



Australian Government

Department of Education, Employment and Workplace Relations

DEFCA305B Assist in the construction of wet gap crossings

Release: 1

DEECA305B Assist in the construction of wet gap crossings

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

This unit covers the competency required to assist in the preparation, construction, operation and recovery of **wet gap crossing bridging equipment**, including floating support bridges, to cross rivers and other wet gaps to facilitate the movement of personnel, vehicles, cargo and equipment.

Wet gap crossing is defined as a bridge that is physically supported by the water, i.e. through pontoons and associated buoyancy measures. Bridges will normally be constructed on a temporary basis under **field conditions** to meet the operational need to provide a crossing point over a gap for personnel and equipment. When the crossing is no longer required the bridge is either recovered to storage or redeployed to another crossing. The individual will usually be engaged in bridge construction as part of a team under supervision, but may undertake some autonomous tasks.

Application of the Unit

Application of the Unit

The application of this unit in the workplace - the environments, complexities and situations involved - will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

This text will be useful for the purposes of job descriptions, recruitment advice or job analysis; where possible, it will not be too job specific to allow other industries to import it into other Training Packages, where feasible.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite Unit/s	BCG1005A Use hand and power tools
	BCG1006A Use small plant and equipment
	BCG1011A Handle construction materials and safely dispose of waste
	BSBCMN311A Maintain workplace safety
	DEFCA304B Prepare, operate and maintain small watercraft

Employability Skills Information

Employability Skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Plan and prepare for wet gap crossing operations

- 1.1 Appropriate ***personal protective equipment*** is selected and worn in accordance with ***OH&S requirements***
- 1.2 ***Site layout and preparation*** is conducted in accordance with ***standard procedures***
- 1.3 All wet gap crossing bridging components are checked against the inventory and materials list for completeness and are prepared for operation with faults and deficiencies reported to the supervisor
- 1.4 ***Tools and equipment*** required for the task are selected, checked for serviceability and faults are reported to the supervisor

2. Construct wet gap crossing equipment

- 2.1 Jigs, fixtures and equipment to be used in construction are assembled and adjusted ready for use
- 2.2 Bridge components are assembled and checked for compliance, accuracy and alignment in accordance with standard procedures
- 2.3 Equipment is operated in accordance with standard procedures

3. Maintain and clean up site and equipment

- 3.1 Gap crossing sites and crossing systems are maintained in accordance with standard procedures
- 3.2 Gap crossing equipment, tools and unused materials are recovered, cleaned, maintained and documentation is completed, with any faults and deficiencies reported in accordance with standard procedures
- 3.3 Gap crossing equipment, tools and materials are either stored or redeployed to another site in accordance with standard procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- interpret plans and job instructions
- manually handle construction materials and heavy bridging components
- work with plant
- follow instructions/directives and report information
- participate in team
- encourage other team members
- use a variety of verbal and non-verbal communication techniques including language style, active listening

Required Knowledge

- OH&S workplace and equipment safety requirements
- materials handling while operating tools
- site safety while working with plant
- anchorage systems, knots and lashings
- techniques for supporting others
- composition of teams and roles and responsibilities of team members
- verbal and non-verbal communication techniques including language style, active listening

Evidence Guide

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessment must confirm the ability to assist in the construction of at least two wet gap crossings using two types of wet gap crossing bridging equipment listed in the Range Statement. Individuals should be assessed participating in the construction of:

- one gap crossing with a span of at least 30 metres
- one crossing at night.

Assessment must also confirm the ability to:

- prepare a crossing site
- check components, tools and equipment for serviceability and completeness
- participate in the assembly, construction operation and recovery of various types of crossing systems
- communicate effectively and work as part of a team.

Consistency in performance

Competency should be demonstrated under field conditions over a time frame that allows for individuals to be assessed in the various tasks related to the construction of at least two wet gap crossings using two types of equipment listed in the Range Statement

Context of and specific resources for assessment

Context of assessment

Competency should be assessed by observing the individual assisting in the assembly, construction, and maintenance of various types of wet gap crossing equipment that may include floating support bridges, ferries, rafts and fixed floating span equipment in accordance with standard procedures and instructions, by day and night and should cover all of the Critical aspects of evidence.

Specific resources for assessment

Access to:

- wet gap crossing equipment and components (fixed floating span equipment; ferry equipment; floating support bridge; rafts; improvised floating structure)
- tools, plant, equipment and materials required to support the operation of wet gap crossing equipment including the construction of supporting devices such as aerial ropeways
- wet gap area for training area

EVIDENCE GUIDE

- transport, small watercraft, plant and operators.

Range Statement

RANGE STATEMENT

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

Wet gap crossing bridging equipment may include

Fixed floating span equipment
Ferry equipment (captive and free)
Floating support bridge
Rafts
Improvised floating structures

Field conditions may include

A range of terrain, soil and vegetation
Under all weather conditions
By day or night and under illumination
Wet gaps including rivers, streams and lakes

Personal protective equipment may include

Boots
Safety glasses/goggles
Ear plugs/muffs
Dust masks/respirators
Gloves
Hard hat/cap
Life vests

OH&S requirements may include

Workplace operations and safety procedures
Use of protective clothing and equipment
Safe use of tools and equipment
Safe handling and storage of materials
Safe working on water and floating structures

Site layout and preparation may include

Preparing site plan
Marking out site
Removing vegetation
Constructing approaches including access roads and tracks
Compacting the soil and stabilising entry and exit points

RANGE STATEMENT**Standard procedures may include**

Positioning components and materials for assembly
Determining datum line

Written and verbal orders and instructions
Wet bridging equipment procedures manuals, manufacturer's handbooks, job instructions, field engineering pamphlets and other publications
Technical specifications

Tools and equipment may include

Small plant equipment
Anchorages
Expedient road and tracking i.e. materials obtained locally to construct improvised roads and tracks
Measuring tape/rule
Spirit level
Straight edge
Weights
String lines
Jigs
Clamps
Mechanical advantage devices, including blocks and tackle
Watercraft
Hand and power tools

Unit Sector(s)

Not applicable.

Corequisite Unit/s**Co-requisite Unit/s**

Nil