



Australian Government

Department of Education, Employment and Workplace Relations

SFIAQUA402C Coordinate construction or installation of stock culture, holding and farm structures

Release: 1

SFIAQUA402C Coordinate construction or installation of stock culture, holding and farm structures

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit of competency involves coordinating construction or installation of stock culture or holding systems, including water supply and disposal systems, and farm structures. It also involves establishing maintenance and repair schedules, and procedures and protocols for their implementation. The construction techniques required may vary with the type of structure. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.
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Application of the Unit

Application of the unit	The unit has application to aquaculture, seafood holding or ornamental facilities. Some construction and/or installation activities will require the employment or engagement of qualified tradespersons or the attainment of appropriate licences to meet state or territory and local government requirements. Skills in supervising staff are covered by AHCWRK403A Supervise work routines and staff performance. All enterprise or workplace procedures and activities are carried out according to relevant government regulations, licensing and other compliance requirements, including occupational health and safety (OHS) guidelines and ecologically sustainable development (ESD) principles. Equipment operation, maintenance, repairs and calibrations are undertaken in a safe manner that conforms to manufacturer instructions. Appropriate personal protective equipment (PPE) is selected, checked, used and maintained.
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Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units		

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 performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for construction or installation of structures	1.1. Design specifications for culture or holding structure and systems, including water supply and disposal systems, prefabricated buildings and farm structures are confirmed with senior personnel. 1.2. Construction work plan is drawn up, activities scheduled, materials ordered, labour arranged, and contractors or tradespeople and construction equipment booked according to specifications and in consultation with senior personnel. 1.3. Raw and prefabricated materials are checked against delivery manifest or specifications. 1.4. Site is prepared according to specifications and secured, if necessary, for safety or loss prevention. 1.5. Staff are fully briefed on work objectives and procedures, including OHS relevant to the site, equipment being used and the type of construction or installation.
2. Coordinate construction or installation	2.1. Construction or installation progress is monitored against the construction work plan and design specifications. 2.2. Materials, equipment and labour, including contractors or tradespeople, are confirmed as available, when required. 2.3. Potential problems are anticipated and avoided or minimised through forward planning and contingency planning. 2.4. Staff are given feedback on work progress and performance on a regular basis. 2.5. Regular reports are given to management on project progress, costs and any problems arising from construction or installation project. 2.6. Checking and commissioning are undertaken to ensure that the finished product fits design specification and is effective or operable.
3. Prepare maintenance and repairs schedule, procedures and protocols	3.1. Maintenance and repair schedules are prepared and documented taking into account other facility plans. 3.2. Procedures are established and documented for maintenance work and repair tasks identified in the maintenance and repair schedule. 3.3. Hand and power tools and spare parts required for maintenance and repair tasks are available or purchase or hire is arranged. 3.4. Protocols for hiring tradespeople, internal reporting

ELEMENT	PERFORMANCE CRITERIA
	and communications are established and documented. 3.5. Supervisors and management are briefed on schedule, protocols and work procedures that have been established and documented, including continuous improvement processes.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE
This section describes the skills and knowledge required for this unit.
Required skills • briefing staff on work objectives, work procedures and OHS requirements • communicating with senior personnel on design specifications, labour and resource requirements, use of contractors and work schedule • coordination of the construction or installation of stock culture or holding structures, including water supply and disposal systems, if applicable, and farm structures • establishing and documenting protocols and procedures related to maintenance and repair of stock culture, holding and farm structures • providing feedback to staff on performance and work progress • reporting regularly orally and in writing on construction progress, problems and budget to management • setting out and building prefabricated buildings and/or structures. Literacy skills used for: • documenting schedules, protocols and work procedures • reading and analysing plans and agreements • reading and writing reports. Numeracy skills used for: • estimating, measuring and doing calculations, such as measurements of length, time, area, volume and flow rates • monitoring project costs • monitoring quantities of material or supplies against specified requirements and on-site usage patterns. Required knowledge

REQUIRED SKILLS AND KNOWLEDGE

- assembling techniques for culture, holding and farm structures
- building regulations
- basic surveying techniques in culture, holding and farm structure construction
- characteristics and general principles of construction of plumbing and fittings
- design principles and components of specific water supply and disposal systems of stock culture, holding and farm structures
- facility OHS procedures, including PPE
- general principles of structural design
- maintenance requirements for specific culture, holding and farm structures, water supply and disposal systems or structures and the components within them
- manufacturer guidelines for installation and maintenance of equipment or systems
- operating principles of specific types of pumps and treatment structures
- purpose and application of buildings and structures in production processes.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment evidence required to demonstrate competence in this unit

Assessment must confirm the ability to:

- interpret design plans and specifications, and coordinate the construction of a structure or system
- establish a maintenance and repair schedule for stock culture, holding and farm structures or systems
- establish protocols and procedures for carrying out maintenance and repair tasks.

Assessment must confirm knowledge of:

- process steps for the construction and installation of stock culture, holding and farm structures or systems
- maintenance and repairs required and the skills needed to effectively carry them out.

Context of and specific resources for assessment

Assessment is to be conducted at the workplace or in a simulated work environment, using at least one (1) farm structure and one (1) stock culture or holding structure, including, if relevant, the water supply and disposal system.

Resources may include:

- design specifications for structures, including water supply and disposal system, to be constructed or installed
- staff involved in the construction of stock culture or holding structure, including water supply and disposal systems, if applicable, and farm structures, to supervise.

Method of assessment

The following assessment methods are suggested:

- project (work or scenario based)
- written or oral short-answer testing.

Guidance information for assessment

This unit may be assessed holistically with other units within a qualification.

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, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Relevant government regulations, licensing and other compliance requirements may include:

- business or workplace operations, policies and practices:
 - commercial law, including fair trading and trade practices
 - consumer law
 - corporate law, including registration, licensing and financial reporting
 - disability policies and practices
 - equal opportunity, anti-discrimination and sexual harassment
 - industrial relations and awards, individual employment contracts and share of catch agreements
 - jurisdictional variations
 - superannuation
 - taxation
 - trade practices
 - warnings and dismissals
 - worker's compensation
- ESD principles, environmental hazard identification, risk assessment and control
- fisheries or aquaculture regulations, permits, licences, quotas, catch restrictions, and other compliance requirements, including:
 - Australian Exclusive Economic Zone
 - international treaties and agreements
- food safety, Hazard Analysis Critical Control Point (HACCP), hygiene and temperature control along chain of custody
- imports quarantine and inspection, and importing approved arrangements for

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	Australian Quarantine Inspection Service (AQIS), Australian Customs Service (ACS) and Biosecurity Australia (BA) • Indigenous native title, land claims and cultural activities, including fishing by traditional methods • maritime and occupational diving operations: • foreign and Australian legislation applying to quarantine and customs • International Convention for the Safety of Life at Sea (SOLAS) • International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW 1978) • Marine Emergency Response Search and Rescue (MERSAR) • National Standards for Commercial Vessels • pollution prevention - International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) • Uniform Shipping Laws (USL) Code • use of vessels, right of way and other marine orders, bunkering and refuelling • land, buildings and vehicles: • buildings and structures design and appearance, constructions and additions • poaching, trespass and theft • road laws for use of motor vehicles, bikes, trucks and other transport equipment • soil and water management • use of chemicals and biological agents • use of firearms and powerheads • use of utilities, including water, natural gas, electricity and sewage • water or land lease, tenure or ownership and use • OHS hazard identification, risk assessment and control • product quality assurance: • correct naming and labelling (e.g. country of origin, Australian Fish Names Standard
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RANGE STATEMENT	
	and eco-labelling) • correct quantities, sizes and other customer requirements • third-party certification (e.g. Australian Grown and ISO 14001:2004 Environmental management systems).

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OHS guidelines may include:

- appropriate workplace provision of first aid kits and fire extinguishers
- clean, uncluttered, hygienic workplace
- codes of practice, regulations and/or guidance notes which may apply in a jurisdiction or industry sector
- enterprise-specific OHS procedures, policies or standards
- hazard and risk assessment of workplace, maintenance activities and control measures
- induction or training of staff, contractors and visitors in relevant OHS procedures and/or requirements to allow them to carry out their duties in a safe manner
- OHS training register
- safe lifting, carrying and handling techniques, including manual handling, and the handling and storage of hazardous substances
- safe systems and procedures for outdoor work, including protection from solar radiation, fall protection, confined space entry and the protection of people in the workplace
- systems and procedures for the safe maintenance of property, machinery and equipment, including hydraulics and exposed moving parts
- the appropriate use, maintenance and storage of PPE.

ESD principles may include:

- controlling use and recycling of water, and managing water quality and quantity
- increasing use of renewable, recyclable and recoverable resources
- managing environmental hazard identification, risk assessment and control
- managing imported products quarantine and inspection, facility biosecurity, translocation of livestock and genetic material, health certification
- managing stock health and welfare, especially for handling, holding, transport and slaughter
- managing sustainable fisheries or broodstock/seedstock collection requirements, such as size limits, quotas, season restrictions,

RANGE STATEMENT

	population dynamics, fishing impacts, reducing by catch, fisheries management strategies and maintaining biodiversity • managing, controlling and treating effluents, chemical residues, contaminants, wastes and pollution • minimising noise, dust, light or odour emissions • planning environmental and resource efficiency improvements • preventing genetically modified and live cultured or held organisms from escaping into environment • protecting native and protected flora and fauna, marine or land parks or areas, adhering to the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES), the Ramsar Convention, World Heritage and other international treaties for which Australia is a signatory • reducing emissions of greenhouse gases • reducing use of non-renewable resources • reducing disturbances to soils, erosion and surface water flows from machinery use and other activities • reducing energy use and introducing alternative energy sources.
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<i>PPE</i> may include:	• buoyancy vest or personal floatation device (PFD) • gloves, mitts or gauntlets, and protective hand and arm covering • hard hat or protective head covering • hearing protection (e.g. ear plugs and ear muffs) • insulated protective clothing for freezers or chillers and refrigeration units • non-slip and waterproof boots (gumboots) or other safety footwear • personal locator beacon or Emergency Position Indicating Radio Beacon (EPIRB) • protective eyewear, glasses and face mask • protective hair, beard and boot covers • protective outdoor clothing for tropical conditions • respirator or face mask • safety harness • sun protection (e.g. sun hat, sunscreen and sunglasses) • uniforms, overalls or protective clothing (e.g. mesh and waterproof aprons) • waterproof clothing (e.g. wet weather gear and waders).
<i>Design specifications</i> may include:	• construction materials • construction method • equipment and resources • location • number • plan or design, colour and appearance • schedule of licensed labour required • security factors • size.
<i>Culture or holding structure and systems</i> may include:	• blowers, aerators, paddlewheels and aspirators • greenhouses, hothouses and igloos • pest, predator and disease control structures • water supply and disposal or effluent systems, including pumps, pipes, canals, channels, settlement ponds and storage dams • cages, pontoons, enclosures and pens, including associated moorings, anchors and

RANGE STATEMENT	
	- markers - dams, ponds and pools - display tanks, aquaria and aquascapes - grow out facilities, hatcheries and nurseries - harvesting swimways, canals or channels - live holding tanks, bins, cages and pens - longlines, posts, racks and rails, rafts, fences, socks, trays, sticks, baskets, modules, barrels, bags and panels - open, flow-through, closed and semi-closed systems - purging or depurating systems - tanks, raceways and recirculating systems.
<i>Pre-fabricated buildings</i> may include:	- cool rooms and freezers - glasshouses - shade houses, poly-tunnels, igloos and their fixtures - sheds and stores - water tanks.
<i>Farm structures</i> may include:	- equipment storage - fences and gates - jetties - moorings - overhead gantry systems - ramps - security systems and equipment - shelters and shade cloth - soil conservation works - tank, pump and blower stands - tracks, roads and pathways - waste holding disposal structures - water supply and effluent systems and pipes.
<i>Maintenance and repair schedules</i> may include:	- farm structures - materials and tools - stock culture structures - water supply and disposal system - work team, including staff skills.

Unit Sector(s)

Unit sector	Aquaculture operations
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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