



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **DEFDV012B Perform underwater beach and waterway surveys**

**Release: 1**

## **DEFDV012B Perform underwater beach and waterway surveys**

### **Modification History**

Not applicable.

### **Unit Descriptor**

#### **Unit Descriptor**

This unit covers the competency required to conduct underwater surveys of beaches and waterways such as estuaries and lakes.

The unit includes conducting the survey for reasons relating to the potential establishment of structures such as bridges or piers, or to determine the feasibility of establishing a beach-head.

Note: This Unit of Competency relates, in part, to the existing standards of the Australian Diver Accreditation Scheme (ADAS). All information was correct at the time of development of this Unit of Competency; however, any diver seeking ADAS accreditation should consult ADAS and not rely on the information contained in this unit.

### **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**                      DEFDV001B Dive using self contained underwater breathing apparatus in open water to 30 metres

## Employability Skills Information

**Employability Skills**                      This unit contains employability skills.

## 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. <b>Prepare for underwater survey</b>	<ul style="list-style-type: none"><li>1.1 Survey task and available <i>worksite data</i> are determined and analysed</li><li>1.2 Survey plan is developed consistent with the dive plan</li><li>1.3 <i>Survey equipment</i> is selected, inspected and prepared</li><li>1.4 Survey equipment is secured safely to/from the dive site</li><li>1.5 Access obstructions and other hazards are assessed and <i>action</i> is taken to <i>remove/reduce the risk</i></li></ul>
2. <b>Conduct underwater survey</b>	<ul style="list-style-type: none"><li>2.1 Survey equipment is secured on self for ease of accessibility and lack of interference to mobility and dive equipment</li><li>2.2 Bottom gradient is measured</li><li>2.3 Bottom composition is determined and <i>sub-surface features</i>, channels and obstacles are identified and marked</li></ul>
3. <b>Conduct post-survey procedures</b>	<ul style="list-style-type: none"><li>3.1 Survey equipment is de-serviced and stored after use</li><li>3.2 Survey <i>report</i> is drafted and submitted according to organisational procedures</li></ul>

## **Required Skills and Knowledge**

### **REQUIRED SKILLS AND KNOWLEDGE**

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

#### **Required Skills**

- ability to dive
- make oral presentations
- make underwater field notes and sketches
- measure instruments
- take photographs
- write reports

#### **Required Knowledge**

- dive physics
- dive equipment
- general occupational/diving safety awareness
- oceanography
- relevant references and Australian Standards
- work hazards

## Evidence Guide

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

Assessment must confirm the ability to carry and secure the equipment throughout the dive; to contribute to compiling a survey report; and to work safely throughout the operation.

### Consistency in performance

Competency should be demonstrated during a survey task conducting at least one underwater survey of a beach/waterway including the following:

- bottom gradient
- bottom composition
- sub-surface features marking of obstacles/channels.

### Context of and specific resources for assessment

#### Context of assessment

Competency should be assessed in the ocean.

When practicable, assessment should relate to the diver's vocational focus.

#### Specific resources for assessment

Access to a complete range of diving, safety and accessory equipment; and survey equipment.

## 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.

<b>Worksite data may include</b>	Current
	Depth
	Gradient
	Hazards
	Obstacles
	Temperature
<b>Survey equipment may include</b>	Angle measurement devices
	Compass
	Depth gauges
	Geo-positioning systems
	Hand-held sonar
	Jackstays
	Locator beacons
	Marking devices
	Photographic equipment
	Sounding lines
	Writing tablets
<b>Action to remove/reduce the risk may include</b>	Erecting signage
	Using patrol/sentry craft
<b>Sub-surface features may include</b>	Obstacles
	Reefs
	Rocks
	Troughs
<b>Report may include</b>	Imagery
	Oral presentation
	Scaled drawings
	Sketches

**RANGE STATEMENT**

Supporting documents

**Unit Sector(s)**

Not applicable.

**Corequisite Unit/s**

Co-requisite Unit/s            Nil