



Civil Construction Training Package BCC98

**Training Package for the
Building and Construction Industry**

Endorsed Component

Competency Standards

Assessment Guidelines

Qualifications

BCC10198 Certificate I in Construction

BCC20198 Certificate II in Civil Construction

BCC30198 Certificate III in Civil Construction (Plant)

BCC30298 Certificate III in Civil Construction (Road Construction & Maintenance)

BCC30398 Certificate III in Civil Construction (Tunnel Construction)

BCC30498 Certificate III in Civil Construction (Bridge/Marine Construction)

BCC30598 Certificate III in Civil Construction (Foundation Work – Anchors/Piling)

BCC30698 Certificate III in Civil Construction (Railway Construction & Maintenance)

BCC30798 Certificate III in Civil Construction (Pipelaying)

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TRAINING PACKAGE FOR THE CIVIL CONSTRUCTION SKILLS STREAM OF THE BUILDING AND CONSTRUCTION INDUSTRY

TRAINING PACKAGES

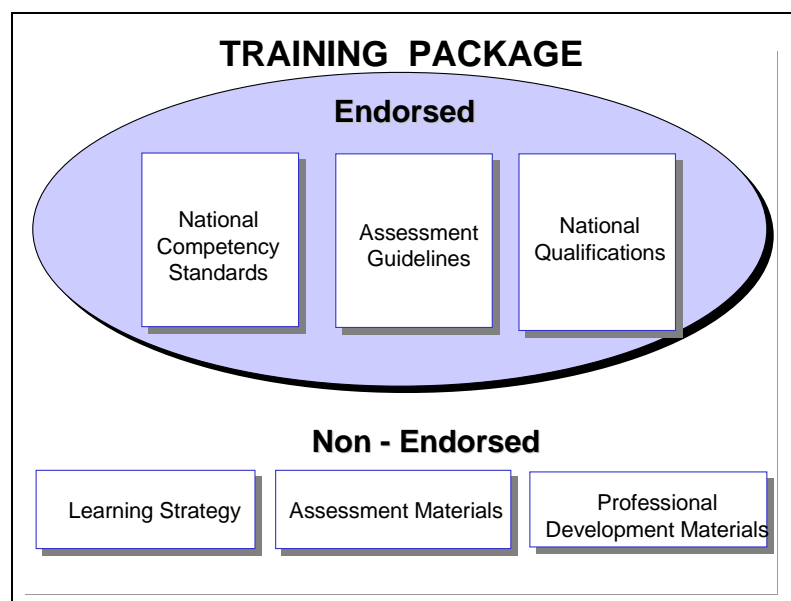
Training Packages provides the basic building blocks for Vocational Education and Training programs. They bring together through a national industry managed process standards, qualifications and assessment, creating a comprehensive toolkit for learning and assessment leading to nationally recognised qualifications.

Training Packages support a new and expanded range of New Apprenticeship opportunities with most qualifications in the Civil Construction Training Packages incorporating flexible pathways.

All Training Packages consist of two components – endorsed and non-endorsed. The endorsed component includes

- **Industry competency standards** which are the competencies the building and construction industry needs its workers to have
- The nine Civil Construction national **qualifications** a person can receive when they are assessed as competent against the standards
- **Assessment guidelines** for assessing competence in the industry.

The non-endorsed component includes a range of resources to support learning and assessment, and the professional development of teachers and trainers.



THE ENDORSED COMPONENT

What are..... Competency Standards

Industry competency standards are nationally agreed, industry developed statements that describe the knowledge and skill necessary to perform the standard required in the workplace.

Each competency standard is made up of

Unit Title: The title of a general area of competency	
Unit Descriptor: Optional, assists with clarifying the unit title. The current Civil Construction competency standards do not have unit descriptors.	
Elements: Describe the outcome which contribute to a unit	Performance Criteria: Specify the required level of performance
Range Statement: Which expands and gives context to performance criteria and elements	
Evidence Guide: Assists the interpretation and assessment of unit. Indicates Resource implications, Key Competencies, context for assessments etc. It provides more information for assessors.	

Development of Competency Standards for Civil Construction

The building and construction industry was one of the first industries to develop national competency standards. The first set of standards for Civil Construction were endorsed by the then National Training Board in 1992. Most of the earlier standards had a narrow focus and they were developed without Evidence Guides.

The original standards were subjected to a thorough review and were revised to reflect a broader notion of competency. The current standards were developed with evidence guides, in accordance with the ANTA “Standards Best Practice Manual”.

CTA has developed competency standards for the Civil Construction stream up to AQF level III.

Customisation of Competency Standards

The building and construction industry has the most mobile workforce in the country. Due to the nature of the industry, building and construction workers are employed on

a project basis for a limited period of time. Building and construction workers move from one project to another, often changing their employer.

Mobility is the key word for employment within the building and construction industry. In this working environment, portability of skills is extremely important for both employers and employees.

Therefore, customisation arrangements for competency standards and their packaging have been developed so that the original intent and the integrity of the standards are maintained to ensure portability of skills.

National competency standards for the building and construction industry have been developed in such a way that flexibility required for different enterprises or industry users has been provided in the range of variables. The enterprises or other industry users may select what is relevant to them from the range of variables.

Evidence guides for competency standards with a broad range of variables indicate the minimum range to be selected to demonstrate competence in a Competency Standard. This provides flexibility for different users to select what is relevant to them from the range of variables, and to demonstrate competence in what is relevant only.

Elements of competency standards and performance criteria given in the competency standards indicate the performance levels acceptable to the industry for those units to be nationally consistent and portable across the industry. Therefore, any changes to the elements of competency or the performance criteria will change the intent and the integrity of the competency standard. Hence, modifications to elements or performance criteria of the competency standards, included in the Training Package, are not allowed.

Competency Standards

Competency Standards included in the Training Package for Civil Construction
(September 1998)

<u>Code</u>	<u>Title</u>
BCG1000A*	Carry out interactive workplace communication
BCG1001A*	Carry out OH&S requirements
BCG1002A*	Plan and organise work
BCC1003A	Drain/dewater site
BCG1004A*	Carry out measurements and calculations
BCC1005A	Use hand and power tools
BCC1006A	Use small plant and equipment
BCG1007A*	Erect and dismantle restricted height scaffolding
BCG1008A*	Use simple levelling devices
BCC1009A	Carry out manual excavation
BCG1010A*	Carry out concreting to simple forms
BCG1011A*	Handle construction materials and safe disposal of waste
BCC1012A	Spread and compact materials manually
BCC1013A	Monitor machine operations
BCC1014A	Control construction traffic

* These standards have been taken from the General Construction Training Package

<u>Code</u>	<u>Title</u>
BCC2000A	Read and interpret plans
BCC2001A	Carry out basic site survey
BCG2002A*	Oxy/LPG acetylene cutting
BCC2003A	Assist with excavation and support installation
BCC2004A	Lay pipes
BCC2005A	Repair pavements
BCC2006A	Erect/dismantle fencing and gates
BCG2007A*	Operate elevating work platforms
BCG2008A*	Use explosive power tools
BCC2009A	Carry out concrete work

<u>Code</u>	<u>Title</u>
BCC3000A	Conduct tractor operations
BCC3001A	Conduct tip truck operations
BCC3002A	Conduct backhoe/loader operations
BCC3003A	Conduct dozer operations
BCC3004A	Conduct excavator operations
BCC3005A	Conduct front end loader operations
BCC3006A	Conduct grader operations
BCC3007A	Conduct scraper operations
BCC3008A	Conduct skid steer loader operations
BCC3009A	Conduct roller operations
BCC3010A	Conduct water cart operations
BCC3011A	Conduct continuous bucket trencher operations

* These standards have been taken from the General Construction Training Package

<u>Code</u>	<u>Title</u>
BCC3012A	Conduct dump truck operations
BCC3013A	Conduct forklift operations
BCC3014A	Conduct pipelayer operations
BCC3015A	Conduct Recycler operations
BCC3016A	Conduct soils and landfill compactor operations
BCC3017A	Conduct telescopic materials spreader operations
BCC3018A	Conduct materials spreader operations
BCC3019A	Conduct profile planer operations
BCC3020A	Install tunnel construction services
BCC3021A	Line tunnel
BCC3022A	Construct underpinning
BCC3023A	Install temporary and permanent rock anchors
BCC3024A	Install primary ground support
BCC3025A	De-water site (sump & permanent de-watering systems)
BCC3026A	Carry out excavations
BCC3027A	Carry out earthworks
BCC3028A	Control traffic
BCC3029A	Excavate by machine
BCC3030A	Install drainage and pipeline systems
BCC3031A	Maintain drainage systems
BCC3032A	Prepare road sub-grade
BCC3033A	Install rock bolts and anchors
BCC3034A	Apply bitumen seal
BCC3035A	Lay asphalt

<u>Code</u>	<u>Title</u>
BCC3036A	Spread and compact granular materials
BCC3037A	Place kerb, channel, median and barrier strips
BCC3038A	Lay segmental/unit pavings
BCC3039A	Apply road markings
BCC3040A	Install and maintain signage and roadside fixtures
BCC3041A	Maintain sealed roads
BCC3042A	Muck out tunnel earthworks
BCC3043A	Construct railway track
BCC3044A	Maintain railway track
BCC3045A	Install piling (driven piles)
BCC3046A	Install piling (compressed piles)
BCC3047A	Install piling (driven-cast in piles)
BCC3048A	Install piling (groutcrete piles)
BCC3049A	Install piling (bored-cast in place piles)
BCC3050A	Construct substructures – bridges & wharves
BCC3051A	Install deck
BCC3052A	Maintain structures – bridge and marine works
BCC3053A	Construct portals
BCC3054A	Excavate by drill & blast

CIVIL CONSTRUCTION QUALIFICATIONS

What are... Qualifications

Under the Australian Qualifications Framework (AQF) there are six levels of vocational education and training qualifications, ranging from AQF level 1 to VI. In the Building and Construction Industry Certificate I is generally accepted as the 'Vet in Schools' level, and Certificate III at 'trade' level.

A training package specifies which combinations of competency standards make up the qualifications for the industry.

Competency standards in the Civil Construction stream have been packaged into 9 qualifications covering AQF levels 1 – 3. The qualifications under the Civil Construction Training Package are:

- BCC10198 Certificate I in Construction
- BCC20198 Certificate II in Civil Construction
- BCC30198 Certificate III in Civil Construction (Plant)
- BCC30298 Certificate III in Civil Construction (Road Construction & Maintenance)
- BCC30398 Certificate III in Civil Construction (Tunnel Construction)
- BCC30498 Certificate III in Civil Construction (Bridge/Marine Construction)
- BCC30598 Certificate III in Civil Construction (Foundation Work – Anchors/Piling)
- BCC30698 Certificate III in Civil Construction (Railway Construction & Maintenance)
- BCC30798 Certificate III in Civil Construction (Pipelaying)

Certificate I was developed to assist transition from schools to VET. Certificate I is common across to Certificate II and all Certificate III qualifications.

Certificate II is common for all Certificate III qualifications. However, the mix of core and elective competencies may vary according to the occupational outcome at Certificate III.

Although most of the Certificate III qualifications listed above are straight forward, there are some qualifications such as Certificate III in Plant and Foundation Work which have more than one pathway within one qualification.

For an example, within the Plant qualification one can select the pathway to be a competent operator in any one of the nine major plant items. The nine major plant items are: backhoe/loader, dozer, excavator, front end loader, grader, scraper, skid steer loader, pipelayer and recycler. Irrespective of the major plant item selected, apprentices are required to be competent in one major plant item and two minor plant items to obtain a qualification.

Similarly those apprentices following Certificate III (Foundation Work) can select the pathway (Piling or Anchors) that suits them best.

Road Marking

After the Training Package was completed, enterprises involved in road marking industry made representation to CTA through the Road Marking Association of Australia to include a Certificate III qualification in Road Marking in the Civil Construction Training Package.

CTA is currently engaged in developing necessary competency standards to be packaged under the proposed qualification. When the work is completed CTA will introduce another qualification titled Certificate III in Civil Construction (Road Marking) within the Civil Construction Training Package.

Components of Qualifications

The building and construction industry has decided to include core, elective and optional competency standards in packaging standards into qualifications aligned to AQF. The industry has decided to have a substantial core in each qualification to ensure all-important portability of skills.

Construction Training Australia on behalf of the building and construction industry is confident that this approach will provide national consistency and the portability required by the industry, whilst providing flexibility required by enterprises, apprentices and licensing authorities.

This approach will also maximise the potential for choice through electives within the boundaries agreed for each qualification for competent performance.

The packaging will also include cross-industry standards, especially in the areas of small business management and office management, including computer skills. These cross-industry standards, once developed will be included in the packaging as optional standards.

Core	All core competency standards listed within a qualification must be achieved. The core competency standards will provide national consistency and portability of skills required.
Electives	The electives will allow enterprises and apprentices to choose units that suit them. The employers and apprentices can draw electives from other Training Packages subject to the customisation arrangements described below.
Optional	These competency standards represent cross-industry standards such as small business management and office skills. They are seen as important but not compulsory to achieve a particular qualification.

The Civil Construction Training Package will allow employers and apprentices to negotiate with Registered Training Organisations and select the elective and optional competency standards that suit their requirements best to supplement the core competency standards listed under each qualification.

Construction Training Australia in conjunction with the construction industry, will periodically add competency standards as elective and optional when, the appropriate standards are developed.

Customisation of packaging of Competency Standards

In general, opportunity for customisation has been provided through core and elective competency standards included in each qualification. The *core* units of competency will provide national consistency of qualifications whilst the *elective* units of

competency will provide the flexibility required by different enterprises and/or apprentices.

Users of the Civil Construction Package can incorporate additional units of competency from other Training Packages as electives. However, all users of Civil Construction Package should complete the **entire core and the minimum number of electives as stipulated** in one qualification package before drawing additional units of competency from another qualification package.

For an example, imagine that a user of the Training Package for Certificate III in General Construction (Bricklaying/Blocklaying) wants to incorporate additional units of competency from Certificate III in General Construction (Solid Plastering). In this case the person should draw additional units of competency from those listed under Solid Plastering in addition to the core and the minimum of two electives as stipulated for Bricklaying/Blocklaying. Any user who does not complete the core and the minimum number of elective stipulated for a particular qualification will not be entitled to have the particular qualification title.

Customisation by RTOs

Construction Training Australia would prefer Registered Training Organisations to refer any customised arrangement involving any component of the Civil Construction Training Package to CTA for their comment on national consistency and portability of such customised arrangements.

New Apprenticeship Pathways

Qualifications included in the Civil Construction Training Package can be achieved by a variety of pathways and delivery methods. Qualifications can be achieved either on-the-job or through a combination of on and off-the-job training.

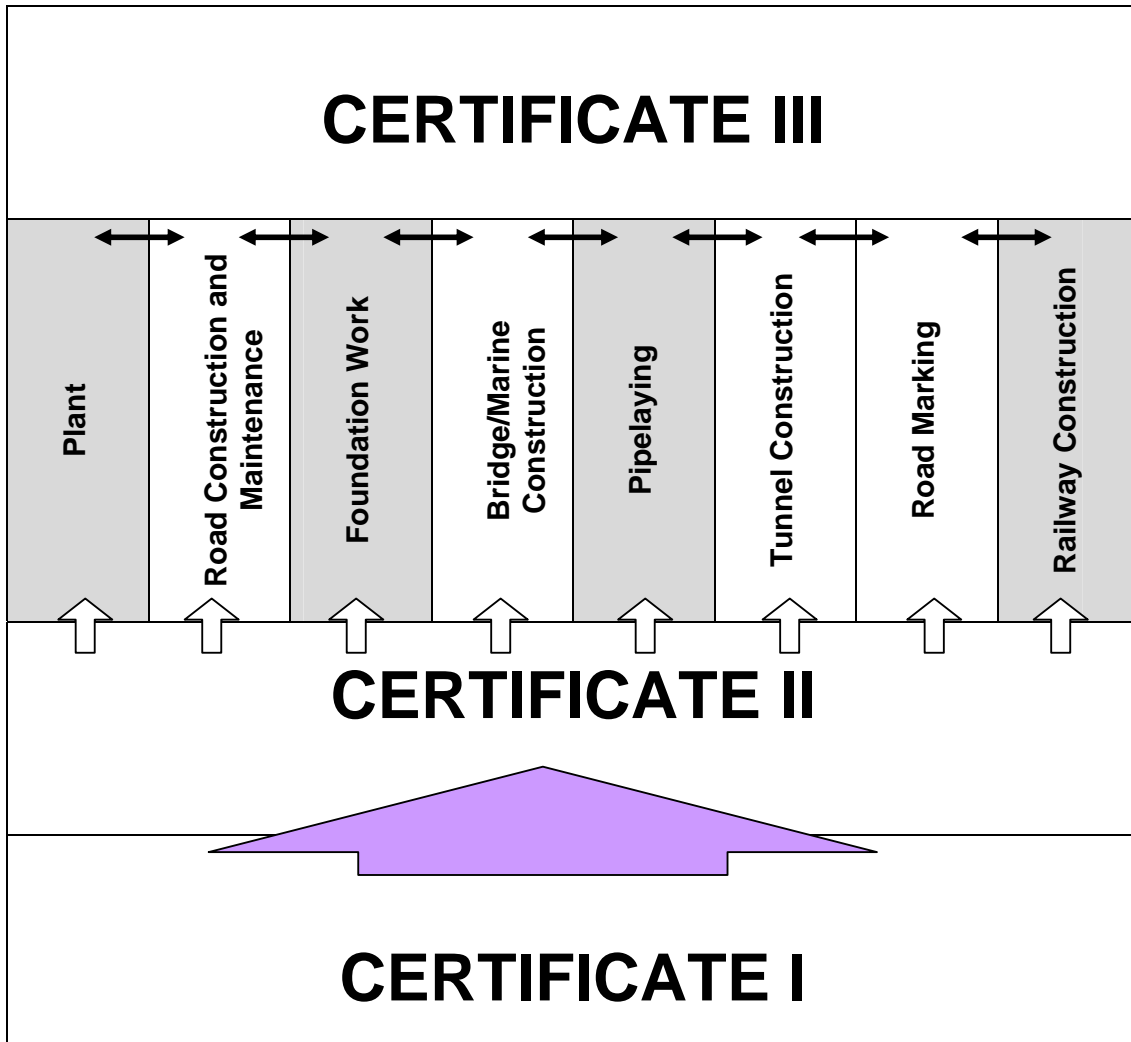
With the exception of Certificate I, the main objective of which is to facilitate VET in schools, all other qualifications can be achieved through contracted training. The General Construction Training Package has introduced five new qualifications at AQF III level that did not exist previously.

Having qualifications at AQF levels I, II and III facilitates traineeship and apprenticeship pathways. This provides multiple entry and exit points and has the potential to recognise more than one certificate with efficient use of learning strategies and pathways which include articulation arrangements.

The diagram on the following page illustrates the formal linkages between different levels of qualifications. The articulation arrangements allow for horizontal and vertical movement between qualifications. Eg. Vertically between Certificates I, II and III and horizontally between Certificate III qualifications.

On the whole, the Civil Construction Training Package will facilitate introduction of new apprenticeships in the building and construction industry.

CIVIL CONSTRUCTION TRAINING PACKAGE OUTLINE



**Packaging of competency standards into qualifications
and their alignment to the AQF
under the Civil Construction Training Package**

BCC10198 - Certificate I in Construction

Unit Number	Unit Title	Core/Elective
BCG1000A	Carry out interactive workplace communication	Core
BCG1001A	Carry out OH&S requirements	Core
BCG1002A	Plan and organise work	Core
BCG1004A	Carry out measurements & calculations	Core
BCC1005A	Use and hand and power tools	Core
BCC1006A	Use small plant and equipment	Core
BCG1008A	Use simple levelling devices	Core
BCG1011A	Handle construction materials & safe disposal of waste	Core
BCC2000A	Read and interpret plans	Core

To achieve this qualification under the VET in schools program, all nine core competency standards must be achieved.

BCC20198 - Certificate II in Civil Construction

Unit Number	Unit Title	Core/Elective
BCG1000A	Carry out interactive workplace communication	Core
BCG1001A	Carry out OH&S requirements	Core
BCG1002A	Plan and organise work	Core
BCC1003A	Site drainage/dewatering	Core
BCG1004A	Carry out measurements and calculations	Core
BCC1005A	Use hand and power tools	Core
BCC1006A	Use small plant and equipment	Core
BCG1007A	Erect and dismantle restricted height scaffolding	Elective
BCG1008A	Use simple levelling devices	Core
BCC1009A	Carry out manual excavation	Core
BCG1010A	Carry out concreting to simple forms	Core
BCG1011A	Handle construction materials and safe disposal of waste	Core
BCC1012A	Spread and compact materials manually	Core
BCC1013A	Monitor machine operations	Core
BCC1014A	Control construction traffic	Core
BCC2000A	Read and interpret plans	Core
BCC2003A	Assist with excavation and support installation	Core
BCC2005A	Repair pavements	Core
BCC2009A	Carry out concrete work	Core
BCC2001A	Carry out basic site survey	Elective
BCG2002A	Oxy/LPG acetylene cutting	Elective
BCC2004A	Lay pipes	Elective
BCC2006A	Erect/dismantle fencing and gates	Elective
BCG2007A	Operate elevating work platforms	Elective
BCG2008A	Use explosive power tools	Elective

To obtain this qualification, all core competency standards and three out of seven elective competency standards must be achieved.

BCC30198 - Certificate III in Civil Construction - Plant

Unit Number	Unit Title	Core/Elective
BCG1000A	Carry out interactive workplace communication	Core
BCG1001A	Carry out OH&S requirements	Core
BCG1002A	Plan and organise work	Core
BCC1003A	Site drainage/dewatering	Core
BCG1004A	Carry out measurements and calculations	Core
BCC1005A	Use hand and power tools	Core
BCC1006A	Use small plant and equipment	Core
BCG1007A	Erect and dismantle restricted height scaffolding	Elective
BCG1008A	Use simple levelling devices	Core
BCC1009A	Carry out manual excavation	Core
BCG1010A	Carry out concreting to simple forms	Core
BCG1011A	Handle construction materials and safe disposal of waste	Core
BCC1012A	Spread and compact materials manually	Core
BCC1013A	Monitor machine operations	Core
BCC1014A	Control construction traffic	Core
BCC2000A	Read and interpret plans	Core
BCC2003A	Assist with excavation and support installation	Core
BCC2005A	Repair pavements	Core
BCC2009A	Carry out concrete work	Core
BCC2001A	Carry out basic site survey	Elective
BCG2002A	Oxy/LPG acetylene cutting	Elective
BCC2004A	Lay pipes	Elective
BCC2006A	Erect/dismantle fencing and gates	Elective
BCG2007A	Operate elevating work platforms	Elective
BCG2008A	Use explosive power tools	Elective

Group A

Unit Number	Unit Title	Core/Elective
BCC3002A	Conduct Backhoe/Loader operations	Elective
BCC3003A	Conduct Dozer operations	Elective
BCC3004A	Conduct Excavator operations	Elective
BCC3005A	Conduct Front End Loader operations	Elective
BCC3006A	Conduct Grader operations	Elective
BCC3007A	Conduct Scraper operations	Elective
BCC3008A	Conduct Skid Steer Loader operations	Elective
BCC3014A	Conduct Pipelayer operations	Elective
BCC3015A	Conduct Recycler operations	Elective

Group B

Unit Number	Unit Title	Core/Elective
BCC3000A	Conduct Tractor operations	Elective
BCC3001A	Conduct Tip Truck operations	Elective
BCC3009A	Conduct Roller operations	Elective
BCC3010A	Conduct water cart operations	Elective
BCC3011A	Conduct Continuous Bucket Trencher operations	Elective
BCC3012A	Conduct Dump Truck operations	Elective
BCC3013A	Conduct Forklift operations	Elective
BCC3016A	Conduct Soil and landfill Compactor operations	Elective
BCC3017A	Conduct Telescopic Materials Handler operations	Elective
BCC3018A	Conduct Materials Spreader operations	Elective
BCC3019A	Conduct Profile Planer operations	Elective

To obtain this qualification one must achieve:

All core competency standards and three out of seven elective competency standards from the 1000 and the 2000 series,

1 competency standard from Group A

and

2 competency standards from Group B

BCC30298 - Certificate III in Civil Construction (Road Construction & Maintenance)

Unit Number	Unit Title	Core/Elective
BCG1000A	Carry out interactive workplace communication	Core
BCG1001A	Carry out OH&S requirements	Core
BCG1002A	Plan and organise work	Core
BCC1003A	Site drainage/dewatering	Core
BCG1004A	Carry out measurements and calculations	Core
BCC1005A	Use hand and power tools	Core
BCC1006A	Use small plant and equipment	Core
BCG1007A	Erect and dismantle restricted height scaffolding	Elective
BCG1008A	Use simple levelling devices	Core
BCC1009A	Carry out manual excavation	Core
BCG1010A	Carry out concreting to simple forms	Core
BCG1011A	Handle construction materials and safe disposal of waste	Core
BCC1012A	Spread and compact materials manually	Core
BCC1013A	Monitor machine operations	Core
BCC1014A	Control construction traffic	Core
BCC2000A	Read and interpret plans	Core
BCC2003A	Assist with excavation and support installation	Core
BCC2004A	Lay pipes	Core
BCC2005A	Repair pavements	Core
BCC2009A	Carry out concrete work	Core
BCC2001A	Carry out basic site survey	Elective
BCG2002A	Oxy/LPG acetylene cutting	Elective
BCC2006A	Erect/dismantle fencing and gates	Elective
BCG2007A	Operate elevating work platforms	Elective
BCG2008A	Use explosive power tools	Elective
BCC3028A	Control traffic	Core
BCC3030A	Install drainage and pipeline systems	Core
BCC3032A	Prepare road sub-grade	Core
BCC3036A	Spread and compact granular materials	Core
BCC3031A	Maintain drainage systems	Elective
BCC3034A	Apply bitumen seal	Elective
BCC3035A	Lay asphalt	Elective
BCC3037A	Place kerb, channel, median and barrier strips	Elective
BCC3038A	Lay segmental/unit paving	Elective
BCC3039A	Apply road markings	Elective
BCC3040A	Install and maintain signage and roadside fixtures	Elective
BCC3041A	Maintain sealed roads	Elective

To obtain this qualification, all core competency standards and three out of six elective competency standards from the 1000 and the 2000 series plus three electives from the 3000 series must be achieved.

BCC30398 - Certificate III in Civil Construction (Tunnel Construction)

Unit Number	Unit Title	Core/Elective
BCG1000A	Carry out interactive workplace communication	Core
BCG1001A	Carry out OH&S requirements	Core
BCG1002A	Plan and organise work	Core
BCC1003A	Site drainage/dewatering	Core
BCG1004A	Carry out measurements and calculations	Core
BCC1005A	Use hand and power tools	Core
BCC1006A	Use small plant and equipment	Core
BCG1007A	Erect and dismantle restricted height scaffolding	Elective
BCG1008A	Use simple levelling devices	Core
BCC1009A	Carry out manual excavation	Core
BCG1010A	Carry out concreting to simple forms	Core
BCG1011A	Handle construction materials and safe disposal of waste	Core
BCC1012A	Spread and compact materials manually	Core
BCC1013A	Monitor machine operations	Core
BCC1014A	Control construction traffic	Core
BCC2000A	Read and interpret plans	Core
BCC2003A	Assist with excavation and support installation	Core
BCC2005A	Repair pavements	Core
BCC2009A	Carry out concrete work	Core
BCC2001A	Carry out basic site survey	Elective
BCG2002A	Oxy/LPG acetylene cutting	Elective
BCC2004A	Lay pipes	Elective
BCC2006A	Erect/dismantle fencing and gates	Elective
BCG2007A	Operate elevating work platforms	Elective
BCG2008A	Use explosive power tools	Elective
BCC3020A	Install tunnelling construction services	Core
BCC3024A	Install primary ground support	Core
BCC3028A	Control traffic	Core
BCC3029A	Excavate by machine	Core
BCC3030A	Install drainage and pipeline systems	Core
BCC3031A	Maintain drainage systems	Core
BCC3042A	Muck out tunnel earthworks	Core
BCC3053A	Construct portals	Core
BCC3021A	Line tunnel	Elective
BCC3033A	Install rock bolts and anchors	Elective
BCC3054A	Excavate by drill and blast	Elective

To obtain this qualification, all core competency standards and three out of six elective competency standards from the 1000 and the 2000 series plus two electives from the 3000 series must be achieved.

BCC30498 - Certificate III in Civil Construction (Bridge/Marine Construction and Maintenance)

Unit Number	Unit Title	Core/Elective
BCG1000A	Carry out interactive workplace communication	Core
BCG1001A	Carry out OH&S requirements	Core
BCG1002A	Plan and organise work	Core
BCC1003A	Site drainage/dewatering	Core
BCG1004A	Carry out measurements and calculations	Core
BCC1005A	Use hand and power tools	Core
BCC1006A	Use small plant and equipment	Core
BCG1007A	Erect and dismantle restricted height scaffolding	Elective
BCG1008A	Use simple levelling devices	Core
BCC1009A	Carry out manual excavation	Core
BCG1010A	Carry out concreting to simple forms	Core
BCG1011A	Handle construction materials and safe disposal of waste	Core
BCC1012A	Spread and compact materials manually	Core
BCC1013A	Monitor machine operations	Core
BCC1014A	Control construction traffic	Core
BCC2000A	Read and interpret plans	Core
BCC2003A	Assist with excavation and support installation	Core
BCC2009A	Carry out concrete work	Core
BCC2005A	Repair pavements	Core
BCC2001A	Carry out basic site survey	Elective
BCG2002A	Oxy/LPG acetylene cutting	Elective
BCC2004A	Lay pipes	Elective
BCC2006A	Erect/dismantle fencing and gates	Elective
BCG2007A	Operate elevating work platforms	Elective
BCG2008A	Use explosive power tools	Elective
BCC3028A	Control traffic	Core
BCC3050A	Construct sub-structures - bridges & wharves	Core
BCC3051A	Install deck	Core
BCC3052A	Maintain structures – bridge & marine works	Core

To obtain this qualification all core competency units and three out of seven elective competency standards must be achieved,

BCC30598 - Certificate III in Civil Construction (Foundation Work - Piling/Anchors)

Unit Number	Unit Title	Core/Elective
BCG1000A	Carry out interactive workplace communication	Core
BCG1001A	Carry out OH&S requirements	Core
BCG1002A	Plan and organise work	Core
BCC1003A	Site drainage/dewatering	Core
BCG1004A	Carry out measurements and calculations	Core
BCC1005A	Use hand and power tools	Core
BCC1006A	Use small plant and equipment	Core
BCG1007A	Erect and dismantle restricted height scaffolding	Elective
BCG1008A	Use simple levelling devices	Core
BCC1009A	Carry out manual excavation	Core
BCG1010A	Carry out concreting to simple forms	Core
BCG1011A	Handle construction materials and safe disposal of waste	Core
BCC1012A	Spread and compact materials manually	Core
BCC1013A	Monitor machine operations	Core
BCC1014A	Control construction traffic	Core
BCC2000A	Read and interpret plans	Core
BCC2003A	Assist with excavation and support installation	Core
BCC2005A	Repair pavements	Core
BCC2009A	Carry out concrete work	Core
BCC2001A	Carry out basic site survey	Elective
BCG2002A	Oxy/LPG acetylene cutting	Elective
BCC2004A	Lay pipes	Elective
BCC2006A	Erect/dismantle fencing and gates	Elective
BCG2007A	Operate elevating work platforms	Elective
BCG2008A	Use explosive power tools	Elective
BCC3025A	De-water site (sump and permanent de-watering systems)	Core
BCC3027A	Carry out earthworks	Core
BCC3022A	Construct underpinning	Elective
BCC3023A	Install temporary and permanent rock anchors	Elective
BCC3024A	Install primary ground support	Elective
BCC3026A	Carry out excavations	Elective
BCC3045A	Install piling (driven plies)	Elective
BCC3046A	Install piling (compressed piles)	Elective
BCC3047A	Install piling (driven-cast in piles)	Elective
BCC3048A	Install piling (groutcrete piles)	Elective
BCC3049A	Install piling (bored-cast in place piles)	Elective

To obtain this qualification, all core competency standards and three out of six elective competency standards from the 1000 and the 2000 series plus three electives from the 3000 series must be achieved.

BCC30698 - Certificate III in Civil Construction (Railway Construction & Maintenance)

Unit Number	Unit Title	Core/Elective
BCG1000A	Carry out interactive workplace communication	Core
BCG1001A	Carry out OH&S requirements	Core
BCG1002A	Plan and organise work	Core
BCC1003A	Site drainage/dewatering	Core
BCG1004A	Carry out measurements and calculations	Core
BCC1005A	Use hand and power tools	Core
BCC1006A	Use small plant and equipment	Core
BCG1007A	Erect and dismantle restricted height scaffolding	Elective
BCG1008A	Use simple levelling devices	Core
BCC1009A	Carry out manual excavation	Core
BCG1010A	Carry out concreting to simple forms	Core
BCG1011A	Handle construction materials and safe disposal of waste	Core
BCC1012A	Spread and compact materials manually	Core
BCC1013A	Monitor machine operations	Core
BCC1014A	Control construction traffic	Core
BCC2000A	Read and interpret plans	Core
BCC2003A	Assist with excavation and support installation	Core
BCC2005A	Repair pavements	Core
BCC2009A	Carry out concrete work	Core
BCC2001A	Carry out basic site survey	Elective
BCG2002A	Oxy/LPG acetylene cutting	Elective
BCC2004A	Lay pipes	Elective
BCC2006A	Erect/dismantle fencing and gates	Elective
BCG2007A	Operate elevating work platforms	Elective
BCG2008A	Use explosive power tools	Elective
BCC3043A	Construct railway track	Core
BCC3044A	Maintain railway track	Core

To obtain this qualification, all core competency units and three out of seven elective competency standards must be achieved.

BCC30798 - Certificate III in Civil Construction (Pipelaying)

Unit Number	Unit Title	Core/Elective
BCG1000A	Carry out interactive workplace communication	Core
BCG1001A	Carry out OH&S requirements	Core
BCG1002A	Plan and organise work	Core
BCC1003A	Site drainage/dewatering	Core
BCG1004A	Carry out measurements and calculations	Core
BCC1005A	Use hand and power tools	Core
BCC1006A	Use small plant and equipment	Core
BCG1007A	Erect and dismantle restricted height scaffolding	Elective
BCG1008A	Use simple levelling devices	Core
BCC1009A	Carry out manual excavation	Core
BCG1010A	Carry out concreting to simple forms	Core
BCG1011A	Handle construction materials and safe disposal of waste	Core
BCC1012A	Spread and compact materials manually	Core
BCC1013A	Monitor machine operations	Core
BCC1014A	Control construction traffic	Core
BCC2000A	Read and interpret plans	Core
BCC2003A	Assist with excavation and support installation	Core
BCC2004A	Lay pipes	Core
BCC2005A	Repair pavements	Core
BCC2009A	Carry out concrete work	Core
BCC2001A	Carry out basic site survey	Elective
BCG2002A	Oxy/LPG acetylene cutting	Elective
BCC2006A	Erect/dismantle fencing and gates	Elective
BCG2007A	Operate elevating work platforms	Elective
BCG2008A	Use explosive power tools	Elective
BCC3030A	Install drainage and pipeline systems	Core
BCC3036A	Spread and compact granular materials	Core
BCC3031A	Maintain drainage systems	Elective
BCC3034A	Apply bitumen seal	Elective
BCC3037A	Place kerb, channel, median and barrier strips	Elective
BCC3038A	Lay segmental/unit paving	Elective
BCC3039A	Apply road markings	Elective
BCC3040A	Install and maintain signage and roadside fixtures	Elective

To obtain this qualification, all core competency standards and three out of six elective competency standards from the 1000 and the 2000 series plus three electives from the 3000 series must be achieved.

Assessment Guidelines

What are Assessment Guidelines?

Assessment guidelines describe the type of system by which the competence of an employee/learner may be assessed against endorsed industry/enterprise competency standards.

The process of assessment is a central element to the development of a competency-based training (CBT) system. It ensures that persons working or seeking work within the Building and Construction industry have the skills and knowledge required to perform selected job functions. Similarly it provides a benchmark that ensures an employee's/learner's skills are recognised and acknowledged.

Training Package Assessment Guidelines are based on principles agreed by Commonwealth, State and Territory Ministers of Education and Training through the operation of the Australian Recognition Framework.

The Assessment Guidelines provide direction for the implementation of an industry relevant assessment system which is designed to ensure the validity, reliability and fairness of assessments conducted in both the workplace and institutional contexts

SECTION 1

Assessment System Overview

1.1 Benchmark for Assessment

The benchmark for assessment, in accordance with national requirements, will be the endorsed industry competency standards for Building and Construction - Civil Construction and General Construction.

1.2. Role of Registered Training Organisations.

The relevant State Training or Recognition Authority, in accordance with the Australian Recognition Framework, is required to implement the national core standards for the registration of Registered Training Organisations and for the maintenance of the system through the provision of monitoring and auditing processes.

The requirements for assessment and the issuance of qualifications essentially refer to:

- ensuring that the resources for assessment and issuance of qualifications meet the requirements of the relevant endorsed Training Package
- ensuring that assessments are conducted in accordance with the endorsed components of the relevant endorsed Training Package.
- providing quality assurance mechanisms to ensure that assessment is fair, reliable, valid and provides for a consistency of outcomes.
- the provision of appropriate information, advice and support services which include an appeals system and dispute settling procedure.
- the issuing of the relevant AQF qualification(s) or statement of attainment in accordance with the requirements of the AQF guidelines, National Training Framework Training Committee Guidelines and the specific qualification requirements of the relevant endorsed Training Package(s).

Range of options for undertaking assessment.

The Building and Construction industry streams of Civil Construction and General Construction have specific legislative and regulatory requirements in regards to load shifting operations, occupational health and safety and construction standards. Given the level of technical expertise required for assessors within the industry it may be appropriate that partnership arrangements are undertaken between Registered Training Organisations, enterprises and technically qualified

industry personnel. It should be noted that the Registered Training Organisation has responsibility for ensuring the integrity of the assessment process and this should be the guiding focus at all times. **It is incumbent upon the relevant Registered Training Organisation to ensure that assessments are conducted in a fair and equitable manner which includes provision for the language and literacy capabilities of the assessee.**

The range of options may include:

- partnerships between enterprises, technically qualified industry personnel and Registered Training Organisations whereby aspects such as evidence collection, assessor requirements, validation methods and the like are shared between the respective parties.
- enterprises undertaking the assessment process with the Registered Training Organisation monitoring and validating the assessment outcomes.
- enterprises becoming Registered Training Organisations.
- enterprises engaging Registered Training Organisations to undertake all assessment requirements.
- combinations of the above.

1.3. Assessment Pathways

The Building and Construction industry considers that to maintain a level of consistency and validity with assessment outcomes, all assessments must be consistent with the relevant units of competency. Therefore this benchmark for assessment will operate for both on and off-the-job assessments within the industry.

The single assessment benchmark acknowledges that competency can be developed and assessed through a variety of structured and unstructured experiences, informal and formal training and the transference of knowledge and skills from other contexts and environments. To devise separate assessment benchmarks to encompass the myriad of ways in which competence may be gained and demonstrated is neither efficient or effective.

The major consideration in any assessment process must be the attainment of the required standard of performance rather than how the competencies may have been acquired.

Within the Civil Construction and General Construction streams of Building and Construction a number of learning pathways have traditionally operated. This encompasses formal apprenticeship and traineeship systems as well as skills gained solely from workplace experience. The industry is conscious of the multiple ways that persons have gained workplace competence and in accordance with the principles of Training Reform, requires an assessment process that is

non-discriminatory in acknowledging that competence. It is therefore of paramount importance that assessment instruments are in accordance with the level of language and literacy required by the assessee to achieve competence at the workplace.

Assessment against the units of competence provides for the identification of the required skills and knowledge to be demonstrated and also details the appropriate context and range of evidence necessary to inform a valid assessment. The processes thereby ensuring that an assessee meets the specific legislative and regulatory requirements that operate within the industry.

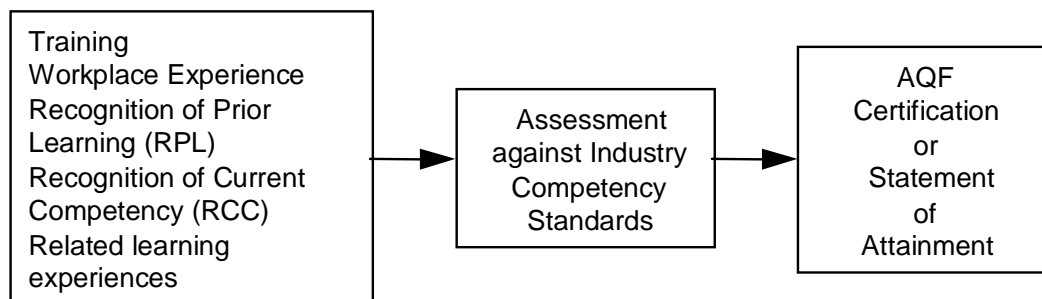
It should be noted that this does impact upon the range of assessment methodologies and evidence collection processes which assessors may utilise to determine competence. It is acknowledged by the industry that these will differ to account for varying contexts and individual/enterprise requirements. Those processes must however confirm, that the assessed competencies can be effectively displayed in a workplace environment.

'Assessment is the process of collecting evidence and making judgements on whether competency has been achieved, the purpose of assessment is to confirm that an individual can perform to those standards expected in the workplace as expressed in the relevant endorsed industry/enterprise competency standards'.

Guidelines for Training Package Developers. (1997).

Figure 1

Pathways to Recognition



Options for AQF Certification or Statement of Attainment through training include New Apprenticeships, which may be on-the-job only or a combination of on and off-the-job. New Apprenticeships would not be available in off-the-job only.

1.4. Recording Assessment Outcomes

The responsibility for the recording, storing and retrieval of assessment outcomes rests with the Registered Training Organisation(s). It is acknowledged that individuals and enterprises may engage the services of different RTO's over a period of time. It is therefore important that results of any assessment process must be documented and stored in accordance with the requirements of the Australian Recognition Framework.

The Building and Construction Industry recognises that individuals have an important role in ensuring that their competencies are recognised and recorded. Individuals should maintain a record of the competencies that they have achieved which provides a further measure of ensuring that when the required combination of standards have been met, an appropriate qualification against the Australian Qualifications Framework can be issued.

1.5. Reporting Assessment Outcomes

In accordance with the Australian Qualifications Framework the minimum level of detail to be provided in a statement of attainment or qualification includes the AQF level, the AQF title of the qualification (if applicable) and the title(s) of the achieved unit(s) of competency.

1.6. Appeal and Reassessment Process

The process of assessment carries a level of interpretation and procedural formality, which can create an environment, where disagreements may occur. Although clear understandings and informed views about the process of assessment will reduce the prospect of disagreements, an appeals and reassessment process is an essential element of any assessment framework.

Although the responsibility for this function rests with the relevant Registered Training Organisation, it may be beneficial to consider workplace involvement within the appeals and reassessment process, particularly for on-the-job assessments.

1.7. External Audit of Assessment Process

The Australian Recognition Framework outlines a comprehensive monitoring and audit process for the operation of Registered Training Organisations. Although the responsibility for this function rests with the relevant State/Territory Training/Recognition Authority, it may be beneficial to consider involvement of industry in the process through the relevant State/Territory Building and Construction ITAB.

SECTION 2

Assessor Qualifications and Training

2.1 Assessor Qualifications

Assessors within the Building and Construction industry are the principal drivers in delivering a responsive, efficient and high quality assessment system. Within the assessment framework they have primary responsibility for:

- determining the application of the assessment process,
- utilising appropriate assessment strategies and instruments,
- conducting the assessment process,
- making accurate and informed judgements, and
- informing and recording all relevant parties of the outcomes of the assessment process.

It is therefore fundamental that assessors must be competent and knowledgeable in the process of assessment.

All Building and Construction assessors, must:

- be competent against two units within the *Competency Standards for Assessment 1995* (Ministerial Council decision - appendix 1). Those standards include the Assessment Standard - Conduct Assessment in Accordance with an Established Procedure, and the Extension Unit - Plan and Review Assessment.
- be technically competent at least to the level being assessed either individually or in a partnership arrangement. (See section 2.2).

To ensure the integrity of the assessment process and to maintain industry confidence with the system, it is advisable that assessors have knowledge of the nature and impact of training reform within the Building and Construction industry including an overview of the process of assessment adopted for the industry.

Assessor competence may be achieved through the completion of a recognised training program or an approved recognition of prior learning process. Regardless of the method used to infer competence, assessment must always be demonstrated against the endorsed industry assessor standards.

“Assessment against competencies in the Training package will be carried out in accordance with these endorsed guidelines. The guidelines include the necessary qualifications for those conducting assessments and provide for those situations where more than one person may contribute to the assessment and where the required technical and assessment competencies may not be held by any one person.”

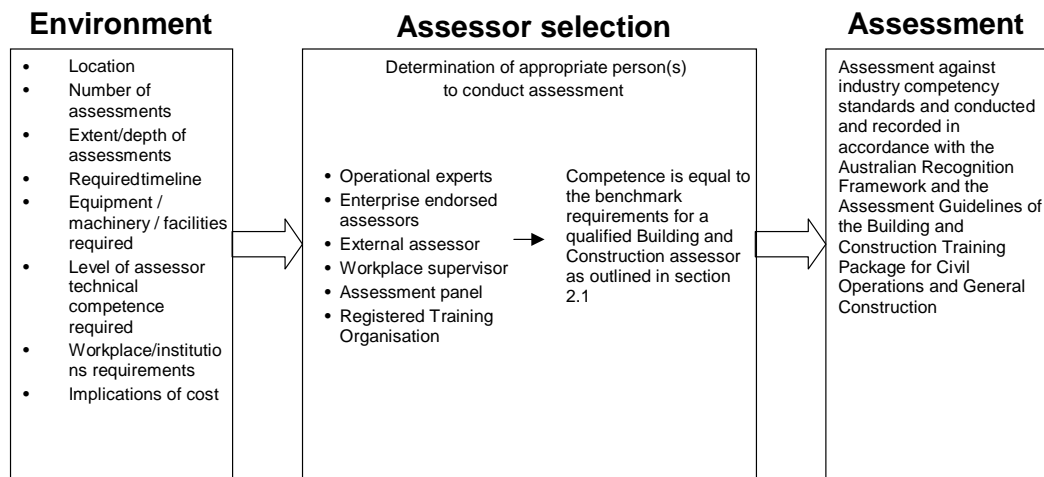
Updated Assessment Sections for the “Guidelines for Training Package Developers” (January 1998)

2.2 Using Qualified Assessors.

In order to ensure that a level of quality and rigor is maintained within the assessment process, it is mandated that the assessor is ultimately responsible for the outcome of any assessment and therefore must ensure that the assessment has met all stipulated requirements.

The assessor, in determining the level of competence or otherwise of a candidate, must be satisfied that the evidence collected adequately addresses the applicable industry/enterprise competency standards and that the assessment process has been undertaken in a valid, reliable and fair manner.

In undertaking the assessment process consideration should also be given to those methods that, whilst maintaining the integrity and quality of the system, offer an approach that is innovative and flexible. This may be achieved by using various combinations of persons that may conduct the assessment.



Whilst some enterprises and Registered Training Organisations will opt for a single qualified assessor to undertake the assessment process, others may utilise a flexible approach when undertaking workplace or institutional assessments. A combination of persons to undertake the assessment process may be most appropriate where assessors may not be technically competent at the level or unit being assessed, or where it is cost prohibitive to have an assessor undertake all aspects of the assessment process, (e.g. remote location, length of assessment, large number of assessments, prohibitive timeline etc.). The use of multiple persons to undertake an assessment must however be auspiced by a Registered Training Organisation.

A flexible approach to fulfilling the requirement for qualified assessors can potentially offer significant cost and time efficiencies to both enterprises and individuals.

SECTION 3

Guidelines for designing assessment instruments.

It is viewed that the assessor and assessee are active participants in the assessment process. Where the assessment is undertaken in a workplace, the opportunity to participate in the assessment process should be afforded to the employer and other relevant persons.

3.1 The Process of Assessment.

The process of assessment requires assessors to make informed judgements concerning an individual's performance against National Building and Construction industry or enterprise-based competency standards. To fulfil this requirement there is a constant need for assessors to interpret and translate information contained within the competency standards to meet the varying contexts in which assessment will take place. The development of reliable, valid, flexible and fair assessment instruments are critical in meeting this challenge.

The design of assessment instruments must therefore consider aspects such as the:

- assessment context
- assessment environment
- assessment purpose
- level of available resources
- characteristics of the assessee
- rigour and length of the assessment
- level of evidence required
- language and literacy capability of the assessee
- language and literacy requirements of the required function / competency

At all times assessors must ensure that sufficient evidence is gathered to provide an accurate, valid and fair assessment of an individual's performance against the applicable competency standard(s).

3.2 Evidence Gathering

An effective assessment process relies on the collection of sufficient information to make an informed judgement on the performance of an individual. Whilst there are no absolute rules about how much evidence is required or what evidence gathering methods should be used, there is a need to confirm the accuracy and consistency of any assessment of performance.

Although processes for the gathering of evidence will vary, four primary approaches should be utilised. They include:

- samples of performance (e.g. constructed through simulations, activities and the like);
- observation of performance in the workplace;
- evidence of prior performance (e.g. recognition of prior learning, recognition of current competencies);
- supplementary information (e.g. questioning, tests, presentations, contingency analysis and the like).

In many instances, the most appropriate method of gathering evidence will be a combination of all four approaches although this would need to be considered in relation to factors such as time, cost and context.

Figure 4

Examples of Appropriate Evidence Gathering Methods or Techniques

Samples of performance	Evaluation of simulated product Evaluation of simulated process Examination of finished products and processes skill tests aligned to work activity
Observation of performance in the workplace	Evaluation of product Evaluation of process Management of changing context and requirements Interaction with related work activities
Evidence of prior performance	Evaluation of qualifications content Evaluation of previous work through portfolios, projects, articles, reports, work history, supervisor and referees' reports etc.

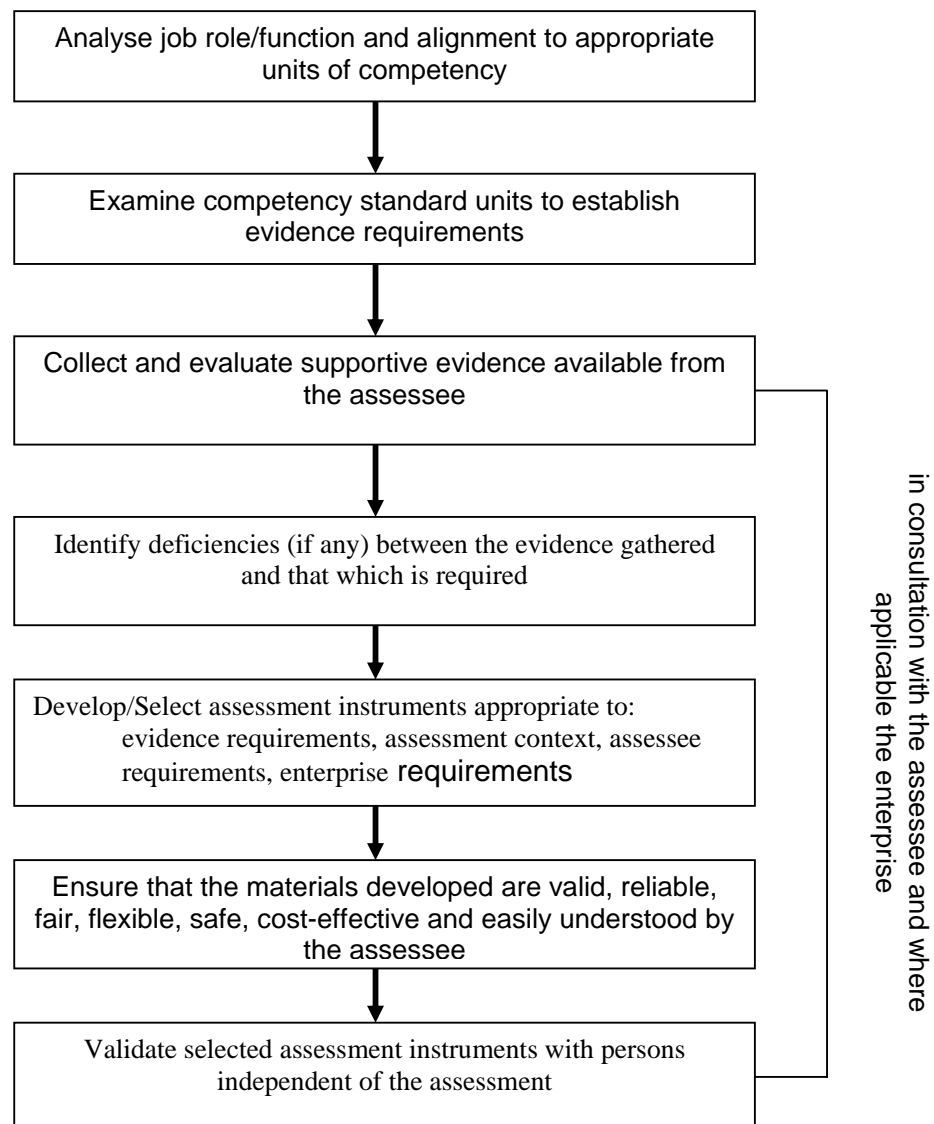
3.3 Assessment Instrument Design

In constructing valid and reliable assessment instruments a balance must be maintained between the specific needs of enterprises and individuals and that of ensuring the integrity of the industry/enterprise competency standards. It is the responsibility of the assessor to ensure that any instruments utilised will produce an outcome that can be directly aligned to the achievement of an industry/enterprise competency standard(s).

The following flowchart outlines a process of designing assessment instruments that meet that criteria.

Figure 5

Designing Assessment Instruments



Network Contacts

The following are the contact details for members of the building and construction ITC network

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