



TECHNICAL &  
VOCATIONAL  
EDUCATION &  
TRAINING



National Competency Standard for Gardening and Landscaping

Qualifications Code: FNA03S15VI

*[Endorsed by the MALDIVES ACCREDITATION BOARD (MAB)]*



## PREFACE

Technical and Vocational Education and Training (TVET) Authority was established with the vision to develop a TVET system in the Maldives that is demand driven, accessible, beneficiary financed and quality assured, to meet the needs of society for stability and economic growth, the needs of Enterprise for a skilled and reliable workforce, the need of young people for decent jobs and the needs of workers for continuous mastery of new technology.

TVET system in the Maldives flourished with the Employment Skills Training Project (ESTP) funded by ADB with the objective of increasing the number of Maldivians, actively participating in the labor force, employed and self-employed. The Project supported expansion of demand driven employment-oriented skills training in priority occupations and to improve the capacity to develop and deliver Competency Based Skill Training (CBST). The project supported delivery of CBST programs to satisfy employer demand-driven needs. The National Competency Standards (NCS) provide the base for this training. Currently CBST is offered for five key sectors in the Maldives: Tourism, Fisheries and Agriculture, Transport, Construction and the Social sectors. These sectors are included as priority sectors that play a vital role in the continued economic growth of the country.

The NCS are developed in consultation with Employment Sector Councils representing employers. They are designed using a consensus format endorsed by the Maldives Qualifications Authority (MQA) to maintain uniformity of approach and the consistency of content amongst occupations. This single format also simplifies benchmarking the NCS against relevant regional and international standards. NCS specify the standards of performance of a competent worker and the various contexts in which the work may take place. NCS also describes the knowledge, skills and attitudes required in a particular occupation. They provide explicit advice to assessors and employers regarding the knowledge, skills and attitudes to be demonstrated by the candidates seeking formal recognition for the competency acquired following training or through work experience. By sharing this information, all participants in the training process have the same understanding of the training required and the standard to be reached for certification. Certification also becomes portable and can be recognized by other employers and in other countries with similar standards. NCS are the foundation for the implementation of the TVET system in Maldives. They ensure that all skills, regardless of where or how they were developed can be assessed and recognized. They also form

Competency Standard for Landscaping

the foundation for certifying skills in the Maldives National Qualification Framework (MNQF).

FNA03S15V1 is the first version of the NCS for Horticulture (**landscaping**), and has been developed and endorsed in the year 2015. This standard includes one Qualification at Level 3 of Maldivian National Qualifications Framework.

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**KEY FOR CODING**

Coding Competency Standards and Related Materials

<b>DESCRIPTION</b>	<b>REPRESENTED BY</b>
Industry Sector as per ESC (Three letters)	Construction Sector ( <b>CON</b> ) Fisheries and Agriculture Sector ( <b>FNA</b> ) Transport sector ( <b>TRN</b> ) Tourism Sector ( <b>TOU</b> ) Social Sector ( <b>SOC</b> ) Foundation ( <b>FOU</b> )
Competency Standard	<b>S</b>
Occupation with in a industry Sector	<b>Two digits 01-99</b>
Unit	<b>U</b>
Common Competency	<b>1</b>
Core Competency	<b>2</b>
Optional/ Elective Competency	<b>3</b>
Assessment Resources Materials	<b>A</b>
Learning Resources Materials	<b>L</b>
Curricula	<b>C</b>
Qualification	<b>Q1, Q2 etc</b>
MNQF level of Qualification	<b>L1, L2 etc</b>
Version Number	<b>V1, V2 etc</b>
Year of endorsement of standard, qualification	<b>By two digits Example- 07</b>

1. Endorsement Application for Qualification 04		
2. NATIONAL CERTIFICATE IV in Landscaping		
<b>3. Qualification code:</b> FNA03SQ1L315	<b>Total Number of Credits :</b>	
<b>4. Purpose of the qualification</b> The holders of the level three qualifications will provides wide range of practical skills and supporting knowledge to establish and maintain landscapes under supervision in the landscape sector of the horticultural industry.		
<b>5. Regulations for the qualification</b>	National Certificate III in landscape will be awarded to those who are competent in unit 1 to 22	
6. Schedule of Units		
Unit Title	Unit Title	Code
1	Meet workplace health and safety requirements	FNA03S1U01V1
2	Use hazardous substances safely	FNA03S1U02V1
3	Cooperate in the workplace	FNA03S1U03V1
4	Act in an emergency	FNA03S1U04V1
5	Prepare plant display	
6	Cultivate turf	FNA03S1U05V1
7	Implement a landscape maintenance program	FNA03S1U06V1

*Competency Standard for Landscaping*

8	Establish planted area	FNA03S1U07V1
9	Install drainage systems	FNA03S1U08V1
10	Install irrigation system	FNA03S1U09V1
11	Set out landscape works	FNA03S1U10V1
12	Operate irrigation system	FNA03S1U11V1
13	Control pests and diseases	FNA03S1U12V1
14	Supervise work site activities	FNA03S1U13V1
15	Undertake a site assessment	
16	Operate Specialized Machinery	
17	Erect horticulture	
18	Conduct operational inspection of park facilities	
19	Install concrete structures and features	FNA03S1U16V1
20	Install timber structures and features	FNA03S1U17V1
21	Install brick structures and features	FNA03S1U18V1
22	Install masonry structures and features	FNA03S1U19V1
23	Install metal structures and features	FNA03S1U20V1
24	Install water features	FNA03S1U21V1
25	Implement OHS policies and guidelines	FNA03S1U22V1
<b>7. Accreditation requirements</b>		The training provider should have an Horticultural workplace or similar training facility to provide the trainees the hands-on experience related to this qualification

### Description of a Landscapers

Landscaping is a field that involves a great many possible careers. The role of a person who achieve this level of competency may include;

- Improving existing garden layout
- Designing and building garden structure
- Designing water gardens
- Installing irrigation systems

Landscape work is allied with commercial construction, hotel and resort construction, engineering projects along transport corridors, new housing developments, and improvements to residential, commercial and industrial properties.

### Competency Standard Development Process

The competencies were determined based on the analysis of the tasks expected to be performed by the Horticulture professional in the Maldives. The task analysis was based on the existing documents prepared among the experts in the industry and on the advice of the experts in the field of Horticulture training in Maldives. Competency standards used for similar type of training in other countries were also examined

### Units Details

Unit	Unit Title	Code	Level	No of credits
1.	Meet workplace health and safety requirements	FNA03S1U01V1	03	
2.	Use hazardous substances safely	FNA03S1U02V1	03	
3.	Cooperate in the workplace	FNA03S1U03V1	03	
4.	Act in an emergency	FNA03S1U04V1	03	
5.	Cultivate turf	FNA03S1U05V1	03	
6.	Implement a landscape maintenance program	FNA03S1U06V1	03	
7.	Establish planted area	FNA03S1U07V1	03	
8.	Install drainage systems	FNA03S1U08V1	03	
9.	Install irrigation system	FNA03S1U09V1	03	
10.	Set out landscape works	FNA03S1U10V1	03	
11.	Operate irrigation system	FNA03S1U11V1	03	
12.	Control pests and diseases	FNA03S1U12V1	03	
13.	Supervise work site activities	FNA03S1U13V1	03	
14.	Provide information on plants, products & treatments	FNA03S1U14V1	03	
15.	Undertake a site assessment	FNA03S1U15V1	03	
16.	Install concrete structures and features	FNA03S1U16V1	03	
17.	Install timber structures and features	FNA03S1U17V1	03	
18.	Install brick structures and features	FNA03S1U18V1	03	

*Competency Standard for Landscaping*

19	Install masonry structures and features	FNA03S1U19V1	03	
20	Install metal structures and features	FNA03S1U20V1	03	
21	Install water features	FNA03S1U21V1	03	
22	Implement OHS policies and guidelines	FNA03S1U22V1	03	

**Packaging of National Qualifications:**

National Certificate III landscaping will be awarded to those who are competent in units

1+2+3+4+5+6+7+8+9+10+11+12+13+14+15+16+17+18+19+20+21+22

Qualification Code: FNA03SQ1L315



**UNIT- 01**

<b>UNIT TITLE</b>	<b>Meet workplace health and safety requirements</b>				
<b>DESCRIPTOR</b>	This unit addresses the ability of workers to meet workplace occupational health and safety requirements.				
<b>CODE</b>	FNA03S1U01V1	<b>LEVEL</b>	3	<b>CREDIT</b>	

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
1. Follow workplace procedure for hazard identification and risk control	<p>1.1. Workplace procedures and work instructions for controlling risks are followed accurately.</p> <p>1.2. Basic safety checks are undertaken before operation of all machinery and vehicles and hazards are reported to the appropriate supervisor.</p> <p>1.3. Work for which protective clothing or equipment is required is identified and the appropriate protective clothing or equipment is used in performing these duties in accordance with workplace policy.</p> <p>1.4. Prior to performing manual handling jobs, risk is assessed and work is carried out according to currently recommended safe practice.</p> <p>1.5. Risks to bystanders are recognized and action is taken to reduce risk associated with jobs in the workplace.</p> <p>1.6. All procedures and work instructions for controlling risk are followed closely.</p>

*Competency Standard for Landscaping*

<p>2. Render appropriate emergency procedures</p>	<p>2.1. Individuals maintain the necessary knowledge of and ability to follow procedures for dealing with accidents, fires and emergencies, including communicating location and directions to emergency personnel.</p> <p>2.2. Emergency procedures are followed to company standards and workplace requirements.</p> <p>2.3. Emergency equipment is used in accordance with manufacturers' specifications and workplace requirements.</p> <p>2.4. Appropriate authorities are notified according to company policy.</p>
<p>3. Participate in arrangements for maintaining health and safety of all people in the workplace</p>	<p>3.1. Contributions are made to the on-going monitoring and reporting of all aspects of Occupational Health &amp; Safety (OHS).</p> <p>3.2. Assistance is provided in developing effective solutions to control the level of risk associated with tasks.</p>

Range statement

Procedures included

- Application of relevant occupational health and safety principles and conformity with

### *Competency Standard for Landscaping*

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legislation and codes of practice in the country.

- Hazards in the workplace
- Hazards in workplace which require protective clothing and equipment's
- Hazardous manual such as handling
- Risk to bystanders include run-over and injury associated with vehicles and machinery
- Appropriate health and fitness
- Workplace procedures
- Occupational health and safety(OHS) emergencies

Tools, equipment and materials required may include:

- Relevant procedure manuals

#### *Assessment guide*

##### *Form of assessment*

- Assessment for the unit needs to be holistic and must be observed through real or simulated workplace activities.
- Any written or oral examinations may include questions related to personal hygiene, maintaining health & safety requirements

##### *Assessment context*

Assessment of this unit must be completed on the job or in a simulated work environment which reflects a range of safe working practices.

##### *Critical aspects*

It is essential that competence is fully observed and there is ability to transfer competence to changing circumstances and to respond to unusual situations in the critical aspects of:

- Maintain personal hygiene and fitness requirements
- Identifying and assessing hazardous situations and rectifying, or reporting to the relevant persons.
- Safely handling and storage of dangerous and/or hazardous goods and substances.
- Applying safe manual handling practices.
- Safely and effectively operating equipment and utilizing materials over the full range of functions and processes for work undertaken on worksite.
- This unit may be assessed in conjunction with all and units which form part of the normal job role

##### *Assessment conditions*

- Theoretical assessment of this unit must be carried out in an examination room where proper examination rules are followed.
- Assessment of hygienic work practices must be constantly evaluated.
- Assessment must reflect and events processes that occur over a period of time

## UNDERPINNING KNOWLEDGE AND SKILLS

Underpinning Knowledge	Underpinning Skills
<ul style="list-style-type: none"> <li>• General knowledge of Significant hazards in the working place</li> <li>• Basic knowledge of Local emergency services</li> <li>• Common knowledge of Personal Hygiene and fitness requirements</li> </ul>	<ul style="list-style-type: none"> <li>• Ability to follow workplace procedure for hazard identification and risk control</li> <li>• Ability to act in an emergency</li> <li>• Ability to maintain health and fitness</li> <li>• Ability to render first aid</li> </ul>

### UNIT- 02

UNIT TITLE	Use hazardous substances safely				
DESCRIPTOR	<p>This unit addresses the handling of hazardous substances in the workplace.</p> <p>Handling of hazardous substances is likely to be under direct supervision with regular checking. Competency involves the application of knowledge and skills to a limited range of tasks and roles. Recording and reporting is undertaken within established routines using methods and procedures that are predictable.</p>				
CODE	FNA03S1U02V1	LEVEL	3	CREDIT	

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
<p>1. Handle hazardous substances</p>	<p>1.1. Specific hazardous substance is identified from the label and applicable manufacturers' safety data sheet.</p> <p>1.2. Selected hazardous substance is handled in safe containers or packages under instruction from the supervisor or manager.</p>
<p>2. Store hazardous substances</p>	<p>2.1. Storage for hazardous substances is checked for compliance with industry standards in line with instructions.</p> <p>2.2. Regular participation in the conduct of safety audits maximizes the individual's awareness of safety issues</p> <p>2.3. Required hazardous substances are estimated and industry standard storage conditions established according to instructions</p>
<p>3. Transport hazardous substances</p>	<p>3.1. Transport mode and procedures are established in consultation with the manager or supervisor as instructed.</p> <p>3.2. Hazardous substances are loaded or decanted into secure containers or packaging in line with work programs.</p> <p>3.3. Load is secured or sealed to ensure safety and eliminate spillage according to enterprise policy.</p> <p>3.4. Transport of hazardous substances is completed in line with established procedures and movements recorded according to enterprise policy.</p>

*Competency Standard for Landscaping*

4. Use hazardous substances	4.1. Personal protective equipment suited to the task is selected and fitted or worn. 4.2. Selected hazardous substance is removed from storage and utilized in accordance with the label instructions or workplace requirements. 4.3. Containers and unused hazardous substances are disposed of in accordance with established workplace procedures.
5. Act in emergency situations with hazardous substances	5.1. Emergency incidence is notified to appropriate authorities in the workplace. 5.2. Clear identification of the nature of the emergency is established in consultation with the workplace supervisor. 5.3. Direction is sought from the supervisor or workplace notices to establish the role of the individual in the emergency.

Range statement

- Identifying Hazardous substances in the workshop
- Handling and using hazardous substances, use of application equipment, decanting liquids, refueling, transport and cartage, use of industrial gases.
- Meeting industrial standard or Suitable storage conditions may include security systems, elevated storage, fans and ventilation, drainage systems, separation of incompatible materials, warning signage as required and workplace notices.
- Enterprise policy may include protocols for record keeping, provision of personal protective equipment, instructions to personnel, record of governing legislation.
- Disposal of containers or quantities of left over hazardous substances will be carried out in line with workplace procedures developed from State or local government regulation relating to hazardous substances, Manufacturers label directions, Farm care recommendations.
- Emergency situations may include spilt fuels or other substances, use of incorrect substances, fire, contact with skin or eyes, leaking or damaged containers, explosion, mixing of incompatible materials, contamination of water supplies and container disposal problem

Tools, equipment and materials required may include:

- Relevant procedure manuals

#### Assessment guide

##### *Form of assessment*

The assessor may use the following assessment methods to objectively assess the candidate:

- Observation
- Questioning
- Practical demonstration
- Any written or oral examinations must include questions related to Handling hazardous substances in work place.

##### *Assessment context*

- Assessment of this unit must be completed on the job or in a simulated work environment which reflects a range of safe working practices. The assessment environment should not disadvantage the candidate.
- Competency needs to be holistic and must be demonstrated in a suitable horticulture workplace condition.

##### *Critical aspects*

It is essential that competence is demonstrated in the knowledge and skills defined in this unit.

These may include the ability to:

- All safety procedures are followed
- Apply required workplace procedures to dispose and handling hazardous substances
- Apply required skills in emergency situations.

## UNDERPINNING KNOWLEDGE AND SKILLS

<b>Underpinning Knowledge</b>	<b>Underpinning Skills</b>
A basic working knowledge of: <ul style="list-style-type: none"><li>- hazardous substances that occur in the rural workplace relevant to the industry sector</li><li>- the drills and protocols with dealing with hazardous substance issues</li></ul>	The ability to: <ul style="list-style-type: none"><li>- read and interpret written instructions and hazardous substance labelling</li><li>- communicate with other workplace personnel</li></ul>

*Competency Standard for Landscaping*

<ul style="list-style-type: none"> <li>- who to contact and who to report to in the individual workplace about hazardous substance matters</li> <li>- horticultural mathematics and the basis of horticultural calculations</li> </ul>	<ul style="list-style-type: none"> <li>- understand and act on verbal instructions</li> <li>manually or electronically record details of hazardous substance usage or emergency incidence</li> <li>- critically observe and accurately report on safety hazards in the workplace</li> <li>- adopt safe work strategies as an integral part of workplace routines</li> </ul>
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**UNIT- 03**

<b>UNIT TITLE</b>	<b>Cooperate in the workplace</b>				
<b>DESCRIPTOR</b>	This unit describes the basic level of workplace communication that is expected of workers. Work is likely to be under direct supervision with regular checking. Competency involves the application of knowledge and skills to a limited range of tasks and roles. Recording and reporting is undertaken within established routines using methods and procedures that are predictable.				
<b>CODE</b>	FNA03S1U03V1	<b>LEVEL</b>	3	<b>CREDIT</b>	

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
1. Observe and record in the workplace	1.3. Issues and events occurring in the workplace on a daily basis and which may require attention are identified. 1.4. Information is recorded accurately and in the required format. 1.5. Communication technology relevant to the enterprise is used under supervision.
2. Interact with others in the workplace	2.1. Issues or events requiring action or attention are reported to supervisor with the level of detail laid down in workplace instructions. 2.2. Telephone messages are taken accurately, information



*Competency Standard for Landscaping*

	<p>recorded appropriately and calls redirected to other staff efficiently.</p> <p>2.3. Work instructions are clarified where necessary and concerns are raised promptly with the supervisor.</p> <p>2.4. A positive attitude is maintained in interacting with others.</p>
<p>3. Work in a team</p>	<p>3.1. Allocated tasks are identified and completed within defined time-lines.</p> <p>3.2. Assistance is actively sought by approaching other team members when difficulties arise.</p> <p>3.3. Feedback provided by others in the working groups is acknowledged.</p> <p>3.4. Appropriate lines of communication with supervisors and peers are demonstrated according to enterprise policy.</p> <p>3.5. Support and tolerance are offered and provided to colleagues.</p> <p>3.6. Participation in team problem solving activities is demonstrated.</p>
<p>4. Meet, greet and direct clients and customers</p>	<p>4.1. Client is greeted in line with enterprise policy.</p> <p>4.2. Questioning and active listening is used to elicit client needs.</p> <p>4.3. Clients with special needs are referred or redirected as required.</p> <p>4.4. A positive attitude is maintained in interacting with clients and customers.</p> <p>4.5. Personal and cultural differences are taken into account when dealing with clients.</p> <p>4.6. Telephone is answered promptly, calls re-directed to appropriate person or messages recorded according to</p>

### *Competency Standard for Landscaping*

	enterprise policy.
5. Maintain personal presentation	5.1. Personal dress is maintained in line with enterprise policy. 5.2. Personal grooming and hygiene reflect enterprise policy.

#### Range statement

- Workplace issues may include personal work duties and roles, personal occupational health and safety, information from other workers and/or customers and clients.
- Workplace events may include reporting any daily information concerning the immediate work routines such as materials, stock, equipment, tools, plant, watering or irrigation systems.
- Recording may be in writing or verbal.
- Enterprise policy may be in regard to assisting with clients, interacting with supervisors and colleagues, codes of personal hygiene and dress, enterprise position description (delegated responsibilities), organizational development of enterprise.
- Communication technology may include faxes, answering machines, telephone networks, electronic mail (e-mail), simple/basic interaction with computers.
- Customers include those with special needs.

#### Tools, equipment and materials required may include:

- Relevant procedure manuals

#### Assessment guide

##### *Form of assessment*

The assessor may use the following assessment methods to objectively assess the candidate:

- Observation
- Questioning
- Practical demonstration
- Any written or oral examinations may include questions related to required and expected level of workplace communication

##### *Assessment context*

- Assessment of this unit must be completed on the job or in a simulated work environment which reflects a range of safe working practices. The assessment environment should not disadvantage the candidate.
- Competency needs to be holistic and must be demonstrated in a suitable horticulture

workplace condition.

## UNDERPINNING KNOWLEDGE AND SKILLS

<b>Underpinning Knowledge</b>	<b>Underpinning Skills</b>
<p>A basic knowledge of;</p> <ul style="list-style-type: none"><li>• enterprise policy in relation to greeting and assisting clients and customers</li><li>• location of enterprise layout and resources</li><li>• communication technology and systems used by the enterprise</li><li>• questioning and listening techniques</li><li>• effective interpersonal skills</li></ul>	<p>An ability to</p> <ul style="list-style-type: none"><li>• observe and record in the workplace</li><li>• interact with others in the workplace</li><li>• work in a team</li><li>• meet, greet and direct clients and customers</li><li>• maintain personal presentation</li></ul>

**UNIT- 04**

<b>UNIT TITLE</b>	<b>Act in an emergency</b>				
<b>DESCRIPTOR</b>	This unit is concerned with the ability of workers to respond to workplace emergencies such as fire and other dangerous situations and render first aid in the workplace. Responsibility for some roles and coordination within a team may be required. Competency involves the application of knowledge and skills to a range of tasks and roles. Competencies are usually within established routines, methods and procedures.				
<b>CODE</b>	FNA03S1U04V1	<b>LEVEL</b>	3	<b>CREDIT</b>	

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
1. Minimize emergency situations	1.1. Appropriate actions are taken to maximize safety and minimize health hazards in the workshop and on site. 1.2. Machinery handling and actions minimize risks to all personnel. 1.3. Regular checks of the environs are carried out to minimize potential hazards.
2. Plan for emergencies	2.1. Contingency plans are understood and activated for emergencies in compliance with Codes of Welfare and relevant legislation. 2.2. Personal responsibilities are carried out in emergency situations and practice drills. 2.3. Evaluation procedures are implemented to company standards.
3. Act as instructed in emergencies	3.1. Contingency plans are activated for emergencies in compliance with the relevant legislation. 3.2. Emergency procedures are carried out as required by established workplace policy.

### Competency Standard for Landscaping

4. Implement fire prevention and control	4.1. Fire hazards are minimised as specified in workshop and fuelling procedures. 4.2. Appropriate fire extinguishers and fire fighting plant are used in fire situations and the appropriate authority is notified according to specified procedures. 4.3. Evacuation procedures are implemented as instructed according to workplace policy.
5. Render first aid	5.1. First aid appropriate to the incident is applied. 5.2. The patient is monitored whilst awaiting professional or para-medical support.

#### Range statement

- Unless otherwise stated directions, specifications and prescriptions come from management or other advisers and may include health, welfare and safety policies, emergency contingency plans, maintenance routines for safeguards and emergency equipment.
- Occupational Health & Safety (OHS) Acts and Regulations apply in all States and Territories.
- Emergency situations may include power failure, quarantine breakdown, fire, flood, storms, heart failure, breathing stopped and serious personal injury.
- Emergency equipment may include first aid kits, fire extinguishers, emergency power generators, chemical spillage kits.

Tools, equipment and materials required may include:

- Relevant procedure manuals

#### Assessment guide

##### *Form of assessment*

The assessor may use the following assessment methods to objectively assess the candidate:

- Observation
- Questioning
- Practical demonstration
- Any written or oral examinations may include questions related to workplace emergencies such as fire and other dangerous situations and render first aid in the workplace. 21 •

*Assessment context*

- Assessment of this unit must be completed on the job or in a simulated work environment which reflects a range of safe working practices. The assessment environment should not disadvantage the candidate.
- Competency needs to be holistic and must be demonstrated in a suitable horticulture workplace condition.

**UNDERPINNING KNOWLEDGE AND SKILLS**

<b>Underpinning Knowledge</b>	<b>Underpinning Skills</b>
A basic working knowledge of: <ul style="list-style-type: none"> <li>• sources of human injury</li> <li>• basic concept of duty of care</li> <li>• specific Acts and Regulations relating to emergency situations</li> <li>• senior First Aid Certificate</li> </ul>	An ability to: <ul style="list-style-type: none"> <li>• minimize emergency situations</li> <li>• plan for emergencies</li> <li>• act as instructed in emergencies</li> <li>• implement fire prevention and control</li> <li>• render first aid as required</li> </ul>

**UNIT- 05**

<b>UNIT TITLE</b>	<b>Prepare plant display</b>			
<b>DESCRIPTOR</b>	This Unit of Competency is concerned with the process of preparing plant displays either in indoor settings or as seasonal displays of annual and perennial plants in garden beds.  The preparation of plant displays involves the application of horticultural knowledge with depth in some areas and a broad range of horticultural skills. The work is normally done within routines, methods and procedures where some discretion and judgement is required in the selection of equipment, work organization, services, actions and achieving outcomes within time constraints.			
<b>CODE</b>		<b>LEVEL</b>		<b>CREDIT</b>

<b>ELEMENTS OF</b>	<b>PERFORMANCE CRITERIA</b>	22
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*Competency Standard for Landscaping*

<b>COMPETENCIES</b>	
1. Design plant displays	<p>1.1. Display site is analyzed for aesthetic, environmental and physical attributes.</p> <p>1.2. Display plan is prepared according to enterprise guidelines.</p> <p>1.3. Plant types suitable for aesthetic effects are identified on the display plan.</p>
2. Select plants	<p>2.1 Plants selected are healthy and vigorous and are selected according to the display plan.</p> <p>2.2. Number and size of plants selected are according to the display plan.</p> <p>2.3. Plants selected display the ability to survive in the display position for the length of the display or the length of time required.</p>
3. Place plants	<p>3.1. Plants are placed in pattern specified by the plan.</p> <p>3.2. Accessories and materials chosen are as specified in the plan.</p> <p>3.3. Display is completed to achieve the enterprise's aesthetic standard.</p>
4. Maintain plants	<p>4.1 Plants are observed for health qualities according to published data, supplier specifications and historical data.</p>

### Competency Standard for Landscaping

	<p>4.2. Plants are fertilized and watered to maintain optimum health and appearance.</p> <p>4.3. Plants are replaced when no longer at optimum health and appearance.</p> <p>4.4. Rubbish, litter and decaying material are removed from plants, pots and surrounds to maintain appearance of display at enterprise standard.</p>
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#### Range statement

- Plant displays may include annual bedding displays, herbaceous perennial displays, and indoor presentations.
- Parameters for analysis may include light, air, humidity, and desired effect, nature of event or exhibition, time-span of display, size of display.
- Plant characteristics may include color, texture, size, species, and longevity.
- Displays designed may include, small displays, displays for small functions.

#### Assessment guide

##### Form of assessment

The assessor may use the following assessment methods to objectively assess the candidate:

- Observation
- Questioning
- Practical demonstration
- Any written or oral examinations may include questions related.

#### Assessment context

- Assessment of this unit must be completed on the job or in a simulated work environment which reflects a range of safe working practices. The assessment environment should not disadvantage the candidate.
- Competency needs to be holistic and must be demonstrated in a suitable horticulture workplace condition.

## UNDERPINNING KNOWLEDGE AND SKILLS

Underpinning Knowledge	Underpinning Skills
A basic working knowledge of:	



*Competency Standard for Landscaping*

<ul style="list-style-type: none"><li>• plant culture and maintenance</li><li>• long and short term slow release fertilizers</li><li>• plant performance and requirements</li><li>• plant establishment and after-care</li><li>• plant maintenance</li><li>• plant selection for display areas</li></ul>	<p>An ability to:</p> <ul style="list-style-type: none"><li>• design plant displays</li><li>• select and place plants in displays</li><li>• maintain plant displays</li></ul>
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**UNIT- 05**

<b>UNIT TITLE</b>	<b>Cultivate turf</b>				
<b>DESCRIPTOR</b>	<p>This Unit of Competency is concerned with the process of establishing turf in commercial and domestic recreational situations.</p> <p>Turf establishment is likely to be under limited supervision from others and with checking only related to overall progress. Turf establishment involves the application of horticultural knowledge with depth in some areas and a broad range of horticultural skills. The work is normally done within routines, methods and procedures where some discretion and judgement is required in the selection of machinery and equipment, work organization, services, actions and achieving outcomes within time and budget constraints.</p>				
<b>CODE</b>	FNA03S1U05V1	<b>LEVEL</b>	3	<b>CREDIT</b>	

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
1. Plant turf	<p>1.1. Soil is watered according to enterprise guidelines.</p> <p>1.2. Placement and planting method of the plant material is consistent with the plant species.</p> <p>1.3. Newly planted turf is watered and top-dressing is applied according to plan and supervisors instructions.</p> <p>1.4. Tools and equipment chosen are appropriate to the task being undertaken, used according to guidelines and safe working practices are employed.</p>
2. Manage juvenile turf	<p>2.1. Juvenile turf is irrigated and fertilized according to variety and method of planting.</p> <p>2.2. Turf is rolled with a lightweight roller prior to first mowing and mowed according to a specified pattern and height according to the requirements of the enterprise.</p> <p>2.3. Juvenile turf is monitored relative to published data on variety, problems identified and any changes are reported to supervisor according to enterprise policy.</p> <p>2.4. Top dressing is applied according to the establishment plan and where plant health characteristics dictate.</p> <p>2.5. Tools and equipment chosen are appropriate to the task being undertaken, used according to guidelines, and safe working practices are employed.</p>
3. Collect samples for a soil analysis	<p>3.1. Samples are taken from a representative area and accurately labelled according to enterprise guidelines and consultant requirements.</p>

*Competency Standard for Landscaping*

	<p>3.2. Tools and equipment are chosen appropriate to the task being undertaken, used according to guidelines and safe working practices are employed according to enterprise Occupational Health &amp; Safety (OHS) guidelines.</p>
<p>4. Identify damaged turf</p>	<p>4.1. Plants are observed for health properties according to published data, supplier specifications and historical data.</p> <p>4.2. Turf structure is observed for quality according to published data, industry practice and enterprise guidelines.</p> <p>4.3. Reports and recommendations are made to supervisor according to enterprise guidelines.</p> <p>4.4. Tools and equipment chosen are appropriate to the task being undertaken, used according to guidelines, and safe working practices are employed.</p>

Range statement

- This unit applies to all turf areas such as parks, gardens and sports fields.
- Site conditions may include soil types, moisture content, pH levels, salinity, texture, compaction, aspect, pollutants, toxicity, climate, buildings, road works, shade.
- Elements that will affect the water requirements may include evaporation, wind, transpiration, rain, season, daylight, use of turf, situation.
- Environmental conditions may include wind, rain, sun, shade, humidity.
- Health properties may include strength, wear tolerance, growth rate, colour, recovery rate.
- Irrigation system types may include mains pressure, low pressure, below ground, above ground, spray systems, dripper-systems.
- Observations for turf quality may include upright, stress, growing pattern, variation.
- Plant material may include sprigs, sod, seed, hydro-seed, stolons.
- Plant material is selected according to required characters, soil type, climate and use.
- Planting methods may include sowing, laying, rolling, chaffing, sprigging.
- Requirements for supplementary watering may include volume delivered was not appropriate, dry patches in places.
- Requirements to be monitored may include irrigation, fertiliser, mowing, weeds, pests and diseases.

### *Competency Standard for Landscaping*

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- Situations where top dressing is appropriate may include joins in sods, to level an area that is “puddling”, to promote lateral growth on after planting practices.
- Soil testing methods may include core sample, penetration test.
- Variables in taking a sample penetration reading may include speed with which readings are taken, time of day, turf use.
- Water distribution variables may include, dry spots, pooling, representative samples, consistency, visually checking sprinklers.
- Enterprise standards may include spacing of core holes, even scarification, no damage to remaining turf.
- Renovation tasks may include fertilising, seeding, top dressing, watering, levelling, installation of barriers and protective measures, scarifying, de-thatching.
- Renovation equipment may include scarifiers, de-thatchers.

### Assessment guide

#### *Form of assessment*

The assessor may use the following assessment methods to objectively assess the candidate:

- Observation
- Questioning
- Practical demonstration
- Any written or oral examinations may include questions related

#### *Assessment context*

- Assessment of this unit must be completed on the job or in a simulated work environment which reflects a range of safe working practices. The assessment environment should not disadvantage the candidate.
- Competency needs to be holistic and must be demonstrated in a suitable horticulture workplace condition.

## UNDERPINNING KNOWLEDGE AND SKILLS

<b>Underpinning Knowledge</b>	<b>Underpinning Skills</b>
A basic working knowledge of: <ul style="list-style-type: none"><li>• appropriate agricultural chemicals and concentrations</li></ul>	An ability to: <ul style="list-style-type: none"><li>• plant turf</li><li>• manage juvenile turf</li></ul>

*Competency Standard for Landscaping*

<ul style="list-style-type: none"> <li>• turf identification and growth characteristics</li> <li>• soils and turf nutrition</li> <li>• fertiliser use and application</li> <li>• watering practices</li> <li>• common weeds, pests and diseases</li> </ul>	<ul style="list-style-type: none"> <li>• collect samples for a soil analysis</li> <li>• interpret the results of a soil analysis</li> <li>• identify damaged turf</li> </ul>
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**UNIT- 07**

<b>UNIT TITLE</b>	<b>Implement a landscape maintenance program</b>				
<b>DESCRIPTOR</b>	<p>This unit describes the work undertaken by landscapers and others in the implementation of landscape maintenance programs.</p> <p>Maintenance is likely to be under limited supervision from others with checking only related to overall progress. The work involves the application of horticultural knowledge with depth in some areas and a broad range of horticultural skills. Landscape maintenance is normally done within routines, methods and procedures where some discretion and judgement is required in the selection of equipment, work organization, services, actions and achieving outcomes within time constraints.</p>				
<b>CODE</b>	FNA03S1U06V1	<b>LEVEL</b>	3	<b>CREDIT</b>	

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
1. Maintain plant protection devices	1.1. Protection devices are checked for their effectiveness according to protection plan requirements.

*Competency Standard for Landscaping*

	<p>1.2. Broken, damaged, or ineffective components are reported and/or repaired according to terms and conditions of contract.</p> <p>1.3. Protection devices are dismantled and removed according to protection plan requirements.</p>
<p>2. Replace diseased or damaged plants</p>	<p>2.1. Diseased or damaged plants are identified and recorded according to enterprise guidelines.</p> <p>1.4. Plants which are to be replaced are removed and new specimens installed in their place according to maintenance program specifications.</p> <p>1.5. Diseased and damaged plants which are beyond the scope of the maintenance program are reported to the nominated person.</p> <p>1.6. Aftercare is provided to established plants to ensure their health and vigour is maintained according to enterprise guidelines.</p>
<p>3. Maintain landscape areas</p>	<p>1.7. Standard and scope of maintenance is established according to maintenance program.</p> <p>1.8. Site is regularly inspected for remedial action and repairs according to maintenance contract conditions.</p> <p>1.9. Remedial action and repairs are implemented to restore site to full effectiveness according to maintenance contract conditions.</p> <p>1.10. Results of operations are assessed to ensure repairs or renovation objectives and standards have been achieved according to maintenance program details.</p> <p>1.11. Surroundings are returned to a tidy and undamaged condition following operations according to enterprise guidelines.</p>

### *Competency Standard for Landscaping*

	1.12. Work performances of others are monitored and remedial action undertaken to ensure terms and conditions of the contract are maintained.
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#### Range statement

- Equipment used includes spraying equipment, safety equipment, mowers, cutting, digging and chipping equipment and machinery, hand tools.
- Maintenance programs can incorporate mowing, pruning, weeding, plant replacement, minor structural repairs, spraying, fertilising, re-mulching, pest control, cleaning, adjustment and programming irrigation systems, top soiling, rubbish removal, chipping.

#### Assessment guide

##### *Form of assessment*

The assessor may use the following assessment methods to objectively assess the candidate:

- Observation
- Questioning
- Practical demonstration
- Any written or oral examinations may include questions related

##### *Assessment context*

- Assessment of this unit must be completed on the job or in a simulated work environment which reflects a range of safe working practices. The assessment environment should not disadvantage the candidate.
- Competency needs to be holistic and must be demonstrated in a suitable horticulture workplace condition.

## UNDERPINNING KNOWLEDGE AND SKILLS



<b>Underpinning Knowledge</b>	<b>Underpinning Skills</b>
<p>A basic working knowledge of:</p> <ul style="list-style-type: none"><li>• application of specifications to individual areas of work</li><li>• appropriate horticultural practices for heritage and cultural areas</li><li>• principles and applications of an integrated pest management program</li><li>• actions permitted in the event of variations to maintenance contracts</li><li>• sources of hazards encountered in landscape maintenance and measures for their reduction</li></ul>	<p>An ability to:</p> <ul style="list-style-type: none"><li>• maintain plant protection devices</li><li>• replace diseased/damaged plants</li><li>• maintain landscape areas</li></ul>

**UNIT- 08**

<b>UNIT TITLE</b>	<b>Establish planted areas</b>			
<b>DESCRIPTOR</b>	This Unit of Competency is concerned with the work undertaken to implement a large scale planting program. Planting is likely to be under limited supervision from others with checking only related to overall progress. The work involves the application of arboricultural knowledge with depth in some areas and a broad range of arboricultural skills. Planting is normally done within routines, methods and procedures where some discretion and judgement is required in the selection of equipment, work organisation, services, actions and achieving outcomes within time constraints.			
<b>CODE</b>	FNA03S1U07V1	<b>LEVEL</b>	3	<b>CREDIT</b>

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
1.Undertake a soil test	1.1 Soil samples collected are representative of area being tested as specified for the test being undertaken and according to enterprise specifications. 1.2 On-site testing procedures are performed according to manufacturers guidelines and industry practice. 1.3 Off-site testing samples are packaged, documented, labelled and dispatched according to enterprise specifications and testers requirements. 1.4 Sampling records are maintained according to enterprise guidelines.
2. Prepare a planting site	2.1 Tools chosen are appropriate to the task being undertaken, used according to manufacturers guidelines and Occupational Health & Safety (OHS) regulations. .2.2 Earthworks are undertaken according to planting plan and/or supervisors instructions. .2.3 Soil ameliorants are used as required according to job specifications. 2.4 Positions of plants are marked out on site according to supervisors directions and/or plans. 2.5 All competing plants, debris and pollutants are treated

*Competency Standard for Landscaping*

	<p>according to enterprise guidelines.</p> <p>2.6 Treatments are selected and applied according to enterprise guidelines and manufacturers instructions.</p>
2. Plant trees and shrubs according to prepared plan	<p>3.1 All plants are inspected prior to being planted out and all plants with major defects discarded.</p> <p>3.2 Broken or damaged plants are trimmed to maintain health and vigour according to enterprise guidelines.</p> <p>3.3 Plants are planted at spacing sufficient to enable them to develop their full potential and according to planting program.</p> <p>3.4 Individual species are planted with due regard to the specific growing requirements of the species.</p>
4. Nurture newly installed plants	<p>4.1 Newly planted plants are provided with immediate aftercare according to the planting program.</p> <p>4.2 Formative pruning is undertaken according to the needs of the species to ensure trees develop a sound framework for the natural growth and habit of the species.</p> <p>4.3 Tools and equipment are cleaned, maintained and stored consistent with manufacturers specifications and enterprise guidelines.</p>
5. Oversee planting	<p>5.1 Planting program is monitored according to enterprise guidelines.</p> <p>5.2 Plants incorrectly planted or situations which will prevent trees from reaching their full potential are identified and reported according to enterprise guidelines.</p> <p>5.3 Remedial action is undertaken to ensure all of the planting program requirements have been implemented.</p>

**Range statement**

- Site conditions may include soil types, moisture content, pH levels, salinity, texture, compaction, aspect, pollutants, toxicity, climate, buildings, road works, shade.
- Species selected may include exotic, evergreen, native, endemic, deciduous, conifer, palm, shape, habit.
- Establishment methods may include hand planting, mechanical planting, direct seeding, mechanical sowing.
- Earthworks may include irrigation, drainage, ripping, cultivating.
- Major defects may include any condition which will prevent the tree from reaching its full potential.
- Growing requirements may include time of planting, pruning, depth, drainage.

### *Competency Standard for Landscaping*

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• Nurturing program may include watering, mulching, fertilising, protection, staking, weeding.

#### Assessment guide

##### *Form of assessment*

The assessor may use the following assessment methods to objectively assess the candidate:

- Observation
- Questioning
- Practical demonstration
- Any written or oral examinations may include questions related

##### *Assessment context*

- Assessment of this unit must be completed on the job or in a simulated work environment which reflects a range of safe working practices. The assessment environment should not disadvantage the candidate.
- Competency needs to be holistic and must be demonstrated in a suitable horticulture workplace condition.

## UNDERPINNING KNOWLEDGE AND SKILLS

<b>Underpinning Knowledge</b>	<b>Underpinning Skills</b>
A basic working knowledge of: <ul style="list-style-type: none"><li>• factors affecting the timing and method of planting</li><li>• identification of pests and diseases of trees</li><li>• principles and methods relating to the prevention and control of pests and diseases</li><li>• safety requirements when handling and using hazardous goods</li><li>• nutrient requirements of a range of plant species and cultivars</li><li>• physiology of plant growth</li><li>• techniques for securing/anchoring trees and shrubs</li><li>• plant selection and culture</li><li>• soils and nutrients</li><li>• calculations for materials</li></ul>	An ability to: <ul style="list-style-type: none"><li>• prepare a planting site</li><li>• plant shrubs and trees according to prepared plan</li><li>• nurture newly planted trees</li><li>• oversee tree planting</li></ul>

**UNIT- 09**

<b>UNIT TITLE</b>	<b>Install drainage systems</b>				
<b>DESCRIPTOR</b>	<p>This unit describes the installation of drainage systems at a horticultural site.</p> <p>Drainage installation is likely to be under limited supervision from others with checking only related to overall progress. The work involves the application of horticultural knowledge with depth in some areas and a broad range of horticultural skills. Installation is normally done within routines, methods and procedures where some discretion and judgement is required in the selection of equipment, work organisation, services, actions and achieving outcomes within time constraints.</p>				
<b>CODE</b>	FNA03S1U08V1	<b>LEVEL</b>	3	<b>CREDIT</b>	

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
1.Prepare a site according to plans and specifications	<p>1.1 Services are detected and recorded on the site plans before work commences.</p> <p>1.2 Measurement and marking out of drainage lines is consistent with plan.</p> <p>1.3 Trenches where constructed are at the specified depth without damage to services, facilities, features and established plants.</p> <p>1.4 Equipment operation and work practices conform with enterprise Occupational Health &amp; Safety (OHS) guidelines.</p> <p>1.5 Regulations and legislation relevant to the situation are observed.</p> <p>1.6 Work practices reflect sustainable horticultural principles and respond to local community requirements.</p>
2.Install drainage components	<p>2.1 The drainage plan is interpreted and where applicable, contractors are supervised and work is monitored to conform to the plan.</p> <p>2.2 Tools are chosen appropriate to the task being undertaken, used according to guidelines and safe working practices are employed.</p> <p>2.3 Components are assembled and connected according to the plan, joints are completed and tested according to</p>

### Competency Standard for Landscaping

	manufacturers specifications. 2.2.4 Fittings and valves are fitted and adjusted to the requirements of the installation plan, and all joints are secured according to enterprise guidelines. 2.5 Earthworks are finished off to specification. 2.6 The system configuration and capacity matches the installation plan.
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#### Range statement

- Drainage systems may include surface drains, subsoil drains, culverts, mole drains, sub-surface drains.
- Equipment may include pumps, motors, appropriate levelling devices.

#### Assessment guide

##### *Form of assessment*

The assessor may use the following assessment methods to objectively assess the candidate:

- Observation
- Questioning
- Practical demonstration
- Any written or oral examinations may include questions related

##### *Assessment context*

- Assessment of this unit must be completed on the job or in a simulated work environment which reflects a range of safe working practices. The assessment environment should not disadvantage the candidate.
- Competency needs to be holistic and must be demonstrated in a suitable horticulture workplace condition.

### UNDERPINNING KNOWLEDGE AND SKILLS

<b>Underpinning Knowledge</b>	<b>Underpinning Skills</b>
A basic working knowledge of: <ul style="list-style-type: none"><li>• operation of pumps and water flow rates</li><li>• behaviour of water on varying terrain and soil types</li><li>• soil water retention testing techniques</li><li>• principle and practice in drainage design</li><li>• calculations for installing drainage systems</li></ul>	An ability to: <ul style="list-style-type: none"><li>• prepare a site according to plans and specifications</li><li>• install drainage components</li></ul>

**UNIT-10**

<b>UNIT TITLE</b>	<b>Install irrigation systems</b>				
<b>DESCRIPTOR</b>	This Unit of Competency is concerned with the installation of irrigation systems. Irrigation installation is likely to be under limited supervision from others with checking only related to overall progress. The work involves the application of horticultural knowledge with depth in some areas and a broad range of horticultural skills. Irrigation installation is normally done within routines, methods and procedures where some discretion and judgement is required in the selection of equipment, work organisation, services, actions and achieving outcomes within time constraints and may include the coordination of other tradespersons such as plumbers and electricians.				
<b>CODE</b>	FNA03S1U09V1	<b>LEVEL</b>	3	<b>CREDIT</b>	39

ELEMENTS OF COMPETENCIES	PERFORMANCE CRITERIA
1.Organise resource requirements	1.1 Parts and equipment delivered to site are checked according to system drawings and specifications. 1.2 Work team is briefed on installation or modification procedures and requirements and jobs and tasks allocated. 1.3 Equipment and machinery is in good working condition and safety hazards are identified.
2.Prepare a site in accordance with plans and specifications	2.1 Measurement and marking out of irrigation lines is consistent with plan. 2.2 Trenches where constructed are at the specified depth without damage to services, facilities, features and established plants. 2.3 Equipment operation and work practices conform with enterprise OHS guidelines. 2.4 Regulations and legislation relevant to the situation are observed. 2.5 Work practices reflect sustainable horticulture principles and respond to local community requirements.
3.Install irrigation components	3.1 Plan is interpreted and where applicable, contractors are supervised and work is monitored to conform to plan. 3.2 Components are assembled and connected according to plan, joints are completed and tested according to manufacturers specifications. 3.3 Fittings and valves are fitted and adjusted to requirements of the installation plan, and all joints are secured according to enterprise guidelines. .3.4 Earthworks are finished off to specification. .3.5 The system configuration and capacity matches the installation plan. .3.6 The site is restored to its original condition after works completion. 3.7 Tools are chosen appropriate to the task being undertaken, used according to guidelines and safe working practices are employed.



### *Competency Standard for Landscaping*

4. Commission irrigation system	4.1 Start up sequence is in accordance with operations manual. 4.2 System is flushed as required. 4.3 Operating faults are identified and corrective actions taken according to operations manual. 4.4 Testing and monitoring equipment is calibrated to manufacturers specifications.. 4.5 Regular monitoring ensures that the system operates according to design specifications.
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#### Range statement

- Irrigation systems may include mains pressure, low pressure, below ground, above ground, spray systems, dripper, capillary, ebb and flow and flood systems.
- Irrigation equipment may include pumps, motors, delivery equipment, sprays, system controllers.
  - Testing equipment may include pressure gauges, flow meters.
  - Water supply may be underground, mains or surface storage.
  - Machinery may include graders, back hoes, front end loaders, ploughs, molding boards.
  - Fixtures may include dams, bores, windmills, tanks, channels.
  - Equipment may include injectors, pumps, tensiometers, probe tubes, flow meter, cath cans, pressure gauge, computer and/or other scheduling devices, recycling equipment, spray equipment.
- Materials may include gland packing, rubber rings, belts and pulleys, hazardous substances, chemicals.
- Irrigation systems may range from manual operation and monitoring to fully automated with computer control and monitoring.
- Reuse systems include disinfection and filtering equipment.

#### Assessment guide

##### *Form of assessment*

The assessor may use the following assessment methods to objectively assess the candidate:

- Observation
- Questioning
- Practical demonstration
- Any written or oral examinations may include questions related

##### *Assessment context*

- Assessment of this unit must be completed on the job or in a simulated work environment which reflects a range of safe working practices. The assessment environment should not disadvantage the candidate.
- Competency needs to be holistic and must be demonstrated in a suitable horticulture

workplace condition.

## UNDERPINNING KNOWLEDGE AND SKILLS

Underpinning Knowledge	Underpinning Skills
<p>A basic working knowledge of:</p> <ul style="list-style-type: none"> <li>• methods and techniques of irrigation</li> <li>• components of an irrigation system</li> <li>• characteristics and operation of joints, valves and sprinkler components</li> <li>• operation of pumps and water flow rates</li> <li>• behaviour of water on varying terrain and soil types</li> <li>• soil water retention testing techniques</li> <li>• principle and practice in irrigation design</li> <li>• water quality and water filtration techniques</li> <li>• calculations for installing irrigation systems</li> </ul>	<p>An ability to:</p> <ul style="list-style-type: none"> <li>• prepare a site according to plans and specifications</li> <li>• install irrigation components</li> </ul>

## UNIT- 11

UNIT TITLE	Set out landscape works				
<b>DESCRIPTOR</b>	<p>This Unit of Competency is concerned with the setting out of landscape works from plans and specifications in advance or in conjunction with implementation of planned works.</p> <p>The work is likely to be under routine supervision with intermittent checking. Competency involves the application of knowledge and skills to a range of setting out and installation tasks and roles usually within established enterprise routines.</p>				
<b>CODE</b>	FNA03S1U10V1	<b>LEVEL</b>	3	<b>CREDIT</b>	

ELEMENTS OF COMPETENCIES	PERFORMANCE CRITERIA
1.Mark out position of works	<p>1.1. Proposed structure is located on site according to site plan dimensions.</p> <p>1.2 Shape of proposed structure is marked out on ground according to plan dimensions.</p>

*Competency Standard for Landscaping*

	1.3 Datum height is established to ensure all features can be linked by survey equipment according to established survey techniques.
2.Establish set-out lines	2.1 Profiles are located with close proximity to site set out to ensure they are not damaged during construction according to site plan. 2.2 Profiles are installed to ensure they remain stable when setout lines are tightened according to established construction techniques. 2.3 Base lines are established according to plan dimensions. 2.4 Building lines are established with corners at 90° and diagonals of equal distance according to size and shape as determined by plan.
3.Establish survey bench marks	3.1. Equipment is prepared and used according to instructions and manufacturers guidelines. 3.2. Levelling equipment is set up and checked for accuracy of readings according to manufacturer’s guidelines. 3.3. Instruments which are out of specification are adjusted or reported to nominated person according to enterprise guidelines. 3.4. A temporary bench mark is selected and established on a position/structure according to established surveying techniques. 3.5. A temporary bench mark height is established using line levelling techniques according to established surveying practice. 3.6. Tools and equipment are cleaned, maintained and stored consistent with manufacturer’s specifications and enterprise guidelines.

Range statement

- Marking out procedures include application of lime, paint, chipping, pegging, staking.
- Equipment includes tilting levels, automatic levels, line level, spirit level, water level, Cowley level, staffs, boning rods, measuring tapes, claw hammer, sledge hammer.

Assessment guide

*Form of assessment*

The assessor may use the following assessment methods to objectively assess the candidate:

- Observation
- Questioning
- Practical demonstration
- Any written or oral examinations may include questions related.

*Assessment context*

- Assessment of this unit must be completed on the job or in a simulated work environment which reflects a range of safe working practices. The assessment environment should not disadvantage the candidate.
- Competency needs to be holistic and must be demonstrated in a suitable horticulture workplace condition.

UNDERPINNING KNOWLEDGE AND SKILLS

<b>Underpinning Knowledge</b>	<b>Underpinning Skills</b>
A basic working knowledge of: <ul style="list-style-type: none"><li>• interpretation of landscape plans</li><li>• mathematical and geometrical principles used in setting out</li><li>• methods of detecting underground services</li></ul>	An ability to: <ul style="list-style-type: none"><li>• mark out position of structures</li><li>• establish set-out lines</li><li>• establish survey bench marks</li></ul>

**UNIT- 12**

<b>UNIT TITLE</b>	<b>Operate irrigation systems</b>				
<b>DESCRIPTOR</b>	<p>This Unit of Competency is concerned with the operation of irrigation systems.</p> <p>Work is likely to be under limited supervision with checking related to overall progress. Responsibility for the work of others may be involved and team coordination may be required. Competency involves the application of knowledge with depth in some areas and a broad range of skills. Competencies are normally used within routines, methods and procedures where some discretion and judgement is required in the selection of equipment, work organisation, services, actions and achieving outcomes within time constraints.</p>				
<b>CODE</b>	FNA03S1U11V1	<b>LEVEL</b>	3	<b>CREDIT</b>	

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
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*Competency Standard for Landscaping*

1.Perform pre-start checks	<p>1.1. Checks of water, power, fuel and lubricants ensure that all are available and the control system is operational.</p> <p>1.2. Pump is primed if necessary and valves, gates and controls are open or closed as directed.</p> <p>1.3. Water management devices are in position according to design specifications.</p> <p>1.4. Pressure and flow testing equipment is calibrated and available.</p>
2.Prepare injection or fertigation equipment	<p>1.5. Injection or fertigation equipment is connected as directed and calibrated according to manufacturers specifications.</p> <p>1.6. Fertiliser concentration is calculated and the solution thoroughly mixed according to enterprise standards.</p> <p>1.7. Injection equipment is flushed out until equipment is clean or for approximately ten minutes prior to shut down.</p>
3.Start up and inspect system	<p>2.1. Start up sequence is implemented in accordance with operations manual and water levels and pressure built up slowly as directed.</p> <p>2.2. All malfunctions, leakages and blockages are corrected or repaired immediately and reported to the supervisor.</p> <p>2.3. Control system is set to ensure time of application for amount of water required is in accordance with irrigation schedule.</p> <p>2.4. Pressure at the headworks and control valves is within design specifications indicating efficient filter operation and water is distributed evenly to the targeted areas with minimal wastage and run-off.</p>
4.Shut down system based upon irrigation indicators	<p>2.5.4.1 Area is irrigated to the required soil moisture levels and time lag between shut down and end of watering is determined to minimize run-off and deep percolation.</p> <p>2.6.System components are shut down and drained in sequence according the operations manual and irrigation activity is recorded as required according to enterprise guidelines.</p>

Range statement

- Irrigation systems may include mains pressure, low pressure, below ground, above ground, spray systems, dripper systems, capillary, ebb and flow and flood systems.
- Water sources may include underground water supply, mains or surface storage.

### *Competency Standard for Landscaping*

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- Irrigation equipment may include pumps, motors, tensiometers, probe tubes, solenoid valves, sprinklers, delivery equipment, sprays, system controllers, disinfestation equipment and filters or other water treatment equipment.
- Testing equipment may include pressure gauges, flow meters.
- Injection/fertigation equipment may include pumps, tanks, strainers and injectors.
- Irrigation systems may range from manual operation and monitoring to fully automated with computer control and monitoring.
- Maintenance may include efficiency testing, run off awareness, filter maintenance, legislative requirements.
- Checks may include flow rates, operating pressures, tail waters.
- Inspections may include solenoid adjustments, priming all laterals to prevent water hammer, sprinkler pressure and output, head ditch, tail water, reuse system, flow rate.
- Fertigation may involve leaf, water and soil analyses.
- Treatment systems for both head and tail water.
- Re-use systems including disinfestation and filtering equipment.

#### Assessment guide

##### *Form of assessment*

The assessor may use the following assessment methods to objectively assess the candidate:

- Observation
- Questioning
- Practical demonstration
- Any written or oral examinations may include questions related

##### *Assessment context*

- Assessment of this unit must be completed on the job or in a simulated work environment which reflects a range of safe working practices. The assessment environment should not disadvantage the candidate.
- Competency needs to be holistic and must be demonstrated in a suitable horticulture workplace condition.

### UNDERPINNING KNOWLEDGE AND SKILLS

<b>Underpinning Knowledge</b>	<b>Underpinning Skills</b>
A basic working knowledge of: <ul style="list-style-type: none"><li>• methods and techniques of irrigation</li><li>• components of an irrigation system</li><li>• characteristics and operation of joints, valves and sprinkler components</li><li>• operation of pumps and water flow rates</li><li>• emergency shut down procedures</li><li>• behaviour of water on varying terrain and soil types</li></ul>	An ability to: <ul style="list-style-type: none"><li>• perform pre-start checks</li><li>• prepare injection or fertigation equipment</li><li>• start up and inspect system</li><li>• shut down system based upon irrigation</li></ul>

47

*Competency Standard for Landscaping*

<ul style="list-style-type: none"> <li>• soil water retention testing techniques</li> <li>• principle and practice in irrigation design</li> <li>• water quality and water filtration techniques</li> </ul>	indicators
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**UNIT- 13**

<b>UNIT TITLE</b>	<b>Control pests and diseases</b>				
<b>DESCRIPTOR</b>	<p>This Unit of Competency is concerned with the control of plant pests and diseases in a horticultural situation.</p> <p>Pest and disease control is likely to be under limited supervision from others with checking only related to overall progress. The work involves the application of horticultural knowledge with depth in some areas and a broad range of horticultural skills. Pest and disease control is normally done within routines, methods and procedures where some discretion and judgement is required in the selection of equipment, work organisation, services, actions and achieving outcomes within time constraints.</p>				
<b>CODE</b>		<b>LEVEL</b>		<b>CREDIT</b>	

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
1. Diagnose pest and disease infestations	1.1. Observations support a systematic and demanding analysis of available symptoms. 1.2. Samples are collected for laboratory diagnosis where necessary. 1.3. Conclusions drawn from relevant information are based on reasoned argument and appropriate evidence. 1.4. Professional advice is obtained where the complexity of the problem or the severity of infestation dictate.
2. Select control measures for the treatment of pests and diseases	2.1. Control measures suited to infestation are identified from integrated pest management strategy. 2.2. Treatment suited to crop conditions, severity of infestation, marketing requirements and business circumstances is chosen.
3. Apply treatments to pests and diseases	3.1. Treatments are applied having regard to Occupational Health & Safety (OHS) principles, business requirements and sound horticultural practice.



### Competency Standard for Landscaping

	3.2. Records are maintained as required by legislation and enterprise guidelines.
4. Review pest and disease control programs	4.1. Infestations are monitored and progress compared to manufacturers specifications and enterprise records. 4.2. Treatment programs are modified where necessary and when dictated by progress. 4.3. Supervisor is notified promptly of significant changes to treatments and/or when business implications dictate.

#### Range statement

##### Landscape

- Pests may include proclaimed pests of the region, commonly occurring pests of the region, high risk occasionally occurring pests of the region.
- Diseases may include commonly occurring diseases of the region, high risk occasional diseases of the region.
- Control measures may include chemical, cultural.

#### Assessment guide

##### Form of assessment

The assessor may use the following assessment methods to objectively assess the candidate:

- Observation
- Questioning
- Practical demonstration
- Any written or oral examinations may include questions related to workplace emergencies such as fire and other dangerous situations and render first aid in the workplace.

##### Assessment context

- Assessment of this unit must be completed on the job or in a simulated work environment which reflects a range of safe working practices. The assessment environment should not disadvantage the candidate.
- Competency needs to be holistic and must be demonstrated in a suitable horticulture workplace condition.

### UNDERPINNING KNOWLEDGE AND SKILLS

Underpinning Knowledge	Underpinning Skills
A basic working knowledge of: <ul style="list-style-type: none"><li>• the characteristics, signs and symptoms of pest and disease infestations of crops</li></ul>	An ability to: <ul style="list-style-type: none"><li>• diagnose pest and disease infestations</li></ul>

*Competency Standard for Landscaping*

<ul style="list-style-type: none"> <li>• life cycles and physiology of families of pests</li> <li>• characteristics of pathogenic and non-pathogenic diseases in crops</li> <li>• treatment methodologies, behaviour characteristics, withholding periods of various common treatment programs</li> <li>• alternate combinations of treatment methodologies</li> <li>• local, regional and state based priorities for the use of chemicals in the control of infestations</li> <li>• chemical and non-chemical control measures for use and application in the Parks &amp; Gardens industry</li> <li>• labelling conventions for the safe use and storage of a variety of chemicals</li> </ul>	<ul style="list-style-type: none"> <li>• select control measures for the treatment of pests and diseases</li> <li>• apply treatments to pests and diseases</li> <li>• review pest and disease control programs</li> </ul>
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**UNIT- 14**

<b>UNIT TITLE</b>	<b>Supervise work site activities</b>				
<b>DESCRIPTOR</b>	<p>This Unit of Competency is concerned with the small-scale supervision of projects and work site activities and not general management of people and processes. Responsibility may be for basic coordination and direction of small groups working on a site remote from the enterprise headquarters, small projects or parts of projects, or small areas within the enterprise.</p> <p>The supervision of work site activities is likely to be under limited supervision from above and with checking only related to overall progress. Work site supervision involves the application of horticultural knowledge with depth in some areas and a broad range of horticultural skills. The work is normally done within routines, methods and procedures where some discretion and judgement is required in the selection of equipment, work organisation, services, actions and achieving outcomes within time constraints.</p>				
<b>CODE</b>	FNA03S1U13V1	<b>LEVEL</b>		<b>CREDIT</b>	

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
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*Competency Standard for Landscaping*

<p>1. Prepare project plan</p>	<p>1.1. Requirements of the job are clarified with author and/or works manager.                      1.2. Staff, equipment and material resource requirements are specified and time is allocated in conjunction with supervisor.                      1.3. The order of activities is specified according to enterprise guidelines.                      1.4. Occupational Health &amp; Safety (OHS) legislation, enterprise procedures and site specific safety requirements are observed.                      1.5. The plan is documented clearly and presented to supervisor for verification.</p>
<p>2. Organise resources for project implementation</p>	<p>2.1. Materials are purchased and equipment is hired as authorised by supervisor in conjunction with activities undertaken by management.                      2.2. External agency permits are gained in the correct order, where required.                      2.3. Neighbours and affected parties are notified of works to be undertaken when appropriate.                      2.4. Materials are ordered for delivery on site as required.                      2.5. Staff are coordinated to be on site when they are required.</p>
<p>3. Implement and monitor the project plan</p>	<p>3.1. All resources are prepared and timed to suit the project plan.                      3.2. Staff are directed in activities for each period of work.                      3.3. Work is undertaken together with staff following documented plan guidelines.                      3.4. Staff, activities and resource usage are supervised and are accounted for in the project records.                      3.5. Training on the job is provided as required and as appropriate.                      3.6. Contingency situations are recognised and appropriate corrective actions are taken to enterprise instructions.</p>
<p>4. Perform site administration</p>	<p>4.1. Management reporting is completed in a timely and accurate manner.                      4.2. Decisions are sought from management on important and relevant issues.                      4.3. Site administration is monitored to ensure compliance with enterprise procedures.                      4.4. A simple project report is written to authorise payment for work and materials and to inform management of project details, where required by enterprise.</p>

**Range statement**

External agency permits may include noise pollution, waste production and removal, environmental protection.

- Operations may be in all weather conditions, and may be modified by poor weather.
- Project may include small/short term job, part of a larger project.
- Reporting includes completion of enterprise procedures and associated manual or computer-based documentation.
- Staff may be obtained from within the enterprise, “borrowed” from another enterprise, hired from a contracting firm, hired for the project from outside the industry.

**Assessment guide**

*Form of assessment*

The assessor may use the following assessment methods to objectively assess the candidate:

- Observation
- Questioning
- Practical demonstration
- Any written or oral examinations may include questions related to workplace emergencies such as fire and other dangerous situations and render first aid in the workplace.

*Assessment context*

- Assessment of this unit must be completed on the job or in a simulated work environment which reflects a range of safe working practices. The assessment environment should not disadvantage the candidate.
- Competency needs to be holistic and must be demonstrated in a suitable horticulture workplace condition.

**UNDERPINNING KNOWLEDGE AND SKILLS**

<b>Underpinning Knowledge</b>	<b>Underpinning Skills</b>
A basic working knowledge of: <ul style="list-style-type: none"><li>• application of employment-related legislation and awards</li><li>• application of legislative requirements, especially in the areas of safety, site management and employment</li><li>• development and maintenance of effective teamwork</li><li>• enterprise computing systems</li><li>• enterprise policies especially in areas of quality, personnel and operations, including EEO target groups</li></ul>	An ability to: <ul style="list-style-type: none"><li>• prepare a project plan</li><li>• organise resources for project implementation</li><li>• implement and monitor the project plan</li><li>• perform site administration</li></ul>

*Competency Standard for Landscaping*

<ul style="list-style-type: none"> <li>• enterprise reporting and recording policies</li> <li>• first line supervision</li> <li>• interpreting and communication of operational information, procedures and instructions, and enterprise policies</li> <li>• management of contingencies and emergencies</li> <li>• operation cost control</li> <li>• operational quality control</li> <li>• operational safety</li> <li>• reporting to enterprise requirements</li> </ul>	
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**UNIT- 15**

<b>UNIT TITLE</b>	<b>Undertake a site assessment</b>				
<b>DESCRIPTOR</b>	<p>This Unit of Competency is concerned with undertaking a site assessment as part of preliminary tasks leading to the development of a landscape design.</p> <p>Undertaking a site assessment is likely to occur under limited supervision from others with checking only related to overall progress. Undertaking a site assessment involves the application of horticultural knowledge with depth in some areas and a broad range of horticultural skills. The provision of information is normally done within routines, methods and procedures where some discretion and judgement is required.</p>				
<b>CODE</b>	FNA03S1U15V1	<b>LEVEL</b>	3	<b>CREDIT</b>	

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
Survey site features and characteristics	<p>1.1.Existing on-site features and services impacting upon the design proposal are identified and recorded according to enterprise guidelines.</p> <p>327.1.2 Compass bearings are identified and magnetic north recorded.</p> <p>327.1.3 Direction of prevailing weather conditions are ascertained from historical data.</p> <p>327.1.4 General falls and contours are visually identified and recorded according to recognised land surveying techniques.</p>

*Competency Standard for Landscaping*

	<p>327.1.5 Covenants which could affect the design are identified and recorded according to enterprise guidelines.</p> <p>327.1.6 Features adjacent to the site which could be used to enhance the design are identified and recorded.</p> <p>327.1.7 Site boundaries are measured and shape of site determined and recorded according to recognised land surveying techniques.</p> <p>327.1.8 Site inventory report is produced according to enterprise guidelines</p>
Conduct a soil analysis	<p>327.2.1 Soil profile examination holes are excavated to the prescribed depth and to the designated spacings according to enterprise guidelines.</p> <p>327.2.2 Horizon levels within the examination holes are noted according to soil identification reference chart guidelines.</p> <p>327.2.3 Soil samples for testing by others are gathered and prepared according to test kit instructions.</p> <p>327.2.4 Soil types are identified from soil identification reference chart guidelines and soil maps.</p>
Record survey levels	<p>327.3.1 The assumed datum is located and height calculated and recorded using ‘rise and fall’ or similar survey techniques.</p> <p>327.3.2 Line levelling techniques are applied to plot and record levels at corners and random points across site according to recognised land surveying techniques.</p> <p>327.3.3 Relationship between site levels and adjacent levels are calculated and recorded according to enterprise guidelines.</p> <p>327.3.4 Grid layout plan of site is produced from field notes with all features relevant to the design noted and recorded according to recognised land surveying techniques.</p>

**Range statement**

- Site inventory factors include topography, vegetation, hydrology, services and amenities, buildings and structures, access, soil types, site modifications, fauna, location of boundaries, aspect, streams, paths,

banks, gullies.

Assessment guide

*Form of assessment*

The assessor may use the following assessment methods to objectively assess the candidate:

- Observation
- Questioning
- Practical demonstration
- Any written or oral examinations may include questions related to workplace emergencies such as fire and other dangerous situations and render first aid in the workplace.

*Assessment context*

- Assessment of this unit must be completed on the job or in a simulated work environment which reflects a range of safe working practices. The assessment environment should not disadvantage the candidate.
- Competency needs to be holistic and must be demonstrated in a suitable horticulture workplace condition.

## UNDERPINNING KNOWLEDGE AND SKILLS

<b>Underpinning Knowledge</b>	<b>Underpinning Skills</b>
A basic working knowledge of: <ul style="list-style-type: none"><li>• types, application and uses of surveying equipment</li><li>• principles of line levelling techniques</li><li>• methods of analysing condition and nutritional status of soil</li><li>• principles and theory of landscape design</li></ul>	An ability to: <ul style="list-style-type: none"><li>• undertake a site assessment</li><li>• conduct a soil analysis</li><li>• record survey levels</li></ul>

## UNIT- 16

<b>UNIT TITLE</b>	<b>Undertake operational maintenance of machinery</b>
<b>DESCRIPTOR</b>	This Unit of Competency is concerned with the basic operational maintenance and servicing work undertaken by machinery operators. Operational maintenance is likely to be under limited supervision from others with checking only related to overall progress. Basic operational maintenance is normally done within routines, methods and procedures where some discretion and judgement is required in the selection of equipment, work organisation, services, actions and achieving outcomes within time constraints. <span style="float: right;">55</span>

*Competency Standard for Landscaping*

<b>CODE</b>		<b>LEVEL</b>		<b>CREDIT</b>	
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<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
1. Perform scheduled maintenance	1.1 Basic operational maintenance is performed on the equipment according to manufacturer’s guidelines and enterprise guidelines. 1.2. Equipment is adjusted, cleaned and stored consistent with manufacturer’s specifications and enterprise policy.
2. Rectify common mechanical faults	2.1. Faults are diagnosed from mechanical symptoms and where they do not require specialist attention are repaired according to manufacturer guidelines, enterprise policy and supervisors instructions. 2.2.Tools selected are appropriate to each task and safe work practices are employed according to enterprise policy.
3. Document operational maintenance	3.1.Machinery and equipment log books are updated after use according to regulatory standards and enterprise guidelines

*Range statement*

- Equipment may include motorised equipment, plant, implements.
- Tools may include hand tools, power tools, safety equipment, chainsaws.
- Motorised machinery may include sprayers, tractors, mechanical pruners, harvesters, turf mowers, rotary hoes, chainsaws, hedge trimmers, winches, motor cycles.
- Plant may include pumps, generators, coolers.
- Engine types may include petrol, diesel, 2-stroke, 4-stroke.
- Scheduled maintenance may include daily, weekly, monthly, quarterly and yearly servicing schedules, servicing schedules based upon hourly usage rates.
- Mechanical faults may include basic faults reasonably within the scope of a non-mechanic, damage, wear, malfunction or unsoundness.

*Assessment guide*

*Form of assessment*

The assessor may use the following assessment methods to objectively assess the candidate:

- Observation
- Questioning
- Practical demonstration
- Any written or oral examinations may include questions related to workplace emergencies such as fire and other dangerous situations and render first aid in the workplace.



## Competency Standard for Landscaping

### Assessment context

- Assessment of this unit must be completed on the job or in a simulated work environment which reflects a range of safe working practices. The assessment environment should not disadvantage the candidate.
- Competency needs to be holistic and must be demonstrated in a suitable horticulture workplace condition.

## UNDERPINNING KNOWLEDGE AND SKILLS

Underpinning Knowledge	Underpinning Skills
<p>A basic working knowledge of:</p> <ul style="list-style-type: none"> <li>• the working principles of 2-stroke and 4-stroke petrol and diesel engines</li> <li>• major set-up requirements of vehicles and equipment and principles of calibration</li> <li>• servicing characteristics of vehicles and equipment</li> <li>• fault finding techniques in mechanical devices</li> <li>• enterprise recording systems for machinery use</li> </ul>	<p>An ability to:</p> <ul style="list-style-type: none"> <li>• perform scheduled maintenance</li> <li>• rectify common mechanical faults</li> <li>• document operational maintenance</li> </ul>

### UNIT- 17

UNIT TITLE	Erect horticultural structures			
DESCRIPTOR	<p>This Unit of Competency is concerned with the erection of pre-fabricated horticultural structures such as shade-houses, poly-tunnels and their fixtures.</p> <p>The erection of horticultural structures is likely to be under limited supervision from others with checking only related to overall progress. The work is normally done within routines, methods and procedures where some discretion and judgement is required in the selection of equipment, work organisation, services, actions and achieving outcomes within time constraints.</p>			
CODE	LEVEL	CREDIT		

ELEMENTS OF COMPETENCIES	PERFORMANCE CRITERIA
1. Set-out prefabricated buildings and structures	<p>1.1. The building area is cleaned, leveled and marked out according to plans and specifications.</p> <p>1.2. Prefabricated materials are laid out according to manufacturers specifications and components are checked against delivery manifest.</p> <p>1.3. Additional construction materials are determined and procured according to supervisors specifications.</p>

### Competency Standard for Landscaping

<p>2. Assemble buildings and structures</p>	<p>2.1. Assembly conforms to manufacturers plans and specifications.                  2.2. Fixtures and fittings are assembled and fixed, and building works are finished off according to plan.                  2.3. The area is cleaned and tidied, and prepared for designated use according to supervisors specifications.                  2.4. Tools are chosen appropriate to the task being undertaken, used according to guidelines and safe working practices are employed.</p>
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#### Range statement Parks &

##### Gardens

- Buildings and structures may include shade houses, sheds, picnic and playground equipment.
- Fixtures and fittings may include benches, screens, sporting structures - goal posts etc.

#### Assessment guide

##### Form of assessment

The assessor may use the following assessment methods to objectively assess the candidate:

- Observation □ Questioning
- Practical demonstration
- Any written or oral examinations may include questions

##### Assessment context

- Assessment of this unit must be completed on the job or in a simulated work environment which reflects a range of safe working practices. The assessment environment should not disadvantage the candidate.
- Competency needs to be holistic and must be demonstrated in a suitable horticulture workplace condition.

## UNDERPINNING KNOWLEDGE AND SKILLS

Underpinning Knowledge	Underpinning Skills
<p>A basic working knowledge of:</p> <ul style="list-style-type: none"> <li>• basic surveying techniques in building construction</li> <li>• purpose and application of buildings and structures in production processes</li> </ul>	<p>An ability to:</p> <ul style="list-style-type: none"> <li>• set out prefabricated buildings and structures</li> <li>• assemble buildings and structures</li> </ul>

### UNIT- 19

<b>UNIT TITLE</b>	<b>Install concrete structures and features</b>	<b>58</b>
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*Competency Standard for Landscaping*

<b>DESCRIPTOR</b>	<p>This Unit of Competency is concerned with the installation of concrete structures and features as a component of landscape project works.</p> <p>The installation of concrete structures and features is likely to be under limited supervision from others with checking only related to overall progress. The work involves the application of horticultural knowledge with depth in some areas and a broad range of horticultural skills. The installation of concrete structures and features is normally done within routines, methods and procedures where some discretion and judgement is required in the selection of equipment, work organisation, services, actions and achieving outcomes within time constraints.</p>			
<b>CODE</b>	FNA03S1U16V1	<b>LEVEL</b>	<b>3</b>	<b>CREDIT</b>

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
Set out landscape works	<p>1.1 The position of specified landscape features are marked out as outlined in plans and specifications.</p> <p>1.2 Profiles are established to conform with plan and specification details and to the tolerances designated by supervisor and/or plan details.</p> <p>1.3 Survey bench marks, datums and TBM are established according to plan details.</p> <p>1.4 On-site services and utilities are located from data provided by appropriate authorities</p> <p>1.5 Waste and debris is removed and unused materials are stacked to provide a safe working area.</p>
Prepare a site for concrete	<p>2.1 The subsoil is prepared by removing all debris, vegetable matter and top soil to provide a solid foundation for concrete.</p> <p>2.2 Drainage provisions are installed according to plan details.</p> <p>2.3 Form work is installed to site within nominated tolerances in a manner which will ensure that it remains rigid during concrete placement operations.</p> <p>2.4 Sub-base material is installed to site and the area is compacted to the specified level and to a consistency which will ensure that the material does not consolidate during the concrete placement.</p>

*Competency Standard for Landscaping*

	<p>2.5 Waterproof membrane is installed to area, when required, according to manufacturers guidelines.</p> <p>2.6 Reinforcement is cut, placed and tied to the area according to plan details and industry standards (AS1554.3).</p> <p>2.7 Release agent is applied to form work according to manufacturers specifications.</p>
<p>Mix concrete for a landscape project</p>	<p>3.1 Volume of concrete required for project is calculated.</p> <p>3.2 Proportions for concrete mix are determined according to the strength requirements of the project.</p> <p>3.3 Volume of dry materials necessary to produce final concrete mix are determined.</p> <p>3.4 All dry ingredients are mixed together to ensure a thorough blending of all materials is achieved.</p> <p>3.5 Sufficient water is introduced to produce a plastic concrete mix after making allowances for damp aggregates.</p> <p>3.6 Equipment is cleaned on completion to ensure equipment can be immediately used when next required.</p>
<p>Place and finish concrete</p>	<p>4.1 Any faults are checked and rectified prior to placing concrete including: form work stability, reinforcement placement, screeding point positions, debris removal.</p> <p>4.2 Release agent is applied to form work to facilitate ease of removal when concrete has hardened.</p> <p>4.3 The appropriate method of transporting concrete to minimise segregation of materials is identified and used.</p> <p>4.4 A concrete slump test is undertaken and samples are taken for tests to check for conformity to specifications where required.</p> <p>4.5 Concrete is placed to designated levels in a manner to avoid segregation of materials.</p> <p>4.6 Concrete is consolidated using an approved vibration method to industry standard (AS3600) to ensure air pockets are eliminated.</p> <p>4.7 Concrete is screeded to a flat surface to maintain the desired finished level.</p> <p>4.8 Surface is prepared to ensure a non-slip finish.</p> <p>4.9 An appropriate curing agent/method is provided to ensure the concrete attains the desired strength.</p>

### Competency Standard for Landscaping

	4.10 Equipment is cleaned on completion to ensure equipment can be immediately used when next required.
Remove form work from concrete	5.1 Form work is removed without damaging concrete surfaces in a manner which will allow for re-use of the form work. 5.2 Nails are removed from form work without damage to components. 5.3 All debris is cleaned from form work for next usage and all components are correctly stored and stacked in a safe manner.

#### Range statement

• Concrete structures and features may include paths, footings, edgings, floors, decking, boardwalks, ornamental garden elements.

Tools, equipment and materials required may include:

- Relevant procedure manuals

#### Assessment guide

##### *Form of assessment*

The assessor may use the following assessment methods to objectively assess the candidate:

- Observation
- Questioning
- Practical demonstration
- Any written or oral examinations may include questions related to workplace emergencies such as fire and other dangerous situations and render first aid in the workplace.

##### *Assessment context*

- Assessment of this unit must be completed on the job or in a simulated work environment which reflects a range of safe working practices. The assessment environment should not disadvantage the candidate.
- Competency needs to be holistic and must be demonstrated in a suitable horticulture workplace condition.

## UNDERPINNING KNOWLEDGE AND SKILLS

<b>Underpinning Knowledge</b>	<b>Underpinning Skills</b>
A basic working knowledge of: <ul style="list-style-type: none"><li>• setting out landscape works</li></ul>	An ability to: <ul style="list-style-type: none"><li>• set out landscape works</li></ul>

*Competency Standard for Landscaping*

<ul style="list-style-type: none"><li>• concrete construction techniques</li><li>• legislation regarding footings and foundations</li><li>• concrete properties and characteristics</li><li>• hand tools and equipment use and operation</li></ul>	<ul style="list-style-type: none"><li>• prepare a site for concrete</li><li>• mix concrete for a landscape project</li><li>• place and finish concrete</li><li>• remove form work from concrete</li></ul>
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**UNIT- 20**

<b>UNIT TITLE</b>	<b>Install timber structures and features</b>
<b>DESCRIPTOR</b>	This Unit of Competency is concerned with the installation of timber structures and features as a component of landscape project works. 62

*Competency Standard for Landscaping*

	The installation of timber structures and features is likely to be under limited supervision from others with checking only related to overall progress. The work involves the application of horticultural knowledge with depth in some areas and a broad range of horticultural skills. The installation of timber structures and features is normally done within routines, methods and procedures where some discretion and judgement is required in the selection of equipment, work organisation, services, actions and achieving outcomes within time constraints.			
<b>CODE</b>	FNA03S1U17V1	<b>LEVEL</b>	3	<b>CREDIT</b>

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
Plan and prepare works	<p>1.1 Materials and quantities are determined from job drawings and specifications.</p> <p>1.2 Appropriate personal protective equipment is selected and fitted according to Occupational Health &amp; Safety (OHS) requirements.</p> <p>1.3 Tools and equipment are selected and checked for serviceability according to enterprise guidelines.</p> <p>1.4 Materials are checked for quality to ensure they are free of defects and conform to the specification details.</p>
Set out the works	<p>2.1 All obstructions to the construction programs are identified and removed to ensure the works can proceed uninterrupted.</p> <p>2.2 Site access and storage areas are identified to ensure works can proceed in an orderly manner according to enterprise guidelines.</p> <p>2.3 The position of structure is marked out according to job drawing details.</p> <p>2.4 The structure is set out to tolerances nominated within specifications.</p> <p>2.5 Safety signage and barriers are erected to ensure safety of all persons within the construction area.</p> <p>2.6 Footings are excavated and prepared according to job drawings and specifications.</p> <p>2.7 Components are prepared for assembly to the design requirements contained in the job drawings and specifications.</p>

*Competency Standard for Landscaping*

	<p>2.8 The length of components and the positions of cuts marked out if applicable to designated requirement details contained in job drawings.</p> <p>2.9 Material is cut accurately allowing for overhang where applicable.</p>
Assemble and erect structure	<p>3.1 Initial components are located into position and fixed into place according to specification details.</p> <p>3.2 Temporary bracing is fixed where required to maintain stability of components during construction.</p> <p>3.3 The remaining components are installed and fixed into position according to job drawings and specifications.</p> <p>3.4 All overhangs are cut off and the finished structure completed according to job drawing and specifications</p>
Apply coatings to finished structure	<p>4.1 Personal protective equipment is selected and fitted according to Occupational Health &amp; Safety (OHS) requirements.</p> <p>4.2 Tools and equipment are selected and checked for serviceability in line with enterprise standards.</p> <p>4.3 Safety signage and barriers are set up to ensure the safety of all persons within the area.</p> <p>4.4 Paint cloths are placed to protect the surroundings.</p> <p>4.5 Preparation of all components is undertaken according to specifications and manufacturers guidelines.</p> <p>4.6 Paint is applied, as specified by the manufacturer, ensuring complete coverage and evenness of application.</p> <p>4.7 Tools and equipment are cleaned up to ensure that immediate use is possible when next required.</p> <p>4.8 Waste is disposed of to ensure the environment is not adversely affected according to regulatory requirements.</p>
Undertake a site commissioning	<p>5.1 All mechanical features are checked and adjusted to ensure that they operate according to the manufacturers specifications.</p> <p>5.2 Quality of finished works are inspected to ensure the standard of the finished product is according to the plans and specifications.</p>
Clean up site and store all tools and equipment	<p>6.1 Debris is cleaned from structure and site according to specifications details.</p> <p>6.2 Waste material is disposed of safely without adversely impacting upon the environment.</p> <p>6.3 Unused material is stored and stacked for future re-use according to job instructions.</p>



### Competency Standard for Landscaping

	6.4 Tools and equipment are cleaned and stored according to job instructions.
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#### Range statement

- Timber structures and features includes fences, pergolas, trellises, lattices, gazebos, small bridges, handrails, decking, boardwalks, screens, seats, site furniture, bollards, car barriers.

#### Assessment guide

##### *Form of assessment*

The assessor may use the following assessment methods to objectively assess the candidate:

- Observation
- Questioning
- Practical demonstration
- Any written or oral examinations may include questions related

##### *Assessment context*

- Assessment of this unit must be completed on the job or in a simulated work environment which reflects a range of safe working practices. The assessment environment should not disadvantage the candidate.
- Competency needs to be holistic and must be demonstrated in a suitable horticulture workplace condition.

## UNDERPINNING KNOWLEDGE AND SKILLS

<b>Underpinning Knowledge</b>	<b>Underpinning Skills</b>
A basic working knowledge of: <ul style="list-style-type: none"><li>• setting out landscape works</li><li>• timber construction techniques</li><li>• legislation regarding construction of structures</li><li>• timber properties and characteristics</li><li>• hand tools and equipment use and operation</li></ul>	An ability to: <ul style="list-style-type: none"><li>• plan and prepare works</li><li>• set out the works</li><li>• assemble and erect structure</li><li>• apply coatings to finished structure</li><li>• undertake a site commissioning</li><li>• clean up site and store all tools and equipment</li></ul>

## UNIT- 21

<b>UNIT TITLE</b>	<b>Install brick structures and features</b>
<b>DESCRIPTOR</b>	This Unit of Competency is concerned with the installation of brick structures and features as a component of landscape project works.

*Competency Standard for Landscaping*

	The installation of brick structures and features is likely to be under limited supervision from others with checking only related to overall progress. The work involves the application of horticultural knowledge with depth in some areas and a broad range of horticultural skills. The installation of brick structures and features is normally done within routines, methods and procedures where some discretion and judgement is required in the selection of equipment, work organisation, services, actions and achieving outcomes within time constraints.				
<b>CODE</b>	FNA03S1U18V1	<b>LEVEL</b>	3	<b>CREDIT</b>	

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
Set out landscape works	<p>1.1 The position of specified landscape features are marked out as outlined in plans and specifications.</p> <p>1.2 Profiles are established to conform with plan and specification details and to the tolerances designated by supervisor and/or plan details.</p> <p>1.3 Survey bench marks, datums and TBM are established according to plan details.</p> <p>1.4 On-site services and utilities are located from data provided by appropriate authorities</p> <p>1.5 Waste and debris is removed and unused materials are stacked to provide a safe working area.</p>
Set out brickwork or block work for a small landscape project	<p>2.1 The finished level of structure are determined according to plans and specifications.</p> <p>2.2 Profile is set to required levels to ensure plumb and level finishes are achieved.</p> <p>2.3 String lines are set to profiles to ensure straight and level courses are achieved.</p>
Construct a brickwork or block work structure for a small landscape project	<p>3.1 Mortar is mixed to determined ratio and appropriate admixes and colouring agents are applied to ensure plasticity of mix during laying operations.</p> <p>3.2 Damp proofing and base course of brickwork is laid below ground level according to specifications.</p> <p>3.3 Courses of brickwork laid using designated bond/s in a manner which will ensure the viability and stability of the structure.</p>

### Competency Standard for Landscaping

Clean up brickwork and site	<p>4.1 Brickwork surface are cleaned down using chemicals of sufficient strength to remove all debris without damage to the mortar and bricks.</p> <p>4.2 Site is cleaned up and all tools and equipment are stored according to enterprise requirements.</p> <p>4.3 Debris from structure and site is removed according to specifications details.</p> <p>4.4 Waste material is disposed of safely without adversely impacting upon the environment.</p> <p>4.5 Unused material is stored and stacked for future re-use according to job instructions.</p> <p>4.6 Tools and equipment are cleaned and stored according to job instructions.</p>
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#### Range statement

- Brick and block structures include paving, paths, edging, walls, retaining walls, barriers, ornamental garden features.

#### Assessment guide

##### Form of assessment

The assessor may use the following assessment methods to objectively assess the candidate:

- Observation
- Questioning
- Practical demonstration
- Any written or oral examinations may include questions related

##### Assessment context

- Assessment of this unit must be completed on the job or in a simulated work environment which reflects a range of safe working practices. The assessment environment should not disadvantage the candidate.
- Competency needs to be holistic and must be demonstrated in a suitable horticulture workplace condition.

## UNDERPINNING KNOWLEDGE AND SKILLS

<b>Underpinning Knowledge</b>	<b>Underpinning Skills</b>
A basic working knowledge of: <ul style="list-style-type: none"> <li>• setting out landscape works</li> <li>• brick and block construction techniques</li> </ul>	An ability to: <ul style="list-style-type: none"> <li>• set out landscape works</li> </ul>

*Competency Standard for Landscaping*

<ul style="list-style-type: none"> <li>• legislation regarding construction of brick and block structures</li> <li>• properties and characteristics of bricks, blocks and associated materials</li> <li>• hand tools and equipment use and operation</li> </ul>	<ul style="list-style-type: none"> <li>• set out brickwork or block work for a small landscape project</li> <li>• construct a brickwork or block work structure for a small landscape project</li> <li>• clean up brickwork and site</li> <li>• setting or other specified setting.</li> </ul>
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**UNIT- 22**

<b>UNIT TITLE</b>	<b>Install masonry structures and features</b>				
<b>DESCRIPTOR</b>	<p>This Unit of Competency is concerned with the installation of masonry structures and features as a component of landscape project works.</p> <p>The installation of masonry structures and features is likely to be under limited supervision from others with checking only related to overall progress. The work involves the application of horticultural knowledge with depth in some areas and a broad range of horticultural skills. The installation of masonry structures and features is normally done within routines, methods and procedures where some discretion and judgement is required in the selection of equipment, work organisation, services, actions and achieving outcomes within time constraints.</p>				
<b>CODE</b>	FNA03S1U19V1	<b>LEVEL</b>	3	<b>CREDIT</b>	

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
1. Set out landscape	<p>1.1 The position of specified landscape features are marked out as outlined in plans and specifications.</p> <p>1.2 Profiles are established to conform with plan and specification details and to the tolerances designated by supervisor and/or plan details.</p> <p>1.3 Survey bench marks, datums and TBM are established according to plan details.</p> <p>1.4 On-site services and utilities are located from data provided by appropriate authorities.</p> <p>1.5 Waste and debris is removed and unused materials are stacked to provide a safe working area.</p>
2. Prepare site for masonry construction	<p>2.1 The site is prepared by removing all debris, vegetable matter and top soil to provide a solid foundation for masonry.</p>

### *Competency Standard for Landscaping*

	2.2 Drainage provisions are installed according to plan details. 2.3 Sub-base material is installed on site and the area compacted to the specified level and to a consistency which will ensure that the material does not consolidate during the masonry work. 2.4 Irrigation and drainage systems are prepared and installed according to plans and specifications.
3. Install masonry	3.1 Masonry work is installed according to plans and specifications. 3.2 Keystones are installed according to plans and specifications. 3.3 Levels are checked regularly during construction. 3.4 Site is made good at completion of works according to enterprise standards.

#### Range statement

- Masonry structures include paving, paths, edging, walls, retaining walls, barriers, ornamental garden features.

Tools, equipment and materials required may include:

- Relevant procedure manuals

#### Assessment guide

##### *Form of assessment*

The assessor may use the following assessment methods to objectively assess the candidate:

- Observation
- Questioning
- Practical demonstration
- Any written or oral examinations may include questions related to workplace emergencies such as fire and other dangerous situations and render first aid in the workplace.

##### *Assessment context*

- Assessment of this unit must be completed on the job or in a simulated work environment which reflects a range of safe working practices. The assessment environment should not disadvantage the candidate.
- Competency needs to be holistic and must be demonstrated in a suitable horticulture workplace condition.

UNDERPINNING KNOWLEDGE AND SKILLS

Underpinning Knowledge	Underpinning Skills
<p>A basic working knowledge of:</p> <ul style="list-style-type: none"> <li>• setting out landscape works</li> <li>• masonry construction techniques</li> <li>• legislation regarding construction of masonry structures</li> <li>• properties and characteristics of masonry materials</li> <li>• hand tools and equipment use and operation</li> </ul>	<p>An ability to:</p> <ul style="list-style-type: none"> <li>• set out landscape works</li> <li>• prepare site for masonry construction</li> <li>• install masonry</li> </ul>

UNIT- 23

UNIT TITLE	Install metal structures and features				
<b>DESCRIPTOR</b>	<p>This Unit of Competency is concerned with the installation of metal structures and features as a component of landscape project works. The installation of metal structures and features is likely to be under limited supervision from others with checking only related to overall progress. The work involves the application of horticultural knowledge with depth in some areas and a broad range of horticultural skills. The installation of metal structures and features is normally done within routines, methods and procedures where some discretion and judgement is required in the selection of equipment, work organisation, services, actions and achieving outcomes within time constraints.</p>				
<b>CODE</b>	FNA03S1U20V1	<b>LEVEL</b>	3	<b>CREDIT</b>	

ELEMENTS OF COMPETENCIES	PERFORMANCE CRITERIA
Plan and prepare works	<p>1.1 Materials and quantities are determined from job drawings and specifications.</p> <p>1.2 Appropriate personal protective equipment is selected and fitted according to Occupational Health &amp; Safety (OHS) requirements.</p> <p>1.3 Tools and equipment are selected and checked for serviceability according to enterprise guidelines.</p> <p>1.4 Materials are checked for quality to ensure they are free of</p>

*Competency Standard for Landscaping*

	defects and conform to the specification details.
Set out the works	<p>2.1 All obstructions to the construction programs are identified and removed to ensure the works can proceed uninterrupted.</p> <p>2.2 Site access and storage areas are identified to ensure works can proceed in an orderly manner according to enterprise guidelines.</p> <p>2.3 The position of structure is marked out according to job drawing details.</p> <p>2.4 The structure is set out to tolerances nominated within specifications.</p> <p>2.5 Safety signage and barriers are erected to ensure safety of all persons within the construction area.</p> <p>2.6 Footings are excavated and prepared according to job drawings and specifications.</p> <p>2.7 Components are prepared for assembly to the design requirements contained in the job drawings and specifications.</p> <p>2.8 The length of components and the positions of cuts marked out if applicable to designated requirement details contained in job drawings.</p> <p>2.9 Material is cut accurately allowing for overhang where applicable.</p>
Assemble and erect structure	<p>3.1 Initial components are located into position and fixed into place according to specification details.</p> <p>3.2 Temporary bracing is fixed where required to maintain stability of components during construction.</p> <p>3.3 The remaining components are installed and fixed into position according to job drawings and specifications.</p> <p>3.4 All overhangs are cut off and the finished structure completed according to job drawing and specifications</p>
Apply coatings to finished structure	<p>4.1 Personal protective equipment is selected and fitted according to Occupational Health &amp; Safety (OHS) requirements.</p> <p>4.2 Tools and equipment are selected and checked for serviceability.</p> <p>4.3 Safety signage and barriers are set up to ensure the safety of all persons within the area.</p>

### Competency Standard for Landscaping

	<p>4.4 Paint cloths are placed to protect the surroundings.</p> <p>.4.5 Preparation to all components is undertaken according to specifications and manufacturers guidelines.</p> <p>4.6 Paint is applied, as specified by the manufacturer, ensuring complete coverage and evenness of application.</p> <p>.4.7 Tools and equipment are cleaned up to ensure that immediate use is possible when next required.</p> <p>4.8 Waste is disposed of to ensure the environment is not adversely affected according to regulatory requirements.</p>
Undertake a site commissioning	<p>.5.1 All mechanical features are checked and adjusted to ensure that they operate according to the manufacturers specifications.</p> <p>5.2 Quality of finished works are inspected to ensure the standard of the finished product is according to the plans and specifications.</p>
Clean up site and store all tools and equipment	<p>6.1 Debris is cleaned from structure and site according to specifications details.</p> <p>.6.2 Waste material is disposed of safely without adversely impacting upon the environment.</p> <p>6.3 Unused material is stored and stacked for future re-use according to job instructions.</p> <p>.6.4 Tools and equipment are cleaned and stored according to job instructions.</p>

#### Range statement

- Metal structures and features includes fences, pergolas, trellises, handrails, screens, seats, site furniture, bollards, playground equipment, rubbish bins, sculptures and artworks.

#### Assessment guide

##### *Form of assessment*

The assessor may use the following assessment methods to objectively assess the candidate:

- Observation
- Questioning
- Practical demonstration
- Any written or oral examinations may include questions related

##### *Assessment context*

- Assessment of this unit must be completed on the job or in a simulated work environment which reflects a range of safe working practices. The assessment environment should not



disadvantage the candidate.

- Competency needs to be holistic and must be demonstrated in a suitable horticulture workplace condition.

## UNDERPINNING KNOWLEDGE AND SKILLS

Underpinning Knowledge	Underpinning Skills
A basic working knowledge of: <ul style="list-style-type: none"> <li>• setting out landscape works</li> <li>• metal assembling and construction techniques</li> <li>• legislation regarding construction of structures</li> <li>• metal properties and characteristics</li> <li>• hand tools and equipment use and operation</li> </ul>	An ability to: <ul style="list-style-type: none"> <li>• plan and prepare works</li> <li>• set out the works</li> <li>• assemble and erect structure</li> <li>• apply coatings to finished structure</li> <li>• undertake a site commissioning</li> <li>• clean up site and store all tools and equipment</li> </ul>

## UNIT- 24

UNIT TITLE	Install water features				
<b>DESCRIPTOR</b>	This Unit of Competency is concerned with the installation of water features such as waterfalls, ponds, waterways and fountains. The installation of water features is likely to be under limited supervision from others with checking only related to overall progress. Installation involves the application of horticultural knowledge with depth in some areas and a broad range of horticultural skills. The installation of water features is normally done within routines, methods and procedures where some discretion and judgement is required.				
<b>CODE</b>	FNA03S1U21V1	<b>LEVEL</b>	3	<b>CREDIT</b>	

ELEMENTS OF COMPETENCIES	PERFORMANCE CRITERIA
Plan and prepare work	1.1 Materials and quantities required are determined from job drawings and specifications. 1.2 Personal protective equipment is selected and fitted according to Occupational Health & Safety (OHS) requirements. 1.3 Tools and equipment are selected and checked to ensure they are suitable for the job to be undertaken.

*Competency Standard for Landscaping*

	<p>1.4 Quality of materials is checked to ensure they are free of defects and conform to the specifications details.</p> <p>1.5 The exact location and depth of excavations is determined from site plans and drawings.</p>
Set out and prepare for construction	<p>2.1 Components are located into position and fixed into place according to specification details.</p> <p>2.2 Temporary bracings are fixed where required, to maintain stability of components during construction.</p>
Excavate and remove soil	<p>3.1 Site is excavated to the shape, depth and dimensions according to job drawings and specifications.</p> <p>3.2 Sumps are constructed to specified levels and locations when required according to job specifications.</p> <p>3.3 Drainage systems are constructed according to job drawings and specifications.</p> <p>3.4 Bedding material is placed and compacted to the required finished level according to job drawings and specifications.</p> <p>3.5 Soil and waste material is stockpiled and removed from the site according to directions.</p>
Construct water features	<p>4.1 A waterproof membrane is installed according to job drawings, specifications and manufacturers specifications.</p> <p>4.2 All accessories to structure are installed according to job drawings and manufacturers specifications.</p> <p>4.3 The structure is filled with water, tested for leaks and any detected leaks are repaired.</p>
Undertake a site commissioning	<p>5.1 All mechanical features are checked and adjusted to ensure they operate according to manufacturers specifications.</p> <p>5.2 The quality of finished works is inspected to ensure the standards of the work is according to the job drawings and specifications.</p> <p>5.3 All non-conforming items are rectified according to job drawings and specifications.</p>
Clean up site and store all tools and equipment	<p>6.1 Debris is cleaned from structure and site according to specification details.</p> <p>6.2 Waste material is disposed of safely without adversely impacting upon the environment.</p> <p>6.3 Unused material is stored and stacked for future re-use.</p>

### Competency Standard for Landscaping

	according to job instructions. 6.4 All tools and equipment are cleaned and stored according to job instructions. 6.5 Water is treated to remove or neutralise contaminants resulting from construction works.
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#### Range statement

- Water features include waterfalls, ponds, waterways and fountains.
- Accessories includes pumps, pipes, ornamental features, plant materials, timber structures, site furniture.

Tools, equipment and materials required may include:

- Relevant procedure manuals

#### Assessment guide

##### Form of assessment

The assessor may use the following assessment methods to objectively assess the candidate:

- Observation
- Questioning
- Practical demonstration
- Any written or oral examinations may include questions related to workplace emergencies such as fire and other dangerous situations and render first aid in the workplace.

##### Assessment context

- Assessment of this unit must be completed on the job or in a simulated work environment which reflects a range of safe working practices. The assessment environment should not disadvantage the candidate.
- Competency needs to be holistic and must be demonstrated in a suitable horticulture workplace condition.

## UNDERPINNING KNOWLEDGE AND SKILLS

Underpinning Knowledge	Underpinning Skills
A basic working knowledge of: <ul style="list-style-type: none"><li>• setting out landscape works</li><li>• water feature construction techniques</li><li>• legislation regarding water use, recycling and safety in public places</li><li>• pumping systems and components associated with water features</li><li>• hand tools and equipment use and operation</li></ul>	An ability to: <ul style="list-style-type: none"><li>• plan and prepare work</li><li>• set out and prepare for construction</li><li>• excavate and remove soil</li><li>• construct/install water features</li><li>• undertake a site commissioning</li><li>• clean up site and store all tools and equipment</li></ul>

75

**UNIT- 25**

<b>UNIT TITLE</b>	<b>Implement occupational health &amp; safety policies and guidelines ( OHS Policies and guidelines)</b>				
<b>DESCRIPTOR</b>	<p>This Unit of Competency is concerned with the implementation of Occupational health and safety policies and guidelines in a horticultural workplace and/or work site.</p> <p>Work is likely to be under limited supervision with checking related to overall progress. Responsibility for the work of others may be involved and team coordination may be required.</p> <p>Competencies are normally used within routines, methods and procedures where some discretion and judgement is required in the selection of equipment, work organisation, services, actions and achieving outcomes within time constraints.</p>				
<b>CODE</b>	FNA03S1U22V1	<b>LEVEL</b>	3	<b>CREDIT</b>	

<b>ELEMENTS OF COMPETENCIES</b>	<b>PERFORMANCE CRITERIA</b>
1. Provide information to the work group	<p>1.1 Relevant provisions of Occupational Health &amp; Safety (OHS) legislation, regulations and codes of practice are accurately and clearly explained to the work group.</p> <p>1.2 Information on the organisation’s Occupational Health &amp; Safety (OHS) policies, procedures and programs is provided in a readily accessible manner and is accurately and clearly explained to the work group.</p> <p>1.3 Information about identified hazards and the outcomes of risk assessment and risk control procedures is regularly provided and is accurately and clearly explained to the work group.</p>
2. Implement and monitor participative arrangements for the management of Occupational Health & Safety (OHS)	<p>2.1 Organisational procedures for consultation on Occupational Health &amp; Safety (OHS) issues are implemented and monitored to ensure that all members of the work group have the opportunity to contribute.</p> <p>2.2 Issues raised through consultation are dealt with and resolved promptly or referred to the appropriate personnel for resolution according to workplace procedures for issue resolution.</p>

*Competency Standard for Landscaping*

	2.3 The outcomes of consultation over Occupational Health & Safety (OHS) issues are made known promptly to the work group.
3. Implement and monitor the organisation's procedures for identifying hazards and assessing risks	3.1 Existing and potential hazards in the work area are identified and reported so that risk assessment and risk control procedures can be applied.
Implement and monitor the organisation's procedures for controlling risks	3.2 Work procedures to control risks are implemented and adherence to them by the work group is monitored according to workplace procedures. 3.3 Existing risk control measures are monitored and results reported regularly according to workplace procedures. 3.4 Inadequacies in resource allocation for implementation of risk control measures are identified and reported to designated personnel.
4. Implement and monitor the organisation's procedures for providing Occupational Health & Safety (OHS) training	5.1 Occupational Health & Safety (OHS) training needs are identified accurately, specifying gaps between Occupational Health & Safety (OHS) competencies required and those held by work group members. 5.2 Arrangements are made for fulfilling identified Occupational Health & Safety (OHS) training needs in both on and off-the-job training programs in consultation with relevant parties.
5. Implement and monitor the organisation's procedure for maintaining Occupational Health & Safety (OHS) records	6.1 Occupational Health & Safety (OHS) records for the work area are accurately and legibly completed according to workplace requirements for Occupational Health & Safety (OHS) records and legal requirements for the maintenance of records of occupational injury and disease. 6.2 Aggregate information from the area's Occupational Health & Safety (OHS) records is used to identify hazards and monitor risk control procedures within the work area according to organisational procedures and within the scope of responsibilities and competencies.

Range statement

- Occupational Health & Safety (OHS) legislation may include general duty of care; requirements for the

### *Competency Standard for Landscaping*

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maintenance and confidentiality of records of occupational injury and disease; provision of information

and training; regulations and codes of practice relating to hazards present in work area; health and safety representatives and occupational health and safety committees; issue resolution.

- Hazardous events may include accidents, fires and emergencies such as chemical spills or bomb scares.

Procedures for dealing with them may include evacuation, chemical containment and first aid procedures.

- Workplace procedures for Occupational Health & Safety (OHS) may include inspection; housekeeping; consultation processes, either general or specific to Occupational Health & Safety (OHS), training and assessment; specific hazard policies and procedures; Occupational Health & Safety (OHS) information; Occupational Health & Safety (OHS) record keeping; maintenance of plant

and equipment; purchasing of supplies and equipment; counselling/disciplinary processes.

Tools, equipment and materials required may include:

- Relevant procedure manuals

#### *Assessment guide*

##### *Form of assessment*

The assessor may use the following assessment methods to objectively assess the candidate:

- Observation
- Questioning
- Practical demonstration
- Any written or oral examinations may include questions related to workplace emergencies such as fire and other dangerous situations and render first aid in the workplace.

##### *Assessment context*

- Assessment of this unit must be completed on the job or in a simulated work environment which reflects a range of safe working practices. The assessment environment should not disadvantage the candidate.
- Competency needs to be holistic and must be demonstrated in a suitable horticulture workplace condition.

## UNDERPINNING KNOWLEDGE AND SKILLS

<b>Underpinning Knowledge</b>	<b>Underpinning Skills</b>
A basic working knowledge of <ul style="list-style-type: none"><li>• applicable Occupational Health &amp; Safety (OHS) legislation, regulations and Codes of Practice</li><li>• the hierarchy of control</li><li>• risk assessment and control</li></ul>	An ability to <ul style="list-style-type: none"><li>• provide information to the work group</li><li>• implement and monitor participative arrangements for the management of Occupational Health &amp; Safety (OHS)</li></ul>

*Competency Standard for Landscaping*

<ul style="list-style-type: none"><li>• Occupational Health &amp; Safety (OHS) record keeping</li></ul>	<ul style="list-style-type: none"><li>• implement and monitor the organisation's procedures for identifying hazards and assessing risks</li><li>• implement and monitor the organisation's procedures for controlling risks</li><li>• implement and monitor the organisation's procedures for providing Occupational Health &amp; Safety (OHS) training</li><li>• implement and monitor the organisation's procedures for maintaining Occupational Health &amp; Safety (OHS) records</li></ul>
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