete blocks and pavers.

Initial research suggested there has been significant retraction and amalgamation within the manufactured mineral products industry in recent years, which has seen some sectors (e.g. automotive glass and other flat glass manufacturing) significantly reduce or disappear, and others offshore their manufacturing operations. Industry downturn, transition of the resources sector from construction to production, robotics and automation and import competition have all contributed to reshaping sectors across the industry.

It was found that the current users of the PMC Manufactured Mineral Products Training Package predominately comprised of a small number of large operators in the cement and precast concrete industries. Some companies across this sector are not engaged in the national training system and do not believe national accreditation would be of value either to the company in terms of required skill development, or the individual, in terms of recognition and transferability. In some cases, the complexity of state variations has resulted in accredited training being difficult to implement. Jurisdictional funding was also identified as an issue.

Review of the national register (training.gov.au), showed six RTOs with qualifications from the PMC Training Package on scope:

- Alan Bartlett Consulting Pty Ltd
- Applied Training Solutions Pty Ltd
- Boral Construction Materials Ltd
- North Metropolitan TAFE
- Performance Training Pty Limited
- TAFE NSW - Western Sydney Institute.

All RTOs were contacted prior to the commencement of the project to notify them of the work that had been commissioned as well as seek their support in connecting with industry stakeholders. It should be noted that throughout the project some of the RTOs stopped delivery of the PMC qualifications and were considering taking them off scope.

Analysis of NCVER data across the PMC Manufactured Mineral Products Training Package showed there had been consistently low enrolments over the period 2011 to 2015, with significant components attracting no enrolments at all. The strongest interest had been at the Certificate III level, predominately through government funded enrolments. Considering the NCVER data, IBSA extended its analysis and consultation to include all components of the PMC Manufactured Mineral Products Training Package, including two additional units of competency (total of 81 units for the project) and three additional qualifications:

- PMC50116 Diploma of Manufactured Mineral Products
- PMC60116 Advanced Diploma of Manufactured Mineral Products
- PMC80116 Graduate Certificate in Refractories Engineering.

These components were added to the scope of work as the data indicated no enrolments had ever been reported to NCVET for these qualifications.

Mapping

PMC units were mapped to the MSM Manufacturing Training Package, it was identified that MSM units were not suitable replacements for the PMC units. However, the following units were identified as potentially being replaced in future training package development work:

- PMC562083 Allocate and complete team tasks
- MSMSUP102 Communicate in the workplace (core in the Certificate III Manufactured Mineral Products)

A communication and team work cross sector project is currently underway to develop units that may replace the above units. Unfortunately, due to the project timings, it was not possible to consider these cross-sector units as part of this project.

The mapping process also highlighted that the elements and performance criteria across the PMC units of competency had a particular focus on dealing with problems and controlling hazards. Industry confirmed that this was imperative as operators regularly needed to be able to identify and deal with problems and hazards in the context of the task. This was considered throughout the review to ensure that each unit reinforced this approach across everything the operator was undertaking.

As required by the Activity Order, the Certificate II, Certificate III and Certificate IV in Manufactured Mineral Products were mapped to the same AQF level qualifications in the MSM Manufacturing Training Package [See Appendix C]. This mapping was considered by the TAC and the proposed merging of qualifications was consulted on during public consultation. The initial Case for Change suggested that potentially the Certificate II and III in Process Manufacturing qualifications (in the MSM Manufacturing Training Package) are being preferred over the PMC qualifications to meet training requirements. This was believed to be because these qualifications are more suitable to be applied to work which requires skill across a single operation, rather than knowledge of end-to-end operations as required in the PMC qualifications. In addition, it was suggested that Process Manufacturing qualifications are more likely to be registered as traineeships, and can be completed within a shorter time frame, more suitable to short term project requirements. However, the outcomes of the consultations confirmed industry did not support integrating the training needs of PMC users into the Process Manufacturing qualifications. Industry indicated their preference for retaining a standalone Manufactured Mineral Products qualification and units of competency. However, PMC training package components are proposed to be merged into the MSM Manufacturing Training Package. Further explanation of this is provided later in the Case for Endorsement.

Training and Advisory Committee (TAC)

The Manufactured Mineral Products TAC was established (see Appendix D for list of organisations), under the direction of the IRC, to provide advice around the detail of the training package components developed and reviewed. The TAC provided advice for the components which focussed on manufactured mineral product roles, skills, guidelines and standards.

A number of organisations and associations were invited to participate on the TAC, with some associations extending the invitation to their member organisations. All RTOs with PMC qualifications on scope were also invited to nominate and encourage their industry stakeholders to be involved.

TAC members were selected based on one or more of the following criteria:

- technical experience working in the job role
- technical experience directly supervising those in the job role
- specific expertise in subject through experience with the sector or service provision.

The TAC worked under the direction of the IRC who ensured adequate industry consultation occurred, monitored the TAC's progress and validated outcomes and draft Training Package components.

The TAC assisted in the identification, and connection, with stakeholders across the industry to achieve broader consultation and engagement. They were regularly kept informed of project work and notified of opportunities to inform training package development and review work.

First TAC meeting

The first TAC meeting was held on 10 October 2017 at Cement Concrete and Aggregates Australia premises in Mascot, NSW. Initial discussions acknowledged the small number of employers, and RTOs, using the Training Package.

Job roles and skill

The TAC discussed the use of the qualifications within their organisations and how they mapped to their individual, and broader sector, requirements. The TAC agreed all employees were inducted to company specifics, however, this was predominately knowledge related. The Certificate III in Manufactured Mineral Products was the main qualification recognised by industry, broader consultation on the Certificate IV in Manufactured Mineral Products was recommended for draft 1. There were no industrial arrangements aligned to the qualifications, as each organisation would generally work to their own Enterprise Bargaining Agreement (EBA). The significant impact of extensive change to training package components, in terms of associated costs for RTOs, was recognised.

The TAC discussed the role of a Certificate III worker, and it was agreed that the current descriptor (in the Certificate III in Manufactured Mineral Products) generally covered the industry expectation. The workers were advanced operators, working under the supervision of a production manager but required to work with autonomously in running a site. It was identified that almost all enrolments would be employed in the sector, either very recently (a minimum of two/three months was usual before the organisation would invest in the training), or as a professional development tool for those who were quite experienced and looking to have their skills recognised and/or upskilled. It was noted that funding impacted on the amount of training undertaken in the qualification.

The TAC reviewed the core units of the Certificate III in Manufactured Mineral Products and agreed these were appropriate. Members also assisted to identify additional units that met current industry job role requirements. It was agreed these units would form the basis of the review and there would be consideration to identify and remove those training package components that were redundant.

The TAC considered the focus of the proposed new areas of competency to meet manufactured mineral products industry needs:

- Working with materials and processes (concrete technology/precast)
- Implementing Australian Standards
- Using batch command control systems
- Mechanical maintenance for concrete plants
- Mathematics, measurements and angles.

An emphasis on the Australian Standards was identified as essential. Three standards were identified as relevant (AS1379, AS3600 and AS3610), however all Standards were not appropriate for all users. It was highlighted that the main objective was for graduates to understand what they are, where to find them, how they use them and impacts on the way they work. In addition, graduates should be able to implement these standards in their work. For example, understanding the constituents of concrete and acceptable parameters of mixing - what's acceptable and not.

Command batch operation was also highlighted as an area that was also important, such as ability to record deviations. This also related to an awareness of the different systems used, and it was noted that computer related units were often contextualised to meet this requirement.

However, it was identified that the topics for these new units were generally covered in existing PMC units, or could be covered by importing units. Further research and consultation with industry determined there was a preference for contextualising existing units of competency due to the multiple systems, plants and processes used across the different manufactured mineral products organisations. Industry was generally satisfied with the outcomes of their current approach of contextualising existing units and agreed new units were not required. They did agree that content of specific units should be strengthened to reinforce some of these areas, such as additional knowledge on Australian Standards. These units mainly related to preparing for production, batch mixing concrete and delivering concrete to site.

Although candidates enrolled in the qualifications were generally already employed, it was determined that assessment requirements should remain as being able to be assessed in the workplace or a simulated environment. Due to the nature of the work, it would be difficult to collect evidence for all aspects of the units of competency without this flexible assessment.

The TAC agreed to recommend obsolete training package components for removal in draft 1. It was confirmed that the following qualifications in the PMC Manufactured Mineral Products Training Package had no industry supported job outcome at that AQF level and no enrolment activity:

- PMC20116 Certificate II in Manufactured Mineral Products
- PMC50116 Diploma of Manufactured Mineral Products
- PMC60116 Advanced Diploma of Manufactured Mineral Products
- PMC80116 Graduate Certificate in Refractories Engineering.

Similarly, PMC units of competency were assessed to determine if units with between five and 25 enrolments (over 5 years) should be deleted. National enrolment data was analysed and 45 units were recommended for deletion, as in most cases no enrolments had been recorded in the last 2 years.

The TAC agreed that the focus for the review of the remaining 36 units at draft 1 stage should ensure they reflect current practice and terminology, better alignment with the Standards for Training Packages 2012 and removal of superfluous information (such as definitions in the Range of Conditions and repetitive information in the Assessment Requirements).

Summary of changes made in Draft 1

Units

- minor changes to the Application and licensing statement to better define competency requirements

- the Range of Conditions removed (because the information included did not meet the intent of the 2012 Standards for Training Packages - some of this information has been moved to fields in the Assessment Requirements)
- minor changes to the Elements and Performance Criteria for improved clarity and strengthening of the unit intent
- updated Unit Mapping Information
- updated link to Training Package Companion Volumes
- Performance Evidence was often a repeat of the Performance Criteria or was introducing new skill requirements not listed in the Performance Criteria. This was refined to include key information, usually about frequency and volume, remove ambiguity, and provide more consistent outcomes
- Knowledge Evidence updated to include some information that was previously included in the Range of Conditions
- reduction of significant amount of guidance/superfluous information in the Assessment Conditions to focus on the key conditions that must be in place for assessment.

Proposed New units

Feedback was sought on whether the following units and changes would meet industry requirements.

Possible skills gaps identified for PMC	Potential or existing units addressing skills gaps
Working with materials and processes (concrete technology/precast)	<p>This relates to the process of managing materials, orders, stock control and recording deviations.</p> <p>The following units could potentially address this:</p> <ul style="list-style-type: none"> • PMC552004 Prepare for production • PMC563081 Carry out stock control
Implementing Australian standards	<p>The following unit is included in electives to address applying quality standards, including Australian Standards.</p> <ul style="list-style-type: none"> • MSS402051 Apply quality standards <p>Australian Standards have also been added to the Knowledge Evidence of the following units:</p> <ul style="list-style-type: none"> • PMC552004 Prepare for production • PMC552060 Batch mix concrete • PMC552061 Deliver concrete to site
Using batch command control systems	<p>Organisations use different systems which is why training providers use a generic computer unit of competency and contextualise it. The following unit is included in the electives and is currently being used by industry to meet this requirement for manufacturing workers.</p> <ul style="list-style-type: none"> • MSMOPS212 Use organisation computers or data systems
Mechanical maintenance for concrete plants	<p>This unit has been included in the electives to meet minor maintenance requirements of the role. Workers undertake minor maintenance, such as</p>

	<p>adjustments of gates, cleaning, locking out, scrapers on belts and this unit can be contextualised to meet this requirement.</p> <ul style="list-style-type: none"> MSMSUP240 Undertake minor maintenance
Mathematics, measurements and angles	<p>TAC recommended looking at foundations skills or Construction Training Package for existing units. The following units were proposed:</p> <ul style="list-style-type: none"> CPCCCM1015A Carry out measurements and calculations FSKNUM15 Estimate, measure and calculate with routine metric measurements for work <p>Also, industry currently uses the following unit which is also included in the electives.</p> <ul style="list-style-type: none"> MSMOPS101 Make measurements

Qualifications

Updates to the qualifications included:

PMC20116 Certificate II in Manufactured Mineral Products	<ul style="list-style-type: none"> recommended for deletion due to no job outcome at this AQF level no enrolment activity Certificate III preferred
PMC30116 Certificate III in Manufactured Mineral Products	<ul style="list-style-type: none"> qualification template updated qualification description simplified packaging rules simplified <i>MSMWHS201 Conduct hazard analysis</i> added to electives as is a pre-requisite <i>CPCCCM1015A Carry out measurements and calculations</i> and <i>FSKNUM15 Estimate, measure and calculate with routine metric measurements for work</i> added to electives PMC units with no enrolment activity removed elective bank reduced
PMC40116 Certificate IV in Manufactured Mineral Products	<ul style="list-style-type: none"> very low (single digit) enrolment activity feedback was sought as to whether the Certificate IV should remain and if so how the Certificate IV role differentiates from the Certificate III role.
PMC50116 Diploma of Manufactured Mineral Products	<ul style="list-style-type: none"> recommended for deletion due to no job outcome at this AQF level no enrolment activity
PMC60116 Advanced Diploma of Manufactured Mineral Products	<ul style="list-style-type: none"> recommended for deletion due to no job outcome at this AQF level. no enrolment activity

PMC80116 Graduate Certificate in Refractories Engineering	<ul style="list-style-type: none"> recommended for deletion due to no job outcome at this AQF level. no enrolment activity
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Proposed merge with MSM Training Package

Also included was a draft qualification which merged PMC30116 Certificate III in Manufactured Mineral Products with MSM30116 Certificate III in Process Manufacturing. Feedback was sought as to whether a merged qualification was supported by stakeholders.

Draft 1 Public consultation

Draft 1 components were available for review and comment on the IBSA website for four (4) weeks from 6 November to 1 December 2017. A consultation paper, which provided a summary of key information about proposed changes to the PMC Manufactured Mineral Products Training Package and questions for stakeholders accompanied the draft training package products.

An email notification was sent to stakeholders when the draft components were released on the IBSA website. This notification included State and Territory Training Authorities, Industry Training Advisory Bodies (ITABs), RTOs with the PMC qualifications on scope, and 93 stakeholders who had registered their interest in the project. In addition, associations notified approximately 145 member organisations. Appendix D includes industry stakeholders who were notified of the consultation.

During the consultation period the Project page on the IBSA website received 129 views and IBSA received 5 feedback submissions. Appendix E lists the organisations that provided written feedback.

The issues register, that was used to compile feedback throughout this period, noted the following general issues:

- the additional information included in the knowledge evidence section of the assessment requirements (moved from the range of conditions) was reduced to ensure content was appropriate for all users
- overall feedback was not in support of merging the PMC Certificate III with the MSM Certificate III. This was mainly due to an irrelevant core unit and difficulty in meeting packaging rules.
- support for the removal of obsolete training package components
- support for contextualising existing units in place of developing new units.

Second TAC meeting

The TAC met on 6 February 2018, via teleconference, to discuss draft 1 feedback and make recommendations about future development.

The core units for the Certificate III in Manufactured Mineral Products were reconfirmed, with strong preference that core units should remain generic so that the qualification was flexible enough to meet the needs of the diverse range of industries using the qualification. It was noted that sector specific detail would be gained through the selection of relevant electives.

Feedback on merging PMC30116 Certificate III in Manufactured Mineral Products with MSM30116 Certificate III in Process Manufacturing suggested that this approach would not suit industry. The TAC

supported this position, advising MSM30116 Certificate III in Process Manufacturing did not meet the job outcome requirements for those working in the manufactured minerals products sector. Of note was the total number of units required for each qualification being different, the complexity of packaging rules for the MSM30116 Certificate III in Process Manufacturing, as well as a core unit in the Process Manufacturing qualification (MSS402051 Apply quality standards) deemed not appropriate. The TAC supported a revised, standalone version, of PMC30116 Certificate III in Manufactured Mineral Products be recoded and added to the MSM Manufacturing Training Package. All remaining PMC units would also be recoded and added to the MSM Manufacturing Training Package. As a result, the PMC Manufactured Mineral Products Training Package would be deleted. This deletion included the Certificate IV in Manufactured Mineral Products as there was no feedback to oppose the TACs initial recommendation that there was not an industry supported vocational outcome at this level.

The TAC reconfirmed they did not support the development of the new units and preferred to strengthen the existing units by referencing Australian Standards in the knowledge evidence of relevant units and contextualise existing units to meet skills and knowledge requirements.

Actions for training package development arising from this meeting and other targeted consultation included:

- recoding of PMC training package components to MSM
- qualification descriptor revised to acknowledge quarry and asphalt industries
- reducing the total number of electives by 2 and update packaging rules
- minor content changes to units arising from feedback which did not impact vocational outcome
- removal of excessive Knowledge Evidence, some resulting from incorporating Range of Conditions (this type of information to be retained in a separate Companion Volume)
- strengthening or including content related to Australian Standards in relevant units
- reordering elements for consistency across units.

Summary of changes made in Draft 2 (validation)

Units

- 36 units recoded to MSMPMCXXX
- changes to the Elements and Performance Criteria including the re-ordering of some elements for improved consistency in sequencing
- updating Unit Mapping Information
- Performance Evidence refined to ensure volume and frequency was well-defined and supported a consistent outcome
- Knowledge Evidence refined to ensure alignment with elements and performance criteria as well as applicability across industries, where relevant
- minor changes to further improve alignment with 2012 Standards for Training Packages (note Range of Conditions information will be retained in a separate Companion Volume User Guide).

Qualifications

PMC30116 Certificate III in Manufactured	<ul style="list-style-type: none"> • qualification recoded MSM • qualification template updated • qualification description simplified and updated to include asphalt and quarry industries
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Mineral Products	<ul style="list-style-type: none"> • electives reduced from 15 units to 13 units • <i>MSMWH201 Conduct hazard analysis</i> added to electives as is a pre-requisite
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Draft 2 (validation) public consultation

Draft 2 (validation) components were made available to the public via the IBSA website for four (4) weeks ending 9 March 2018. A consultation paper accompanied the draft training package components which provided a summary of key information about proposed changes to the PMC Manufactured Mineral Products Training Package.

An email notification was sent to stakeholders when draft components were released on the IBSA website. This included State and Territory Training Authorities, Industry Training Advisory Bodies (ITABs), RTOs with the PMC qualifications on scope, and 132 stakeholders who had registered their interest in the project were also notified. In addition, associations notified approximately 145 member organisations. Appendix D includes industry stakeholders who were notified of the consultation.

All RTOs with PMC qualifications on scope were also phoned to discuss the changes, gather feedback, and encourage them to promote the consultation with their industry networks.

During the consultation period the Project page on the IBSA website received 167 views and IBSA received 5 feedback submissions. Appendix E lists the organisations that provided written feedback.

The issues register for this stage of the project includes:

- support for the changes implemented
- clarification on the removal of the Certificate IV in Manufactured Mineral Products
- minor amendment to the foundations skills field of some units to provide context
- minor amendment to remove ambiguous and clarify terminology in performance evidence.

Final TAC meeting

The TAC met on 27 March 2018, via teleconference, to consider feedback from draft 2 and finalise components for approval. Each piece of feedback was considered, the TAC agreed the following actions:

- Proceed with the removal of the Certificate IV in Manufactured Mineral Products
- Clarify the term 'measure' in the foundation skills field, replace with 'measure reinforcement to specifications'
- Reduce ambiguity by updating the performance evidence of relevant units to 'recognise possible causes...' rather than 'distinguish between potential causes...'
- Provide context to the performance evidence of relevant units by updating lead statement to include '...ensure product integrity and conformance to specification'

The TAC confirmed the reference to 'experienced operator' was accurate and should remain in the application of 'Prepare moulds and dies', 'Produce architectural precast concrete' and 'Produce structural precast concrete'. It was noted that these units were usually undertaken toward the end of a training program.

The TAC also determined that:

- The job role was at an AQF level three and confirmed the accuracy of the AQF alignment.
- The vocational outcome of the new qualification is equivalent to PMC30116 Certificate III in Manufactured Mineral Products. It was noted that the total number of units required for the

qualification had been reduced by two. However, core units had not changed and updates to units strengthened the content and provided improved clarity of industry's expectations. The TAC also agreed that someone who held the 'old' or 'new' qualification would be qualified to do the same job.

- The Volume of Learning was between 12 and 24 months and it was recommended that the qualification is appropriate for a traineeship/apprenticeship.
- Unit codes should be updated using a consecutive sequence and AQF alignment. This will assist to better reflect the complexity of the task being described. The proposed amendments to the Application of all units was confirmed, again to better reflect the complexity of the task and provide guidance to the user.
- The vocational outcome of all units remained equivalent. It was noted that superfluous information had been removed and the content strengthened to improve consistent outcomes. However, unit titles had remained the same because the function being described had not changed.
- New units were not required for development and that sufficient content had been built into existing units to ensure coverage.
- The Implementation Guide was accurate providing suggestions for clarification of some statements.
- The TAC supported the components being put to Process Manufacturing, Recreational Vehicles and Laboratory IRC for approval, and subsequently the AISC for endorsement.

State/Territory engagement

IBSA Manufacturing has actively engaged with all State and Territory Training Authorities (STAs) throughout the project, providing an initial briefing, maintaining open dialogue and requesting comments or issues raised on Draft 1 and Draft 2 (validation) components. STAs also had two weeks at the end of the project to review and provide feedback on the final drafts of training package components, as required by the Training Package Development and Endorsement Products Policy.

STA Personnel

Given Name	Family Name	Organisation	State
Jodie	Kafer	ACT Chief Minister, Treasury and Economic Development Directorate	ACT
Nelson	Brown	Department of Business	NT
Lee	Carter	Department of Education and Training	VIC
Marina	Borrello	Department of State Development	SA
Lisa	Barron	Department of Training and Workforce Development	WA
Susan	Bearfield	NSW Department of Industry	NSW
Guy	Valentine	Strategic Engagement Skills Investment and Market Strategy Department of Education and Training	QLD

Given Name	Family Name	Organisation	State
Stuart	Hollingsworth	Skills Tasmania	TAS

Reports by exception

There are no reports by exception.

Support by Industry Reference Committee

A fully constituted Process Manufacturing, Recreational Vehicle and Laboratory IRC approved the draft components for submission to the Australian Industry and Skills Committee for endorsement. See Appendix F for IRC letter of support.

Training package components marked for deletion

The Case for Endorsement proposes the deletion of the PMC Manufactured Mineral Products Training Package, as well as 5 associated qualifications and 45 units of competency. State and Territory Training Authorities were advised early in the consultation, draft 1, of proposed deletions. These were again highlighted in draft 2 consultation. Downstream impacts of the removal of these components should be minimal as almost all components have had no enrolment activity over the past 2 years. Many components have not recorded enrolments for even longer. As a result, it is recommended that these components are deleted at the same time that Release 3.0 of the MSM Manufacturing Training Package is published on the national register.

D. Industry expectations about training delivery

Training delivery

The *Companion Volume Implementation Guide* includes advice about industry's expectations of training delivery. Duration of training, delivery modes and pathways, work-based learning strategies, assessment and learner characteristics are included in the Implementation Guide.

The *Companion Volume Range of Conditions* includes all Range of Condition that were in the original units. As more MSM units are revised this Guide will be updated. Range of conditions were deemed as often providing useful information for training implementation and therefore industry's preference was that information should not be lost.

Delivery as an apprenticeship/traineeship

The Process Manufacturing, Recreational Vehicle and Laboratory IRC and Manufactured Mineral Products TAC agree that the MSM30318 Certificate III in Manufactured Mineral Products is recommended for a traineeship or apprenticeship.

E. Implementation of the new training packages

Occupation and licensing requirements

No licensing or certification requirements apply to the units or qualifications included in this submission. There are regulations, standards and/or external accreditation requirements that may apply to the

various sectors using this training package. Because the requirements vary between jurisdictions, the following statement has been added to all units of competency:

No licensing or certification requirements exist at the time of publication. Relevant legislation, industry standards and codes of practice within Australia must also be applied.

The qualifications include the following statement:

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

Implementation issues and management strategy

All units of competency have been analysed, the range of conditions removed, and assessment requirements clarified and made more succinct. They have been recoded and repackaged to the MSM Manufacturing Training Package.

These changes will require RTOs to update their scope of delivery, review and update training and assessment plans, and review and update training and assessment materials.

The transition period from PMC30116 Certificate III in Manufactured Mineral Products to MSM30318 Certificate III Manufactured Mineral Products will be 12 months, in line with the Standards for RTOs (2015). This will also be the case for MSM Manufacturing Training Package Release 2.0 to Release 3.0. New learners must not commence training in a unit of competency that has been removed or deleted from the National Register.

Learners currently enrolled in units that are proposed to be deleted will have two years to finalise completion. According to available enrolment data the units proposed for deletion have not had enrolments for more than two (2) years.

Funding arrangements will need to be reviewed by states and territories.

F. Quality assurance reports

IBSA Manufacturing declares that the proposed components of the MSM Manufacturing Training Package Release 3.0 meet the requirements of the Standards for Training Packages 2012, Training Package Products Policy and Training Package Development and Endorsement Process Policy.

This declaration is confirmed by the independent Quality Assurance report.

The Companion Volume Implementation Guide has been quality assured through the IBSA Manufacturing internal process, and through the independent quality assurance process. It is available with this submission and will be available on the VETNet website at endorsement.

Statement of evidence against the Training Package Quality Principles

Training Package Quality Principles	Evidenced by:
1. Reflect identified workforce outcomes	Changes made demonstrate a clear link back to relevant AISC decisions commissioning the work, the IRC Skills Forecast and Proposed Schedule of Work, National Review Schedule and the PMC Business Case 2016 and include:

	<ul style="list-style-type: none"> Revision and update of 36 units of competency and 1 qualification to better align with industry outcomes.
	<ul style="list-style-type: none"> Training package components are compliant with the <i>Standards for Training Packages 2012</i>, the <i>Training Package Products Policy</i> and the <i>Training Package Development and Endorsement Process Policy</i>, as evidenced by the Quality Assurance report. Evidence that the training package components respond to Ministers' policy initiatives, in particular the 2015 training package reforms, including the removal of duplication and obsolete components where 1 Training Package, 5 qualifications and 45 units have been deleted. 36 units and 1 qualification from PMC Training Package retained, revised and repackaged in the MSM Training Package
	<ul style="list-style-type: none"> Open and inclusive consultation and validation commensurate with scope and impact has been conducted, as described in the Case for Endorsement.
2. Support portability of skills and competencies including reflecting licensing and regulatory requirements	<ul style="list-style-type: none"> Packaging rules, qualifications framework, and pathways support movement within and across sectors, as described in the MSM Companion Volume Implementation Guide, Release 3.0
	<ul style="list-style-type: none"> Other national and international standards for skills are considered.
	<ul style="list-style-type: none"> No licensing or certification requirements exist at the time of publication.
3. Reflect national agreement about the core transferable skills and core job-specific skills required for job roles as identified by industry	<ul style="list-style-type: none"> Active and extensive engagement across industry has sought to achieve a national consensus about the advice being provided to the AISC, as described in this Case for Endorsement.
4. Be flexible to meet the diversity of individual and employer needs, including the capacity to adapt to changing job roles and workplaces	<ul style="list-style-type: none"> Provide a flexible qualification that enable application in different contexts.
	<ul style="list-style-type: none"> Provide multiple entry and exit points, as described in the MSM Companion Volume Implementation Guide, Release 3.0
5. Facilitate recognition of an individual's skills and knowledge and support movement between the school, vocational education and higher education sectors	<ul style="list-style-type: none"> Provide pathways from entry level into work, and between VET and higher education qualifications, as described in the MSM Companion Volume Implementation Guide, Release 3.0.
6. Support interpretation by training providers and others	<ul style="list-style-type: none"> Industry advice about delivery is provided in the MSM Companion Volume Implementation Guide, Release 3.0. A

through the use of simple, concise language and clear articulation of assessment requirements	Companion Volume Range of Conditions will also be available.
	<ul style="list-style-type: none"> • Units of competency and their associated assessment requirements are clearly written and have consistent breadth and depth.
	<ul style="list-style-type: none"> • Components comply with the TGA/National Register requirements for publication. • Implementation advice is provided in MSM Companion Volume Implementation Guide, Release 3.0.

Declaration

IBSA Manufacturing, the SSO for the Process Manufacturing, Recreational Vehicle and Laboratory Industry Reference Committee (IRC), declares that the proposed training package component(s) meet the requirements of the *Standards for Training Packages 2012*, *Training Package Products Policy* and *Training Package Development and Endorsement Process Policy*.

Furthermore, IBSA Manufacturing, the SSO for the Process Manufacturing, Recreational Vehicle and Laboratory Industry Reference Committee (IRC), declares that the Companion Volume Implementation Guide is available and has been quality assured.

G. Implementation of the COAG Industry Skills Council reforms to training packages

The decision being sought from the AISC will support the COAG Industry and Skills Council reforms to training packages. Completion of the training package development work outlined in the Case for Change, together with industry consultation confirms that this work:

<ul style="list-style-type: none"> • has removed superfluous information from units of competency, does not duplicate qualifications and units from other training packages, and has removed units and qualifications that are obsolete
<ul style="list-style-type: none"> • includes information about industry's expectations of training delivery (i.e. duration of training, mode of delivery and learner characteristics) in the MSM Companion Volume Implementation Guide, Release 3.0
<ul style="list-style-type: none"> • has improved qualification design to clarify the AQF outcomes and enable individuals to move easily from one related occupation to another
<ul style="list-style-type: none"> • improved the efficiency of the training system through the creation of units of competency that can be owned and used by multiple industry sectors. The MSM Manufacturing Training Package addresses the training and recognition needs of its workers across multiple sectors and industries.

H. A copy of the full content of the proposed training package component(s)

All proposed components for MSM Manufacturing Training Package Release 3.0 have been finalised in line with AISC Activity Order and accompany this submission.

All components have been developed to comply with the requirements of the National Register and include a modification history.

Appendix A: Details of Activity Order

Details of the training package development and review work to be completed as part of this activity order are as follows:

- Analyse PMC units of competency for repackaging into MSM Training Package, including:
 - assessing whether units with between five and 25 national enrolments (over five years) should be deleted
 - conducting a mapping and comparison exercise of units with above 25 enrolments to determine which PMC units can be replaced with MSM units
 - reviewing remaining units to ensure they reflect current practice and terminology and appropriate assessment requirements
 - importing reviewed PMC units into the MSM Training Package.
- Map Certificate II, III and IV qualifications in PMC Training Package to determine alignment with relevant qualifications in MSM Manufacturing Training Package. Consult with industry to confirm support, identify gaps, and realign PMC qualifications to fit within MSM Training Package. As part of this project 79 units are to be reviewed, and updated where required, in consultation with industry.
- Develop at least 5 new units of competency that meet manufactured mineral products:
 - Working with materials and processes (concrete technology/precast)
 - Implementing Australian Standards
 - Using batch command control systems
 - Mechanical maintenance for concrete plants
 - Mathematics, measurements and angles.

Appendix B: Draft endorsed components

Mapping new MSM units of competency

Unit code	Unit title	Unit code	Unit title	Comment
PMC561080	Organise self	MSMPMC200	Organise self	New Unit. Supersedes and is equivalent.
PMC553051	Produce structural precast concrete	MSMPMC300	Produce structural precast concrete	New Unit. Supersedes and is equivalent.
PMC561072	Store materials for production	MSMPMC301	Store materials for production	New Unit. Supersedes and is equivalent.
PMC552002	Operate equipment to blend/mix materials	MSMPMC302	Operate equipment to blend/mix materials	New Unit. Supersedes and is equivalent.
PMC552003	Operate grinding equipment	MSMPMC303	Operate grinding equipment	New Unit. Supersedes and is equivalent.
PMC552004	Prepare for production	MSMPMC304	Prepare for production	New Unit. Supersedes and is equivalent.
PMC552007	Heat accelerate the curing of precast concrete	MSMPMC305	Heat accelerate the curing of precast concrete	New Unit. Supersedes and is equivalent.
PMC552008	Operate crushing equipment	MSMPMC306	Operate crushing equipment	New Unit. Supersedes and is equivalent.
PMC552010	Operate a calcining kiln	MSMPMC307	Operate a calcining kiln	New Unit. Supersedes and is equivalent.
PMC552020	Operate slip casting equipment	MSMPMC308	Operate slip casting equipment	New Unit. Supersedes and is equivalent.
PMC552023	Finish products after firing	MSMPMC309	Finish products after firing	New Unit. Supersedes and is equivalent.
PMC552024	Hand mould products	MSMPMC310	Hand mould products	New Unit. Supersedes and is equivalent.
PMC552030	Operate a firing kiln	MSMPMC311	Operate a firing kiln	New Unit. Supersedes and is equivalent.

PMC552048	Operate glass finishing equipment	MSMPMC312	Operate glass finishing equipment	New Unit. Supersedes and is equivalent.
PMC552050	Schedule, cut and bend reinforcement	MSMPMC313	Schedule, cut and bend reinforcement	New Unit. Supersedes and is equivalent.
PMC552051	Finish green concrete products	MSMPMC314	Finish green concrete products	New Unit. Supersedes and is equivalent.
PMC552052	Cast moulded concrete products	MSMPMC315	Cast moulded concrete products	New Unit. Supersedes and is equivalent.
PMC552053	Finish cured concrete products	MSMPMC316	Finish cured concrete products	New Unit. Supersedes and is equivalent.
PMC552055	Conduct benching operations	MSMPMC317	Conduct benching operations	New Unit. Supersedes and is equivalent.
PMC552056	Assemble, fabricate and place reinforcement	MSMPMC318	Assemble, fabricate and place reinforcement	New Unit. Supersedes and is equivalent.
PMC552057	Finish casting operation	MSMPMC319	Finish casting operation	New Unit. Supersedes and is equivalent.
PMC552058	Demould concrete products	MSMPMC320	Demould concrete products	New Unit. Supersedes and is equivalent.
PMC552060	Batch mix concrete	MSMPMC321	Batch mix concrete	New Unit. Supersedes and is equivalent.
PMC552061	Deliver concrete to site	MSMPMC322	Deliver concrete to site	New Unit. Supersedes and is equivalent.
PMC552065	Prepare asphalt	MSMPMC323	Prepare asphalt	New Unit. Supersedes and is equivalent.
PMC562070	Move materials	MSMPMC324	Move materials	New Unit. Supersedes and is equivalent.
PMC562071	Operate bulk materials handling equipment	MSMPMC325	Operate bulk materials handling equipment	New Unit. Supersedes and is equivalent.

PMC562081	Deliver customer service	MSMPMC326	Deliver customer service	New Unit. Supersedes and is equivalent.
PMC562083	Allocate and complete team tasks	MSMPMC327	Allocate and complete team tasks	New Unit. Supersedes and is equivalent.
PMC552094	Prepare for and apply shotcrete for installation	MSMPMC328	Prepare for and apply shotcrete for installation	New Unit. Supersedes and is equivalent.
PMC553020	Prepare moulds and dies	MSMPMC329	Prepare moulds and dies	New Unit. Supersedes and is equivalent.
PMC553050	Produce architectural precast concrete	MSMPMC330	Produce architectural precast concrete	New Unit. Supersedes and is equivalent.
PMC563081	Carry out stock control	MSMPMC400	Carry out stock control	New Unit. Supersedes and is equivalent.
PMC553000	Set up and tune a process	MSMPMC401	Set up and tune a process	New Unit. Supersedes and is equivalent.
PMC553010	Process raw meal into product	MSMPMC402	Process raw meal into product	New Unit. Supersedes and is equivalent.
PMC553040	Set up and optimise glass forming process	MSMPMC403	Set up and optimise glass forming process	New Unit. Supersedes and is equivalent.

Mapping new MSM Qualification

Qualification code	Qualification title	Qualification code	Qualification title	Comment
PMC30116	Certificate III in Manufactured Mineral Products	MSM30318	Certificate III in Manufactured Mineral Products	New Qualification. Supersedes and is equivalent.

Additional imported units of competency

Unit code	Unit title
PMAOPS101	Read dials and indicators
CPCCCM1016A	Identify requirements for safe tilt-up work
MSAPMSUP201A	Receive or despatch goods
MSS402040	Apply 5S procedures

MSS402051	Apply quality standards
RIIMPO304D	Conduct wheel loader operations

Deleted PMC units of competency

Unit code	Unit title
PMC552005	Process greenware/green products
PMC552006	Operate an autoclave
PMC552021	Operate manual glazing equipment
PMC552022	Prepare materials for clay and ceramic production
PMC552031	Operate extrusion equipment
PMC552032	Operate pressing equipment
PMC552040	Operate glass melting process
PMC552041	Operate process ovens
PMC552042	Operate blown insulation equipment
PMC552043	Operate float forming equipment
PMC552044	Operate fibre forming equipment
PMC552045	Operate container forming equipment
PMC552046	Operate glass printing equipment
PMC552047	Operate primary annealing equipment
PMC552049	Operate on-line stacking and assembly equipment
PMC552054	Spin concrete pipes
PMC552070	Operate forming equipment
PMC552072	Produce fibrous plasterboard
PMC552090	Use and maintain tools and equipment for refractory operations
PMC552091	Prepare for, install and repair refractory brickwork/blockwork
PMC552092	Prepare for and install mouldable refractory materials
PMC552093	Prepare for and cast refractory materials
PMC552095	Prepare for, install and repair ceramic fibre
PMC553021	Set up and tune glazing equipment
PMC553041	Set up and optimise glass furnace process
PMC553042	Set up and optimise secondary process
PMC553070	Design and construct moulds for fibrous plaster products
PMC553072	Model fibrous plaster products

PMC553080	Set up and optimise finishing process
PMC554020	Design and prepare models, moulds and dies
PMC554090	Undertake simple refractory design
PMC554091	Analyse refractory failures
PMC555030	Analyse equipment performance
PMC555031	Choose materials for an application
PMC556031	Design structural/mechanical components
PMC557001	Manage trials
PMC557090	Select refractory materials for an application
PMC557091	Design a refractory lining
PMC557092	Specify and interpret refractory tests
PMC557093	Design a refractory/ceramic component
PMC557094	Investigate refractory failures
PMC557095	Specify and monitor the installation of monolithic/castable refractories
PMC557096	Specify and monitor the installation of block/precast refractories
PMC557097	Specify and monitor repairs to refractory installations
PMC557098	Specify refractory installation systems

Deleted PMC qualifications

Code	Title
PMC20116	Certificate II in Manufactured Mineral Products
PMC40116	Certificate IV in Manufactured Mineral Products
PMC50116	Diploma of Manufactured Mineral Products
PMC60116	Advanced Diploma of Manufactured Mineral Products
PMC80116	Graduate Certificate in Refractories Engineering

Deleted PMC Training Package

Code	Title	Release
PMC	Manufactured Mineral Products	1.0

Credit arrangements

At the time of endorsement of this training package, no national credit arrangements exist.

Appendix C: Mapping PMC qualifications to MSM qualifications

Mapping PMC20116 Certificate II in Manufactured Mineral Products to MSM20116 Certificate II in Process Manufacturing

Purpose: to see if the PMC qualification can be merged into the MSM Training Package

	PMC20116 Certificate II in Manufactured Mineral Products	MSM20116 Certificate II in Process Manufacturing	Proposed merge MSM2011x Certificate II in Process Manufacturing (Manufactured Mineral Products)
Qualification Description	<p>The PMC20116 Certificate II in Manufactured Mineral Products covers the skills and knowledge required to perform a range of process operations within the manufactured mineral products industries.</p> <p>The qualification is suitable to prepare new employees and to develop existing workers to perform an operational role to directly produce product.</p> <p>The operator will be able to operate production equipment within defined specifications and procedures and carry out a range of support functions. The operator will be able to apply technical and procedural knowledge to a defined range of situations and activities.</p> <p>The operator will be able to solve predictable problems by applying known solutions and will report non-routine problems to appropriate personnel.</p> <p>The qualification provides the skills and knowledge relevant to the following sectors:</p> <ul style="list-style-type: none"> • cement • precast concrete products • premixed concrete 	<p>The MSM20116 Certificate II in Process Manufacturing provides the competencies required by competent production workers who undertake vital production support roles directly related to producing products. Production workers apply a breadth and depth of knowledge to a defined range of situations and would be expected to apply this knowledge to solve a defined range of problems by applying known solutions to a limited range of predictable problems.</p> <p>This qualification has been developed for use across the three process manufacturing sectors:</p> <ul style="list-style-type: none"> • chemical, hydrocarbons and refining • plastics, rubber and cabling • manufactured mineral products. 	<p>The MSM20116 Certificate II in Process Manufacturing provides the competencies required by competent production workers who undertake vital production support roles directly related to producing products. Production workers apply a breadth and depth of knowledge to a defined range of situations and would be expected to apply this knowledge to solve a defined range of problems by applying known solutions to a limited range of predictable problems.</p> <p>This qualification has been developed for use across the three process manufacturing sectors:</p> <ul style="list-style-type: none"> • chemical, hydrocarbons and refining • plastics, rubber and cabling • manufactured mineral products. <p>There are no specific licenses that relate to this qualification. However, some units in this qualification may have licensing or regulatory requirements in some jurisdictions. Local regulations should be checked for details.</p>

	PMC20116 Certificate II in Manufactured Mineral Products	MSM20116 Certificate II in Process Manufacturing	Proposed merge MSM2011x Certificate II in Process Manufacturing (Manufactured Mineral Products)
	<ul style="list-style-type: none"> • clay products • ceramic products • float (flat) glass • glass containers • refractories • plaster (both fibrous plaster and plaster boards) • fibre cement boards and other products • ground minerals • abrasive grinding wheels and cutting discs. <p>For job roles at Certificate I level see MSM10116 Certificate I in Process Manufacturing.</p> <p>For people who do not directly produce product but work in production support roles see MSM20116 Certificate II in Process Manufacturing.</p> <p>For people who require a more generalist qualification covering the application of good manufacturing practice and lean principles see MSS20316 Certificate II in Competitive Systems and Practices.</p> <p>The PMC20116 Certificate II in Manufactured Mineral Products contains units of competency that can be credited towards other manufacturing qualifications such as:</p> <ul style="list-style-type: none"> • PMC30116 Certificate III in Manufactured Mineral Products • MSM30116 Certificate III in Process Manufacturing • MSS30316 Certificate III in Competitive Systems and Practices 		

	PMC20116 Certificate II in Manufactured Mineral Products	MSM20116 Certificate II in Process Manufacturing	Proposed merge MSM2011x Certificate II in Process Manufacturing (Manufactured Mineral Products)
	There are no specific licenses that relate to this qualification. However, some units in this qualification may have licensing or regulatory requirements in some jurisdictions. Local regulations should be checked for details.		
Qualification Description notes	<p>Graduates directly produce product.</p> <p>Not sure why it says if not producing product see MSM20116 for more of a generalist/support role because that qual is also for employees to directly produce product. Just different product groups.</p> <p>Most of this description belongs in an implementation guide.</p>	<p>Graduates directly produce products in:</p> <ul style="list-style-type: none"> chemical, hydrocarbons and refining plastics, rubber and cabling manufactured mineral products <p>Already states it can have the same outcome as PMC20116</p> <p>Missing Licencing statement from PCM20116</p>	<p>Keep the same except with the addition of licensing statement.</p> <p>Move additional information in the PMC20116 qualification descriptor to implementation guide.</p>
Packaging rules	<p>To be awarded the PMC20116 Certificate II in Manufactured Mineral Products competency must be achieved in fifteen (15) units of competency:</p> <ul style="list-style-type: none"> six (6) core units of competency nine (9) elective units of competency from Groups A and B, as specified below. <ul style="list-style-type: none"> A minimum of two (2) specialist elective units must be chosen from Group A; up to one (1) specialist elective unit may be chosen from Group A of PMC30116 Certificate III in 	<p>To be awarded the MSM20116 Certificate II in Process Manufacturing, competency must be achieved in fourteen (14) units of competency:</p> <ul style="list-style-type: none"> three (3) core units of competency eleven (11) elective units of competency, four (4) of which can be selected from this Training Package, other endorsed Training Packages and accredited courses, as specified below. 	<p>To be awarded the MSM20116 Certificate II in Process Manufacturing, competency must be achieved in fourteen (14) units of competency:</p> <ul style="list-style-type: none"> three (3) core units of competency eleven (11) elective units of competency, four (4) of which can be selected from this Training Package, other endorsed Training Packages and accredited courses, as specified below. <p>Any combination of electives that meets the rules</p>

	PMC20116 Certificate II in Manufactured Mineral Products	MSM20116 Certificate II in Process Manufacturing	Proposed merge MSM2011x Certificate II in Process Manufacturing (Manufactured Mineral Products)
	<p>Manufactured Mineral Products</p> <ul style="list-style-type: none"> The balance of units, to a maximum of seven (7), may be chosen from Group A or Group B to bring the total number of electives to fifteen (15). <p>Up to four (4) of the elective units of competency can be selected from this Training Package; other endorsed Training Packages and accredited courses, where those units are available at Certificate II or III.</p> <p>Note: Where prerequisite units apply, these must be counted in the total number of units required for achievement of the qualification.</p>	<p>Note: Where prerequisite units are identified they must be counted in the total number of units required for achievement of the qualification.</p>	<p>above can be selected for the award of the Certificate II in Process Manufacturing. Where appropriate, electives may be packaged to provide a qualification with a specialisation.</p> <p>Packaging for each specialisation:</p> <p>Four (4) Group A electives and at least two (2) group B electives must be selected for award of the Certificate II in Process Manufacturing (Manufactured Mineral Products)</p> <p>Note: Where prerequisite units are identified they must not be counted in the total number of units required for achievement of the qualification.</p> <p>Total units: 14 (note 1 less than PMC20116)</p>
Core units	<p>MSMENV272</p> <p>Participate in environmentally sustainable work practices</p>	<p>MSMENV272</p> <p>Participate in environmentally sustainable work practices</p>	<p>MSMENV272</p> <p>Participate in environmentally sustainable work practices</p>
	<p>MSMWHS200</p> <p>Work safely</p>	<p>MSMWHS200</p> <p>Work safely</p>	<p>MSMWHS200</p> <p>Work safely</p>

	PMC20116 Certificate II in Manufactured Mineral Products	MSM20116 Certificate II in Process Manufacturing	Proposed merge MSM2011x Certificate II in Process Manufacturing (Manufactured Mineral Products)
		MSMSUP210 Process and record information	MSMSUP210 Process and record information
	MSMSUP100 Apply workplace procedures		Add to MMP specialisation (group A electives)
	MSMSUP101 Clean workplace or equipment		Add to MMP specialisation (group A electives)
	MSMSUP102 Communicate in the workplace		Add to MMP specialisation (group A electives)
	MSMOPS101 Make measurements OR (not both) PMAOPS101 Read dials and indicators		Add to MMP specialisation (group A electives) Complete 4
Electives:	Following electives missing from <i>MSM20016</i> : PMAOPS216	Remove these electives from general list because they will appear in proposed MMP Group B electives:	Add to a new MMP specialisation (group B electives) Complete 2 units

	PMC20116 Certificate II in Manufactured Mineral Products	MSM20116 Certificate II in Process Manufacturing	Proposed merge MSM2011x Certificate II in Process Manufacturing (Manufactured Mineral Products)
	PMC552002 PMC552003 PMC552004 PMC552005 PMC552006 PMC552007 PMC552008 PMC552010 PMC552020 PMC552021 PMC552022 PMC552023 PMC552024 PMC552030 PMC552031 PMC552032 PMC552040 PMC552041 PMC552042 PMC552043 PMC552044 PMC552045 PMC552046 PMC552047 PMC552048 PMC552049 PMC552050 PMC552051	MSMOPS200 MSMOPS212 MSMSUP230	MSMOPS200 MSMOPS212 MSMSUP230 PMAOPS216 PMC552002 PMC552003 PMC552004 PMC552005 PMC552006 PMC552007 PMC552008 PMC552010 PMC552020 PMC552021 PMC552022 PMC552023 PMC552024 PMC552030 PMC552031 PMC552032 PMC552040 PMC552041 PMC552042 PMC552043 PMC552044 PMC552045 PMC552046 PMC552047

	PMC20116 Certificate II in Manufactured Mineral Products	MSM20116 Certificate II in Process Manufacturing	Proposed merge MSM2011x Certificate II in Process Manufacturing (Manufactured Mineral Products)
	PMC552052 PMC552053 PMC552054 PMC552055 PMC552056 PMC552057 PMC552058 PMC552060 PMC552061 PMC552065 PMC552070 PMC552072 PMC552090 PMC552091 PMC552092 PMC552093 PMC552094 PMC552095		PMC552048 PMC552049 PMC552050 PMC552051 PMC552052 PMC552053 PMC552054 PMC552055 PMC552056 PMC552057 PMC552058 PMC552060 PMC552061 PMC552065 PMC552070 PMC552072 PMC552090 PMC552091 PMC552092 PMC552093 PMC552094 PMC552095
	Following electives missing from <i>MSM20016</i> : RIIRIS201D MSS402031		Add to proposed Group C electives

	PMC20116 Certificate II in Manufactured Mineral Products	MSM20116 Certificate II in Process Manufacturing	Proposed merge MSM2011x Certificate II in Process Manufacturing (Manufactured Mineral Products)
	MSS402081 MSL952001 PMAOPS105 PMC561072 PMC561080 PMC562070 PMC562071 PMC562081 PMC562083 TLIC3003 TLIC3004		

Additional questions/ recommendations	Proposed specialisation ensures that the same outcome can be obtained from merge. Confirm with TAC that the specialisation unit selection is still what they want in case needs have changed. They may wish to select different units for specialisation.
	<p>PMC20116 also states that up to 1 specialist unit may be chosen from PMC30116. I have not included these in the electives because packaging rules allow this anyway. Would need to check if TAC if it is mandatory to only select 1 from that qualification. Why can't they select more? – I think because if they do then they could just obtain a Certificate III – almost embedded qualifications except for these types of rules.</p> <p>In the MSM20116 this statement allows for maximum of 2 units from any Certificate III.</p>

	<p><i>A maximum of four (4) relevant units may be selected from this Training Package, other endorsed Training Packages and accredited courses, where those units are packaged in a Certificate II or III. Note: a maximum of two (2) units may be chosen from a Certificate III.</i></p> <p>Need to check if this is still a relevant requirement of qualification and how this will affect the merge.</p>
	<p>MSM20116 has this statement:</p> <p><i>Elective units may also be chosen from the Group A or Group B units in PMA20116, PMB20107 and PMC20110.</i></p> <p>In relation to PMA20116 & PMB20107 these qualifications generally have the same core as MSM and could be potentially merged as specialisations within MSM20116 in the future.</p> <p>Is this ambiguous – does this mean maximum of 4 units can be chosen from those qualifications due to the next statement?</p> <p><i>A maximum of four (4) relevant units may be selected from this Training Package, other endorsed Training Packages and accredited courses, where those units are packaged in a Certificate II or III. Note: a maximum of two (2) units may be chosen from a Certificate III.</i></p> <p>Note also PMB20107 superseded by PMB20116</p>
	<p>Note: MSMSUP100 referred to as Apply workplace procedures in qualification but unit in TGA is called: Apply Workplace Context to own job</p>
	<p>14/15 units quite a lot for a Certificate II.</p>

Mapping PMC30116 Certificate III in Manufactured Mineral Products to MSM30116 Certificate III in Process Manufacturing

Purpose: to see if the PMC qualification can be merged into the MSM Training Package

	PMC30116 Certificate III in Manufactured Mineral Products	MSM30116 Certificate III in Process Manufacturing	Proposed merge MSM3011x Certificate III in Process Manufacturing (Manufactured Mineral Products)
Qualification Description	<p>The PMC30116 Certificate III in Manufactured Mineral Products covers the skills and knowledge required to perform a range of advanced operations within the manufactured mineral products industries.</p> <p>The qualification is suitable to develop existing workers to perform an advanced operational role to directly produce product.</p> <p>The operator will be able to work independently and to apply theoretical and technical knowledge and well developed skills to undertake advanced operations and exercise judgement in areas such as start-up and shutdown procedures and quality assurance.</p> <p>The operator will be able to apply their knowledge to anticipate problems and to solve a range of routine and non-routine problems using product and process knowledge to develop solutions to problems which do not have a known solution or do not have a solution recorded in the procedures.</p> <p>The operator will be able to solve a range of foreseen and unforeseen problems, using product and process knowledge to develop solutions to problems which do not have a known solution, or a solution recorded in the procedures.</p> <p>The qualification provides the skills and knowledge</p>	<p>The MSM30116 Certificate III in Process Manufacturing provides the competencies required by advanced production workers who use a range of equipment and provide support functions directly related to producing products. They would undertake more advanced roles than workers with a Certificate II in Process Manufacturing, working in accordance with operating procedures and applying knowledge to anticipate problems and solve a range of foreseen and unforeseen problems.</p> <p>This qualification is designed for use across the three process manufacturing sectors:</p> <ul style="list-style-type: none"> chemical, hydrocarbons and oil refining plastics, rubber and cablemaking manufactured mineral products. <p>It includes the same range of electives, but with different packaging rules to provide a qualification for workers unable to meet the technical requirements of PMA, PMB or PMC.</p> <p>This qualification covers:</p> <ul style="list-style-type: none"> production support workers - people working in manufacturing and filling the vital production support roles but who may not have the opportunity to develop 	<p>The MSM30116 Certificate III in Process Manufacturing provides the competencies required by advanced production workers who use a range of equipment and provide support functions directly related to producing products. They would undertake more advanced roles than workers with a Certificate II in Process Manufacturing, working in accordance with operating procedures and applying knowledge to anticipate problems and solve a range of foreseen and unforeseen problems.</p> <p>This qualification is designed for use across the three process manufacturing sectors:</p> <ul style="list-style-type: none"> chemical, hydrocarbons and oil refining plastics, rubber and cablemaking manufactured mineral products. <p>It includes the same range of electives, but with different packaging rules to provide a qualification for workers unable to meet the technical requirements of PMA, PMB or PMC.</p> <p>This qualification covers:</p> <ul style="list-style-type: none"> production support workers - people working in manufacturing and filling the vital production support roles but who may not have the opportunity to develop competency in

	PMC30116 Certificate III in Manufactured Mineral Products	MSM30116 Certificate III in Process Manufacturing	Proposed merge MSM3011x Certificate III in Process Manufacturing (Manufactured Mineral Products)
	<p>relevant to the following sectors:</p> <ul style="list-style-type: none"> • cement • precast concrete • premixed concrete • clay products • ceramic products • float (flat) glass • glass containers • refractories • plaster (both fibrous plaster and plaster boards) • fibre cement boards • ground minerals • abrasive grinding wheels and cutting discs. <p>For people who do not directly produce product but work in production support roles see MSM30116 Certificate III in Process Manufacturing.</p> <p>For people who require a more generalist qualification covering the application of good manufacturing practice and lean principles see MSS30316 Certificate III in Competitive Systems and Practices.</p> <p>The PMC30116 Certificate III in Manufactured Mineral Products contains units of competency that can be credited towards other manufacturing qualifications such as:</p> <ul style="list-style-type: none"> • PMC40116 Certificate IV in Manufactured Mineral Products • MSM40116 Certificate IV in Process Manufacturing • MSS40116 Certificate IV in Sustainable Operations 	<p>competency in sufficient technical units related directly to producing products</p> <ul style="list-style-type: none"> • employees who operate across more than one category within process manufacturing or 'specialised processes' and elsewhere when required. 	<p>sufficient technical units related directly to producing products</p> <ul style="list-style-type: none"> • employees who operate across more than one category within process manufacturing or 'specialised processes' and elsewhere when required. <p>There are no specific licenses that relate to this qualification. However, some units in this qualification may have licensing or regulatory requirements in some jurisdictions. Local regulations should be checked for details.</p>

	PMC30116 Certificate III in Manufactured Mineral Products	MSM30116 Certificate III in Process Manufacturing	Proposed merge MSM3011x Certificate III in Process Manufacturing (Manufactured Mineral Products)
	<ul style="list-style-type: none"> MSS40316 Certificate IV in Competitive Systems and Practices. <p>There are no specific licenses that relate to this qualification. However, some units in this qualification may have licensing or regulatory requirements in some jurisdictions. Local regulations should be checked for details.</p>		
Qualification Description notes	<p>Graduates directly produce product.</p> <p>Most of this description belongs in an implementation guide.</p>	<p>Graduates directly produce products in:</p> <ul style="list-style-type: none"> chemical, hydrocarbons and oil refining plastics, rubber and cabling manufactured mineral products <p>Already states it can have the same outcome as PMC30116</p> <p>Missing Licencing statement from PCM30116</p>	<p>Keep the same except with the addition of licensing statement.</p> <p>Move additional information in the PMC30116 qualification descriptor to implementation guide.</p> <p>Also recommend removing following:</p> <p>It includes the same range of electives, but with different packaging rules to provide a qualification for workers unable to meet the technical requirements of PMA, PMB or PMC.</p>
Packaging rules	To be awarded the PMC30116 Certificate III in Manufactured Mineral Products competency must be achieved in twenty (20) units of competency:	To be awarded the MSM30116 Certificate III in Process Manufacturing, competency must be achieved in twenty-one (21) units of	To be awarded the MSM30116 Certificate III in Process Manufacturing, competency must be achieved in twenty-one (21) units of competency:

	PMC30116 Certificate III in Manufactured Mineral Products	MSM30116 Certificate III in Process Manufacturing	Proposed merge MSM3011x Certificate III in Process Manufacturing (Manufactured Mineral Products)
	<ul style="list-style-type: none"> • six (6) core units of competency • fourteen (14) elective units of competency from Groups A and B, chosen as specified below. <ul style="list-style-type: none"> • A minimum of one (1) unit must be selected from Group A • The balance of units, to a maximum of thirteen (13), may be chosen from Groups A and B, with a maximum of nine (9) from Group B2. <p>Up to six (6) of the elective units of competency can be chosen from other qualifications in this Training Package, other endorsed Training Packages and accredited courses, as specified in Groups B1 and B2.</p> <p>Note: Where prerequisite units apply, they must be counted in the total number of units required for achievement of the qualification.</p>	<p>competency:</p> <ul style="list-style-type: none"> • four (4) core units of competency • seventeen (17) elective units of competency, as specified below: <ul style="list-style-type: none"> • a minimum of five (5) units from Group A • a maximum of twelve (12) units from Group B. <p>Note: Where pre-requisite units are identified they must be counted in the total number of units required for achievement of the qualification.</p>	<ul style="list-style-type: none"> • four (4) core units of competency • seventeen (17) elective units of competency, as specified below: <ul style="list-style-type: none"> • a minimum of five (5) units from Group A • a maximum of twelve (12) units from Group B. <p>Any combination of electives that meets the rules above can be selected for the award of the Certificate III in Process Manufacturing. Where appropriate, electives may be packaged to provide a qualification with a specialisation.</p> <p>Packaging for each specialisation: Four (4) Group A1 electives and at least one (1) Group A2 electives and a maximum of nine (9) Group B electives must be selected for award of the Certificate III in Process Manufacturing (Manufactured Mineral Products)</p> <p>Note: Where pre-requisite units are identified they must not be counted in the total number of units required for achievement of the qualification.</p>
Core units	MSMENV272 Participate in environmentally sustainable work practices	MSMENV272 Participate in environmentally sustainable work practices	MSMENV272 Participate in environmentally sustainable work practices

	PMC30116 Certificate III in Manufactured Mineral Products	MSM30116 Certificate III in Process Manufacturing	Proposed merge MSM3011x Certificate III in Process Manufacturing (Manufactured Mineral Products)
	MSMWHS200 Work safely	MSMWHS200 Work safely	MSMWHS200 Work safely
		MSMSUP210 Process and record information	MSMSUP210 Process and record information
		MSS402051 Apply quality standards	MSS402051 Apply quality standards
	MSMSUP100 Apply workplace procedures		Add to MMP specialisation (group A1 electives)
	MSMSUP101 Clean workplace or equipment		Add to MMP specialisation (group A1 electives)
	MSMSUP102 Communicate in the workplace		Add to MMP specialisation (group A1 electives)
	MSMOPS101 Make measurements OR (not both) PMAOPS101		Add to MMP specialisation (group A1 electives) Complete 4

	PMC30116 Certificate III in Manufactured Mineral Products	MSM30116 Certificate III in Process Manufacturing	Proposed merge MSM3011x Certificate III in Process Manufacturing (Manufactured Mineral Products)
	Read dials and indicators		
Electives:	<p>Following electives missing from <i>MSM30016</i>:</p> <p>MSL974005 PMAOPS305 PMC553000 PMC553010 PMC553020 PMC553021 PMC553040 PMC553041 PMC553042 PMC553050 PMC553051 PMC553070 PMC553072 PMC553080</p>	<p>Remove this elective from general list because they will appear in proposed MMP Group A1 electives:</p> <p>MSMSUP101</p>	<p>Add to a new MMP specialisation (group A2 electives) Complete 1 unit</p> <p>MSL974005 PMAOPS305 PMC553000 PMC553010 PMC553020 PMC553021 PMC553040 PMC553041 PMC553042 PMC553050 PMC553051 PMC553070 PMC553072 PMC553080</p>
	PMC563081 TAEASS301		Merge with Group A3 electives
	MSL952001 MSS402031		Merge with Group B electives

	PMC30116 Certificate III in Manufactured Mineral Products	MSM30116 Certificate III in Process Manufacturing	Proposed merge MSM3011x Certificate III in Process Manufacturing (Manufactured Mineral Products)
	MSS402081 PMAOPS105 PMAOPS216 PMC552002 PMC552003 PMC552004 PMC552005 PMC552006 PMC552007 PMC552008 PMC552010 PMC552020 PMC552021 PMC552022 PMC552023 PMC552024 PMC552030 PMC552031 PMC552032 PMC552040 PMC552041 PMC552042 PMC552043 PMC552044 PMC552045 PMC552046		

	PMC30116 Certificate III in Manufactured Mineral Products	MSM30116 Certificate III in Process Manufacturing	Proposed merge MSM3011x Certificate III in Process Manufacturing (Manufactured Mineral Products)
	PMC552047 PMC552048 PMC552049 PMC552050 PMC552051 PMC552052 PMC552053 PMC552054 PMC552055 PMC552056 PMC552057 PMC552058 PMC552060 PMC552061 PMC552065 PMC552070 PMC552072 PMC552090 PMC552091 PMC552092 PMC552093 PMC552094 PMC561072 PMC561080 PMC562070 PMC562071		

	PMC30116 Certificate III in Manufactured Mineral Products	MSM30116 Certificate III in Process Manufacturing	Proposed merge MSM3011x Certificate III in Process Manufacturing (Manufactured Mineral Products)
	PMC562081 PMC562083 RIIRIS201D TLIC3003 TLIC3004		

Additional questions/ recommendations	Note the PMC30116 is virtually the same as PMC20116. The core is exactly the same. Cert III has more electives and some packaging rules that stop them being the same. Certificate IV is also the same with the addition of 1 extra core unit.
	Proposed specialisation ensures that the overall same outcome can be obtained from merge. Confirm with TAC that the specialisation unit selection is still what they want in case needs have changed. They may wish to select different units for specialisation.
	Similar packaging rule issues as noted in Certificate II mapping.
	21/20 units is a lot for a Certificate III.
	Seems like the MSM qual has been streamlined and simplified and made to incorporate PMC (perhaps due to funding as mentioned) and this has resulted in some legacy material in the PMC qualifications. It seems like MSM extra unit selection notes are catering for including PMA, PMC and PMB qualifications within the MSM qualification. I wonder if industry even wants specialisation – will provide proposal that merges with specialisation but might not be necessary. Just including units might suffice. Ask TAC.

	TGA inconsistency – unit MSMSUP300 name different in qualification and unit in TGA.
	Prerequisite sometimes listed sometimes not. Recommend reviewing this as well when doing qualifications.
	It seems that qualifications are embedded. Ie, Cert IV just more units than Cert III and Cert II. Is this the intent?

Mapping PMC40116 Certificate IV in Manufactured Mineral Products to MSM40116 Certificate IV in Process Manufacturing

Purpose: to see if the PMC qualification can be merged into the MSM Training Package

	PMC40116 Certificate IV in Manufactured Mineral Products	MSM40116 Certificate IV in Process Manufacturing	Proposed merge MSM4011x Certificate IV in Process Manufacturing (Manufactured Mineral Products)
Qualification Description	<p>The PMC40116 Certificate IV in Manufactured Mineral Products covers the skills and knowledge required to perform a range of technical operations within the manufactured mineral products industries.</p> <p>The qualification is suitable to develop existing workers or to prepare new entrants to perform a plant technician role.</p> <p>The technician will be able to apply specialised theoretical and technical knowledge and well developed skills in situations that require autonomy, discretion and judgement.</p> <p>The technician will be able to solve complex problems which require in depth theoretical knowledge combined with an understanding of the production process and equipment across the plant.</p> <p>For people who require a more generalist qualification covering the application of good manufacturing practice and lean principles see MSS40316 Certificate IV in Competitive Systems and Practices.</p> <p>The PMC40116 Certificate IV in Manufactured Mineral Products contains units of competency that can be credited towards other manufacturing qualifications such as:</p> <ul style="list-style-type: none"> • PMC50116 Diploma of Manufactured Mineral 	<p>The MSM40116 Certificate IV in Process Manufacturing provides the competencies required by advanced production workers who use a range of equipment and are involved in solving complex problems that require theoretical knowledge, combined with an understanding of operating procedures directly related to producing products.</p> <p>This qualification is typically used to develop employees performing a technical role that includes the ability to work independently and conduct technical problem solving according to the needs of the work required to produce products.</p> <p>This qualification is designed to develop employees who operate across more than one category within process manufacturing or other product conversion processes in manufacturing. Typical applications would be in chemical, hydrocarbons, refining, minerals processing, plastics, rubber, cabling, manufactured mineral products, and other areas as appropriate.</p> <p>Non-technical team leaders, coordinators and supervisors may be better served by a qualification in competitive manufacturing. Qualification pathways from this qualification include MSM50316 Diploma of Production Management and MSS50312 Diploma of Competitive Systems and Practices.</p>	<p>The MSM40116 Certificate IV in Process Manufacturing provides the competencies required by advanced production workers who use a range of equipment and are involved in solving complex problems that require theoretical knowledge, combined with an understanding of operating procedures directly related to producing products.</p> <p>This qualification is typically used to develop employees performing a technical role that includes the ability to work independently and conduct technical problem solving according to the needs of the work required to produce products.</p> <p>This qualification is designed to develop employees who operate across more than one category within process manufacturing or other product conversion processes in manufacturing. Typical applications would be in chemical, hydrocarbons, refining, minerals processing, plastics, rubber, cabling, manufactured mineral products, and other areas as appropriate.</p> <p>Non-technical team leaders, coordinators and supervisors may be better served by a qualification in competitive manufacturing. Qualification pathways from this qualification include MSM50316 Diploma of Production Management and MSS50312 Diploma of Competitive Systems and Practices.</p>

	PMC40116 Certificate IV in Manufactured Mineral Products	MSM40116 Certificate IV in Process Manufacturing	Proposed merge MSM4011x Certificate IV in Process Manufacturing (Manufactured Mineral Products)
	<p>Products</p> <ul style="list-style-type: none"> MSS50116 Diploma of Sustainable Operations MSS50316 Diploma of Competitive Systems and Practices MSM50316 Diploma of Production Management. <p>There are no specific licenses that relate to this qualification. However, some units of competency in this qualification may have licensing or regulatory requirements. Local regulations should be checked for details.</p>		<p>There are no specific licenses that relate to this qualification. However, some units of competency in this qualification may have licensing or regulatory requirements. Local regulations should be checked for details.</p>
Description notes.	Most of this description belongs in an implementation guide.		Keep the same except with the addition of licensing statement.
Packaging rules	<p>To be awarded the PMC40116 Certificate IV in Manufactured Mineral Products competency must be achieved in twenty-four (24) units of competency:</p> <ul style="list-style-type: none"> seven (7) core units of competency seventeen (17) elective units of competency from Groups A and B, chosen as specified below. <ul style="list-style-type: none"> A minimum of one (1) specialist elective unit must be chosen from Group A The balance of units, to a maximum of sixteen (16), may be drawn Groups A and B, with a maximum of thirteen (13) from Group B2, to bring the total number of electives to seventeen (17). <p>Up to eight (8) of the elective units of competency can</p>	<p>To be awarded the MSM40116 Certificate IV in Process Manufacturing competency must be achieved in a total of twenty-six (26) units of competency.</p> <ul style="list-style-type: none"> five (5) core units of competency twenty-one (21) elective units of competency, as specified below: <ul style="list-style-type: none"> a minimum of four (4) units from Group A the balance of units, to a maximum of seventeen (17) may be selected from Groups A, B and C (with a maximum of eleven (11) units from Group C). <p>Note: Up to nine (9) elective units may be selected</p>	<p>To be awarded the MSM40116 Certificate IV in Process Manufacturing competency must be achieved in a total of twenty-six (26) units of competency.</p> <ul style="list-style-type: none"> five (5) core units of competency twenty-one (21) elective units of competency, as specified below: <ul style="list-style-type: none"> a minimum of four (4) units from Group A the balance of units, to a maximum of seventeen (17) may be selected from Groups A, B and C (with a maximum of eleven (11) units from Group C). <p>Note: Up to nine (9) elective units may be selected from this Training Package, other endorsed Training Packages and accredited courses, as specified below.</p>

	PMC40116 Certificate IV in Manufactured Mineral Products	MSM40116 Certificate IV in Process Manufacturing	Proposed merge MSM4011x Certificate IV in Process Manufacturing (Manufactured Mineral Products)
	<p>be chosen from other qualifications in this Training Package, other endorsed Training Packages and accredited courses, as specified in Groups B1 and B2.</p> <p>Note: Where prerequisite units apply, these must be counted in the total number of units required for achievement of the qualification.</p>	<p>from this Training Package, other endorsed Training Packages and accredited courses, as specified below.</p> <p>Note: Where prerequisite units are identified they must be counted in the total number of units required for achievement of the qualification.</p>	<p>Any combination of electives that meets the rules above can be selected for the award of the Certificate IV in Process Manufacturing. Where appropriate, electives may be packaged to provide a qualification with a specialisation.</p> <p>Packaging for each specialisation: Four (4) Group A1 electives and at least one (1) Group A2 electives and a maximum of thirteen (13) Group B electives must be selected for award of the Certificate IV in Process Manufacturing (Manufactured Mineral Products)</p> <p>Note: Where prerequisite units are identified they must not be counted in the total number of units required for achievement of the qualification.</p>
Core units	MSMENV272 Participate in environmentally sustainable work practices	MSMENV272 Participate in environmentally sustainable work practices	MSMENV272 Participate in environmentally sustainable work practices
	MSMWHS200 Work safely	MSMWHS200 Work safely	MSMWHS200 Work safely
	MSMSUP200 Achieve work outcomes	MSMSUP200 Achieve work outcomes	MSMSUP200 Achieve work outcomes
		MSMSUP210	MSMSUP210

	PMC40116 Certificate IV in Manufactured Mineral Products	MSM40116 Certificate IV in Process Manufacturing	Proposed merge MSM4011x Certificate IV in Process Manufacturing (Manufactured Mineral Products)
		Process and record information	Process and record information
		MSS402051 Apply quality standards	MSS402051 Apply quality standards
	MSMSUP100 Apply workplace procedures		Add to MMP specialisation (group A1 electives)
	MSMSUP101 Clean workplace or equipment		Add to MMP specialisation (group A1 electives)
	MSMSUP102 Communicate in the workplace		Add to MMP specialisation (group A1 electives)
	MSMOPS101 Make measurements OR (not both) PMAOPS101 Read dials and indicators		Add to MMP specialisation (group A1 electives) Complete 4

	PMC40116 Certificate IV in Manufactured Mineral Products	MSM40116 Certificate IV in Process Manufacturing	Proposed merge MSM4011x Certificate IV in Process Manufacturing (Manufactured Mineral Products)
Electives:		Remove this elective from general list because they will appear in proposed MMP Group A1 electives: MSMSUP101	
	MSMOPS400 MSMOPS401 MSMSUP404 MSMSUP405 MSMSUP406 PMAOPS402 PMAOPS405 PMC554020 PMC554090 PMC554091	Remove from Group A and create new A2 elective group Rename Group A – A3 electives.	Revised Group A2 and A3
	Missing from MSM: TAEASS401 TAEASS402 TAEASS403 TAEASS502	Add these units to Group B	Merge with Group B electives
	Missing from MSM:	Add these units to Group C	Merge with Group C electives

	PMC40116 Certificate IV in Manufactured Mineral Products	MSM40116 Certificate IV in Process Manufacturing	Proposed merge MSM4011x Certificate IV in Process Manufacturing (Manufactured Mineral Products)
	RIIRIS201D MSS402031 MSS402081 MSAPMSUP201A MSL952001 MSL974005 PMAOPS105 PMAOPS216 PMAOPS305 PMC552002 PMC552003 PMC552004 PMC552005 PMC552006 PMC552007 PMC552008 PMC552010 PMC552020 PMC552021 PMC552022 PMC552023 PMC552024 PMC552030 PMC552031 PMC552032 PMC552040 PMC552041 PMC552042		

	PMC40116 Certificate IV in Manufactured Mineral Products	MSM40116 Certificate IV in Process Manufacturing	Proposed merge MSM4011x Certificate IV in Process Manufacturing (Manufactured Mineral Products)
	PMC552043 PMC552044 PMC552045 PMC552046 PMC552047 PMC552048 PMC552049 PMC552050 PMC552051 PMC552052 PMC552053 PMC552054 PMC552055 PMC552056 PMC552057 PMC552058 PMC552060 PMC552061 PMC552065 PMC552070 PMC552072 PMC552090 PMC552091 PMC552092 PMC552093 PMC552094 PMC552095 PMC553000		

	PMC40116 Certificate IV in Manufactured Mineral Products	MSM40116 Certificate IV in Process Manufacturing	Proposed merge MSM4011x Certificate IV in Process Manufacturing (Manufactured Mineral Products)
	PMC553010 PMC553020 PMC553021 PMC553040 PMC553041 PMC553042 PMC553050 PMC553051 PMC553070 PMC553072 PMC553080 PMC561072 PMC561080 PMC562070 PMC562071 PMC562081 PMC562083 PMC563081 TAEASS301 TLIC3003 TLIC3004		

	Note the PMC20116 is virtually the same as PMC30116. The core is exactly the same. Cert III has more electives and some packaging rules that stop them being the same. Certificate IV is also the same with the addition of 1 extra core unit.
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Additional questions/recommendations	Proposed specialisation ensures that the same overall outcome can be obtained from merge. Confirm with TAC that the specialisation unit selection is still what they want in case needs have changed. They may wish to select different units for specialisation.
	Similar packaging rule issues as noted in Certificate II & III mapping.
	Seems like the MSM qual has been streamlined and simplified and made to incorporate PMC (perhaps due to funding as mentioned) and this has resulted in some legacy material in the PMC qualifications. It seems like MSM extra unit selection notes are catering for including PMA, PMC and PMB qualifications within the MSM qualification. I wonder if industry even wants specialisation – will provide proposal that merges with specialisation but might not be necessary. Just including units might suffice. Ask TAC.
	TGA inconsistency – unit MSMSUP300 name different in qualification and unit in TGA.
	Prerequisite sometimes listed sometimes not. Recommend reviewing this as well when doing qualifications.

Appendix D: Key stakeholder engagement

Industry organisations notified of public consultation

Organisation
Adbri Masonry
Adelaide Brighton Ltd
Advanced Precast (Aust)
Allsands Pty Limited
Alphaprecast
Alsafes Pre-Mix Concrete Pty Ltd
Ancon Building Products
Asurco Contracting
Austral Precast
Barossa Quarries Pty Ltd
Barro Group Pty Ltd
BASF Australia
Baxters Concrete Pty Ltd
Bayswater Ash Pty Ltd
Benedict Industries Pty Ltd
Bennett Equipment
BIS Industries Limited T/A BIS Industrial Logistics
Boral Cement Ltd
Boral Construction Materials & Cement
Braeside Quarries Pty Ltd
BridgePro Engineering
Brisbane City Council T/A Bracalba Quarries
Broadway & Frame Premix Concrete Pty Ltd
Byrne Bros Pty Ltd
CCS Materials Pty Ltd
Cement Australia Pty Ltd
Cement Concrete and Aggregates Australia
Central Coast Septics
Chevron Glass
Clare Quarry Pty Ltd
Clay & Mineral Sales Pty Ltd
Cleary Bros (Bombo) Pty Ltd
Coastwide Ready Mix Concrete
Combilift
Concrete 4 Goulburn Pty Ltd
Concrete by Design
Concrete Colour Systems
Concrete Institute of Australia
Concrete Pipe Association of Australia
Concrete Products Australia
Concrite Pty Ltd

D K Quarries Pty Ltd
Davalan Concrete Pty Ltd
Delta Corporation
DrumBlaster Pty Ltd
Duggans Precast
Ecoratio
Elvin Group Pty Ltd
ENCO Precast
Entire Concrete Pty Ltd
ERICO Products Australia Pty Ltd
Euro Precast
Eziway Concrete (T&M Lynch Pty Ltd T/A)
Fieldwick Crushing & Screening
Flyash Australia Pty Ltd
Forbes Concrete Pty Ltd T/A Lachlan Readymix
Fulton Hogan Industries
Gaspersic Contracting Pty Ltd
GCP Applied Technologies
Gunlake Concrete NSW Pty Ltd
Handycrete Concrete Pty Ltd
Hanson Australia Pty Ltd
Hanson Precast
Hazell Bros Group Pty Ltd
Hillview Quarries Pty Ltd
HMV Precast
Holcim (Australia) Pty Ltd
Hollow Core Concrete
Humes
Hymix Australia Pty Ltd
Hy-Tec Industries Pty Ltd
Independent Cement & Lime Pty Ltd
Kennedy Haulage Pty Ltd
Lanxess
Lime Industries Pty Ltd
Mackay Sand & Gravel Sales
Mantina Quarries
Mentone Pre Mix
Metromix Concrete Pty Ltd
MILCast
Minicrete Concrete
MJB Industries
MSD Construction Pty Ltd
MSP Group Pty Ltd
National Precast Concrete Association Australia
Nawkaw Australia
Neilsen's Quality Gravels Pty Ltd

Nucrush Pty Ltd
O-I Glass
OneSteel Reinforcing
Orora Group
Outback Sleepers
Parkes Ready Mixed Concrete Pty Ltd
Peikko Australia Pty Ltd
PERMAcast
Pilatti Bros Transport
Pioneer North Queensland Pty Ltd
Precast Concrete Products
Precast Projects
Q-crete Premix Pty Ltd
Quarrico Products Pty Ltd
Ransberg Pty Ltd T/A WA Premix & WA Bluemetal
Reinforced Concrete Pipes Australia (RCPA)
Reinforced Earth
Riverside Industrial Sands Pty Ltd
RJB Industries
RNB Trading Pty Ltd
Rocla
SA Precast
Santos Ready Mixed Concrete Pty Ltd
Sanwa
Sika Australia
Skyline Precast
SLN Australia Pty Ltd
Sloans Sands Pty Ltd
Southern Pacific Sands
Southern Quarries Pty Ltd
Stoney Pinch Pty Ltd T/A Stoney Pinch Quarry
Stornoway Quarrying
Stresscrete
Sunstate Cement Ltd
Supermix Concrete & Quarries
Tegra Australia Pty Ltd
The Concrete Yard Pty Ltd T/A Queanbeyan Pre-Mix Concrete
Treloar Transport
Ultrafloor (Aust)
Urban Resources Pty Ltd
Vision Precast
Volumetric Concrete Australia Pty Ltd
Waeger Precast
Wagner Investments Pty Ltd
Walker Panels
Wallaroo Contracting Pty Ltd

Walsh Glass
WAM Australia
Western Suburbs Concrete
Westrac
WGE Civil
Xypex Australia (Concrete Waterproofing Manufacturing Pty Ltd T/as Xypex Australia)
Zanow Sand and Gravel

Appendix E: Development process participants

Technical Advisory Committee membership

The great value of the TAC expertise and input is gratefully acknowledged.

Name	Organisation
Wendy Wright	Delta Corporation
Jason Walsh	Delta Corporation
Ceridwen Jones	Cement Concrete and Aggregates Australia
Steve Baker	Boral
Adam Tointon	Boral
Brendan Wotherspoon	Metromix
Trent Harris	Metromix
Sean O’Gorman	National Precast Concrete Association Australia

Organisations that provided feedback

The following organisations provided written feedback during the project.

Organisation
AB Consulting
Boral
Delta Corporation
Industry Skills Advisory Council Northern Territory
Orora Group
Skills Tasmania
TaPS
Victorian Department of Education and Training
WA Department of Training and Workforce Development

Appendix F: IRC Letter of Support

21 May 2018

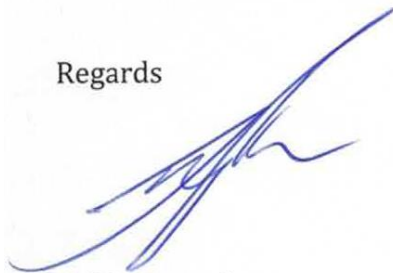
Dear Australian Industry and Skills Committee,

As the Chair of the Process Manufacturing, Recreational Vehicles and Laboratory IRC (IRC), I write on behalf of the IRC to support the endorsement of the MSM Manufacturing Training Package, Release 3.0, as completed under the Activity Order IBSA/TPD/2016-2017/008.

The training package components have been significantly strengthened and closely reflect current industry practice.

A fully constituted IRC approved the draft components for submission to the Australian Industry and Skills Committee for endorsement.

Regards



Keith Monaghan

Quality Report for MSM Manufacturing Training Package, Release 3.0

SECTION 1 – DETAILS OF DRAFT TRAINING PACKAGE COMPONENTS

INFORMATION REQUIRED	DETAIL
Training Package title and code	MSM Manufacturing Training Package, Release 3.0
Number of new or revised qualifications	1 new qualification (MSM30318 Certificate III in Manufactured Mineral Products)
Number of new or revised units	36 new units of competency
Confirmation that the draft endorsed components meet the <i>Standards for Training Packages 2012</i>	The draft components reviewed meet the requirements of the <i>Standards for Training Packages 2012</i> .
Name of panel member completing Quality Report	Jenni Oldfield, JOConsultancy
Statement that the panel member: <ul style="list-style-type: none">• is independent of development and/or validation activities associated with the <i>Case for Endorsement</i>• has not undertaken the <i>Equity and/or Editorial Report</i>• is independent of the Training Package or Training Package components being reviewed.	Jenni Oldfield is an independent Quality Assurance Panel member and has not undertaken the equity or editorial reports or been involved in the development or validation activities associated with any aspect of this review of the MSM Manufacturing Training Package, Release 3.0.
Date completed	10 May, 2018

SECTION 2 – COMPLIANCE WITH THE STANDARDS FOR TRAINING PACKAGES

Standards for Training Packages	Standard met –yes or no	Comments (including any relevant comments from the Equity and Editorial Reports)
<p>Standard 1 Training Packages consist of the following:</p> <ol style="list-style-type: none"> 1. AISC endorsed components: <ul style="list-style-type: none"> • units of competency • assessment requirements (associated with each unit of competency) • qualifications • credit arrangements. 2. One or more quality assured companion volumes. 	Yes	<p>The components of the <i>MSM Manufacturing Training Package, Release 3.0</i>, submitted for endorsement meet the requirements of Standard 1.</p> <p>Components include:</p> <ul style="list-style-type: none"> • one new qualification (MSM30318 Certificate III in Manufactured Mineral Products) • 36 new units of competency • credit arrangements for the new qualification (specified in the <i>Case for Endorsement</i>). <p>All components are new to the <i>MSM Manufacturing Training Package</i>, moved from the <i>PMC Manufactured Mineral Products Training Package</i>.</p> <p>The submission includes the <i>MSM Manufacturing Training Package Implementation Guide Release 3.0</i>, which has been quality assured.</p>
<p>Standard 2 Training Package developers comply with the AISC <i>Training Package Products Policy</i>.</p>	Yes	<p>IBSA Manufacturing has complied with the <i>Training Package Products Policy</i>.</p> <p>All components are appropriately coded with new, unique codes. Access and equity issues are addressed in the <i>MSM Companion Volume Implementation Guide, Release 3.0</i>. Foundation Skills have been highlighted in two units and made explicit in the performance criteria of other units. Supporting information about Foundation Skills is included in the Implementation Guide, expressed using reference to the Australian Core Skills Framework (ACSF) and Employability Skills.</p>

Standards for Training Packages	Standard met –yes or no	Comments (including any relevant comments from the Equity and Editorial Reports)
		<p>The new qualification includes five listed imported units that all retain the source coding and are current.</p> <p>Qualifications and units of competency have been appropriately mapped in the <i>MSM Manufacturing Training Package Implementation Guide Release 3.0</i> – all components are equivalent to their predecessor in the <i>PMC Manufactured Mineral Products Training Package</i>. The <i>Case for Endorsement</i> notes that this equivalence status was confirmed by the Training Advisory Committee (TAC) at their final meeting on 27 March.</p>
<p>Standard 3 Training Package developers comply with the AISC <i>Training Package Development and Endorsement Process Policy</i>.</p>	<p>Yes</p>	<p>IBSA Manufacturing has complied with the AISC <i>Training Package Development and Endorsement Process Policy</i>.</p> <p>The <i>Case for Endorsement</i> outlines the training package development process, ensuring national industry consultation and stakeholder engagement throughout, using a variety of methods:</p> <ul style="list-style-type: none"> • IRC monitoring • formation of a TAC that met on several occasions • specific advice from technical experts • two rounds of public consultation, where key industry organisations, State/Territory Training Authorities and Industry Training Advisory Bodies, and all RTOs with qualifications on scope were notified (8 weeks in total) • establishment of a project webpage outlining project activities and including a subscriber alert option.

Standards for Training Packages	Standard met –yes or no	Comments (including any relevant comments from the Equity and Editorial Reports)
		An independent QA Panel member was contracted to complete the Editorial and Equity reports.
Standard 4 Units of competency specify the standards of performance required in the workplace.	Yes	<p>All 36 units of competency specify the standards of performance required in the workplace and many have been strengthened to address particular industry needs, including:</p> <ul style="list-style-type: none"> • working with materials and processes (concrete technology/precast) • implementing Australian Standards • using batch command control systems • mechanical maintenance for concrete plants • mathematics, measurements and angles.
Standard 5 The structure of units of competency complies with the unit of competency template.	Yes	All 36 units of competency comply with the unit template. The units have been clarified– this has been confirmed through consultation and through the Editorial review.
Standard 6 Assessment requirements specify the evidence and required conditions for assessment.	Yes	The assessment requirements of all 36 units clearly specify the volume and frequency of tasks that must be performed for assessment, relevant knowledge evidence and clear conditions for assessment.
Standard 7 Every unit of competency has associated assessment requirements. The structure of assessment requirements complies with the assessment requirements template.	Yes	Every unit has associated assessment requirements, the structure of which complies with the template included in the Standards for Training Packages 2012. This has been confirmed by the Editorial review.

Standards for Training Packages	Standard met –yes or no	Comments (including any relevant comments from the Equity and Editorial Reports)
Standard 8 Qualifications comply with the Australian Qualifications Framework specification for that qualification type.	Yes	<p>The qualification, <i>MSM30318 Certificate III in Manufactured Mineral Products</i>, complies with the AQF 3 specification, which has been confirmed by the TAC and through the Editorial review. The qualification reflects the role of operators who may work independently or as part of a team, utilizing theoretical and practical knowledge for specialised work in producing manufacture mineral products for industry, including cement, pre-cast concrete, pre-mixed concrete, quarry and asphalt.</p> <p>The core of the qualification includes units that have relatively low level AQF indicators in the codes, but these are balanced out by most electives having codes with indicators at AQF 3 and some at AQF 4.</p>
Standard 9 The structure of the information for the Australian Qualifications Framework qualification complies with the qualification template.	Yes	<p>The structure of qualification complies with the qualification template included in the <i>2012 Standards</i>. It includes a qualification descriptor, information about entry requirements, packaging rules, core and elective units. The electives are divided into two groups, including a small group of electives that cover 'Measurements', from which one unit must be selected, followed by a larger elective bank.</p> <p>Prerequisite units are noted beside relevant units and also included within the qualification itself.</p>
Standard 10 Credit arrangements existing between Training Package qualifications and Higher Education	Yes	<p>The <i>Case for Endorsement</i> notes that no credit arrangements exist between MSM Manufacturing Training Package qualifications and higher education qualifications.</p>

Standards for Training Packages	Standard met –yes or no	Comments (including any relevant comments from the Equity and Editorial Reports)
qualifications are listed in a format that complies with the credit arrangements template.		
Standard 11 A quality assured Companion Volume Implementation Guide produced by the Training Package developer is available at the time of endorsement and complies with the Companion Volume Implementation Guide template.	Yes	The <i>MSM Companion Volume Implementation Guide, Release 3.0</i> , includes information about all components included in this review, which have been added to the <i>MSM Manufacturing Training Package, Release 3.0</i> . The Implementation Guide is a general guide for the whole <i>MSM Manufacturing Training Package</i> covering several industry sectors, but the changes between Release 2.0 and 3.0 and the addition of the Manufactured Mineral Products sector, have been highlighted. This guide will be available at endorsement for publication on the VETNet site.
Standard 12 Training Package developers produce other quality assured companion volumes to meet the needs of their stakeholders as required.	Yes	This review has not included the review of any other companion volumes, but the <i>Case for Endorsement</i> includes references to the information previously included in the Range of Conditions field of the units, being retained in a separate companion volume.

SECTION 3 – COMMENTS ON HOW THE DRAFT TRAINING PACKAGE COMPONENTS MEET THE QUALITY PRINCIPLES

I. 1. Reflect identified workforce outcomes

Key features	Examples of evidence	Met: Yes / No	Comments/ other evidence demonstrated
Driven by industry's needs	<ul style="list-style-type: none"> Changes demonstrate a clear link back to relevant AISC decisions commissioning the work, the IRC Skills Forecast and Proposed Schedule of Work, National Review Schedule and/or Case for Change, or demonstrate other evidence of industry needs 	Yes	<p>The <i>Case for Endorsement</i> includes detail of the <i>Activity Order IBSA/TPD/2016-2017/008</i>, executed in February 2017. The Activity Order specified a requirement to map Certificate II, III and IV PMC qualifications to determine alignment with MSM qualifications, that 79 units should be reviewed and updated where required, and that five new units should be developed.</p> <p>The <i>Case for Endorsement</i> details consultation that confirms the new units were not required, rather that existing units should be updated to include more rigour in the areas identified, that 81 units were reviewed (36 updated and 45 proposed for deletion), that three qualifications were mapped, two qualifications updated (one with only minor changes not submitted for endorsement) and five qualifications deleted.</p>

Key features	Examples of evidence	Met: Yes / No	Comments/ other evidence demonstrated
Compliant and respond to government broad policy initiatives	<ul style="list-style-type: none"> • Training package components are compliant with the Standards for Training Packages 2012, the Training Package Products Policy and the Training Package Development and Endorsement Process Policy • Evidence that the training package components respond to Ministers' policy initiatives, in particular the 2015 training package reforms 	Yes	<p>The <i>Case for Endorsement</i> provides evidence that the <i>MSM Manufacturing Training Package</i> components submitted for endorsement are compliant with both the <i>Training Package Products Policy</i> and the <i>Training Package Development and Endorsement Process Policy</i>, and that the changes made have been:</p> <ul style="list-style-type: none"> • driven by industry needs • supported by the nature and scope of stakeholder consultation • supported by stakeholders as reflecting contemporary work organisation and job profiles. <p>This quality assurance review determines that the components are compliant with the <i>Standards for Training Packages 2012</i>.</p> <p>Evidence that the training package work has responded to the Ministers' policy initiatives, in particular the 2015 training package reforms, includes the deletion of duplication and obsolete, unused units (45) and qualifications (5), and the deletion of the entire <i>PMC Manufactured Mineral Products Training Package</i>.</p>

Key features	Examples of evidence	Met: Yes / No	Comments/ other evidence demonstrated Provide brief commentary on how the draft endorsed components meet the Quality Principles with specific reference to the evidence provided, including any evidence provided by the Equity and Editorial Reports
Reflect contemporary work organisation and job profiles incorporating a future orientation	<ul style="list-style-type: none"> Open and inclusive consultation and validation commensurate with scope and impact has been conducted 	Yes	<p>The <i>Case for Endorsement</i> provides details of an open and inclusive consultation and validation process, commensurate with the scope and impact of the project, including:</p> <ul style="list-style-type: none"> specialist advice (through the formation of a TAC working as a group and on an individual basis for specific technical areas) two rounds of public consultations (8 weeks) where key stakeholders (industry bodies, STAs and RTOs with qualifications on scope) were emailed or telephoned to alert them to draft material being available on the IBSA website 132 email addresses subscribed for project updates written feedback from several stakeholders and organisations.

J. 2. Support portability of skills and competencies including reflecting licensing and regulatory requirements

Key features	Examples of evidence	Met: Yes / No	Comments/ other evidence demonstrated
Support movement of skills within and across organisations and sectors	<ul style="list-style-type: none"> • Packaging rules, qualifications framework, and pathways support movement within and across sectors • Identification of skill sets that respond to client needs 	Yes	The <i>MSM Companion Volume Implementation Guide, Release 3.0</i> , provides information about pathways for the new <i>MSM30318 Certificate III in Manufactured Mineral Products</i> , which allow for movement within and across the different sectors of the Manufacturing industry including Process Manufacturing and Competitive Manufacturing and also into Leadership and Management.
Promote national and international portability	<ul style="list-style-type: none"> • Other national and international standards for skills are considered 	Yes	Consideration of and comparison with other qualifications from the <i>MSM Manufacturing Training Package</i> was integral to the work carried out through this project. The <i>Case for Endorsement</i> includes a detailed mapping of qualifications that were included in the <i>PMC Manufactured Mineral Products Training Package</i> with those in the <i>MSM Manufacturing Training Package</i> to determine if qualifications could be merged. Consultation on the mapping determined that a stand alone Manufactured Mineral Products qualification should be retained, and other PMC units could be merged into MSM qualifications.

Key features	Examples of evidence	Met: Yes / No	Comments/ other evidence demonstrated Provide brief commentary on how the draft endorsed components meet the Quality Principles with specific reference to the evidence provided, including any evidence provided by the Equity and Editorial Reports
Reflect regulatory requirements and licensing	<ul style="list-style-type: none"> Solutions to incorporate licensing and regulatory requirements are brokered and there is clear evidence of support from licensing and industry regulatory bodies 	Yes	No licensing or certification requirements exist at the time of publication – this is clearly stated in all components.

K. 3. Reflect national agreement about the core transferable skills and core job-specific skills required for job roles as identified by industry

Key features	Examples of evidence	Met: Yes / No	Comments/ other evidence demonstrated Provide brief commentary on how the draft endorsed components meet the Quality Principles with specific reference to the evidence provided, including any evidence provided by the Equity and Editorial Reports
Reflect national consensus	<ul style="list-style-type: none"> Active engagement across industry has sought to achieve a national consensus about the advice being provided to the AISC. 	Yes	<p>The <i>Case for Endorsement</i> outlines the national consultation and validation process and the organisations and participants involved. The number of organisations contacted (145) and stakeholders registered for project updates (132) demonstrates that IBSA Manufacturing sought to achieve a national consensus on the components submitted for endorsement.</p> <p>There are no reports by exception.</p> <p>A letter of support from the IRC is included with the submission.</p>

Key features	Examples of evidence	Met: Yes / No	Comments/ other evidence demonstrated Provide brief commentary on how the draft endorsed components meet the Quality Principles with specific reference to the evidence provided, including any evidence provided by the Equity and Editorial Reports
Recognise convergence and connectivity of skills	<ul style="list-style-type: none"> Best use is made of cross-industry and work and participation bank units 	Yes	<p>The new <i>MSM30318 Certificate III in Manufactured Mineral Products</i> lists five elective units from other training packages, including PMA, CPC, MEM, MSA and RII. The TAC also considered units being developed through the communication and team work cross sector project, but units are not yet available.</p> <p>Six of the new units have been added to the elective bank of the <i>MSM30116 Certificate III in Process Manufacturing</i> through this project, and six additional units have been added to the MSM Manufacturing Training Package imported unit list (see CfE p23).</p>

L. 4. Be flexible to meet the diversity of individual and employer needs, including the capacity to adapt to changing job roles and workplaces

Key features	Examples of evidence	Met: Yes / No	Comments/ other evidence demonstrated Provide brief commentary on how the draft endorsed components meet the Quality Principles with specific reference to the evidence provided, including any evidence provided by the Equity and Editorial Reports
Meet the diversity of individual and employer needs	<ul style="list-style-type: none"> Provide flexible qualifications that enable application in different contexts 	Yes	The packaging rules of the <i>MSM30318 Certificate III in Manufactured Mineral Products</i> allow users to choose 13 electives (out of a total of 18), four of which can be chosen from other training packages or accredited courses – this flexibility will ensure that choices can cater for different contexts and different client needs.
Support equitable access and progression of learners	<ul style="list-style-type: none"> Provide multiple entry and exit points Pre-requisite units of competency are used only when required 	Yes	<p>There are no entry requirements for the <i>MSM30318 Certificate III in Manufactured Mineral Products</i> – RTOs can determine which candidates are suitable and appropriate for enrolment.</p> <p>The qualification includes two units that have prerequisites (one existing unit and one ‘new’ unit that included the same prerequisite in the superseded version). Both prerequisites are listed units within the qualification.</p> <p>No prerequisites have been added through this project.</p>

M. 5. Facilitate recognition of an individual's skills and knowledge and support movement between the school, vocational education and higher education sectors

Key features	Examples of evidence	Met: Yes / No	Comments/ other evidence demonstrated
Support learner transition between education sectors	<ul style="list-style-type: none"> Provide pathways from entry and preparatory level as appropriate to facilitate movement between schools and VET, from entry level into work, and between VET and higher education qualifications 	Yes	<p>Detailed information on career pathways is included in the <i>MSM Companion Volume Implementation Guide Release 3.0</i>, including information about which MSM qualifications are appropriate for VET in Schools delivery.</p> <p>The TAC and IRC have determined that the <i>MSM30318 Certificate III in Manufactured Mineral Products</i> is suitable for delivery under traineeship/apprenticeship schemes, providing a possible pathway from VET in Schools to work.</p>

N. 6. Support interpretation by training providers and others through the use of simple, concise language and clear articulation of assessment requirements

Key features	Examples of evidence	Met: Yes / No	Comments/ other evidence demonstrated
Support implementation across a range of settings	<ul style="list-style-type: none"> Industry advice about delivery is provided via a Companion Volume Implementation Guide ready for publication at the same time as the Training Package 	Yes	<p>Provide brief commentary on how the draft endorsed components meet the Quality Principles with specific reference to the evidence provided, including any evidence provided by the Equity and Editorial Reports</p> <p>Industry advice about delivery is provided in the <i>MSM Companion Volume Implementation Guide Release 3.0</i>, including information about choosing the appropriate qualification, choosing electives to suit context, health and safety, how to deal with access and equity issues and advice about foundation skills. The guide also includes employability skills summaries for each qualification and mapping of units against the Australian Core Skills Framework (ACSF).</p>
Support sound assessment practice	<ul style="list-style-type: none"> Units of competency and their associated assessment requirements are clearly written and have consistent breadth and depth 	Yes	<p>The units of competency and their associated assessment requirements are clearly written, and the Editorial Report confirms this.</p> <p>Content previously included in the Range of Conditions has been removed, and the Performance Evidence and Assessment Conditions have been revised and significantly clarified in this review, enabling users will be able to deliver and assess with consistency.</p>

Key features	Examples of evidence	Met: Yes / No	Comments/ other evidence demonstrated Provide brief commentary on how the draft endorsed components meet the Quality Principles with specific reference to the evidence provided, including any evidence provided by the Equity and Editorial Reports
Support implementation	<ul style="list-style-type: none"> • Compliance with the TGA/National Register requirements for publication • Implementation advice is provided in a Companion Volume Implementation Guide that is ready for publication at the same time as the Training Package 	Yes	All components within this submission comply with the requirements of the National Register and will be ready for publication on TGA at endorsement, including the <i>MSM Companion Volume Implementation Guide, Release 3.0</i> .