

Technical and Vocational Education and Training (TVET) Council



**Occupational Standards
of Competence**

**Horticulture Turf
Management**

Level 2

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Qualification Overview

NVQB

in

Horticulture Turf Management

Level 2

NVQB in Horticulture Turf Management Level 2

Qualification Overview

The NVQB in Horticulture Turf Management is aimed at persons currently working within horticulture.

Candidates at this level must have an understanding of different types of grass surfaces and turf and how to establish, monitor and maintain them. They must also be able to prepare turf for intended play, operate and maintain irrigation and drainage systems and operate a tractor with attachments as part of routine work tasks.

Like all NVQs this qualification is competence based. This means that it is linked to the candidate's ability to competently perform a range of tasks connected with their work. Candidates must plan a programme of development and assessment with their assessor and compile a portfolio of evidence to prove that they are competent in their work role.

Who is this qualification for?

The qualification is designed for candidates working within horticulture as a skilled worker with limited autonomy for tasks and reporting directly to a supervisor. The candidate should have sound skills and knowledge in horticulture turf management and be able to contribute to discussions and decision-making processes; however, the final authority rests with the supervisor and management team of the worker. The qualification may also assist persons who are seeking entry into the horticulture and turf management area. Other skills such as team work and communication can be used in a variety of other job roles and functions.

Jobs within the occupational area:

The qualification may be used in jobs such as:

- Landscaper
- Groundsman
- Golf course worker
- Sports turf worker
- Recreational area worker e.g. parks, school grounds.

A08202 APPROVED - NATIONAL VOCATIONAL QUALIFICATION STRUCTURE

HORTICULTURE TURF MANAGEMENT – LEVEL 2

To achieve a full award, candidates must complete **all** ten (10) mandatory units.

<u>Mandatory Units (All must be completed)</u>	<u>CODES</u>
1. Create and maintain effective working relationships	U00106
1.1 Gain the trust and support of colleagues and team members	
1.2 Gain the trust and support of one's immediate manager	
2. Maintain safe and effective working practices	U92502
2.1 Maintain the safety of self and others in the workplace	
2.2 Maintain working relationships with others	
2.3 Maintain and develop personal performance	
3. Implement an infestation control and treatment programme	UA17102
3.1 Identify infestation	
3.2 Confirm control strategies	
3.3 Implement control strategies	
3.4 Monitor and evaluate control strategies	
3.5 Terminate control strategies	
4. Establish turf	UA17202
4.1 Collect samples for testing	
4.2 Prepare site	
4.3 Plant turf	
5. Monitor and maintain turf	UA17302
5.1 Prepare for monitoring and maintenance activities	
5.2 Collect samples for testing	
5.3 Conduct monitoring activities	
5.4 Maintain turf	
6. Prepare turf surface for play	UA17402
6.1 Prepare turf surface for play	
6.2 Prepare equipment for use	
6.3 Prepare playing surface	
6.4 Carry out final preparation of playing surface	

Mandatory Units (All must be completed)

CODES

7. Operate and maintain irrigation systems

UA17502

- 7.1 Perform start up checks
- 7.2 Operate irrigation systems
- 7.3 Maintain irrigation systems

8. Maintain drainage systems

UA17602

- 8.1 Confirm maintenance requirements
- 8.2 Maintain drainage systems
- 8.3 Record and report maintenance activities

9. Operate tractor with attachments

UA17702

- 9.1 Check tractor and attachments before use
- 9.2 Check and confirm the work area or site to be maintained
- 9.3 Operate tractor and attachments
- 9.4 Shut down tractor and attachments

10. Use measurements and calculations in turf management activities

UA17802

- 10.1 Perform calculations
- 10.2 Measure and perform calculations
- 10.3 Use measurements and calculations

U00106

Create and maintain effective working relationships

Unit Descriptor:

This unit describes the competence required to create and maintain effective relationships. It describes the essential abilities of communicating effectively; managing time; problem solving; developing new skills to improve performance; operating within organisational procedures and meeting legal requirements.

ELEMENT**PERFORMANCE CRITERIA**

To be competent you must achieve the following:

- | | |
|---|--|
| <p>1. Gain the trust and support of colleagues and team members</p> | <p>1.1 Communicate with colleagues and team members at appropriate times about proposed activities in a manner which encourages open and frank discussion.</p> <p>1.2 Inform colleagues and teams sufficiently about organisational plans and activities.</p> <p>1.3 Confirm that commitments made to colleagues and team members are realistic and honoured.</p> <p>1.4 Treat colleagues and team members in a manner that shows respect for individuals and the need for confidentiality.</p> <p>1.5 Support colleagues and team members sufficiently to achieve work objectives.</p> <p>1.6 Discuss the evaluations of output and behavior with colleagues and team members promptly and effectively.</p> <p>1.7 Deal with unexpected situations effectively and inform the appropriate persons where necessary.</p> <p>1.8 Carry out work in an organised and efficient manner in accordance with organisational procedures.</p> |
|---|--|

2. Gain the trust and support of one's immediate manager
 - 2.1 Confirm that the immediate manager receives timely and accurate reports on activities, issues, progress, results and achievement.
 - 2.2 Confirm that the immediate manager receives clear, accurate and timely information about emerging threats and opportunities.
 - 2.3 Consult the immediate manager at appropriate times about organisational policies and ways of working.
 - 2.4 Confirm that proposals for action are realistic, clear and presented at an appropriate time.
 - 2.5 Make constructive efforts, where there are disagreements, to resolve them with the immediate manager.
 - 2.6 Deal with unexpected situations effectively and inform the appropriate persons where necessary.
 - 2.7 Carry out work in an organised and efficient manner in accordance with organisational procedures.

RANGE STATEMENT

All range statements must be assessed:

1. Colleagues:

- persons working at a lower level
- persons working at a higher level
- persons working at the same level

2. Team members:

- persons with whom the individual works to fulfill line responsibilities
- persons with whom the individual works to fulfill functional responsibilities

3. Immediate manager:

- persons to whom the individual reports
- organisation or authority to which the person reports

4. Proposals:

- oral
- written

5. Disagreements:

- actual
- potential

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. Why gaining the trust and support of colleagues and team members are important for effective performance.
2. How to encourage good working relationships and a feeling that colleagues and team members are respected.
3. Why gaining the trust and support of one's immediate manager is important to effective performance.
4. What types of emerging threats and opportunities the manager needs to be informed about and the degree of urgency attached to these.
5. Why commitments to colleagues need to be realistic and why they should be honoured.
6. What types of support colleagues and team members may require to achieve their objectives and how to respond effectively to these needs.
7. How to select appropriate times, methods and styles of consultation according to a range of issues and contexts.
8. What range of issues about which colleagues and team members need to be informed.
9. What range of communication methods is available and how to select methods appropriate to a range of issues and contexts.
10. What types of information concerning colleagues and team members need to be treated confidentially and what procedures need to be followed to achieve this.
11. How to provide feedback in a way which will lead to a constructive outcome.
12. What types of disagreements may occur with the immediate manager and what are the methods of handling these in an appropriate manner.
13. Why the immediate manager needs to be kept informed of activities, progress, results and achievements.
14. How to develop and present proposals in a way which is realistic, clear and likely to influence the immediate manager's decision-making positively.
15. What range of communication methods can be used to keep the immediate manager informed and how to select an appropriate method according to the range of issues and contexts.
16. What types of organisational policies and way of working the manager needs to be informed about and what are the appropriate methods of doing so.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

Candidates must prove that they can carry out all the elements, meeting **all** of the performance criteria, range and underpinning knowledge on more than one occasion. This evidence must come from a real working environment.

(2) Methods of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic.

Evidence may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Written evidence
- Witness testimony
- Professional discussion

Questioning techniques should not require language, literacy or numeracy skills beyond those required in this unit of competency.

(3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

Simulation **must not** be used, except in exceptional circumstances where natural work evidence is unlikely to occur.

U92502

Maintain safe and effective working practices

Unit Descriptor:

This unit describes the knowledge, skills and attitudes required to function within health and safety standards. Candidates are required to demonstrate that they are able to work effectively and efficiently with colleagues, supervisors and customers. It also highlights the need for individuals to take responsibility for self-development in the workplace.

ELEMENT**PERFORMANCE CRITERIA**

To be competent you must achieve the following:

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| 1. Maintain the safety of self and others in the workplace | 1.1 Work according to training and instructions received to avoid risk to self and others. |
| | 1.2 Wear the appropriate personal protective equipment according to organisational procedures. |
| | 1.3 Use approved methods and handling equipment when moving and lifting items. |
| | 1.4 Use appropriate equipment and materials safely and correctly according to organisational requirements and manufacturer's instructions. |
| | 1.5 Return equipment and materials to designated storage when not in use. |
| | 1.6 Keep the immediate work area tidy and free from hazards. |
| | 1.7 Dispose of waste safely and correctly in a designated area, in accordance with organisational procedures, and environmental and industry regulations. |
| | 1.8 Perform work in a manner which minimises environmental damage and contributes to the improvement of environmental work practices. |

- 1.9 Report accidents, incidents or problems to appropriate persons promptly and take immediate action to reduce further danger.
 - 1.10 Carry out work in an organised and efficient manner in accordance with specified procedures.
- 2. Maintain working relationships with others
 - 2.1 Maintain appropriate and effective working relationships with **others**.
 - 2.2 Carry out activities requiring cooperation with **others** in accordance with required procedures.
 - 2.3 Handle disagreements effectively and in accordance with organisational procedures.
 - 2.4 Communicate clearly and in a manner which promotes effective working relationships.
- 3. Maintain and develop personal performance
 - 3.1 Take responsibility for tasks and activities in accordance with organisational requirements, either alone as part of a team.
 - 3.2 Seek advice from the appropriate person if clarification is required concerning specific tasks.
 - 3.3 Review **personal performance** and **development** with the appropriate person at suitable times.

RANGE STATEMENT

All range statement items must be assessed:

1. Personal protective equipment:

- Ear protection
- gloves
- footwear
- overalls/coveralls
- helmets/hats
- eye protection

2. Equipment:

- manual
- electronic

3. Waste:

- solid
- liquids
- hazardous/toxic

4. Others:

- colleagues
- supervisors
- customers

5. Personal performance and development:

- productivity
- quality of work

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. How to carry out work activities avoiding risk to self and others.
2. What are the basic requirements of the health and safety and other legislation and regulations that apply to the workplace.
3. What are the organisational requirements for the use of personal protective equipment.
4. How to select and use the correct personal protective equipment.
5. What is the relevant, up-to-date information on health, safety and security and how it applies in the workplace.
6. Why it is important to be alert to health, safety and security hazards.
7. What are the common health, safety and security hazards that affect persons working in this role and how these should be identified.
8. Why it is important to warn others about hazards and how to do so until the hazard is dealt with.
9. Why it is important to use safe lifting techniques.
10. What are the correct and safe ways to use equipment and materials required for the work.
11. What are safe methods and areas for the storage of equipment and materials.
12. What are the organisational and legislative requirements for disposing of waste safely.
13. What health and safety records may need to be kept and how to do so.
13. How the conditions under which you work can affect the efficiency and effectiveness of yourself and those around you.
14. What methods should be used to promote good environmental practice and to minimise environmental damage while working.
15. What procedures should be used for different types of emergencies in the industry.
16. Why it is important to develop and maintain effective working relationships and how to do so.
17. What procedures should be used in dealing with workplace disagreements.
18. Why it is important to communicate effectively and what are the available methods to do so.
19. How to maintain security in the work area.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

Candidates must prove that they can carry out all the elements, meeting **all** of the performance criteria, range and underpinning knowledge on more than one occasion. This evidence must come from a real working environment.

(2) Methods of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic.

Evidence may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Written evidence
- Witness testimony
- Professional discussion

Questioning techniques should not require language, literacy or numeracy skills beyond those required in this unit of competency.

(3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

Simulation may be used to cover **PCs 1.9 and 2.3**.

UA17102

Implement an infestation control and treatment programme

Unit Descriptor:

This unit deals with the knowledge, skills and attitudes required to deal with the management of pests, weeds and other types of infestation. It includes procedures for maintaining turf and grass in places such as recreational areas, sporting facilities, public parks, commercial properties, private residences and roadway verges.

ELEMENT**PERFORMANCE CRITERIA**

To be competent you must achieve the following:

- | | | | |
|----|----------------------------|-----|--|
| 1. | Identify infestation | 1.1 | Identify and assess the type of infestation and level according to established industry procedures and organisational policies and guidelines. |
| | | 1.2 | Record and report the extent and type of infestation according to organisational procedures. |
| | | 1.3 | Assess the damage caused by the infestation and report and record according to organisational procedures. |
| 2. | Confirm control strategies | 2.1 | Review approved organisational control strategies and confirm that these are in keeping with health, safety and environmental regulations. |
| | | 2.2 | Select suitable control strategies for the type of infestation according to health, safety and environmental regulations, industry best practices and organisational procedures. |
| | | 2.3 | Assess and reduce the risks involved in the implementation of selected control strategies in accordance with international regulations and organisational procedures. |
| | | 2.4 | Select, use and maintain safety and personal protective equipment (PPE) suited to the selected control strategies . |

3. Implement control strategies
 - 3.1 Select and use tools, equipment and materials appropriate to the selected **control strategies** according to manufacturer's instructions and organisational procedures.
 - 3.2 Select and handle chemicals appropriate to the **control strategies** according manufacturer's instructions, occupational health and safety and environmental regulations.
 - 3.3 Implement **control strategies** according to approved organisational procedures and relevant industry guidelines and regulations.
 - 3.4 Maintain a clean and safe work area throughout the work activity according to occupational health and safety and organisational procedures.
 - 3.5 Dispose of used materials, chemicals and residue according to the occupational health and safety, environmental regulations, manufacturer's instructions and organisational procedures.
 - 3.6 Clean used tools and equipment and store and maintain them according to manufacturer's instructions and organisational policies.
 - 3.7 Store unused chemicals according to manufacturer's instructions and organisational procedures.
 - 3.8 Record implemented **control strategies** and report according to industry practices and organisational policies.
4. Monitor and evaluate control strategies
 - 4.1 Check and monitor implemented **control strategies** according to the specified schedule and record findings according to organisational requirements.
 - 4.2 Assess the effectiveness of implemented **control strategies** on the identified infestation according to best industry practices, occupational health and safety, environmental and organisational procedures.

- 4.3 Report the results of the assessment of the effectiveness of the implemented control strategies according to organisational procedures.
 - 4.4 Implement additional **control strategies** as instructed according to organisational policies and procedures.
- 5. Terminate control strategies
 - 5.1 Check and confirm that infestation has been eradicated as detailed by the organisational procedures.
 - 5.2 Check and confirm that the work area is left clean and safe as specified in workplace policies and procedures.
 - 5.3 Record the results of implemented **control strategies** and report according to organisational procedures.

RANGE STATEMENT

All range statements must be assessed:

1. Type of infestation:

- pest
- weed
- disease

2. Control strategies:

- chemical
- physical
- cultural

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. How to identify the types of infestation and their causes.
2. Why it is important to know the type of infestation and level of the infestation.
3. How to assess the type and level of infestation.
4. How to assess damage caused by infestation.
5. What are the control strategies used to control infestation.
6. How to select the control strategies to suit the type of infestation.
7. How to identify, select, use and maintain safety equipment appropriate to the control strategies to be implemented.
8. How to identify, select, use and maintain personal protective equipment (PPE) appropriate to the specific control strategies.
9. What are the occupational health and safety and environmental regulations that should be considered according to the control strategies.
10. How to implement the control strategies according to the identified type of infestation.
11. Why it is important to monitor the effectiveness of the implemented control strategies and how to do so.
12. What are the handling procedures for different types of chemicals.
13. How to dispose of used chemicals and materials safely adhering to occupational health and safety and environmental regulations.
14. What are the organisational procedures for the reporting and recording of evidence.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

Candidates have to prove that they can carry out **all** of the elements, meeting **all** the performance criteria, range and underpinning knowledge **on more than one occasion**. This evidence must come from a real working environment including:

- PC 3.3 before and after photographs
- PC 3.8 before and after photographs (with significant time lapse period)
- PC 4.2 before and after photographs and witness testimony

(2) Method of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic.

Evidence may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Written evidence
- Witness testimony
- Professional discussion

Questioning techniques should not require language, literacy or numeracy skills beyond those required in this unit of competency.

(3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

Simulation **should not be used**, except in exceptional circumstances where natural work evidence is unlikely to occur.

UA17202**Establish turf**

Unit Descriptor:

This units deals with the knowledge, skills and attitudes required to establish turf in sporting, public recreational open space and domestic situations according to local, regional and international protocol and regulations.

ELEMENT**PERFORMANCE CRITERIA**

To be competent you must achieve the following:

- | | |
|--------------------------------|--|
| 1. Collect samples for testing | <ul style="list-style-type: none"> 1.1 Prepare tools and materials for collecting samples according to established guidelines and standard operating procedures. 1.2 Identify areas from which samples are to be collected according to organisational procedures and work specifications. 1.3 Identify occupational health and safety hazards, assess risks, implement controls and report according to organisational procedures and industry best practices. 1.4 Select, use and maintain suitable safety and sampling equipment appropriate to the task. 1.5 Take samples randomly from the designated area according to identified sampling techniques. 1.6 Prepare, label and record samples according to organisational procedures and prepare for on site or off-site analysis. |
| 2. Prepare site | <ul style="list-style-type: none"> 2.1 Select tools appropriate to preparing the site in keeping with the established procedures. |

- 2.2 Remove existing vegetation using **appropriate methods** as necessary and according to organisational and environmental procedures.
- 2.3 Prepare surfaces to receive turf in accordance with the intended use.
- 3. Plant turf
 - 3.1 Confirm that the placement and **planting method** of the plant material are consistent with the turf and media type.
 - 3.2 Select **tools, equipment** and machinery appropriate to the task being undertaken and organisational guidelines and employ safe work practices.
 - 3.3 Plant turf according to type and intended use.
 - 3.4 Maintain newly established turf according to schedule and instructions.

RANGE STATEMENT

All range statements must be assessed:

1. Tools and equipment:

- manual
- mechanical

2. Samples:

- plant
- soil

2. Appropriate methods

- manual
- mechanical

3. Planting methods:

- sowing
- sprigging/plugging
- sodding

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. What samples are to be collected for analysis and the methods of analysis to be used.
2. Which tools and equipment are needed for the preparation and planting of turf.
3. How to take and label samples for analysis.
4. How to identify occupational health and safety hazards and assess risks and what controls should be implemented.
5. What are the methods and procedures for removing existing turf.
6. How to prepare the surface to receive the turf according to the intended use.
7. What are the methods of maintaining newly planted turf.
8. What are the organisational reporting policies and procedures and process for documentation of recommendations.
9. What are the different planting methods.
10. What are the different types of turf and growth characteristics.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

Candidates have to prove that they can carry out **all** of the elements, meeting **all** the performance criteria, range and underpinning knowledge **on more than one occasion**. This evidence must come from a real working environment.

(2) Method of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic.

Evidence may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Written evidence
- Witness testimony
- Professional discussion

Questioning techniques should not require language, literacy or numeracy skills beyond those required in this unit of competency.

(3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

Simulation **should not be used**, except in exceptional circumstances where natural work evidence is unlikely to occur.

UA17302**Monitor and maintain turf**

Unit Descriptor:

This units deals with the knowledge, skills and attitudes required to monitor and maintain turf in sporting, public recreational open space and domestic situations according to local, regional and international protocol and regulations. It also deals with monitoring the health and condition of existing and new turf and the maintenance activities that should be applied to each type of turf.

ELEMENT**PERFORMANCE CRITERIA**

To be competent you must achieve the following:

- | | |
|--|---|
| 1. Prepare for monitoring and maintenance activities | 1.1 Identify the nature, type and regularity of monitoring and maintenance activities according to best industry practices and organisational procedures. |
| | 1.2 Select, use and maintain personal protective and safety equipment appropriate to the identified task. |
| | 1.3 Identify occupational health and safety hazards, assess risks and implement controls and report according to organisational procedures. |
| | 1.4 Carry out pre-operational and safety checks on required tools, equipment and materials for monitoring and maintenance activities. |
| 2. Collect samples for testing | 2.1 Take samples randomly from the designated area according to identified sampling techniques. |
| | 2.2 Label and record samples according to organisational procedures. |
| | 2.3 Prepare samples for type of analysis to be conducted. |
| 3. Conduct monitoring activities | 3.1 Confirm monitoring activities and obtain approval in accordance with organisational procedures. |

- 3.2 Conduct **monitoring activities** according to established procedures and organisational instructions.
 - 3.3 Report the results and outcomes from **monitoring activities** and document according to organisational procedures.
- 4 Maintain turf
- 4.1 Identify and confirm the type and level of maintenance required for turf according to industry best practices and organisational procedures.
 - 4.2 Obtain approval for required maintenance for turf according to organisational procedures.
 - 4.3 Carry out **maintenance activities** according to the required type and level of turf maintenance.
 - 4.4 Examine turf, evaluate the effectiveness of maintenance procedures and report findings to relevant persons.
 - 4.5 Conduct maintenance procedures until objectives are achieved.
 - 4.6 Clean, maintain and store tools, equipment and materials used in **maintenance activities** according to manufacturer's instructions and organisational procedures.

RANGE STATEMENT

All range statements must be assessed:

1. Samples:

- plant
- soil

2. Tools and equipment:

- manual
- mechanical

3. Monitoring activities:

- visual inspections
- physical

4. Maintenance activities:

- pest control
- irrigation
- aeration
- mowing
- fertilisation

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. What samples are to be collected for analysis and the methods of analysis to be used.
2. Which tools and equipment are needed for the respective monitoring and maintenance activities.
3. How to take and label samples for analysis.
4. What are the preparation methods of samples according to their testing regime.
5. How to identify occupational health and safety hazards, assess risks and what controls should be implemented.
6. What are the monitoring activities that must be carried out on existing and newly planted turf.
7. What are the methods of maintaining existing and newly planted turf.
8. What are the organisational reporting policies, procedures and process for documenting recommendations.
9. What are the various maintenance activities and how to conduct them effectively.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

Candidates have to prove that they can carry out **all** of the elements, meeting **all** the performance criteria, range and underpinning knowledge **on more than one occasion**. This evidence must come from a real working environment.

(2) Method of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic.

Evidence may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Written evidence
- Witness testimony
- Professional discussion

Questioning techniques should not require language, literacy or numeracy skills beyond those required in this unit of competency.

(3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

Simulation **should not be used**, except in exceptional circumstances where natural work evidence is unlikely to occur.

UA17402**Prepare turf surfaces for play**

Unit Descriptor:

This unit deals with the knowledge, skills and attitudes required to prepare turf surfaces for play according to local, regional and international protocols and organisational specifications. The turf surfaces are prepared for the intended use and type of play.

ELEMENT**PERFORMANCE CRITERIA**

To be competent you must achieve the following:

- | | |
|----------------------------------|---|
| 1. Prepare turf surface for play | <ul style="list-style-type: none"> 1.1 Locate the amenities servicing the turf surface using operational plans, relevant documents and instructions. 1.2 Identify permanent obstacles and occupational health and safety hazards, assess risks and report to the appropriate persons. 1.3 Re-locate movable obstacles prior to commencement, replace after preparation and dispose of debris in an environmentally safe manner according to organisational procedures. 1.4 Report abnormal conditions or changes in the appearance of the site to appropriate persons according to organisational procedures. |
| 2. Prepare equipment for use | <ul style="list-style-type: none"> 2.1 Select and correctly use tools, equipment and machinery and suitable personal protective equipment appropriate to the task being undertaken according to manufacturer and organisational requirements. 2.2 Complete pre-operational checks of tools, equipment and machinery according to manufacturer's specifications and organisational requirements. 2.3 Set up equipment and machinery using manufacturer's guidelines and adjust according to enterprise requirement. 2.4 Select and erect suitable safety equipment at the work site during activities. |

3. Prepare playing surface
 - 3.1 Assess grass and turf surface against established specifications and guidelines and report abnormal conditions and any changes in appearance following organisational procedures.
 - 3.2 Confirm the type of surface and obtain approval of the **method of preparation** to be used according to organisational procedures.
 - 3.3 Select and use suitable personal protective and safety equipment appropriate for preparation activities.
 - 3.4 Check that equipment, machinery and attachments are functioning according to manufacturer's instructions while preparing the playing surface.

4. Carry out final preparation of playing surface
 - 4.1 Select tools and equipment appropriate for the task and intended use of playing surface.
 - 4.2 Mark out turf surface for playing according to the intended use in keeping with industry standards and organisational procedures.
 - 4.3 Place markers and fixtures where necessary according to the intended use, industry standards and organisational specifications.
 - 4.4 Work safely according to occupational health and safety regulations and keep the work area clean according to organisational instructions and best industry practices.
 - 4.5 Clean, maintain and store tools and equipment used according to manufacturer's instructions and organisational procedures.
 - 4.6 Report relevant information and outcomes according to organisational procedures.

RANGE STATEMENT

All range statements must be assessed:

1. Appropriate persons:

- supervisor
- manager
- other colleagues

2. Method of preparation:

- mowing
- rolling
- marking

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. What are the methods used for preparing turf surfaces for play.
2. What are the different types of surfaces and which methods to use to prepare each respective surface.
3. How to identify occupational health and safety hazards and assess their associated risks.
4. Which control measures should be implemented to deal with identified hazards and risks.
5. How to select, correctly use and maintain personal protective equipment appropriate for the tasks according to manufacturer's recommendations and organisational requirements.
6. What safety equipment and signage are needed for the work area and activities and how they are used.
7. Which pre-operational checks are carried out on tools, equipment and machinery and how these are conducted.
8. How to monitor preparation activities.
9. How to isolate and protect areas of turf that are not undergoing treatment.
10. What are the methods used to mark out turf surfaces according to the intended use.
11. What are the workplace reporting procedures.
12. What are the cleaning, maintenance and storage procedures for tools and equipment.
13. What are the relevant occupational health, safety and environmental regulations and how to ensure compliance with them.
14. How to work safely and keep the work area clean.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

Candidates have to prove that they can carry out **all** of the elements, meeting **all** the performance criteria, range and underpinning knowledge **on more than one occasion**. This evidence must come from a real working environment.

(2) Method of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic.

Evidence may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Written evidence
- Witness testimony
- Professional discussion

Questioning techniques should not require language, literacy or numeracy skills beyond those required in this unit of competency.

(3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

Simulation **should not be used**, except in exceptional circumstances where natural work evidence is unlikely to occur.

UA17502**Operate and maintain irrigation systems**

Unit Descriptor:

This unit deals with the knowledge, skills and attitudes required to operate and maintain irrigation systems including carrying out start-up checks and operating and maintaining the equipment safely and effectively. These irrigation systems are used to irrigate turf and grass surfaces of all types to ensure the best health and condition of the turf and grassed surfaces.

ELEMENT**PERFORMANCE CRITERIA**

To be competent you must achieve the following:

- | | |
|--------------------------------|--|
| 1. Perform start up checks | <ul style="list-style-type: none"> 1.1 Identify and use safety and personal protective equipment appropriate for working with irrigation systems according to manufacturer's instructions and organisational procedures. 1.2 Select and confirm that the required tools, equipment and materials for the work task are available and operational in accordance with manufacturer's procedures. 1.3 Repair and correct malfunctions within the limits of your authority and report to the relevant persons according to organisational procedures. |
| 2. Operate irrigation systems | <ul style="list-style-type: none"> 2.1 Carry out the start-up sequence in accordance with operations manual and manufacturer's instructions. 2.2 Irrigate and check the surface to ensure water is evenly distributed to the targeted areas. 2.3 Confirm that the surface is irrigated for the allocated time. 2.4 Monitor the shut-down of the irrigation system according to the organisational procedures. |
| 3. Maintain irrigation systems | <ul style="list-style-type: none"> 3.1 Clean and maintain irrigation systems and components according to manufacturer's service schedule and organisational procedures. |

- 3.2 Handle irrigation components according to manufacturer's recommendations.
- 3.3 Document cleaning and maintenance activities as specified by organisational procedures.

RANGE STATEMENT

All range statements must be assessed:

No Range

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. What safety and personal protective equipment is needed for working with irrigations systems.
2. How to identify and correctly use tools, equipment and materials appropriate to the irrigation work task.
3. What are the start-up checks for irrigation systems and how they are conducted.
4. How to identify malfunctions and problems such as leaks and blockage and how to report and correct them within your limits of own authority.
5. What are the workplace procedures for recording and reporting malfunctions and problems.
6. How to operate irrigation systems safely.
7. What are the different types of irrigation systems and their application.
8. What factors should be monitored to ensure that irrigation was effective.
9. Why it is important to monitor the irrigation process.
10. What are the cleaning and maintenance procedures for irrigation systems.
11. What are the handling procedures for irrigation systems.
12. What are the procedures for sorting and handling used and unused materials safely.
13. What are occupational health and safety and environmental regulations and procedures for working with irrigation systems and associated work tasks.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

Candidates have to prove that they can carry out **all** of the elements, meeting **all** the performance criteria, range and underpinning knowledge **on more than one occasion**. This evidence must come from a real working environment.

(2) Method of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic.

Evidence may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Written evidence
- Witness testimony
- Professional discussion

Questioning techniques should not require language, literacy or numeracy skills beyond those required in this unit of competency.

(3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

Simulation **should not be used**, except in exceptional circumstances where natural work evidence is unlikely to occur.

UA17602**Maintain drainage systems**

Unit Descriptor:

This unit deals with the knowledge, skills and attitudes required to maintain drainage systems for turf. Maintenance activities include the routine repair and replacement of components within the limits of your authority and under supervision of authorised persons.

ELEMENT**PERFORMANCE CRITERIA**

To be competent you must achieve the following:

- | | |
|-------------------------------------|--|
| 1. Confirm maintenance requirements | 1.1 Identify and confirm the type of drainage system and components according to job specifications. |
| | 1.2 Inspect the drainage system and confirm maintenance requirements according to approved organisational procedures. |
| | 1.3 Select tools, equipment and materials according to the type of drainage system and maintenance requirements. |
| | 1.4 Identify and use safety and personal protective equipment correctly and appropriate to the task according to manufacturer's recommendations and organisational procedures. |
| | 1.5 Perform pre-operational and safety checks on tools, equipment and materials according to manufacturer's recommendations and organisational requirements. |
| | 1.6 Refer identified problems to relevant persons and assist with implementing corrective measures to resolve them according to organisational procedures. |
| | 1.7 Maintain a clean and safe work area throughout installation processes in accordance with organisational health and safety and organisational standards. |
| | 1.8 Remove and dispose of waste materials safely according to environmental regulations and organisational procedures. |

2. Maintain drainage systems
 - 2.1 Inspect drainage systems and components for **faults** and other specified problems and record observations according to organisational procedures.
 - 2.2 Inspect landscape, plant area surrounding drainage systems and components and record damages and problems according to organisational requirements.
 - 2.3 Implement measures to address identified malfunctions, problems and damage to drainage systems, components and surrounding landscape and planted areas.
 - 2.4 Flush and clean drainage system and repair or replace components as necessary according to manufacturers' guidelines and organisational procedures.
 - 2.5 Perform maintenance activities and service equipment according to established maintenance programme and operations manual.
 - 2.6 Leave drainage system and components clean and ready for the next operation according to organisational procedures.
 - 2.7 Handle and store used tools, equipment and materials safely according to organisational and health and safety requirements and manufacturer's recommendations to avoid damage to self, others and the environment.
3. Record and report maintenance activities
 - 3.1 Record and report damage and problems encountered according to the type, location on the site area or section of affected system or components using established procedures.
 - 3.2 Contribute to implementing measures to control and mitigate damage and problems and monitor the drainage system continuously to ensure correct operation.
 - 3.3 Work safely in executing activities according to occupational safety and health and environmental regulations and organisational procedures.

RANGE STATEMENT

All range statements must be assessed:

1. Drainage:

- surface
- sub-surface

2. Faults:

- operational
- wear
- leaks
- blockages

3. Maintenance activities:

- new
- existing

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. How to prepare a site or area for the installation of a drainage system.
2. What are the different types of drainage systems and their respective characteristics and applications.
3. What are the required tools, equipment and materials for installing drainage systems.
4. What safety equipment and personal protective equipment are required for working with drainage systems.
5. What occupational health, safety and environmental regulations must be adhered to for the installation and maintenance of drainage systems.
6. How to identify the occupational health and safety hazards and assess the risks associated with the installation and maintenance of drainage systems.
7. What are the control measures and how these are implemented when dealing with risks associated with occupational safety and health hazards.
8. What tools, equipment and materials are required to work with different drainage systems.
9. Which maintenance procedures to follow and why it is important to follow the advised maintenance schedule.
10. Why it is important to clean and flush the drainage system.
11. How to inspect the drainage system and components.
12. How to confirm that the site or area is ready for the installation of drainage systems.
13. What are the organisational procedures and manufacturer's recommendations for handling and storage of tools, equipment and materials and why it is important to ensure minimal damage in these activities.
14. How to implement control measures to address damage and problems with the drainage systems and components.

EVIDENCE GUIDE

For assessment purposes:

1) Critical Aspects of Evidence

Candidates have to prove that they can carry out **all** of the elements, meeting **all** the performance criteria, range and underpinning knowledge **on more than one occasion**. This evidence must come from a real working environment.

(2) Method of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic.

Evidence may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Written evidence
- Witness testimony
- Professional discussion

Questioning techniques should not require language, literacy or numeracy skills beyond those required in this unit of competency.

(3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

Simulation **should not be used**, except in exceptional circumstances where natural work evidence is unlikely to occur.

UA17702**Operate a tractor with attachments**

Unit Descriptor:

This unit deals with the knowledge, skills and attitudes required to operate a tractor with attachments to maintain turf in various conditions while adhering to health and safety requirements at all times. It also deals with checking and confirming the work area to be maintained using a tractor with attachments.

ELEMENT**PERFORMANCE CRITERIA**

To be competent you must achieve the following:

- | | |
|---|---|
| 1. Check tractor and attachments before use | <ul style="list-style-type: none"> 1.1 Select and use the correct personal protective equipment for the task according to organisational and health and safety requirements. 1.2 Carry out pre-operational checks and adjustments of tractor and compatible attachments in accordance with manufacturer's instructions and organisational procedures. 1.3 Report and document identified faults and malfunctions to appropriate persons according to organisational procedures. 1.4 Arrange and confirm repairs and replacements according to organisational requirements. 1.5 Check and confirm that attachments are suitable for the tractor and mount them according to manufacturer's recommendations and health and safety requirements. 1.6 Record and report pre-operational checks for equipment and obtain sign-off that the tractor and attachments are approved for use according to organisational procedures. |
| 2. Check and confirm work area or site to be maintained | <ul style="list-style-type: none"> 2.1 Inspect the work area or site to identify hazards and obstacles and take appropriate action within the limits of your authority according to organisational procedures. |

- 2.2 Refer actions outside of the limits of your authority to relevant persons according to organisational procedures.
 - 2.3 Confirm that work area or site is clear and safe for the start of operations according to organisational and occupational health and safety requirements.
 - 2.4 Erect safety signage and give clear signals to confirm that the work area or site is safe and ready for operations.
 - 2.5 Work safely in accordance with organisational occupational health and safety regulations and guidelines.
- 3. Operate tractor and attachments
 - 3.1 **Operate tractor** and its attachments safely, consistent with task requirements in accordance with manufacturer's specifications and organisational occupational health and safety standards.
 - 3.2 Modify and adjust operation of the tractor and its attachments to suit **various conditions** according to manufacturer's recommendations.
 - 3.3 Deal with hazards and obstacles encountered during operation in accordance with manufacturer's recommendations and organisational occupational safety and health procedures.
 - 3.4 Monitor the performance of the tractor and attachments and use the correct handling and operation procedures to maintain efficient performance.
- 4. Shut down tractor and attachments
 - 4.1 Confirm that the work task is completed according to specifications and obtain sign-off from authorised persons.
 - 4.2 Shut down tractor and remove attachments according to manufacturer's specifications and established health and safety standards.

- 4.3 Clean and maintain tractor and attachments safely according to manufacturer's recommendations and organisational requirements.
- 4.4 Leave tractor and attachments in a suitable condition for future use, according to manufacturer's recommendations and organisational requirements.

RANGE STATEMENT

All range statements must be assessed:

1. Attachments:

- loaders
- trailers
- mounted implements

2. Operate tractor:

- start-up tractor
- connect/disconnect attachments
- lower/raise height of equipment

3. Various conditions:

- type of turf
- terrain
- weather

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. What personal protective equipment to use when operating a tractor with attachments and what are the cleaning and maintenance procedures.
2. Which pre-operational and start-up checks are required for the tractor and attachments and how these are conducted.
3. How to identify faults and malfunctions with the tractor and attachments and how and to whom these should be reported.
4. Why it is important that the tractor and attachments are compatible.
5. What are the procedures for obtaining approval for use of equipment and signing off the completion of work tasks.
6. What are the relevant occupational health and safety and environmental regulations that must be recognised.
7. How to work safely and what safety signage should be erected in the work area.
8. How to operate the tractor and its attachments safely inclusive of pre-operational checks and shut down activities.
9. How to modify and adjust the tractor and attachments according to various conditions.
10. How to monitor the performance of the tractor.
11. How to clean the tractor and attachments.
12. How to inspect and identify hazards and obstacles in the workplace.
13. What actions can be taken within limits of your own authority to deal with identified hazards and risks.
14. When to refer situations to relevant persons for action.
15. How to leave the tractor and attachments ready for future use.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

Candidates have to prove that they can carry out **all** of the elements, meeting **all** the performance criteria, range and underpinning knowledge **on more than one occasion**. This evidence must come from a real working environment.

(2) Method of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic.

Evidence may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Written evidence
- Witness testimony
- Professional discussion

Questioning techniques should not require language, literacy or numeracy skills beyond those required in this unit of competency.

(3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

Simulation **should not be used**, except in exceptional circumstances where natural work evidence is unlikely to occur.

UA17802**Use measurements and calculations in turf management activities**

Unit Descriptor:

This unit deals with the knowledge, skills and attitudes required to perform measurements and calculations appropriate for work tasks in horticulture turf management. It deals with carrying out general measurements and calculations and using these to determine the required parameters for the work tasks.

ELEMENT**PERFORMANCE CRITERIA**

To be competent you must achieve the following:

- | | | | |
|----|---------------------------------|-----|--|
| 1. | Perform calculations | 1.1 | Follow and apply basic rules and principles of arithmetic to carry out calculations and other mathematical activities accordingly. |
| | | 1.2 | Perform basic calculations to determine lengths, volumes, ratios, angles and other factors as required according to organisational specifications. |
| | | 1.3 | Perform basic calculations using fractions, decimals and percentages in keeping with organisational instructions. |
| | | 1.4 | Check and confirm calculations in work task specifications and record and report any discrepancies according to organisational procedures. |
| 2. | Measure and record measurements | 2.1 | Identify and confirm the methods, equipment and instruments to be used according to organisational instructions. |
| | | 2.2 | Carry out pre-operational checks and calibration procedures before use of measuring equipment and instruments. |
| | | 2.3 | Measure using approved methods, equipment and instruments. |
| | | 2.4 | Record measurements and report to relevant persons in accordance with organisational requirements. |

- 3. Use measurements and calculations
 - 3.1 Confirm organisational documents and instructions to be used and identify required measurements and quantities for work tasks.
 - 3.2 Confirm that identified measurements and quantities are accurate according to organisational procedures.
 - 3.3 Estimate quantities of resources required to complete work tasks.
 - 3.4 Report and record according to organisational procedures.

RANGE STATEMENT

All range statements must be assessed:

No range.

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. What are the basic rules and principles of arithmetic.
2. How to apply the basic rules and principles of arithmetic to calculate lengths, volumes, ratios and percentages.
3. Which methods to use according to the measurements to be carried out.
4. Why it is important to perform pre-operational checks and calibrations prior to using measuring devices.
5. What are the recording and reporting procedures of the organisation.
6. How to confirm the calculations in the specifications and when to refer errors and incorrect figures to other relevant persons.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

Candidates have to prove that they can carry out **all** of the elements, meeting **all** the performance criteria, range and underpinning knowledge **on more than one occasion**. This evidence must come from a real working environment.

(2) Method of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic.

Evidence may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Written evidence
- Witness testimony
- Professional discussion

Questioning techniques should not require language, literacy or numeracy skills beyond those required in this unit of competency.

(3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

Simulation **should not be used**, except in exceptional circumstances where natural work evidence is unlikely to occur.

Assessment methods

The methods which can be used to determine competence in performance and underpinning knowledge.

Assessors

The Assessor's role is to determine whether evidence presented by a candidate for assessment within the programme meets the required standard of competence in the relevant unit or element. The Assessor needs to be competent to assess to national standards in the area under assessment.

Approved Centre

Organization/Centre approved by the TVET Council to offer full National Vocational Qualifications.

Case Studies

In situations where it is difficult for workplace assessment to take place, case studies can offer the candidate an opportunity to demonstrate potential competence.

A case study is a description of an actual or imaginary situation presented in some detail. The way the case study is presented will vary depending upon the qualification, but the most usual methods are written, taped or filmed.

The main advantage of a case study is the amount of evidence of underpinning knowledge they can generate and the specific nature of the evidence produced.

Competence

In the context of vocational qualifications, competence means: the ability to carry out prescribed activities to nationally pre-determined standards in an occupation. The definition embraces cognitive, practical and behavioural skills, underpinning knowledge and understanding and the ability to react appropriately in contingency situations.

Element

An element is a description of an activity which a person should be able to do. It is a description of an action, behaviour or outcome which a person should be able to demonstrate.

Explanation of NVQ Levels

NVQs cover five (5) levels of competence, from entry level staff at Level 1 through to senior management at Level 5.

Level 1 - Entry Level

Recognizes competence in a range of varied work activities performed in a variety of contexts. Most work activities are simple and routine. Collaboration with others through work groups or teams may often be a requirement. Substantial supervision is required especially during the early months evolving into more autonomy with time.

Level 2 - Skilled Occupations:

Recognizes competence in a broad range of diverse work activities performed in a variety of contexts. Some of these may be complex and non-routine and involve some responsibility and autonomy. Collaboration with others through work groups or teams and guidance of others may be required.

Level 3 - Technician and Supervisory Occupations:

Recognizes competence in a broad range of complex, technical or professional work activities performed in a wide variety of contexts, with a substantial degree of personal responsibility and autonomy. Responsibility for the work of others and the allocation of resources are often a requirement. The individual is capable of self-directed application, exhibits problem solving, planning, designing and supervisory capabilities.

Level 4 - Technical Specialist and Middle Management Occupations:

Recognizes competence involving the application of a range of fundamental principles and complex techniques across a wide and unpredictable variety of contexts. Requires very substantial personal autonomy and often significant responsibility for the work of others, the allocation of resources, as well as personal accountability for analysis, diagnosis, design, planning, execution and evaluation.

Level 5 - Chartered, Professional and Senior Management Occupations:

Recognizes the ability to exercise personal professional responsibility for the design, development or improvement of a product, process, system or service. Recognizes technical and management competencies at the highest level and includes those who have occupied positions of the highest responsibility and made outstanding contribution to the promotion and practice of their occupation.

External Verifier

The External Verifier is trained and appointed by the TVET Council and is competent to approve and ensure an approved Centre's quality of provision.

Internal Verifier

The Internal Verifier acts in a supporting role for Assessors to ensure consistent quality of assessment and competence. They need to be competent to assess to national standards in the area under assessment.

NVQ

National Vocational Qualifications (NVQs) are work-based qualifications that assess an individual's competence in a work situation and certify that the individual can perform the work role to the standards expected in employment.

NVQs are based on national occupational standards of competence drawn up by standards-setting bodies known as Industry Lead Bodies. The standards describe the level and breadth of performance that is expected of persons working in the industry or sector which the NVQ covers.

NVQ Coordinator

Within each approved Centre offering NVQs, there is a centre contact who has overall responsibility for the operation and administration of the NVQ system.

Observation

Observation of the candidate carrying out his/her job in the workplace is the assessment method recommended in the vast majority of units and elements. Observation of staff carrying out their duties is something that most supervisors and managers do every day.

Performance criteria

Performance criteria indicate what is required for the successful achievement of an element. They are descriptions of what you would expect to see in competent performance.

Product of Work

This could be items produced during the normal course of work, which can be used for evidence purposes such as reports, menus, promotional literature, training plans, etc.

Questioning

Questioning is one of the most appropriate ways to collect evidence to assess a candidate's underpinning knowledge and understanding.

Questioning can also be used to assess a candidate in those areas of work listed in the range which cannot be assessed by observation. Guidance on when this assessment method can be used is given in the assessment guidance of each individual element.

As an assessment method, questioning ensures you have all of the evidence about a candidate's performance. It also allows you to clarify situations.

Range statements

The range puts the element of competence into context. A range statement is a description of the range of situations to which an element and its performance criteria are intended to apply.

Range statements are prescriptive therefore each category must be assessed.

Role-plays

Role-plays are simulations where the candidate is asked to act out a situation in the way he/she considers “real” people would behave. By using role-play situations to assess a candidate you are able to collect evidence and make a judgment about how the candidate is most likely to perform. This may be necessary if the range specified includes a situation in which the candidate is unlikely to find himself/herself in the normal course of their work, or where the candidate needs to develop competence, before being judged competently, for example, in a disciplinary situation.

Simulations

Where possible, assessment should always be carried out by observing **natural performance** in the workplace. **Simulated performance**, however, can be used where specified to collect evidence about an aspect of the candidate’s work which occurs infrequently or is potentially hazardous; for example, dealing with fires.

By designing the simulated situation, briefing the candidate and observing his/her performance, you will be able to elicit evidence which will help you judge how a candidate is **most likely** to perform in real life.

Supplementary evidence

Supplementary evidence can be used to confirm and support performance evidence. Types of supplementary evidence include witness testimonies, reports, journals or diaries, records of activities, personal statements, simulation (see note in glossary).

Underpinning knowledge

Underpinning knowledge indicates what knowledge is essential for a person to possess in order to successfully achieve an element and prove total competence.

Units

A unit of competence describes one or more activities which form a significant part of an individual’s work. Units are accredited separately but in combination can make up a vocational qualification. There are three categories of units:

Mandatory units - are core to a qualification and must to be completed.

Optional units - candidates must choose the required number of individual units, specified in the qualification structure, to achieve the qualification.

Work-based projects

Work-based projects are a useful way for you to collect evidence to support any decision you make about a candidate's performance. They are particularly appropriate in determining the level of a candidate's underpinning knowledge and understanding where it may be insufficient to rely only on questioning observation.

A project often involves the identification of a solution to a specific problem identified by you and/or the candidate (such as looking at ways to redress a recent drop in sales), or may be a structured programme of work built around a central situation or idea (such as the introduction of a new job rostering process).