



Australian Government

SFIAQU508 Plan and design stock culture or holding systems and structures

Release: 2

SFIAQU508 Plan and design stock culture or holding systems and structures

Modification History

Release	Comments
Release 2	This version released with SFI Seafood Industry Training Package Version 2.0.
Release 1	This version released with SFI Seafood Industry Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to plan and design stock culture or holding systems and structures. It includes the ability to determine design, resource and budget requirements.

This unit applies to individuals who have specialised knowledge and technical and/or management responsibility for stock culture or holding systems and structures for an aquaculture facility or workplace.

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

Pre-requisite Unit

Nil

Unit Sector

Aquaculture (AQU)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine appropriate location or orientation	1.1 Determine type of culture or holding structure or system to ensure appropriate environment is provided for cultured or held stock 1.2 Determine numbers of structures to ensure stock is available in

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	sufficient quantity at harvest 1.3 Design, locate and orientate water use and culture or holding structure or system to make the best use of water resources 1.4 Research and consider mechanisation or automation of process or activity, including the use of specialised contract services 1.5 Document design calculations and construction specifications for required work 1.6 Identify and protect environmentally sensitive areas and land degradation according to legislative requirements
2. Design culture or holding structures and systems	2.1 Design individual culture or holding structures to provide optimal conditions for stock 2.2 Consider all production inputs and culture or holding activities in design of systems 2.3 Select construction materials to suit design specifications and design calculations 2.4 Optimise relationship between capital and operational costs, including a comparison of energy sources 2.5 Check power supply design specifications with power authorities 2.6 Select accessories and performance indicators and integrate into functional systems that can be monitored and maintained 2.7 Define construction specifications to achieve required standards of uniformity and efficiency
3. Determine capital expense budget	3.1 Document design calculations and decisions and ensure relevant information is communicated clearly through plans, specifications and manuals 3.2 Ensure design output is checked by a competent designer against workplace objectives 3.3 Determine and document material requirements from plans and specifications 3.4 Estimate labour requirements, based on documented work schedule allowing reasonable variances in work schedules 3.5 Negotiate external labour and hire contracts, if required, and confirm with management 3.6 Attribute costing to each component based upon quoted information from suppliers or sound analysis of individual elements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
4. Determine operating expense budget	4.1 Confirm operating expense budget with senior personnel 4.2 Apply all expenses to the completed stock culture or holding system

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	Research and extract technical information relating to stock culture or holding systems from a range of sources
Writing	Document plans, specifications and procedures using appropriate format, clear language and accurate technical terminology
Numeracy	Calculate and itemise costs to prepare and analyse budgets and expenditure
Oral communication	Participate in verbal exchanges to consult others and organise requirements using accurate technical terminology and specifications
Navigate the world of work	Understand legislative and regulatory requirements, including safety and environmental requirements, relating to own role and area of responsibility
Interact with others	- Liaise collaboratively and consult others for specialist planning and design advice, influencing direction and taking a leadership role on occasion - Select and use appropriate communication protocols and conventions when seeking or sharing information with others

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
SFIAQU508 Plan and	SFIAQU508 Plan and	Minor cross-referencing	Equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
design stock culture or holding systems and structures Release 2	design stock culture or holding systems and structures Release 1	correction/update to knowledge evidence referencing automation research	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=e31d8c6b-1608-4d77-9f71-9ee749456273>

Assessment Requirements for SFIAQU508 Plan and design stock culture or holding systems and structures

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Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has developed and documented, on at least one occasion, a design plan for a stock culture or holding system and structure, including:

- determining location and resource requirements for the stock culture or holding systems and structures
- developing a detailed budget based on resource requirements and expenses
- developing construction specifications for stock culture or holding systems and structures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- types, functions and options for stock culture or holding systems and their components
- key design features and processes for planning stock culture or holding systems and structures
- features and options for mechanisation or automatic control and monitoring systems
- mechanisation or automation research
- biological requirements of cultured or held stock relevant to holding systems and structures
- overview of stock biological and production cycles relevant to holding systems and structures
- waste management and environmental issues relevant to stock culture or holding systems and structures
- key features of contracts and contract management
- basic bookkeeping for budgeting

- key government regulations relating to aquaculture operations
- features of latest culture technology
- biosecurity relevant to culture or holding systems
- sustainability practices relating to aquaculture operations.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an aquaculture workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - opportunities to access personnel for specialist advice
 - relevant workplace operational and financial information needed to plan and design stock culture or holding systems and structures
 - technology for recording and documenting information.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

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