CONSTRUCT A FISH POND

UNIT CODE: AQ/OS/AM/CR/01/4/A

UNIT DESCRIPTION

This unit specifies the competencies required to construct a fish pond. It involves ability to Implement fish pond site food safety plan, select and prepare a fish pond construction site, excavate the pond, protect and test the completed pond.

ELEMENT These describe the key outcomes which make up workplace function.	**PERFORMANCE CRITERIA** These are assessable statements which specify the required level of performance for each of the elements. ***Bold and italicized terms are elaborated in the Range***
1. Implement fish pond site food safety plan	1.1 Farm site and adjacent site ***hazards*** are identified and documented 1.2 Possible ***sources*** of physical, chemical and microbial hazards are identified based on ***prior use of land.*** 1.3 Standard operating procedures for ***preventing*** and ***correcting*** fish pond site food safety risks are implemented based on the identified risks.
2. Select fish farming site	2.1 Pond and farm layout designs are interpreted in relation to the proposed site 2.2 Preliminary site measurements carried out as per the drawing designs 2.3 Site assessed for suitability, following standard site selection criteria 2.4 Identify appropriate pond locations based on land gradient and water source
3. Prepare pond construction site	3.1 Safety precautions are applied according to site requirements 3.2 ***Tools, equipment, materials*** *and* ***supplies*** are identified and gathered based on job requirements. 3.3 ***PPEs*** are identified and gathered as per job requirements. 3.4 Pond site is cleared of ***vegetation*** and debris following standard operational procedures 3.5 Top soil is removed to a depth determined by soil type and nature of vegetation 3.6 Site access paths marked out, cleared and leveled.
4. Excavate fish pond	4.1 Tools, equipment, materials and supplies are identified and gathered based on job requirements. 4.2 Safety precautions are applied according to site requirements

	4.3 Fish pond area is measured and pegged based on design dimensions. 4.4 A perimeter core trench is constructed around the pond area based on soil characteristics. 4.5 Pond area is excavated following the peg markings, to a depth recommended by the designs 4.6 Dykes are constructed, shaped and aligned in accordance with design specifications
5. Complete pond construction	5.1 Inlets and outlets are fitted based on design specifications. 5.2 Supply and drainage channel are constructed following peg markings as per design and topography. 5.3 Screening devices for in-coming water are installed based on nature of predators and intruders 5.4 ***Soil erosion and flood control measures*** are taken based on good agricultural practices manual 5.5 Predator control measures are applied as per best management practices and identified food safety risks 5.6 Pond is filled with water fit for aquaculture and tested following standard procedures. 5.7 Actionable defects on the newly constructed pond are identified and corrected in accordance with SOPs. 5.8 Water intake, pond inlets and outlets, and the drainage system are tested for amount and speed of water flow 5.9 Finished site is cleared, fenced and landscaped as per identified risks

RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

Variable	Range
1. Prior use may include but not limited to:	• For animal feeding or domestic animal production; • As a waste disposal site (garbage or toxic industrial waste); • As a sanitary waste management site; • For mining activities, oil or gas extraction; • For former agricultural activities; • Adjacent land and neighbouring areas (risk of cross-contamination); • History of flooding in area of concern.

2. Hazards may include but not limited to:	• Chemical hazards
	  • Heavy metals
	  • Pesticides
	  • Industrial chemicals
	• Physical hazards
	• Biological hazards
	  • Aquatic animal diseases
	  • Naturally occurring toxins

3. Sources of hazards may include but not limited to:	• Agricultural chemicals • Toxic plants • Fecal matter • Soil • Water
4. Preventing may include but not limited to:	• Location, design and layout of farm • Farm waste management • Pond nets • Pest control • Pond lining • Runoff control
5. Water fit for aquaculture include but not limited to	• Fish species specific recommended level of chlorine • Fish species specific Recommended pH range • Fish species specific Recommended Ammonia • Fish species specific recommended turbidity level • Free of infective pathogens
6. Tools, equipment, materials and supplies include but not limited to:	• Tools-tape measure, spirit level, jembes, spades, pangas, • Equipment-plate compactors and rollers, wheelbarrows • Materials and supplies-ropes, liners, pegs, plumbing materials, lime, cement, sand,
7. PPE's include but not limited to	• Gum boots, helmets, gloves, overalls, first aid kits
8. Vegetation includes but not limited to:	• Trees and tree stumps • Wetland grass and sedges • Shrubs and scrubs
9. Soil erosion control measures include but not limited to:	• Planting grass on the dykes, terracing

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit of competency.

Required Skills

The individual needs to demonstrate the following skills:

- Food safety risk assessment and communication
- Trouble shooting
- Use of tools and equipment
- Measurement
- Communication skills
- Basic first aid skills
- Numeracy

Required Knowledge

The individual needs to demonstrate knowledge of:

- Food safety Standards (codes of practice for fish and fishery products)
- Regulatory bodies/ Competent authorities
- Hazard Analysis Critical Control Point (HACCP)
- Use of tools, equipment and PPEs
- Behavior of predators and related control measures
- Wetland vegetation
- Pond and farm designs

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Implemented fish pond site food safety plan 1.2 Used correct tools and equipment in construction 1.3 Cleared all vegetation and top soil, and stowed away from construction area 1.4 Constructed ponds to specified dimensions 1.5 Constructed intake, supply and drainage channels 1.6 Identified structural defects and faults in ponds and drainage system 1.7 Cleaned and stored tools and equipment as per work place procedures 1.8 Followed safety procedures

2. Resource Implications for competence certification	The following resources must be provided: 2.1 Access to relevant workplace where assessment can take place 2.2 Appropriately simulated environment where assessment can take place 2.3 Materials relevant to the proposed activity or tasks
3. Methods of Assessment	Competency may be assessed through: 3.1 Observation 3.2 Oral presentation 3.3 Projects 3.4 Written tests
4. Context of Assessment	Competency may be assessed on the job, off the job or a combination of these. Off the job assessment must be undertaken in a closely simulated workplace environment.
5. Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.