

ABC Level 3 Diploma in Work-Based Horticulture



Sports Turf Groundsman Pathway

Unit	Level	Credit Value	GLH	Page No.
Sports Turf Groundsman Pathway				
To achieve the Level 3 Diploma in Work-Based Horticulture (Sports Turf Groundsman) learners must achieve the twelve mandatory units plus a minimum of 6 credits from the optional units				
Mandatory Units				
HC079-C3 Promote, monitor and maintain health, safety and security of the workplace [D/502/1523]	3	6	39	
HC080-C3 Estimate and programme resource requirements for landscaping [Y/502/0502]	3	4	26	
HC081-C2 Manage your own resources [F/501/2989]	3	7	70	
HC087-C3 Set and mark out landscape sites to establish grassed and planted areas [H/502/0499]	3	3	19	
HC088-C3 Evaluate ground and environmental conditions to establish grassed and planted areas [L/502/0500]	3	3	19	
HC089-C3 Prepare sites for soft landscape establishment [D/502/0503]	3	3	19	
HC090-C3 Establish grass swards [H/502/0857]	3	3	19	
HC092-C3 Plan the maintenance, repair and renovation of sports turf areas [H/502/0504]	3	6	39	
HC093-C3 Plan and set out sports areas [R/502/0501]	3	3	19	
HC023-C2 Maintain drainage systems [T/502/1222]	2	3	23	
HC094-C3 Maintain irrigation systems [F/502/1272]	3	3	19	
HC131-C3 Manage information for action [A/501/2988]	3	7	46	
Optional Units				
HC090-C3 Establish planted areas [D/502/0856]	3	3	19	
HC096-C3 Prepare sites for landscape works [H/502/1183]	3	6	39	
HC097-C3 Design and install drainage systems [R/502/1227]	3	4	26	
HC123-C3 Prepare and maintain equipment and machines [K/501/0492]	3	3	19	
HC125-C3 Plan and manage the control of pests, diseases and disorders [R/502/1471]	3	5	33	
HC126-C3 Prepare and apply pesticides [J/502/1516]	3	7	46	
HC132-C2 Prepare to undertake and report on a field survey [T/502/3276]	2	4	30	

Unit Title	HC079-C3 Promote, monitor and maintain health, safety and security of the workplace
Level	3
Credit Value	6
Guided Learning Hours	39
Unit Summary	The aim of this unit is to provide the learner with the knowledge, understanding and skills required for monitoring and maintaining the safety and security of the workplace. It also covers carrying out risk assessments, promoting good standards of health and safety and understanding how to deal with any accidents or health emergencies.
Learning Outcomes (1 to 7) <i>The learner will</i>	Assessment Criteria (1.1 to 7.4) <i>The learner can</i>
1. Understand how to monitor and maintain the health, safety and security of the work area	<p>1.1 Explain the legal and organisational responsibilities in relation to health, safety and security covering</p> <ul style="list-style-type: none"> • people • equipment and materials • the work area <p>1.2 Explain the importance of carrying out risk assessments for all work activities including assessing risks from new and non-routine activities</p> <p>1.3 Explain the importance of assessing security issues associated with the work area covering</p> <ul style="list-style-type: none"> • bio security • building security • data security • personal security <p>1.4 Describe how to carry out and evaluate a risk assessment</p> <p>1.5 Explain the hierarchy of measures to control risks (including elimination, substitution, relevant engineering controls, safe systems of work, training/instruction and personal protective equipment)</p>

	<p>1.6 Outline safe systems of work when people are working alone or at risk of abuse</p> <p>1.7 Explain safe methods and systems of working with hazardous materials and equipment in line with relevant legislation</p> <p>1.8 Explain how hazardous and non-hazardous waste should be managed in line with legislation</p>
<p>2. Understand how to promote good standards of health and safety</p>	<p>2.1 Explain the methods of communicating health and safety precautions to others entering the work area</p> <p>2.2 Explain how good standards of health and safety contribute to the management and efficiency of businesses or organisations</p>
<p>3. Understand how to deal with health emergency situations</p>	<p>3.1 Describe the types of accidents or incidents which may occur and the correct actions to take</p> <p>3.2 Explain the importance of not carrying out actions beyond own capabilities</p> <p>3.3 Explain the potential risks to others from an emergency situation</p> <p>3.4 Explain the reasons for offering support and help to others involved in the accident or incident and how this should be achieved</p>
<p>4. Understand the records required and their importance</p>	<p>4.1 Explain the responsibility for and types of records required and the importance of accurate record keeping</p> <p>4.2 Explain the relevant legislative requirements for completing records of accidents and incidents</p>
<p>5. Monitor and maintain the health, safety and security of the work area</p>	<p>5.1 Carry out risk assessments in accordance with relevant legal and organisational requirements</p> <p>5.2 Evaluate the risks which have been identified and implement appropriate control measures</p>

<p>6. Promote good standards of health and safety</p>	<p>6.1 Ensure appropriate clothing and protective equipment is worn which is consistent with recognised health and safety practice and in line with risk assessment</p> <p>6.2 Communicate any health and safety precautions that are being applied in the work area to others entering the area</p> <p>6.3 Use approved safe methods of lifting and handling when carrying out work</p> <p>6.4 Ensure standard procedures for personal hygiene are followed at all times</p> <p>6.5 Adopt safe systems of work which are consistent with organisational procedures and the findings of the risk assessment</p> <p>6.6 Take appropriate action if there is a danger of accidents or injury</p>
<p>7. Respond to health emergencies within the work area</p>	<p>7.1 Implement procedures safely, correctly and without delay in an emergency situation</p> <p>7.2 Summon assistance immediately for any health emergency and initiate action appropriate to the condition and situation</p> <p>7.3 Give assistance as required within the limits of your capability, including suitable verbal support</p> <p>7.4 Make the immediate vicinity as safe as possible.</p>
<p>Mapping to National Occupational Standards O29NCU3.1, 2, 3</p>	

Unit Title	HC080-C3 Estimate and programme resource requirements for landscaping
Level	3
Credit Value	4
Guided Learning Hours	26
Unit Summary	This unit will provide the learner with the skills, knowledge and understanding required for estimating resource requirements and programming work for soft, hard and interior landscapes
Learning Outcomes (1 to 6) <i>The learner will</i>	Assessment Criteria (1.1 to 6.3) <i>The learner can</i>
1. Be able to estimate the resources	<p>1.1 Identify the nature, extent, required outcome and standards of proposed work clearly and accurately.</p> <p>1.2 Identify required resources which are appropriate to the work taking into account:</p> <ul style="list-style-type: none"> • labour • equipment • materials • finance • specific expertise <p>1.3 Ensure timing of resource enable work to proceed</p>
2. Be able to sequence and programme work	<p>2.1 Ensure the work programme takes full account of the available resources to proceed</p> <p>2.2 Provide a sequence of work which meets agreed targets efficiently and effectively</p> <p>2.3 Use a work programme which enables work to be completed on time, safely and to the standard required</p> <p>2.4 Communicate the work programme effectively and in time to all relevant people</p>

<p>3. Be able to promote health and safety and good environmental practice</p>	<p>3.1 Work in a way which promotes health and safety, is consistent with relevant legislation, codes of practice and any additional requirements.</p> <p>3.2 Ensure work is carried out in a manner which minimises environmental damage</p>
<p>4. Understand how to estimate resource requirements and programme work</p>	<p>4.1 Define project planning and describe methods of estimating resource requirements</p> <ul style="list-style-type: none"> • labour • equipment • materials • finance • specific expertise <p>4.2 Compare the effects of timing of resource provision on costs and completion</p> <p>4.3 Assess methods to optimise resource usage and timing and minimise waste</p> <p>4.4 Comment on the implications of estimating and arranging resources for both horticultural and landscape projects</p>
<p>5. Understand the sequence and programming of work</p>	<p>5.1 Explain the methods of sequencing work to achieve targets and realistic work rates for the work type programmed</p> <p>5.2 Evaluate the use of performance measures</p> <p>5.3 Describe the possible causes of disruption to work programmes and their effects on quality and timing</p> <p>5.4 Explain the sources of hazard encountered on landscape maintenance and measures for their reduction</p>
<p>6. Understand relevant health and safety legislation and environmental good practice</p>	<p>6.1 Explain current health and safety legislation, codes of practice and any additional requirements which apply to this area of work</p> <p>6.2 Describe the possible environmental damage and how to respond appropriately</p> <p>6.3 Explain the records required for management and legislative purposes and the importance of maintaining them</p>

Mapping to National Occupational Standards
029NL26.1,2

Unit Title	HC081-C2 Manage Your Own Resources
Level	2
Credit Value	7
Guided Learning Hours	70
Unit Summary	This unit is mainly about making sure learners have the personal resources (particularly knowledge, understanding, skills and time) to undertake their work role and reviewing their performance against agreed objectives. It also covers identifying and undertaking activities to develop their knowledge, skills and understanding where gaps have been identified
Learning Outcomes (1 to 5) <i>The learner will</i>	Assessment Criteria (1.1 to 5.9) <i>The learner can</i>
1. Manage their own resources	<p>1.1 Identify and agree the requirements of their work-role with those they report to</p> <p>1.2 Discuss and agree personal work objectives with those they report to and how they will measure progress</p> <p>1.3 Identify any gaps between the requirements of their work-role and their current knowledge, understanding and skills</p> <p>1.4 Discuss and agree, with those they report to, a development plan to address any identified gaps in their current knowledge, understanding and skills</p> <p>1.5 Undertake the activities identified in their development plan and discuss, with those they report to, how they have contributed to their performance</p> <p>1.6 Get regular and useful feedback on their performance from those who are in a good position to judge it and provide you with objective and valid feedback</p>

	<p>1.7 Discuss and agree, with those they report to, any changes to their personal work objectives and development plan in the light of performance, feedback received, any development activities undertaken and any wider changes</p> <p>1.8 Check, on a regular basis, how they are using their time at work and identify possible improvements</p> <p>1.9 Ensure that their performance consistently meets or goes beyond agreed requirements</p>
<p>2. Use appropriate behaviours to manage their own resource</p>	<p>2.1 Demonstrate that they recognise changes in circumstances promptly and adjust plans and activities accordingly</p> <p>2.2 Demonstrate that they prioritise objectives and plan work to make best use of time and resources</p> <p>2.3 Demonstrate that they take personal responsibility for making things happen</p> <p>2.4 Demonstrate that they take pride in delivering high quality work</p> <p>2.5 Demonstrate that they agree achievable objectives for themselves and give a consistent and reliable performance</p> <p>2.6 Demonstrate that they can find practical ways to overcome barriers</p> <p>2.7 Demonstrate that they make best use of available resources and proactively seek new sources of support when necessary</p>
<p>3. Know and understand how to manage their own resources using general knowledge</p>	<p>3.1 Demonstrate why managing their resources (particularly knowledge, understanding, skills and time) is important</p> <p>3.2 Demonstrate how to identify the requirements of a work-role</p> <p>3.3 Demonstrate how to set work objectives which are SMART (Specific, Measurable, Achievable, Realistic and Time-bound)</p> <p>3.4 Demonstrate how to measure progress against work objectives</p> <p>3.5 Demonstrate how to identify development needs to address any identified gaps between the requirements of their work-role and their current knowledge, understanding and skills</p>

	<p>3.6 Demonstrate what an effective development plan should contain</p> <p>3.7 Demonstrate the type of development activities which can be undertaken to address identified gaps in knowledge, understanding and skills</p> <p>3.8 Demonstrate how to identify whether/how development activities have contributed to their performance</p> <p>3.9 Demonstrate how to get and make effective use of feedback on their performance</p> <p>3.10 Demonstrate how to update work objectives and development plans in the light of performance, feedback received, any development activities undertaken and any wider changes</p> <p>3.11 Demonstrate how to record the use of their time and identify possible improvements</p>
<p>4. Know and understand how to manage their own resources using industry and sector specific knowledge</p>	<p>4.1 Show that they know and understand the industry/sector requirements for the development or maintenance of knowledge, understanding and skills</p>
<p>5. Know and understand how to manage their own resources using context specific knowledge</p>	<p>5.1 Show that they know the agreed requirements of their work-role including the limits of their responsibilities</p> <p>5.2 Show that they know their agreed personal work objectives</p> <p>5.3 Show that they know the reporting lines in their organisation</p> <p>5.4 Show that they know and understand their current knowledge, understanding and skills</p> <p>5.5 Show that they can identify gaps in their current knowledge, understanding and skills</p> <p>5.6 Show that they know and understand their personal development plan</p> <p>5.7 Show that they know their organisation's policy and procedures in terms of personal development</p>

	<p>5.8 Show that they know the available development opportunities and resources in their organisation</p> <p>5.9 Show that they understand possible sources of feedback in their organisation</p>
<p>Mapping to National Occupational Standards Direct Match to M & L standards 2004</p>	

Unit Title	HC087-C3 Set and mark out landscape sites to establish grassed and planted areas
Level	3
Credit Value	3
Guided Learning Hours	19
Unit Summary	This unit provides the learner with the knowledge, skills and understanding to set and mark out landscape sites ready for the establishment of mixed grassed and planted areas. It assumes that the objectives and tolerances for the site are already worked out and that work begins with setting and marking out
Learning Outcomes (1 to 6) <i>The learner will</i>	Assessment Criteria (1.1 to 6.3) <i>The learner can</i>
1. Understand how to set and mark out sites ready for operations	1.1 Explain how to interpret landscape plans 1.2 Describe the methods and equipment for setting out in horizontal and vertical planes 1.3 Explain the mathematical and geometric principles used in setting out 1.4 Review the types of marking materials and factors affecting their selection 1.5 Explain how site markings can facilitate next stages of operations 1.6 Explain the likely problems and how to manage these 1.7 Describe the methods of detecting underground services
2. Be able to set and mark out sites ready for operations	2.1 Confirm objectives and tolerances for the site 2.2 Achieve objectives to required tolerances 2.3 Apply the mathematical and geometric principles used in setting out

	<p>2.4 Use site markings to facilitate the next stage of operations</p> <p>2.5 Deal with any problems efficiently, effectively and safely should any occur</p> <p>2.6 Maintain effective working relations with all relevant people throughout</p>
3. Understand the reasons for maintaining equipment	<p>3.1 Explain the importance of maintaining equipment for use</p> <p>3.2 Describe the methods of maintaining the range of equipment used</p>
4. Be able to maintain and use relevant equipment	4.1 Ensure equipment is prepared, used and maintained in a safe and effective condition.
5. Understand relevant health and safety legislation and environmental good practice	<p>5.1 Summarise current health and safety legislation, codes of practice and organisational requirements</p> <p>5.2 Describe possible environmental damage and how to respond appropriately</p> <p>5.3 Explain the correct and appropriate methods for disposing of organic and inorganic waste</p> <p>5.4 Explain the records required for management and legislative purposes and the importance of maintaining them</p>
6. Be able to promote health and safety and environmental good practice	<p>6.1 Work in a way which promotes health and safety, is consistent with relevant legislation, codes of practice and any additional requirements</p> <p>6.2 Ensure work is carried out in a manner which minimises environmental damage</p> <p>6.3 Manage and dispose of waste in accordance with legislative requirements and codes of practice</p>
<p>Mapping to National Occupational Standards O29NL19.1</p>	

Unit Title	HC088-C3 Evaluate ground and environmental conditions to establish grassed and planted areas
Level	3
Credit Value	3
Guided Learning Hours	19
Unit Summary	This unit provides the learner with the knowledge, skills and understanding to evaluate ground and environmental conditions ready for the establishment of mixed grassed and planted areas
Learning Outcomes (1 to 4) <i>The learner will</i>	Assessment Criteria (1.1 to 4.2) <i>The learner can</i>
1. Understand how to evaluate ground and environmental conditions	<p>1.1 Explain the principles and methods of measurement of ground and environmental conditions</p> <p>1.2 Evaluate the methods of measurement and where they may be appropriate</p> <p>1.3 Describe what varying ground and environmental conditions may occur, their effect on plant establishment and growth and how to handle these effectively for the following</p> <ul style="list-style-type: none"> • substrate structure • substrate texture and conditions • drainage characteristics • pH • pest, disease and weed problems • nutrient deficiencies • ground and air pollutants • microclimate <p>1.4 Review the sources of information and analysis relating to ground and environmental assessment</p>
2. Be able to evaluate ground and environmental conditions	<p>2.1 Ensure the purpose and scope of the evaluation is consistent with the proposed use for site</p> <p>2.2 Use evaluation methods that are consistent with the agreed purpose and scope</p>

	<p>2.3 Evaluate the ground and environmental conditions accurately</p> <p>2.4 Ensure the site is left in a tidy and safe condition following operations</p> <p>2.5 Deal with problems efficiently, effectively and safely should any occur</p> <p>2.6 Maintain effective working relations with all relevant people</p>
<p>3. Understand relevant health and safety legislation and environmental good practice</p>	<p>3.1 Summarise current health and safety legislation, codes of practice and organisational requirements</p> <p>3.2 Describe the possible environmental damage that could occur and how to respond appropriately</p> <p>3.3 Explain the records required for management and legislative purposes and the importance of maintaining them</p>
<p>4. Be able to promote health and safety and environmental good practice</p>	<p>4.1 Work in a way which promotes health and safety, is consistent with relevant legislation, codes of practice and any additional requirements</p> <p>4.2 Ensure work is carried out in a manner which minimises environmental damage</p>
<p>Mapping to National Occupational Standards O29NL19.2</p>	

Unit Title	HC089-C3 Prepare sites for soft landscape establishment
Level	3
Credit Value	3
Guided Learning Hours	19
Unit Summary	This unit provides the learner with the knowledge, skills and understanding to identify, select and use appropriate methods and procedures in preparing sites for soft landscape establishment
Learning Outcomes (1 to 6) <i>The learner will</i>	Assessment Criteria (1.1 to 6.2) <i>The learner can</i>
1. Understand how to prepare sites for soft landscape establishment	<p>1.1 Describe the principles and methods of site preparation to meet the required conditions for the following landscapes</p> <ul style="list-style-type: none"> • areas for soft landscape construction • areas for planting • areas for restoration <p>1.2 Explain which methods are most appropriate to achieve required conditions</p> <p>1.3 Describe how to check the site is ready for planting/sowing</p> <p>1.4 Explain potential problems which may occur and how to deal with these effectively</p>
2. Be able to prepare sites for soft landscape establishment	<p>2.1 Prepare the site to meet specifications and function</p> <p>2.2 Maintain the site in a suitable condition for planting/sowing as planned</p> <p>2.3 Monitor site main services continually throughout operations</p> <p>2.4 Deal with problems efficiently, effectively and safely should any occur</p>

	2.5 Maintain effective working relations with all relevant people
3. Understand the reasons for maintaining equipment	3.1 Explain the importance of maintaining equipment for use 3.2 Describe the methods of maintaining the range of equipment used
4. Be able to maintain and use relevant equipment	4.1 Ensure equipment is prepared, used and maintained in a safe and effective condition.
5. Understand relevant health and safety legislation and environmental good practice	5.1 Summarise current health and safety legislation, codes of practice and organisational requirements 5.2 Describe the possible environmental damage that could occur and how to respond appropriately 5.3 Explain the correct and appropriate methods for disposing of organic and inorganic waste 5.4 Explain the records required for management and legislative purposes and the importance of maintaining them
6. Be able to promote health and safety and environmental good practice	6.1 Work in a way which promotes health and safety, is consistent with relevant legislation, codes of practice and any additional requirements 6.2 Ensure work is carried out in a manner which minimises environmental damage and waste
Mapping to National Occupational Standards O29NL19.3	

Unit Title	HC091-C3 Establish grass swards
Level	3
Credit Value	3
Guided Learning Hours	19
Unit Summary	This unit provides the learner with the knowledge, skills and understanding to identify and establish grass swards
Learning Outcomes (1 to 9) <i>The learner will</i>	Assessment Criteria (1.1 to 9.3) <i>The learner can</i>
1. Understand how to establish grass swards	1.1 Explain the factors affecting the timing and methods of establishment 1.2 Describe the methods of protection and their application 1.3 Explain the initial maintenance requirements for newly established swards 1.4 Explain what potential problems may affect operations and how to handle these effectively
2. Be able to identify types of grasses	2.1 Identify a minimum of 6 types of grasses by common and botanical names when establishing grass swards
3. Understand the principles of selecting grasses	3.1 Explain the principles of selecting and combining grass species for different applications 3.2 Explain the principles of selecting turf and seeding mats for different applications
4. Understand how to assess turf health	4.1 Describe how to assess the health of turf 4.2 Explain the different types of damage that can occur and how to prevent them

<p>5. Be able to establish grass swards</p>	<p>5.1 Mark out sites accurately before beginning operations</p> <p>5.2 Select turf or seed as appropriate for intended purpose</p> <p>5.3 Check the specification and health of plant material on receipt and reject unacceptable material</p> <p>5.4 Use handling and establishment methods which maximise the quality of the sward</p> <p>5.5 Provide protection which is appropriate and effective</p> <p>5.6 Ensure the site is left in a tidy and safe condition following operations</p> <p>5.7 Maintain effective working relations with all relevant persons</p>
<p>6. Understand how to maintain equipment</p>	<p>6.1 Explain the importance of maintaining equipment for use</p> <p>6.2 Describe the methods of maintaining the range of equipment used</p>
<p>7. Be able to maintain and use relevant equipment</p>	<p>7.1 Ensure equipment is prepared, used and maintained in a safe and effective condition</p>
<p>8. Understand relevant health and safety legislation and environmental good practice</p>	<p>8.1 Summarise current health and safety legislation, codes of practice and organisational requirements</p> <p>8.2 Describe the possible environmental damage that could occur and how to respond appropriately</p> <p>8.3 Explain the correct and appropriate methods for disposing of organic and inorganic waste</p> <p>8.4 Explain the records required for management and legislative purposes and the importance of maintaining them</p>
<p>9. Be able to promote health and safety and environmental good practice</p>	<p>9.1 Work in a way which promotes health and safety, is consistent with relevant legislation, codes of practice and any additional requirements</p> <p>9.2 Ensure work is carried out in a manner which minimises environmental damage</p>

	9.3 Manage and dispose of waste in accordance with legislative requirements and codes of practice
Mapping to National Occupational Standards O29NL19.5	

Unit Title	HC092-C3 Plan the maintenance, repair and renovation of sports turf areas
Level	3
Credit Value	6
Guided Learning Hours	39
Unit Summary	<p>This unit will provide the learner with the skills, knowledge and understanding required to plan the maintenance of sports turf areas, for example</p> <ul style="list-style-type: none"> • football and rugby pitches • cricket wickets • tennis or lacrosse courts • athletic tracks • golf courses • race courses
Learning Outcomes (1 to 8) <i>The learner will</i>	Assessment Criteria (1.1 to 8.2) <i>The learner can</i>
<p>1. Understand how to plan and ensure the maintenance of sports turf areas</p>	<p>1.1 Explain the purposes and functions of sports turf and how these affect maintenance, repairs and renovation</p> <p>1.2 Describe the consideration of soil types and condition in relation to sports turf management</p> <p>1.3 Describe the considerations relating to choice of mowing regimes and other maintenance operations, for example</p> <ul style="list-style-type: none"> • cutting • edging • weed • pest and disease control • fertiliser application • aeration • top dressing • switching/brushing • rolling • scarifying/verticutting • irrigation and repairs by inserting turf • overseeding • repairing edges

	<p>1.4 Define the principles of identifying turf's pathological and physiological disorders</p> <p>1.5 Define the principles and techniques relating to the choice, effects and application of fertilisers</p>
<p>2. Understand the factors affective repair and renovation of sports turf areas</p>	<p>2.1 Describe how timing of repair and renovation operations may be influenced</p> <p>2.2 Describe the factors affecting the type and extent of repairs, e.g. over seeding, inserting turf and repairing edges</p> <p>2.3 Explain how soil type and condition relate to the type and extent of repairs and renovation</p> <p>2.4 Describe the methods of assessing results of repair and renovation operations</p>
<p>3. Know how to deal with problems</p>	<p>3.1 Describe the typical problems that may occur and how to handle these</p>
<p>4. Be able to plan for the maintenance and repair of sports turf</p>	<p>4.1 Plan operations, e.g</p> <ul style="list-style-type: none"> • cutting • edging • weed • pest and disease control • fertiliser application • aeration • top dressing • switching/brushing • rolling • scarifying/verticutting • irrigation and repairs by inserting turf • overseeding • repairing edges <p>4.2 Assess the results of maintenance, repair and renovation operations, ensuring the agreed objectives and standards have been achieved</p> <p>4.3 Monitor maintenance, repair and renovation operations so as to minimise risk to the public and operators</p> <p>4.4 Leave the site in a tidy and undamaged condition following operations</p>

<p>5. Understand the reasons for maintaining equipment</p>	<p>5.1 Explain the importance of maintaining equipment for use</p> <p>5.2 Describe the methods of maintaining the range of equipment used</p>
<p>6. Be able to maintain and use relevant equipment</p>	<p>6.1 Ensure equipment is prepared, used and maintained in a safe and effective condition</p>
<p>7. Understand relevant health and safety legislation and environmental good practice</p>	<p>7.1 Summarise current health and safety legislation, codes of practice and any additional requirements</p> <p>7.2 Describe the possible environmental damage and how to respond appropriately</p> <p>7.3 Explain the correct and appropriate methods for disposing of organic and inorganic waste</p> <p>7.4 Explain the records required for management and legislative purposes and the importance of maintaining them</p>
<p>8. Be able to promote health and safety and environmental good practice</p>	<p>8.1 Work in a way which promotes health and safety, is consistent with relevant legislation, codes of practice and any additional requirements</p> <p>8.2 Ensure work is carried out in a manner which minimises environmental damage and waste</p>
<p>Mapping to National Occupational Standards O29NL20.1,2</p>	

Unit Title	Plan and set out sports areas
Level	3
Credit Value	3
Guided Learning Hours	19
Unit Summary	<p>The aim of this unit is to provide the learner with the knowledge, understanding and skills required for planning and setting out sports areas covering</p> <ul style="list-style-type: none"> • football and rugby pitches • cricket wickets • tennis or lacrosse courts • athletic tracks • golf courses • race courses
Learning Outcomes (1 to 6) <i>The learner will</i>	Assessment Criteria (1.1 to 6.2) <i>The learner can</i>
1. Understand how to set out sports areas	<p>1.1 Explain the factors influencing the positioning of sports areas within the total area available</p> <p>1.2 List the sources of information on standard sports dimensions</p> <p>1.3 Explain the factors influencing the choice and use of marking equipment and materials</p> <p>1.4 Describe the typical contingencies associated with setting out sports area and how these may be handled</p>
2. Be able to plan and set out sports areas	<p>2.1 Perform an initial survey which identifies the type, function and required dimensions of the sports area</p> <p>2.2 Produce accurate plans which are consistent with the rules of the sport</p>

	<p>2.3 Select positioning and dimensions of the sports area consistent with the rules of the sport and the function, use and safety of the site,</p> <ul style="list-style-type: none"> • marking out • setting out equipment <p>2.4 Leave the site in an undamaged and tidy condition following operations</p> <p>2.5 Perform effective working relations with all relevant people</p>
3. Understand the reasons for maintaining equipment	<p>3.1 Explain the importance of maintaining equipment for use</p> <p>3.2 Describe the methods of maintaining the range of equipment used</p>
4. Be able to maintain and use relevant equipment	4.1 Ensure equipment is prepared, used and maintained in a safe and effective condition
5. Understand relevant health and safety legislation and environmental good practice	<p>5.1 Summarise current health and safety legislation, codes of practice and any additional requirements</p> <p>5.2 Describe the possible environmental damage and how to respond appropriately</p> <p>5.3 Explain the correct and appropriate methods for disposing of organic and inorganic waste</p> <p>5.4 Explain the records required for management and legislative purposes and the importance of maintaining them</p>
6. Be able to promote health and safety and environmental good practice	<p>6.1 Work in a way which promotes health and safety, is consistent with relevant legislation, codes of practice and any additional requirements</p> <p>6.2 Ensure work is carried out in a manner which minimises environmental damage and waste</p>
<p>Mapping to National Occupational Standards O29NL20.3</p>	

Unit Title	HC023-C2 Maintain drainage systems
Level	2
Credit Value	3
Guided Learning Hours	23
Unit Summary	The aim of this unit is to provide the learner with knowledge, skills and understanding required to inspect and maintain drainage systems
Learning Outcomes (1 to 4) <i>The learner will</i>	Assessment Criteria (1.1 to 4.3) <i>The learner can</i>
1. Be able to inspect and maintain drainage systems	1.1 Inspect and assess drainage systems according to agreed schedules 1.2 Restore drainage systems to full effectiveness and to agreed schedule 1.3 Record inspections and work undertaken 1.4 Maintain effective working relations with all relevant people throughout
2. Be able to work safely and minimise environmental damage	2.1 Work in a way which maintains health and safety and is consistent with current legislation, codes of practice and any additional requirements 2.2 Carry out work in a manner which minimises environmental damage 2.3 Dispose of waste safely and correctly

<p>3. Know how to inspect and maintain drainage systems</p>	<p>3.1 Describe the schedule of inspections required to identify faults and problems</p> <p>3.2 Describe how to identify and correct impeded drainage and its causes</p> <p>3.3 State how to identify and deal with any problems with drainage systems</p> <p>3.4 Describe the main causes of drain malfunction, including leaks and blockages and methods that can be used to deal with them</p> <p>3.5 Describe the factors affecting flow rates in the drains</p> <p>3.6 State the importance of maintaining drainage systems so they work effectively and efficiently</p> <p>3.7 Describe the principles of drainage design</p> <p>3.8 State why it is important to keep working areas clean according to clients' requirements</p> <p>3.9 State what records need to be kept and why</p>
<p>4. Know the current health and safety legislation and environmental practice</p>	<p>4.1 Outline the current health and safety legislation, codes of practice and any additional requirements, which apply to this area of work</p> <p>4.2 Describe how environmental damage can be minimised</p> <p>4.3 Describe the correct methods for disposing of organic and inorganic waste</p>
<p>Mapping to National Occupational Standards 029NL21.1 L15.2</p>	

Unit Title	HC094-C3 Maintain irrigation systems
Level	3
Credit Value	3
Guided Learning Hours	19
Unit Summary	The unit will provide the learner with the skills, knowledge and understanding required for maintaining the efficient working of irrigation systems which maybe complex and non-routine
Learning Outcomes (1 to 5) <i>The learner will</i>	Assessment Criteria (1.1 to 5.2) <i>The learner can</i>
1. Understand how to design irrigation systems	1.1 Explain the principles of design and construction of irrigation systems <ul style="list-style-type: none"> • mobile • installed
2. Understand how to maintain irrigation systems	2.1 Explain the principles, methods and calculations relating to soil water management 2.2 Give a range of possible water sources and quality systems for irrigation 2.3 Explain the maintenance requirements for irrigation systems 2.4 Explain the different maintenance requirements of irrigation equipment 2.5 Compare the different irrigation requirements of surfaces <ul style="list-style-type: none"> • hard/porous • synthetic • turf 2.6 Describe the frequency and thoroughness of inspections to identify faults 2.7 Give a range of possible contingencies that may affect operations and how to handle these effectively

	<p>2.8 Identify the types of records required and the importance of accurate record keeping</p>
<p>3. Maintain irrigation systems</p>	<p>3.1 Inspect and assess irrigation systems and surfaces according to agreed schedules</p> <p>3.2 Identify problems with irrigation systems and arrange repairs where necessary</p> <p>3.3 Ensure surroundings are in a tidy and undamaged condition following operations</p> <p>3.4 Record inspections clearly, accurately and promptly</p> <p>3.5 Maintain effective working relations with all relevant people throughout</p>
<p>4. Maintain the waste and environment</p>	<p>4.1 Explain the adverse environmental impact and waste which may occur and how to minimise these</p> <p>4.2 Keep unnecessary waste and unwanted impact on the environment to a minimum</p>
<p>5. Understand and comply with current health and safety legislation and codes of practice</p>	<p>5.1 Apply the principles and application of risk assessment</p> <p>5.2 Summarise current health and safety legislation, codes of practice and any additional requirements</p>
<p>Mapping to National Occupational Standards 029NL21.2</p>	

Unit Title	HC131-C3 Manage information for action
Level	3
Credit Value	7
Guided Learning Hours	46
Unit Summary	The learner will develop skills and knowledge in the efficient management of information. It covers gathering the information needed, providing information and advice to others and holding meetings
Learning Outcomes (1 to 6) <i>The learner will</i>	Assessment Criteria (1.1 to 6.7) <i>The learner can</i>
1. Understand how to gather required information	<p>1.1 Describe how to assess the effectiveness of current methods of gathering and storing information</p> <p>1.2 Explain the importance of gathering, validating and analysing information to team and organisational effectiveness and your role and responsibility in relation to this</p> <p>1.3 Describe the types of qualitative and quantitative information which are essential to your role and responsibilities</p> <p>1.4 Explain how to gather the information you need for your job</p> <p>1.5 Describe the types of problems which may occur when gathering information and how to overcome these</p> <p>1.6 Describe how to record and store the information you need</p> <p>1.7 Describe the procedures to follow in order to make recommendations for improvements to formal and informal systems and procedures</p>
2. Understand how to inform and advise others	<p>2.1 Describe how to give information and advice effectively both orally and in writing</p> <p>2.2 Explain how to develop and present a reasoned case when providing advice to others</p>

	<p>2.3 Explain the importance of confirming the recipient's understanding of the information and advice you have provided and how to do this</p> <p>2.4 Explain the importance of seeking feedback on the quality and relevance of the advice and information provided, and how to encourage and enable such feedback</p> <p>2.5 Explain the importance of providing information and advice to others including team members, colleagues working at the same level, higher-level managers or sponsors and people not part of your organisation, and your role and responsibility in relation to this</p> <p>2.6 Describe the types of information and advice which other people may require</p> <p>2.7 Explain the importance of checking the validity of information and advice provided to others and how to do this</p> <p>2.8 Describe the principles of confidentiality when handling information and advice; the types of information and advice which may be provided to different people</p> <p>2.9 Describe organisational policies, procedures and resource constraints which may affect advice and information you give to others</p>
<p>3. Understand how to hold meetings</p>	<p>3.1 Explain how to identify unhelpful arguments and digressions, and strategies which may be used to discourage these</p> <p>3.2 Describe the styles of leadership which can be used to run meetings and how to choose a style according to the nature of the meeting</p> <p>3.3 Describe the value and limitations of meetings as a method of exchanging information and making decisions</p> <p>3.4 Explain how to determine when a meeting is the most effective way of dealing with issues; the possible alternatives which you may use</p> <p>3.5 Explain the importance of determining the purpose and objectives of meetings and how to do so. Purposes should include information giving, consultation and decision making</p> <p>3.6 Explain how to manage discussions so that the objectives of the meetings are met within the allocated time</p>

	<p>3.7 Explain how to determine who are necessary people to attend the meeting</p> <p>3.8 Describe the procedures to follow when calling meetings and preparing for them</p>
<p>4. Gather required information</p>	<p>4.1 Ensure that the information you gather is accurate, sufficient and relevant to the purpose for which it is needed</p> <p>4.2 Take prompt and effective action to overcome problems in gathering relevant information</p> <p>4.3 Record and store the information you gather according to your organisation's systems and procedures</p> <p>4.4 Ensure that the information you gather is accessible in the required format to authorised people only</p> <p>4.5 Identify possible improvements to systems and procedures and pass these on to the relevant people</p>
<p>5. Inform and advise others</p>	<p>5.1 Give information and advice at a time and place, and in a form and manner, appropriate to the needs of recipients</p> <p>5.2 Ensure that the information you give is accurate, current, relevant and sufficient</p> <p>5.3 Ensure that the advice you give is consistent with your organisation's policy, procedures and resource constraints</p> <p>5.4 Use reasoned arguments and appropriate evidence to support your advice</p> <p>5.5 Check and confirm recipients' understanding of the information and advice you have given them</p> <p>5.6 Maintain confidentiality according to your organisation's requirements</p> <p>5.7 Seek feedback from recipients about the information and advice you provide, and use this feedback to improve the ways in which you give information and advice</p>

<p>6. Hold meetings</p>	<p>6.1 Hold one of the following meetings</p> <ul style="list-style-type: none"> • involving people within your organisation • involving people outside your organisation <p>6.2 Give sufficient notice of the meeting to allow the necessary people to attend</p> <p>6.3 Make clear the purpose and objectives of the meeting at the start</p> <p>6.4 Ensure that your style of leadership helps people to make useful contributions</p> <p>6.5 Discourage unhelpful arguments and digressions</p> <p>6.6 Ensure that the meeting achieves its objectives within the allocated time</p> <p>6.7 Give clear, accurate and concise information about outcomes of the meeting promptly to those who need it</p>
<p>Mapping to National Occupational Standards</p>	

Unit Title	HC090-C3 Establish planted areas
Level	3
Credit Value	3
Guided Learning Hours	19
Unit Summary	This unit provides the learner with the knowledge, skills and understanding to identify and establish planted areas
Learning Outcomes (1 to 9) <i>The learner will</i>	Assessment Criteria (1.1 to 9.3) <i>The learner can</i>
1. Understand how to establish planted areas	<p>1.1 Explain the factors affecting the timing and method of planting</p> <p>1.2 Describe methods of support and protection and how to apply them</p> <p>1.3 Explain the initial maintenance requirements for newly established planted areas covering</p> <ul style="list-style-type: none"> • Trees • Shrubs • Container grown • Root grown <p>1.4 Explain potential problems which may occur and how to deal with these effectively</p>
2. Be able to identify a range of plants	<p>2.1 Describe how to identify the plants to be established</p> <p>2.2 Identify a minimum of 80 different plants to be established by common and botanical names</p>
3. Understand the principles of selecting plants	3.1 Explain the principles of selecting and combining plants for different applications

<p>4. Understand the methods of assessing plant health</p>	<p>4.1 Review the methods of assessing plant health</p> <p>4.2 Explain the damage which may occur when handling and during the establishment of plants and how to minimise this</p>
<p>5. Be able to establish planted areas</p>	<p>5.1 Identify and mark out planting sites accurately</p> <p>5.2 Check the specification and health of plants before planting, and reject unacceptable specimens</p> <p>5.3 Ensure the quality of plants is maintained throughout handling and planting</p> <p>5.4 Establish at least 3 different types of plants from</p> <ul style="list-style-type: none"> • trees • shrubs • container grown • root grown <p>5.5 Provide support and protection to the plants if required</p> <p>5.6 Ensure the site is left in a tidy and safe condition following operations</p> <p>5.7 Maintain effective working relations with all relevant people</p>
<p>6. Understand the reasons for maintaining equipment</p>	<p>6.1 Explain the importance of maintaining equipment</p> <p>6.2 Describe the methods of maintaining the range of equipment used</p>
<p>7. Be able to maintain and use relevant equipment</p>	<p>7.1 Ensure equipment is prepared, used and maintained in a safe and effective condition</p>
<p>8. Understand relevant health and safety legislation and environmental good practice</p>	<p>8.1 Summarise current health and safety legislation, codes of practice and organisational requirements</p> <p>8.2 Describe the possible environmental damage that could occur and how to respond appropriately</p> <p>8.3 Explain the correct and appropriate methods for disposing of organic and inorganic waste</p> <p>8.4 Explain the records required for management and legislative</p>

	purposes and the importance of maintaining them
9. Be able to promote health and safety and environmental good practice	<p>9.1 Work in a way which promotes health and safety, is consistent with relevant legislation, codes of practice and any additional requirements</p> <p>9.2 Ensure work is carried out in a manner which minimises environmental damage</p> <p>9.3 Manage and dispose of waste in accordance with legislative requirements and codes of practice</p>
<p>Mapping to National Occupational Standards O29NL19.4</p>	

Unit Title	HC096-C3 Prepare sites for landscape works
Level	3
Credit Value	6
Guided Learning Hours	39
Unit Summary	This unit provides the learner with the skills, knowledge and understanding to prepare a site for both hard and soft landscape construction. The unit assumes that the learner will be working to a previously developed plan and that all work must meet its specifications and tolerances
Learning Outcomes (1 to 6) <i>The learner will</i>	Assessment Criteria (1.1 to 6.5) <i>The learner can</i>
1. Form ground profiles for landscape works	<p>1.1 Set out site according to the plan/specification</p> <p>1.2 Form profiles that meet the requirements of the plan and subsequent work:</p> <ul style="list-style-type: none"> • soft landscape construction • hard landscape construction <p>1.3 Form profiles that are to specified and required levels and gradients</p> <p>1.4 Monitor progress and prepare according to specification two of the following surfaces flat gradient steps</p> <p>1.5 Keep the site in a tidy and suitable condition for subsequent works following operations</p> <p>1.6 Maintain effective working relations throughout with the relevant people</p>

<p>2. Be able to maintain and use equipment during preparation of sites for landscape works</p>	<p>2.1 Ensure equipment is prepared, used and maintained in a safe and effective condition throughout</p>
<p>3. Be able to promote health and safety and environmental good practice</p>	<p>3.1 Work in a way which promotes health and safety, is consistent with relevant legislation, codes of practice and any additional requirements which apply to preparing sites for landscape works</p> <p>3.2 Ensure work is carried out in a manner which minimises environmental damage</p> <p>3.3 Manage and dispose of waste including underground services in accordance with legislative requirements and codes of good practice</p>
<p>4. Understand how to form ground profiles for landscape works</p>	<p>4.1 Explain the construction standards and regulations for operations involving changes of level</p> <p>4.2 Explain the differences in construction requirements for soft and hard landscape construction</p> <p>4.3 Describe how to interpret landscape plans and specifications</p> <p>4.4 Explain the methods and equipment for setting out in the horizontal and vertical planes</p> <p>4.5 Explain the mathematical and geometrical principles for setting out</p> <p>4.6 Explain how to calculate gradients, risers and treads</p> <p>4.7 Explain the design of steps</p> <p>4.8 Explain the methods of detecting underground services</p> <p>4.9 Explain the typical contingencies and how to handle these effectively</p> <p>4.10 Explain the types of problems and how to resolve these and whom these should be reported to</p>

<p>5. Understand the reasons for maintaining equipment</p>	<p>5.1 Explain the importance and methods of maintaining equipment in a fit state for use to minimise risks</p>
<p>6. Know and understand relevant health and safety legislation and environmental good practice</p>	<p>6.1 Explain current health and safety legislation, codes of practice and any additional requirements which apply to this area of work</p> <p>6.2 Explain the principles and application of risk assessment</p> <p>6.3 Describe the possible environmental damage and how to respond appropriately</p> <p>6.4 Explain the correct and appropriate methods for disposing of waste</p> <p>6.5 Explain the records required for management and legislative purposes and the importance of maintaining them</p>
<p>Mapping to National Occupational Standards O29NL23.1</p>	

Unit Title	HC097-C3 Design and install drainage systems
Level	3
Credit Value	4
Guided Learning Hours	26
Unit Summary	<p>The unit will provide the learner with the skills, knowledge and understanding in required to design and install drainage systems</p> <p>The learner will be working to a previously developed plan and that it meets specifications and tolerances</p>
Learning Outcomes (1 to 8) <i>The learner will</i>	Assessment Criteria (1.1 to 8.4) <i>The learner can</i>
1. Be able to calculate drainage requirements	<p>1.1 Identify drainage requirements</p> <p>1.2 Calculate drainage requirements at a level which will prevent flooding or water logging</p>
2. Be able to install drainage systems	<p>2.1 Install 2 drainage systems from the list below which meet requirements and specifications</p> <ul style="list-style-type: none"> • surface water • pipes • tile <p>2.2 Ensure levels and falls are in accordance with requirements and specifications</p> <p>2.3 Ensure the surface is restored to its original condition</p> <p>2.4 Maintain effective working relations with the relevant people</p>
3. Be able to promote health and safety and good environmental practice	3.1 Work in a way which promotes health and safety, is consistent with relevant legislation, codes of practice and any additional requirements which apply to installing drainage

	<p>3.2 Ensure work is carried out in a manner which minimises environmental damage</p> <p>3.3 Manage and dispose of waste in accordance with legislative requirements and codes of practice</p>
4. Be able to maintain and use equipment during installing drainage	4.1 Ensure equipment is prepared, used and maintained in a safe and effective condition throughout
5. Understand the calculation required for drainage	5.1 Explain how to make drainage calculations
6. Understand why its important to be able to install drainage systems	<p>6.1 Explain the factors influencing drainage requirements</p> <p>6.2 Describe the advantages, disadvantages and applications of the following types of drainage systems:</p> <ul style="list-style-type: none"> • surface water • pipes • tile <p>6.3 Explain the typical problems that may occur and effective methods of dealing with these</p>
7. Understand the reasons for maintaining equipment	7.1 Explain the importance of and methods of maintaining equipment in a fit state for use to minimise risks
8. Understand relevant health and safety legislation and environmental practice	<p>8.1 Explain current health and safety legislation, codes of practice and any additional requirements</p> <p>8.2 Describe the possible environmental damage and how to respond appropriately</p> <p>8.3 Explain the correct and appropriate methods for disposing of waste</p> <p>8.4 Explain the records required for management and legislative purposes and the importance of maintaining them</p>
<p>Mapping to National Occupational Standards O29NL23.2</p>	

Unit Title	HC123-C3 Prepare and maintain equipment and machines
Level	3
Credit Value	3
Guided Learning Hours	19
Unit Summary	The aim of this unit is to provide the learner with the knowledge, understanding and skills required to maintain and repair equipment and machines. Maintenance may also be required due to equipment malfunction. The unit covers manual (hand operated) and mechanical (engine drive) equipment and machines.
Learning Outcomes (1 to 4) <i>The learner will</i>	Assessment Criteria (1.1 to 4.7) <i>The learner can</i>
<p>1. Understand how to prepare equipment and machines for maintenance</p> <p>A. maintenance</p> <p>B. tools</p>	<p>1.1 Explain the purpose of a maintenance schedule plan</p> <ul style="list-style-type: none"> • routine • breakdown <p>1.2 Justify circumstances in which authorisation must be obtained prior to maintenance</p> <p>1.3 Research information required for the maintenance procedure and how it should be obtained</p> <p>1.4 Describe methods for preparing equipment and machines</p> <ul style="list-style-type: none"> • manual • mechanical <p>1.5 Investigate the dangers created by stored energy and how these should be responded to during the preparation stage</p> <p>1.6 Evaluate hazardous chemicals and substances which may be present and ways in which they should be dealt with</p> <p>1.7 Select the type of tools, equipment and materials required for the maintenance procedure</p> <ul style="list-style-type: none"> • hand tools • power tools.

	<p>1.8 Describe the ways, and reasons, for making equipment and machinery for dis-assembly and re-assembly purposes</p> <p>1.9 Describe the location of stored equipment and any associated components</p>
<p>2. Understand how to maintain and repair equipment and machines</p>	<p>2.1 Describe methods for the diagnosis of faults and the identification of the root cause</p> <p>2.2 Give a range of routine maintenance requirements and why these must be adhered to</p> <p>2.3 Analyse factors which impact on the value of continuing with the procedure such as cost of repair, estimated working life, immediate needs for the equipment/machinery use</p> <p>2.4 Describe the reasons and methods for maintaining equipment and machines</p> <p>2.5 Investigate the possible consequences of not maintaining equipment and machines</p> <p>2.6 Investigate legislative requirements relating to the maintenance of equipment and machinery, and the work area</p> <p>2.7 Give a range of components that require periodic replacement and the reasons for this</p> <p>2.8 Describe procedures for obtaining replacement components</p> <p>2.9 Describe safe and appropriate methods of storing equipment and machinery</p> <p>2.10 Describe how and where to obtain expert advice in relation to maintenance</p> <p>2.11 Describe the necessary post-maintenance checks</p> <p>2.12 Describe how to keep appropriate records</p>
<p>3. Prepare equipment and machines for maintenance</p>	<p>3.1 Obtain the relevant information and authorisation for the maintenance procedure e.g. manual/maintenance</p> <p>3.2 Identify the equipment and machines requiring maintenance e.g. routine and breakdown</p> <p>3.3 Make sure the equipment and machines for maintenance are safe, and completely isolated from the power source</p>

	<p>3.4 Keep the work area safe and in a condition suitable for the maintenance procedure</p> <p>3.5 Obtain the appropriate tools and materials for the maintenance procedures</p> <p>3.6 Complete the preparation of equipment and machines for maintenance in accordance with manufacturers instructions e.g. manual/mechanical</p> <p>3.7 Identify the relevant components for dis-assembly and re-assembly purposes</p>
<p>4. Maintain and repair equipment and machines</p>	<p>4.1 Assess the maintenance requirements based on the condition and use of the equipment and machines</p> <p>4.2 Identify, remove and replace worn and damaged components in accordance with manufacturers instructions</p> <p>4.3 Where replacement components are unavailable, safely store the equipment and machinery, and take the appropriate action to obtain the suitable replacements</p> <p>4.4 Carry out the maintenance in accordance with manufacturers instructions, standard procedure and legislation</p> <p>4.5 Identify the need for expert advice and assistance and promptly refer this matter to the appropriate member of staff</p> <p>4.6 Make sure that stored equipment and machines are safe, secure and appropriately protected from any adverse conditions</p> <p>4.7 Carry out the correct tests on completion of the maintenance procedure to confirm the machinery/equipment is returned to good working order</p>
<p>Mapping to National Occupational Standards CU28.1,2</p>	

Unit Title	HC125-C3 Plan and manage the control of pests, diseases and disorders
Level	3
Credit Value	5
Guided Learning Hours	33
Unit Summary	<p>The aim of this unit is to provide the learner with the knowledge, understanding and skills required for planning and managing the control of pests, diseases and disorders. Pests may include insects, slugs, snails and rodents. Diseases may be fungal, viral or bacterial and disorders may include nutrient deficiencies. The unit covers the identification, monitoring and developing plans for the control of the pests, diseases and disorders.</p> <p>If the use of chemicals is required the learner must possess the appropriate certificates.</p>
Learning Outcomes (1 to 12) <i>The learner will</i>	Assessment Criteria (1.1 to 12.4) <i>The learner can</i>
1. Plan the control of pests, diseases and disorders	<p>1.1 Develop suitable plans for the control of pests, disease and disorders. The plans should specify the following</p> <ul style="list-style-type: none"> • control method(s) to be used (chemical, biological and/or cultural) • timing • individuals involved • health and safety requirements • environmental protection measures <p>To take account of the following criteria</p> <ul style="list-style-type: none"> • crop • cropping area • problem • market requirements <p>1.2 Present plans clearly to the appropriate people</p>

<p>2. Be able to monitor the control of pests, diseases and disorders</p>	<p>2.1 Establish methods, timing and frequency of monitoring to determine the presence of pests, diseases and disorders</p> <p>2.2 Gather accurate monitoring information relating to the presence of pests, diseases and disorders at appropriate intervals</p> <p>2.3 Accurately interpret all available information to identify the extent of the pest population, disease, disorders and biological controls</p>
<p>3. Be able to manage the control of pests, diseases and disorders</p>	<p>3.1 Confirm that the selected control methods are in accordance with legislative requirements</p> <p>3.2 Implement at least two control methods in ways which minimise the risks to non-target species and the environment</p> <ul style="list-style-type: none"> • chemical • biological • cultural <p>3.3 Take appropriate actions without delay should problems arise during pest, disease and disorder control</p> <p>3.4 Evaluate accurately the use of control method and amend activities if necessary</p>
<p>4. Be able to keep appropriate records</p>	<p>4.1 Keep all relevant records up to date, accurate, legible and complete</p>
<p>5. Be able to promote health and safety and environmental good practice</p>	<p>5.1 Work in a way which promotes health and safety, is consistent with relevant legislation, codes of practice and any additional requirements</p> <p>5.2 Ensure work is carried out in a manner which minimises environmental damage</p> <p>5.3 Manage and dispose of waste in accordance with legislative requirements and codes of practice</p>
<p>6. Be able to maintain and use relevant equipment</p>	<p>6.1 Ensure equipment is prepared, used and maintained in a safe and effective condition throughout</p>

<p>7. Understand how to plan for the control of pests, diseases and disorders</p>	<p>7.1 Explain the importance of developing plans for the control of pests, diseases and disorders and why they should cover the following</p> <ul style="list-style-type: none"> • control method(s) to be used (chemical, biological and/or cultural) • timing • individuals involved • health and safety requirements • environmental protection measures <p>7.2 Explain the ways in which the plans should be communicated covering both written and spoken</p> <p>7.3 Explain all the planning criteria to be considered when developing plans</p> <ul style="list-style-type: none"> • crop • cropping area • problem • market requirements
<p>8. Understand how to monitor the control of pests, diseases and disorders</p>	<p>8.1 Explain how to assess the risks associated with monitoring and controlling pests, diseases and disorders</p> <p>8.2 Explain how to identify pests, diseases and disorders, the significance of their presence on crop(s) and the problems they cause</p> <p>8.3 Explain integrated pest management and its advantages and disadvantages</p> <p>8.4 Explain the effects of season and weather conditions on monitoring pest populations and how monitoring methods can be adjusted to take account of these changes</p> <p>8.5 Explain the reasons for monitoring pest populations and the importance of developing suitable plans for their control</p>
<p>9. Understand the records required for managing the control of pests, diseases and disorders</p>	<p>9.1 Explain the records required and their importance</p>
<p>10. Understand the control of pests, diseases and disorders</p>	<p>10.1 Explain how to assess the health and safety risks related to controlling pests, diseases and disorders</p>

	<p>10.2 Explain different methods for controlling pests, diseases and disorders and the problems which may occur and the action to be taken covering</p> <ul style="list-style-type: none"> • chemical • biological • cultural <p>10.3 Explain the safe and effective handling of chemicals and the dangers and emergency treatments</p> <p>10.4 Explain how to prolong the effective life of chemicals</p>
<p>11. Understand the reasons for maintaining equipment</p>	<p>11.1 Explain the importance and methods of maintaining equipment for use</p>
<p>12. Understand relevant health and safety legislation and environmental good practice</p>	<p>12.1 Summarise current health and safety legislation, codes of practice and any additional requirements</p> <p>12.2 Describe the possible environmental damage that could occur and how to respond appropriately</p> <p>12.3 Explain the correct and appropriate methods for disposing of waste</p> <p>12.4 Explain the records required for management and legislative purposes and the importance of maintaining them</p>
<p>Mapping to National Occupational Standards 029NCU80.1,2</p>	

Unit Title	HC126-C3 Prepare and apply pesticides
Level	3
Credit Value	7
Guided Learning Hours	46
Unit Summary	<p>The aim of this unit is to provide the learner with the knowledge, understanding and skills required for preparing for the application of pesticides, applying pesticides in accordance with instructions and legislation</p> <p>To comply with legislation the learner must hold the relevant Certificate of competence for each situation in which they wish to apply pesticides</p>
Learning Outcomes (1 to 11) <i>The learner will</i>	Assessment Criteria (1.1 to 11.1) <i>The learner can</i>
1. Understand how to prepare for pesticide application	<p>1.1 Explain the significance of the product labels and the information included</p> <p>1.2 Compare the appropriateness of specific pesticide products for the work</p> <p>1.3 Explain who and how people will be informed of the work plan</p> <p>1.4 Explain how to calibrate equipment</p> <p>1.5 Explain how to calculate the amount of pesticide required</p> <p>1.6 Describe procedures to be considered when preparing the pesticide product</p> <ul style="list-style-type: none"> • transportation • storage • disposal • emergency procedures • incident reporting

	<p>1.7 Describe the environmental conditions which are required for the work to be carried out and the affect which these conditions have on the operations</p> <p>1.8 Describe the necessary growth stage of the plants for treatment to take place</p> <p>1.9 Explain how to transport, store and dispose of pesticides and containers safely and correctly</p>
<p>2. Understand how to apply pesticides</p>	<p>2.1 Explain the safe handling and use of pesticides</p> <p>2.2 Explain the methods of applying pesticides</p> <p>2.3 Explain the correct operation of the applicator</p> <p>2.4 Explain the relevance of risk assessment to the application, including the importance of buffer zones</p> <p>2.5 Explain the problems which may occur and how to respond to these effectively covering</p> <ul style="list-style-type: none"> • spillage • contamination of equipment and non-target areas • malfunction of equipment • adverse effects on non-target species • changes in conditions which reflect on the relevance of the work plan • emergency <p>2.6 Assess the dangers and emergency treatments associated with the use of pesticides</p>
<p>3. Understand how to carry out post-application procedures</p>	<p>3.1 Describe the ways in which surplus product and washings must be used or disposed of</p> <p>3.2 Explain how to dispose of, or clean and decontaminate personal protective equipment, including; gloves, face shields, boots and overalls`</p>
<p>4. Understand the reasons for maintaining equipment</p>	<p>4.1 Explain the importance of maintaining equipment for use</p> <p>4.2 Describe the selection and use of personal protective equipment and ancillary equipment</p> <p>4.3 Explain how to clean and store the application equipment and clear the site</p>

<p>5. Understand relevant health and safety legislation and environmental good practice</p>	<p>5.1 Summarise current health and safety legislation, codes of practice and any additional requirements</p> <p>5.2 Assess the health and safety, and environmental risks in the methods of controlling pests</p> <p>5.3 Describe the possible environmental damage that could occur and how to respond appropriately</p> <p>5.4 Explain the correct and appropriate methods for disposing of waste</p> <p>5.5 Explain the reasons for washing hands and maintaining personal hygiene</p> <p>5.6 Explain the records required for management and legislative purposes and the importance of maintaining them</p>
<p>6. Be able to prepare for pesticide application</p>	<p>6.1 Transport and store pesticides and containers according to legislation and the plan</p> <p>6.2 Confirm that the product is appropriate for the work</p> <p>6.3 Confirm that the application complies with the conditions of approval</p> <p>6.4 Calculate the minimum application rate to achieve the desired level of control</p> <p>6.5 Select a suitable site for preparation</p> <p>6.6 Take action to minimise any risks and keep the appropriate people fully informed according to instructions</p> <p>6.7 Confirm that the environmental conditions are appropriate for the work to be carried out</p> <p>6.8 Confirm that the necessary procedures have been put in place</p>
<p>7. Be able to apply pesticides</p>	<p>7.1 Use the correct preparation procedures in accordance with instructions</p> <p>7.2 Apply the pesticide in a way which minimises the risks to non-target species and the environment in accordance with instructions and legislative requirements</p>

	<p>7.3 Take the appropriate action without delay if problems arise during the work</p>
<p>8. Be able to carry out post-application procedures</p>	<p>8.1 Utilise or dispose of surplus product according to legislation, instructions and codes of practice</p> <p>8.2 Dispose of containers and unwanted personal protective equipment safely and correctly</p> <p>8.3 Clean, decontaminate, store and where necessary dispose, personal protective equipment correctly</p>
<p>9. Be able to maintain and use relevant equipment</p>	<p>9.1 Ensure equipment is prepared, used and maintained in a safe and effective condition throughout</p> <p>9.2 Clean the application equipment and clear the site thoroughly</p> <p>9.3 Confirm that personal protective equipment is in good condition, the correct size and suitable for the work</p>
<p>10. Be able to promote health and safety and environmental good practice</p>	<p>10.1 Work in a way which promotes health and safety, is consistent with relevant legislation, codes of practice and any additional requirements</p> <p>10.2 Ensure work is carried out in a manner which minimises environmental damage</p> <p>10.3 Manage and dispose of waste in accordance with legislative requirements and codes of practice</p> <p>10.4 Maintain personal hygiene throughout</p>
<p>11. Be able to maintain accurate records</p>	<p>11.1 Provide clear and accurate information for recording purposes</p>
<p>Mapping to National Occupational Standards 029NCU81</p>	

Unit Title	HC132-C2 Prepare to undertake and report on a field survey
Level	2
Credit Value	4
Guided Learning Hours	40
Unit Summary	The aim of this unit is to provide the learner with the knowledge and understanding required to conduct a basic survey relating to the natural environment (on land or at sea). The unit covers the different survey techniques and the reporting techniques for the surveys
Learning Outcomes (1 to 2) <i>The learner will</i>	Assessment Criteria (1.1 to 2.5) <i>The learner can</i>
1. Know how to collect and record data for field surveys	<p>1.1 Outline how to collect and record data for three of the following field surveys</p> <ul style="list-style-type: none"> • plants • animals • people • physical features • habitat types • access networks <p>1.2 State the role and responsibilities in relation to survey activities</p> <p>1.3 Outline the range of survey techniques available, their advantages and disadvantages and principles of use.</p> <p>1.4 Describe primary and secondary sources of data, their advantages and disadvantages and principles of use</p> <p>1.5 Describe effective means of recording the data collected</p> <p>1.6 Describe the actions to take if there is difficulty in obtaining data</p> <p>1.7 Describe the environmental importance of the field survey area(s) and the potential impact of work on the site</p>

	<p>1.8 Describe actions that may be necessary in cases of incidental damage to habitat, wildlife and landscape</p>
<p>2. Know how to report on field surveys</p>	<p>2.1 Outline the required content of a report</p> <p>2.2 Describe different ways of presenting information in a way appropriate to the intended user</p> <p>2.3 Describe potential uses of field survey reports</p> <p>2.4 Outline different methods of communicating clearly</p> <p>2.5 Specify the timescale within which reporting must take place and the reasons for this</p>
<p>Mapping to National Occupational Standards O29NEC2.1&2.2 (knowledge)</p>	