Australian Government

DEFDV012B Perform underwater beach and waterway surveys

Release: 2

INDUSTRY SKILLS COUNCILS
Creating Australia's Future

DEFDV012B Perform underwater beach and waterway surveys

Modification History

Release	TP Version	Comments
2	DEF12 V2	Layout adjusted. No changes to content.
1	DEF12 V1	Primary release.

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

As agreed in the creation of this Training Package, applications for units transferred from the PUA00 Public Safety Training Package will be developed as part of continuous improvement plans, and taking into account the change in Unit of Competency format as detailed in templates for Streamlined Training Packages.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

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

Employability Skills Information

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 Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for underwater survey	1.1 Survey task and available ***worksite data*** are determined and analysed. 1.2 Survey plan is developed consistent with the dive plan. 1.3 ***Survey equipment*** is selected, inspected and prepared. 1.4 Survey equipment is secured safely to/from the dive site. 1.5 Access obstructions and other hazards are assessed and ***action is taken to remove/reduce the risk.***
2. Conduct underwater survey	2.1 Survey equipment is secured on self for ease of accessibility and lack of interference to mobility and dive equipment. 2.2 Bottom gradient is measured. 2.3 Bottom composition is determined and ***sub-surface features***, channels and obstacles are identified and marked.
3. Conduct post-survey procedures	3.1 Survey equipment is de-serviced and stored after use. 3.2 Survey ***report*** is drafted and submitted according to organisational procedures.

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

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.	
Worksite data may include:	• current • depth • gradient • hazards • obstacles • temperature
Survey equipment may include:	• angle measurement devices • compass • depth gauges • geo-positioning systems • hand-held sonar • jackstays • locator beacons • marking devices • photographic equipment • sounding lines • writing tablets
Action to remove/reduce the risk may include:	• erecting signage • using patrol/sentry craft
Sub-surface features may include:	• obstacles • reefs • rocks • troughs
Report may include:	• imagery • oral presentation • scaled drawings • sketches • supporting documents

Unit Sector(s)

Not applicable.