SEG Awards Level 2 Award and Certificate in Practical Environmental and Conservation Skills

Qualification Guidance

England
Level 2 Award – 500/9740/4
Level 2 Certificate – 500/9766/0

Version 9.5
Jan 2026

About Us

At the Skills and Education Group Awards we continually invest in high quality qualifications, assessments and services for our chosen sectors. As a UK leading sector specialist we continue to support employers and skills providers to enable individuals to achieve the skills and knowledge needed to raise professional standards across our sectors.

Skills and Education Group Awards has an on-line registration system to help customers register learners on its qualifications, units and exams. In addition it provides features to view exam results, invoices, mark sheets and other information about learners already registered.

The system is accessed via a web browser by connecting to our secure website using a username and password: https://ors.skillsandeducationgroupawards.co.uk/

Sources of Additional Information

The Skills and Education Group Awards website www.skillsandeducationgroupawards.co.uk provides access to a wide variety of information.

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Specification Code, Date and Issue Number

The specification code is A9016-02 and C9016-02

Version	Date	Details of change
9.2	August 2021	Qualification guide created in new format
9.2	August 2021	New review date
9.3	July 2023	Operational end date and certification end date set for Level 2 Certificate
9.4	July 2025	Revised review date
9.5	January 2026	Revised review date

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Qualification Summary

SEG Awards Level 2 Award in Practical Environmental and Conservation Skills

Qualification	Level 2 Award in Practical Environmental and Conservation Skills							
Qualification Purpose	**B.** Prepare for further learning or training and/or develop knowledge and/or skills in a subject area Sub Purpose **B1.** Prepare for further learning or training, **B2.** Develop knowledge and/or skills in a subject area							
Entry Requirements	14+							
Age Range	Pre 16	✓	16-18	✓	18+	✓	19+	✓
Regulated	The above identified qualification is regulated by Ofqual and Qualifications Wales.							
Assessment	Internal assessment, internal and external moderation							
Type of Funding Available	See FaLE (Find a learning aim)							
Grading	Pass/Fail							
Operational Start Date	01/06/2010							
Review Date	31/08/2029							
Operational End Date								
Certification End Date								
Guided Learning (GL)	85 hours							
Total Qualification Time (TQT)	110 hours							
Credits	11 credits							
Skills and Education Group Awards Sector	Land Based							
Ofqual SSA Sector	03.4 Environmental Conservation							
Stakeholder Support	These qualifications are supported by Lantra, the Sector Skills Council for the Environmental and Land Based Sector							
Administering Office	See Skills and Education Group Awards website							

Level 2 Award in Practical Environmental and Conservation Skills

Rules of Combination: To achieve the Level 2 Award in Practical Environmental and Conservation Skills learners must achieve a minimum of 11 credits. This must include 3 credits from Group A, (mandatory unit) plus a minimum of 8 credits from Group B and/or Group C (optional units). A maximum of one unit can be chosen from Group C. A minimum of 6 credits must be at Level 2.

Unit	Level	Credit Value	GL
Group A Mandatory Unit			
Monitoring and maintaining health and safety [Y/501/6353]	2	3	23
Group B Optional Units			
Practical skills for grassland areas [F/501/4886]	1	5	40
Practical skills for woodland areas [J/501/4887]	1	6	40
Practical skills for coastal areas [L/501/4888]	1	4	40
Practical skills for pond and wetland areas [R/501/4889]	1	5	40
Practical skills for hedgerows [J/501/4890]	1	5	40
Prepare and erect post and timber fencing [L/501/4891]	1	4	40
Practical skills for dry stone walls [Y/501/4893]	1	6	40
Practical skills for footpath and surfacing work [D/501/4894]	1	5	40
Practical skills for bio swales [J/504/4469]	1	6	60
Practical skills for eco grass swales [F/504/4468]	1	4	40
Practical skills for eco mulch swales [A/504/4470]	1	4	40
Practical skills for floating reed beds [F/504/4471]	1	5	40
Practical skills for grassland areas [M/602/1973]	2	6	51
Practical skills for woodland areas [A/602/1975]	2	6	51
Practical skills for coastal areas [L/602/1978]	2	5	43
Practical skills for pond and wetland areas [L/602/1981]	2	6	51
Practical skills for hedgerows [H/602/1985]	2	6	51
Prepare and erect strained wire fencing [A/601/8803]	2	5	38
Practical skills for footpath and surfacing work [H/602/1999]	2	6	53
Practical skills for steps and gates [H/501/7232]	2	6	30

Practical skills for dry stone walling [H/503/2801]	2	4	30
Practical skills for effluent cleansing reed beds [J/504/4472]	2	6	60
Practical skills for naturalised reed beds [L/504/4473]	2	6	60
Access and security in the countryside [J/602/2000]	2	5	43
Load and unload physical resources within the work area [J/502/1421]	2	2	15
Transport physical resources within the work area [J/502/1404]	2	2	15
Installing drainage systems [D/502/1229]	2	3	23
Maintain drainage systems [T/502/1222]	2	3	23
Maintain equipment and machines [L/502/1520]	2	4	30
Excavate and form foundations for fencing [T/501/7042]	2	3	23
Collect, sort and process materials for recycling [A/502/3182]	2	3	23
Prepare sites to create habitats [Y/502/3237]	2	3	23
Manage vegetation by coppicing [J/600/2653]	2	4	30
Manage vegetation by cutting/mowing [H/600/2658]	2	4	30
Manage vegetation by felling [T/600/2678]	2	4	30
Manage vegetation by hedge maintenance [T/600/2681]	2	4	30
Manage vegetation by mulching [F/600/2683]	2	4	30
Manage vegetation by spraying [J/600/2684]	2	4	30
Manage vegetation by thinning [H/600/2689]	2	4	30
Manage vegetation by uprooting [H/600/2692]	2	4	30
Manage vegetation by pruning [J/600/2698]	2	4	30
Group C Optional Units			
Team work in environmental studies [M/501/4883]	1	3	30
Maintain and develop personal performance [F/502/1689]	2	2	15
Establish and maintain effective working relationships with others [T/502/1690]	2	2	15
Communicate with the public and others [L/600/2699]	2	3	23
Work with and consult the local community [L/502/3168]	2	3	23
Encourage involvement in recycling [H/502/3189]	2	3	23
Promote responsible public use of the environment [H/502/3161]	2	4	30
Involve people in community recycling [T/502/3231]	3	3	19
Implement environmental good practice at work [Y/502/3285]	3	4	26

If learners achieve credits from units of the same title (or linked titles) at more than one level, they cannot count credits achieved from both units towards the credit target of a qualification.

Qualification Summary

SEG Awards Skills and Education Group Awards Level 2 Certificate in Practical Environmental and Conservation Skills

Qualification	Level 2 Certificate in Practical Environmental and Conservation Skills							
Qualification Purpose	**B**. Prepare for further learning or training and/or develop knowledge and/or skills in a subject area **B1**. Prepare for further learning or training, B2. Develop knowledge and/or skills in a subject area							
Entry Requirements	14+							
Age Range	Pre 16	✓	16-18	✓	18+	✓	19+	✓
Regulated	The above identified qualification is regulated by Ofqual							
Assessment	Internal assessment, internal and external moderation							
Type of Funding Available	See FaLE (Find a learning aim)							
Grading	Pass/Fail							
Operational Start Date	01/06/2010							
Review Date	31/08/2025							
Operational End Date	**31/12/2023**							
Certification End Date	**31/12/2024**							
Guided Learning (GL)	150 hours							
Total Qualification Time (TQT)	200 hours							
Credits	20 credits							
Skills and Education Group Awards Sector	Land Based							
Ofqual SSA Sector	03.4 Environmental Conservation							
Stakeholder Support	These qualifications are supported by Lantra, the Sector Skills Council for the Environmental and Land Based Sector							
Administering Office	See Skills and Education Group Awards website							

Level 2 Certificate in Practical Environmental and Conservation Skills

Rules of Combination: To achieve the Level 2 Certificate in Practical Environmental and Conservation Skills learners must achieve a minimum of 20 credits. This must include 6 credits from Group A, (mandatory units) plus a minimum of 14 credits from Group B and/or Group C (optional units). A maximum of two units can be chosen from Group C. A minimum of 12 credits must be at Level 2.

Unit	Level	Credit Value	GL
Group A Mandatory Unit			
Monitoring and maintaining health and safety [Y/501/6353]	2	3	23
Team work in environmental studies [M/501/4883]	1	3	30
Group B Optional Units			
Practical skills for grassland areas [F/501/4886]	1	5	40
Practical skills for woodland areas [J/501/4887]	1	6	40
Practical skills for coastal areas [L/501/4888]	1	4	40
Practical skills for pond and wetland areas [R/501/4889]	1	5	40
Practical skills for hedgerows [J/501/4890]	1	5	40
Prepare and erect post and timber fencing [L/501/4891]	1	4	40
Practical skills for dry stone walls [Y/501/4893]	1	6	40
Practical skills for footpath and surfacing work [D/501/4894]	1	5	40
Practical skills for bio swales [J/504/4469]	1	6	60
Practical skills for eco grass swales [F/504/4468]	1	4	40
Practical skills for eco mulch swales [A/504/4470]	1	4	40
Practical skills for floating reed beds [F/504/4471]	1	5	40
Practical skills for grassland areas [M/602/1973]	2	6	51
Practical skills for woodland areas [A/602/1975]	2	6	51
Practical skills for coastal areas [L/602/1978]	2	5	43
Practical skills for pond and wetland areas [L/602/1981]	2	6	51
Practical skills for hedgerows [H/602/1985]	2	6	51
Prepare and erect strained wire fencing [A/601/8803]	2	5	38
Practical skills for footpath and surfacing work [H/602/1999]	2	6	53
Practical skills for steps and gates [H/501/7232]	2	6	30

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Practical skills for effluent cleansing reed beds [J/504/4472]	2	6	60
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Transport physical resources within the work area [J/502/1404]	2	2	15
Installing drainage systems [D/502/1229]	2	3	23
Maintain drainage systems [T/502/1222]	2	3	23
Maintain equipment and machines [L/502/1520]	2	4	30
Excavate and form foundations for fencing [T/501/7042]	2	3	23
Collect, sort and process materials for recycling [A/502/3182]	2	3	23
Prepare sites to create habitats [Y/502/3237]	2	3	23
Manage vegetation by coppicing [J/600/2653]	2	4	30
Manage vegetation by cutting/mowing [H/600/2658]	2	4	30
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Manage vegetation by spraying [J/600/2684]	2	4	30
Manage vegetation by thinning [H/600/2689]	2	4	30
Manage vegetation by uprooting [H/600/2692]	2	4	30
Manage vegetation by pruning [J/600/2698]	2	4	30
Group C Optional Units			
Maintain and develop personal performance [F/502/1689]	2	2	15
Establish and maintain effective working relationships with others [T/502/1690]	2	2	15
Communicate with the public and others [L/600/2699]	2	3	23
Work with and consult the local community [L/502/3168]	2	3	23
Encourage involvement in recycling [H/502/3189]	2	3	23
Promote responsible public use of the environment [H/502/3161]	2	4	30
Involve people in community recycling [T/502/3231]	3	3	19
Implement environmental good practice at work [Y/502/3285]	3	4	26

If learners achieve credits from units of the same title (or linked titles) at more than one level, they cannot count credits achieved from both units towards the credit target of a qualification.

Introduction

The Level 2 Award and Certificate in Practical, Environmental and Conservation Skills have been developed in collaboration with industry, providers and Lantra. They are designed to provide learners with an understanding of environmental conservation, together with practical skills that can be used in the workplace. Successful completion will therefore provide a firm basis for a career in this area and should also lead to improved employment prospects.

Aims

The Skills and Education Group Awards Level 2 Award and Certificate in Practical, Environmental and Conservation Skills aim to provide:

- An understanding of what working in environmental conservation involves;
- Practical skills and knowledge relevant to environmental conservation
- A responsible attitude to Health and Safety at work, hygiene and general working conditions
- An interest in returning to study and progressing onto further courses
- Skills to improve future job prospects

Learners will need to demonstrate that they have achieved the required knowledge and understanding of the work activities and can also carry them out to a competent standard.

Target Group

This qualification is designed for:

- Learners from a wide variety of backgrounds, including 14-16 year olds, who wish to obtain a practical qualification in environmental conservation through vocational study
- School-leavers who are keen to undertake a more practical qualification and do not wish to spend the majority of the time in a "formal" classroom situation
- Mature candidates who are returning to study, particularly for people working in conservation, conservation projects, wildlife schemes, rehabilitation, regeneration of rare species, creation of habitat, enclosures, boundaries, wildlife corridors as well as creation of access to view and enjoy

Skills and Education Group Awards expects approved centres to recruit with integrity on the basis of a learner's ability to contribute to and successfully complete all the requirements of a unit/s or the full qualification.

Progression Opportunities

This Level 2 qualification is designed to offer a progression route for learners who successfully complete SEG Awards Skills and Education Group Awards's Level 1 Certificate in Practical Environmental and Conservation Skills, into paid or voluntary employment or progress into an Apprenticeship in the sector.

Centres should be aware that Reasonable Adjustments which may be permitted for assessment may in some instances limit a learner's progression into the sector. Centres must, therefore, inform learners of any limits their learning difficulty may impose on future progression

Assessment

Internal assessment, external assessment, internal and external moderation. Specific requirements and restrictions may apply to individual units within qualifications. Please check unit and qualification details for specific information.

Teaching Strategies and Learning Activities

Centres should adopt a delivery approach which supports the development of all individuals. The aims and aspirations of all the learners, including those with identified special needs or learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Language

These specifications and associated assessment materials are in English only.

Unit Details

Monitoring and Maintaining Health and Safety

Unit Reference	**Y/501/6353**
Level	**2**
Credit Value	**3**
Guided Learning Hours	**23**
Unit Summary	The aim of this unit is to provide the learner with the knowledge, understanding and skills required to maintain a healthy and safe working environment under minimal guidance or direction. Learners should be familiar with the health and safety policy and understand their responsibilities under the policy
Learning Outcomes (1 to 9) ***The learner will***	**Assessment Criteria (1.1 to 9.4)** ***The learner can***
1. Be able to maintain health, safety and security in the workplace	**1.1** Identify health and safety risks in relation to the workplace covering the following • people • equipment and materials • the work area **1.2** Carry out specified measures to control risks and keep the appropriate people fully informed **1.3** Seek guidance on measures to control unfamiliar risks arising from non-routine work situations **1.4** Relay health and safety information to others in a manner likely to be understood **1.5** Take the appropriate action without delay as soon as an emergency is suspected

	1.6 Dispose of hazardous and non-hazardous waste safely and appropriately **1.7** Maintain the security of the workplace in accordance with organisational requirements
2. Be able to use equipment and materials safely	**2.1** Use equipment and materials in accordance with manufacturers' instructions and any training provided **2.2** Transport any equipment and materials safely and store them correctly at an approved location when not in use
3. Know the systems and procedures for maintaining health, safety and security	**3.1** State the organisational requirements with regard to ensuring the security of the workplace **3.2** Describe the roles and responsibilities for health and safety in the workplace under organisational policy and legislation **3.3** State why inadequate measures to control risks should be reported **3.4** Describe procedures for different types of emergencies appropriate to the relevant industry **3.5** Explain how the procedures for specific emergencies maybe affected by location **3.6** Describe the different types of fire extinguishers and their use, relevant to the work area **3.7** Describe the different forms of waste and appropriate methods of disposal **3.8** Explain the relationship between security and safety within the workplace

	3.9 List any specific risks relevant to child safety in the workplace **3.10** State why accidents should be reported and to whom
4. Understand why equipment is transported and stored safely	**4.1** Explain how to transport and store equipment and materials safely
5. Know the reason for following manufacturers' guidance	**5.1** State the importance of following manufacturers' and organisational training instructions and the potential consequences and risks of not doing so
6. Be able to maintain good standards of health and safety for self and for others	**6.1** Supply the necessary personal medical information in accordance with organisational requirements **6.2** Use and care for the correct personal protective equipment and clothing necessary for work **6.3** Use an approved method of handling when moving and lifting items **6.4** Use the appropriate personal and workplace hygiene at all times **6.5** Provide accurate information about location so that contact can be made if necessary **6.6** Work in a way which minimises **risk** to self, others and the environment **6.7** Take appropriate action where incidents affect the health and safety of workers

	6.8 Report incidents without delay and complete records accurately, legibly and completely
7. Understand how to maintain the health and safety of self and others	**7.1** Explain own roles in maintaining health and safety **7.2** Explain the reasons for leaving information about location when working in isolation or in remote areas **7.3** Explain why accidents should be reported without delay and recorded in the appropriate document **7.4** Explain the methods of minimising environmental damage during work
8. Know the safe lifting techniques	**8.1** Describe the safe methods for moving and lifting items
9. Know how to maintain health and safety	**9.1** Describe the reasons for maintaining good personal and workplace hygiene **9.2** State own limitations in dealing with health and safety emergencies (e.g. not carrying out actions beyond capabilities) **9.3** Describe basic emergency first aid procedures **9.4** Describe the types of personal protective equipment and clothing suitable for the tasks and how they must be used, cleaned, stored, inspected and replaced
Mapping to National Occupational Standards CU 2.1, 2.2	

Supporting Unit Information

Y/501/6353 Monitoring and maintaining health and safety - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number on the left e.g. LO1.3

Note 2: The example of Monitoring and maintaining Health and Safety in this case will be in the workplace. Activities need to follow this example

LO1, LO2 and LO6 are the key areas of competence for this unit

LO3, LO4, LO5, LO7, LO8 and LO9 are the key areas of knowledge for this unit

Learning Outcome 1. Maintain health, safety and security in the workplace

1.1 Identify health and safety risks in relation to the workplace covering people e.g. Injuries, Slips trips and falls, moving plant and machinery, industrial injuries, manual handling, dust and noise. **Equipment and materials** e.g. operator trained, correct tools for task, checks in place, COSSH and the **work area** e.g. moving vehicles, underground and overhead services, confined spaces, and ground conditions. Also refer to satisfying contractual requirements if appropriate.

1.2 Carry out specified measures to control risks and keep the appropriate people fully informed Implement some of the above in L.O.1.1. Carry out activities involving third parties such as other departments or organisations and gaining permissions or authorisations to undertake tasks

1.3 Seek guidance on measures to control unfamiliar risks arising from non-routine work situations e.g. Risk Assessments, works

instructions and guidance from person in charge of workplace such as a supervisor.

1.4 Relay health and safety information to others in a manner likely to be understood Refer to L.O.3 and demonstrate that the above has been relayed in timely manner and within the regulations and policies of the organisation, ensuring legal compliance at all times.

1.5 Take the appropriate action without delay as soon as an emergency is suspected Take action within current health and safety guidelines e.g. report to an appropriate person

1.6 Dispose of hazardous and non-hazardous waste safely and appropriately Identify organic and inorganic waste and dispose of in correct manner. Store in suitable containers and use licensed carriers where appropriate

1.7 Maintain the security of the workplace in accordance with organisational requirements e.g. visitors to site accompanied, security fencing intact, tools stored correctly, vehicles and premises secure - and follow organisational requirements.

Learning Outcome 2. Be able to use equipment and materials safely

2.1 Use equipment and materials in accordance with manufacturers' instructions and any training provided Use equipment and materials and follow manufactures instructions referring to correct usage, regular checking of equipment to check efficiency and checking the use of materials refer to guidance e.g. cement (correct PPE used and all precautions in place) e.g. gloves, eye protection, safety boots.

2.2 Transport any equipment and materials safely and store them correctly at an approved location when not in use e.g. pre-transport checks, consider load, method of transportation, safe routes, no cross contamination and undertake PUWER check. Ensure equipment and materials are in the designated area when stored

Learning Outcome 3. Know the systems and procedures for maintaining health, safety and security

3.1 State the organisational requirements regarding ensuring the security of the workplace e.g. Health and Safety e.g. Management of Health & Safety at Work Regulations, Codes of Practice. Additional requirements including, correct signage, work area isolated and no unauthorised access. Fencing ,barriers, signing in procedures

3.2 Describe the roles and responsibilities for health and safety in the workplace under organisational policy and legislation e.g. HASAWA, PUWER,COSHH

3.3 State why inadequate measures to control risks should be reported e.g. safety of staff and others, maintain maximum performance of equipment and to prevent damage to equipment and the environment

3.4 Describe procedures for different types of emergencies appropriate to the relevant industry e.g. Fire, Employee injury, power cut - Evacuation, deal with patient or activating emergency supply

3.5 Explain how the procedures for specific emergencies may be affected by location e.g. indoors, outdoors, weather, temperature, visibility, noise

3.6 Describe the different types of fire extinguishers and their use, relevant to the work area e.g. Water, Foam, Powder, Carbon Dioxide

3.7 Describe the different forms of waste and appropriate methods of disposal Refer to LO 1.5

3.8 Explain the relationship between security and safety within the workplace Refer to LO 1.6 and explain the relationship e.g. good security ensures a safer workplace

3.9 List any specific risks relevant to child safety in the workplace e.g. children may not be able to read and understand signs

3.10 State why accidents should be reported (legal requirement) **to and whom** (supervisor or person in charge) e.g. see LO 3.3 and refer to RIDDOR and legal requirements.

Learning Outcome 4. Understand why equipment is transported and stored safely

4.1 Explain how to transport and store equipment and materials safely (e.g. Refer to LO2.2)

Learning Outcome 5. Know the reason for following manufacturers guidance

5.1 State the importance of following instructions and potential risks and consequences of not doing so e.g. actions beyond capability could lead to accidents, injury to personnel, damage to property, equipment or the environment.

Learning Outcome 6. Be able to maintain good standards of health and safety for self and for others

6.1 Supply the necessary personal medical information in accordance with organisational requirements e.g. supply as requested , results of any health screening

6.2 Use and care for the correct PPE and clothing necessary for work e.g. correct storage, regular checks to ensure compliance, report any damage or faults to appropriate person in charge

6.3 Use an approved method of handling when moving and lifting items e.g. correct methods demonstrated, training undertaken and kept updated, selection of correct aids and equipment to reduce manual handling, trucks, trolleys etc

6.4 Use the appropriate personal and workplace hygiene at all times e.g. demonstrate washing of hands, cleaning of contaminated PPE

6.5 Provide accurate information about location so contact can be made if necessary e.g. work plans, emergency plans, mobile phone number report in time of arrival at site and time of leaving, consider lone working policy if applicable

6.6 Work in a way that minimises risk to self, others and the environment e.g. follow instructions, refer to LO 1.1, stop work if any unsafe act seen

6.7 State why it is important to report incidents without delay and complete records accurately, legibly and completely e.g. refer to LO 3.3

Learning outcome 7. Understand how to maintain health and safety of self and others

7.1 Explain own roles in maintaining health and safety e.g. refer to own role and the fact all are responsible for Health and Safety, refer to organisational policy

7.2 Explain the reason for leaving information about location when working in isolation or in a remote area e.g. refer to lone worker policy, refer to need to get emergency services quickly on site if incident occurred, refer to tasks that legally require information relayed such as confined space entry

7.3 Explain why accidents should be reported without delay and recorded on the appropriate document e.g. ensures correct information is recorded, helps to prevent an occurrence, avoids confusion in future if subject to further investigation - refer to LO3.3 and LO6.7

7.4 Explain the methods of minimising environmental damage during work e.g. correct equipment used, preventative measures in place, disposal of waste in correct manner, spill mats ,absorbent cloths, drip trays etc - refer to LO1.5

Learning Outcome 8. Know the safe lifting techniques

8.1 Describe the safe methods for moving and lifting items e.g. refer to Load, Individual Capability, Task and Environment - refer to LO6.3

Learning Outcome 9. Know how to maintain health and safety

9.1 Describe the reason for maintaining good personal and workplace hygiene - refer to AC 6.4

9.2 State own limitations in dealing with Health and Safety emergencies (e.g. undertaking actions beyond your own capability could lead to injury to persons or damage to equipment and environment) refer to LO3.3, LO6.7, LO7.3.

9.3 Describe basic first aid procedures (e.g. how to deal with a minor injury, cuts, bruises slips trips, falls etc. who to inform and why)

9.4 Describe the types of PPE and how they must be used, cleaned, stored. inspected and replaced refer to LO 's 2.1 and 6.2

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes (LO)1,2and 6

Delivery of these learning outcomes is by supervised practical operational work giving learners the opportunity, first to practice the various tasks involved in monitoring and maintaining health and safety and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria and therefore competence.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

Learning Outcomes (LO) 3,4,5,7,8 and 9

Delivery of this learning outcomes is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of operational work and witness testimony, answering oral or written questions, assignments or internet research cross referenced to the knowledge evidence.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Centres will need to devise assessment tasks which should be practical where possible e.g. Learning Outcomes 1, 2 and 6 link together and competence can be assessed practically by observation or by generation of diverse evidence. These could also link to Learning Outcomes 3 , 4,5,7,8 and 9 to allow knowledge evidence to be gathered during the practical activities

It is important that practical assessment activities are supervised appropriately.

Minimum requirements when assessing this unit
Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)

- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

Useful sources of reference

- The Health and Safety Executive website http://www.hse.gov.uk/ has useful information about identifying what health and safety legislation applies to areas of work and lists of Acts, Statutory instruments and legal publications
- The Office of Public Information website http://www.opsi.gov.uk has year by year lists of UK Acts and Statutory Instruments
- The website http://www.netregs.gov.uk/ provides helpful guidance about environmental regulations
- The Provision and Use of Work Equipment Regulations PUWER. All plant or equipment used at work, either in the office or in the field, comes under PUWER.

See Skills and Education Group Awards website for further information

Practical Skills for Grassland Areas

Unit Reference	**F/501/4886**
Level	**1**
Credit Value	**5**
Guided Learning Hours	**40**
Unit Summary	This unit explores the steps needed to establish and maintain a new area of wild flower meadow. Learners will be involved in the practical tasks necessary to do this
Learning Outcomes (1 to 4) ***The learner will***	**Assessment Criteria (1.1 to 4.5)** ***The learner can***
1. Be able to prepare new wild flower meadows	**1.1** Contribute, as part of a group activity, to the identification of an area to be established **1.2** Contribute, as part of a group activity, to the identification and reporting of any plant species already present **1.3** Prepare ground for sowing and planting, using appropriate hand tools and/or machinery as necessary
2. Be able to establish new wild flower meadows	**2.1** Introduce plant species **2.2** Use appropriate methods to aid establishment **2.3** Water in as necessary

	2.4 Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition
3. Be able to maintain wildflower meadow(s)/areas	**3.1** Contribute to the identification of an area to be maintained **3.2** Contribute to the identification and reporting of any plant species already present, using simple reference materials **3.3** Carry out hand weeding as instructed **3.4** Cut sward to a specified height at the appropriate time of year, using appropriate hand shears or machinery **3.5** Ensure cutting includes a distribution of seeds **3.6** Repair any environmental damage **3.7** Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition
4. Be able to assist in the eradication of problem plants	**4.1** Contribute to the identification and reporting of all plant species present **4.2** Carry out hand weeding as instructed **4.3** Use hand tools and/or machinery safely where necessary **4.4** Repair any environmental damage **4.5** Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition

Supporting Unit Information

F/501/4886 Practical skills for grassland areas - Level 1

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

Learning Outcome 1. Be able to prepare new wild flower meadows

1.1 Contribute, as part of a group activity, to the identification of an area to be established working as part of a group identify the main site and then focus down to the specific location for the wildflower meadow e.g. using maps or internet maps of the area and then focussing down to job specification or site plan or photograph(s) of site. Agree the main site and specific location with the supervisor, client or land owner. Provide details e.g. annotate copy of site plan to identify why that area was chosen as being suitable - drainage, soil conditions, light etc. Carry out a risk assessment of the area to be established. Take photographs of original site for later comparison.

1.2 Contribute, as part of a group activity, to the identification and reporting of any plant species already present use identification reference material with specific emphasis on a pictorial approach. Develop a plan of the site and use key/coding system to indicate areas/specific locations of species of wild flowers e.g. ox-eye daisy, cowslips buttercup species, forget-me-not species. Also make note of species that might cause trouble later e.g. thistle species, nettles, ragwort, dandelions. Report verbally to supervisor, client or landowner on the species found, using the plan and key/coding system to inform the report.

1.3 Prepare ground for sowing and planting, using appropriate hand tools and/or machinery as necessary cut back existing vegetation

e.g. by strimming/mowing/hand shears. Remove arisings. Prepare ground e.g. remove stones/debris, fork over or use rotary cultivator, rake ground following contours to create suitable tilth for seeds to germinate effectively. Dig out perennial weeds/plants to prevent them from quickly re-establishing - refer to LO1.2. Tools and machinery e.g. hand shears, loppers, spade, fork, rake, brush, wheelbarrow, strimmer, rotary cultivator. PPE - ensure learners are wearing e.g. overalls, steel toe capped footwear, gloves, ear muffs if using machinery, goggles if using strimmer/rotary cultivator. CE marked

Learning Outcome 2. Be able to establish new wild flower meadows.

2.1 Introduce plant species check websites or contact suppliers of British provenance seed stock and list five species that would be suitable for acid or alkaline soils or poor or fertile soils e.g. fertile soil - mix containing annual cornfield flowers such as corn marigold, poppy species, cornflower, corncockle, chamomile, pansy species, etc. Agree with client/landowner plant species mixture that would be suitable for specific location/area. Obtain wildflower meadow seeds e.g. from wholesaler/catalogue/internet.

2.2 Use appropriate methods to aid establishment once area is prepared for sowing e.g. broadcast sow seeds, rake over lightly and firm. Planting can be carried out using a hand trowel e.g. dig planting holes of appropriate depth for plant - avoid planting too shallowly and causing roots to dry out, avoid covering leaves. Protect seeded/planted area e.g. from birds netting or set up bird scarer - or wire netting to keep the rabbits out

2.3 Water in as necessary depending upon weather conditions there may be a need to water to aid establishment e.g. use a watering can with a rose head or it may be possible to use a sprinkler system/irrigation. If the area is far away from the taps it may be possible to obtain water from nearby water courses - avoid stagnant/polluted water

2.4 Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition organic plant arisings e.g. to be recycled by shredding/composting - care not to perpetuate perennial weeds. Inorganic waste - stones, rubbish, plastic. Correct disposal e.g. re-use on site if possible - stones to fill holes/depressions or depending upon access remove using wheelbarrow/bags or place in skip for disposal as instructed by supervisor. Cover safe manual handling and PPE - refer to LO1.3. Clear debris from any areas adjacent to site and clear away all tools and equipment, final brush up of site and then walk around to check it is

safe. Check original photograph against end product to ensure specification met - wildflower meadow established, original trees, shrubs, paths etc. left in good condition

Learning Outcome 3. Know how to maintain wildflower meadow(s)/areas

3.1 Contribute to the identification of an area to be maintained refer to process followed in LO1.1 to identify specific area to be maintained. Annotate on plan of site reasons for area to be maintained. Carry out risk assessment of area to be maintained/activities. Take photographs showing original site to be used later for comparison

3.2 Contribute to the identification and reporting of any plant species already present, using simple reference materials refer to LO1.2. Remember to make note of any species that may need to be controlled to maintain the wildflower meadow

3.3 Carry out hand weeding as instructed weed area specified by supervisor. Pull weeds or remove using hand trowel/fork - ensure perennial weed roots are completely removed - refer to LO2.4. PPE - wear gloves/use knee pads when carrying out hand weeding. Care required to avoid bad posture - strained back, sharp objects, prickles

3.4 Cut sward to a specified height at the appropriate time of year, using appropriate hand shears or machinery agree with client/landowner most appropriate cutting regime e.g. lawn areas which are to be allowed to flower but must be kept looking neat and tidy throughout the season - cut in the early spring using hand shears, strimmer or rotary mower at a high setting - not below 5cm and remove the clippings, leave gap in mowing during May/June to allow flowering then return to regular mowing and removal of clippings. Note - first cut after sowing ideally using sharp hand shears or rotary mower with sharp blades - care not to pull up roots.

3.5 Ensure cutting includes a distribution of seeds seasonality should be taken into account e.g. aim should be to allow flowering to take place and seeds to be set - refer to LO3.4. Once cutting is taking place again the seeds will be distributed during the task being carried out. Remove clippings so that new seedlings are not smothered.

3.6 Repair any environmental damage care needs to be taken not to carry out tasks in adverse weather conditions. If damage has occurred e.g. muddy ground, holes or ruts - fill in, level and re-seed. Any damage to boundaries to be repaired to ensure livestock cannot gain access. Prune any damaged branches or roots to avoid disease

3.7 Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition

refer to LO2.4 in context of removing arisings/debris etc resulting from maintenance activities

Learning Outcome 4. Know how to assist in the eradication of problem plants

4.1 Contribute to the identification and reporting of all plant species present refer to LO1.2 and LO3.2. Report to owner/client/supervisor

4.2 Carry out hand weeding as instructed refer to LO3.3 for hand weeding, also LO4.5

4.3 Use hand tools and/or machinery safely where necessary tools and/or machinery that can be used e.g. hand fork/trowel, hoe, secateurs, loppers, wheelbarrow. Safely e.g. ensure tools are properly maintained - blades sharp, working parts oiled and secure, safe working distances, correct PPE - refer to LO3.3.

4.4 Repair any environmental damage refer to LO3.6

4.5 Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition refer to LO2.4 - particular care not to spread perennial weeds e.g. in compost heaps - burn these if possible

Teaching Strategies

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes (LO)1 and 2

Delivery of these learning outcomes is by supervised practical operational work giving learners the opportunity, first to practice the various tasks and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

Learning Outcomes (LO) 3 and 4

Delivery of these learning outcomes is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of operational work and witness testimony, answering oral or written questions,

assignments or internet research cross referenced to the knowledge evidence.

It is important that practical assessment activities are supervised appropriately

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Minimum requirements when assessing this unit
Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

It is important that practical assessment activities are supervised appropriately.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)

- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Learners should demonstrate that they are able to successfully complete the learning outcomes and apply the related knowledge to different activities and situations, possibly linking with the optional units chosen.

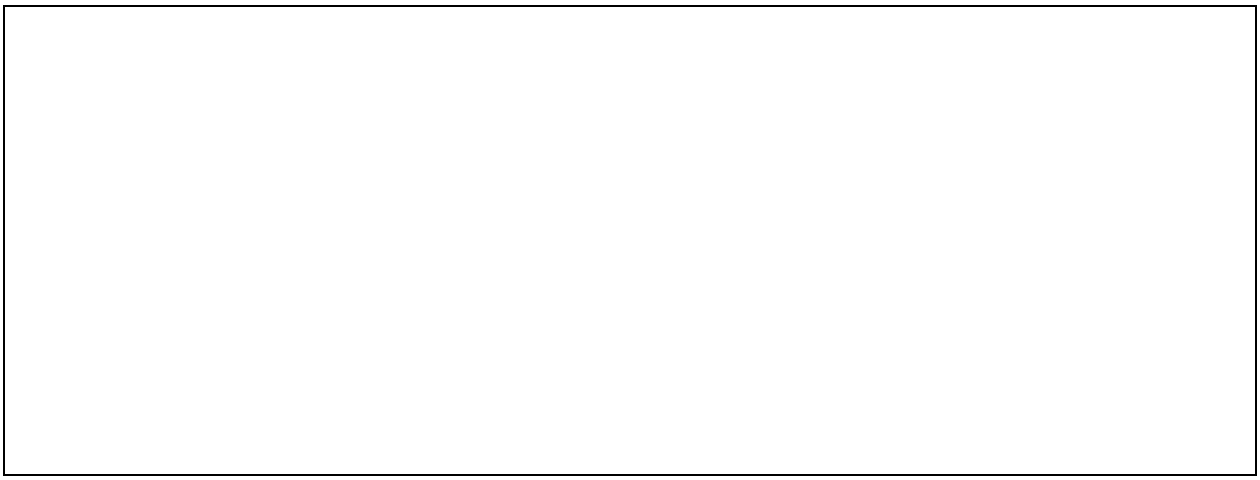
All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

- For pre-16 year olds, powered tools must not be used as per current, relevant legislation
- For post 16, the learners must not use any machinery/equipment unless they and the equipment comply with current, relevant legislation
- All basic Health and Safety relating to the practical tasks in this unit should be explained prior to a demonstration by the tutor/assessor of how to complete the tasks successfully
- It is important to ensure that cutting takes place at the correct time of year e.g. to protect nesting birds/seeding
- In identifying plant species it is be expected that the common name would be stated as a minimum

See Skills and Education Group Awards website for further information



Practical Skills for Woodland Areas

Unit Reference	**J/501/4887**
Level	**1**
Credit Value	**6**
Guided Learning Hours	**40**
Unit Summary	This unit explores the steps needed to establish and maintain woodland areas. Learners will be involved in the practical tasks necessary to do this
Learning Outcomes (1 to 3) ***The learner will***	**Assessment Criteria (1.1 to 3.7)** ***The learner can***
1. Be able to plant woodland areas	**1.1** Contribute to identifying an area in need of planting **1.2** Contribute to identifying and reporting any plant species already present using simple reference materials **1.3** Prepare ground for planting using appropriate hand tools and/or machinery as necessary **1.4** Contribute to identifying and preparing trees to be planted **1.5** Plant trees or transplants / whips **1.6** Use appropriate methods to aid establishment, guards, weed control, support, mulch **1.7** Water in as necessary

	1.8 Repair any environmental damage **1.9** Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition
2. Be able to maintain woodland	**2.1** Contribute to identifying an area of woodland where work is to be carried out **2.2** Contribute to identifying and reporting any plant species for removal **2.3** Carry out thinning, brashing, clearing, weeding and pruning as directed, using hand tools and/or machinery **2.4** Repair any environmental damage **2.5** Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition
3. Be able to carry out coppicing operations by hand	**3.1** Contribute to identifying and marking trees to be coppiced **3.2** Assess individual trees prior to any work **3.3** Prepare ground around trees as necessary **3.4** Contribute to identifying the line of fall and escape routes **3.5** Extract converted timber as necessary **3.6** Repair any environmental damage **3.7** Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition

Supporting Unit Information

J/501/4887 Practical skills for woodland areas – Level 1

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

Learning Outcome 1. Be able to plant woodland areas

1.1 Contribute to Identifying an area in need of planting working as part of a group identify the main site and then focus down to the specific location for the woodland area to be established e.g. using maps or internet maps of the area and then focussing down to job specification or site plans or photograph(s) of the site. Agree main site and the specific location with supervisor, client or land owner. Walk around the woodland area and identify the specific area that is in need of planting and its edges.

1.2 Contribute to identifying and reporting any plant species already present using simple reference materials use identification reference material at the site with specific emphasis on a pictorial approach and taking seasonality into account e.g. identification pictures of buds/leaves. Develop a plan of the site and use a key/coding system to indicate areas/specific locations of species of trees, flowers or grasses. Report verbally to supervisor, client or landowner on the species found, using the plan and key/coding system to inform the report.

1.3 Prepare ground for planting using appropriate hand tools and/or machinery as necessary cut back existing vegetation e.g. by slasher/strimming. Remove arisings and debris. Prepare the ground as necessary e.g. dig or fork over ground or use rotary cultivator depending on site. Tools/machinery e.g. spade, shovel, fork, brush,

slasher, loppers, strimmer, wheelbarrow, rotary cultivator. PPE - e.g. overalls, steel toe capped footwear, gloves, ear muffs and goggles if using machinery. CE marked.

1.4 Contribute to identifying and preparing trees to be planted working as part of a group follow the plan or instructions provided by the client/landowner indicating the species and pattern of trees to be planted. Identify species to be planted and check with supervisor (so that pattern can be achieved) e.g. by the shape and configuration of the buds. Prepare trees e.g. at planting time cut the tie on bundles and check the twigs/ stem/roots have not been damaged, keep roots covered with hessian - avoid drying out.

1.5 Plant trees or transplants/whips dig planting holes e.g. wide enough for the roots and a bit more and deep enough for compost/fertiliser to be added but no deeper than the soil mark on the stem, fork over the base of the hole, plant, back fill with soil. Slit plant whips e.g. dig down with a spade, pull back the ground and carefully put in the roots of the whip before pushing back the ground. In both cases firm ground around the transplants/whips to avoid air pockets in the soil and to secure the tree.

1.6 Use appropriate methods to aid establishment, guards, weed control support and mulch guard from rabbits using plastic spirals around the stems. Remove perennial weeds to avoid competition for water, nutrients, light etc. Support trees with stakes or canes but avoid damaging the roots when putting/knocking them in. If using stakes also use tree ties. Mulch can be applied to retain moisture, add nutrients, keep down weeds.

1.7 Water in as necessary depending on the weather conditions and seasonality it may be necessary to add water to aid establishment - definitely if planting in dry conditions e.g. if tapped water is anywhere close by use a hose pipe or use water transported in for the purpose or if trees are a considerable distance from a tap use water from nearby stream, ditch or water course, ensuring it is not stagnant/polluted.

1.8 Repair any environmental damage there is likely to be damage as a result of access to the site during transportation of machinery/tools/equipment and materials especially if ground conditions are wet or boggy. If damage has occurred e.g. muddy ground, ruts or holes - fill in, rake level and re-seed. Repair any damage to boundaries to ensure livestock cannot gain access. Prune any damaged branches or roots to avoid disease.

1.9 Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition organic plant arisings e.g. to be recycled /composted. Inorganic waste

- rubbish, plastic. Correct disposal e.g. re-use on site if possible - branches for habitat piles or depending upon access remove using wheelbarrow/bags and place in skip for disposal as instructed by supervisor. Cover safe manual handling and PPE - refer to LO1.3. Clear away all tools and equipment and then walk site to check it is safe. Check original photograph against end product to ensure specification is met - trees planted over desired area and site left in good condition as close as possible to original

Learning Outcome 2. Be able to maintain woodland

2.1 Contribute to identifying an area of woodland where work is to be carried out Refer to the process followed in LO1.1 to identify the specific area to be maintained including agreement with client/landowner. Draw up a simple plan of the area. Carry out a risk assessment of the area to be maintained and annotate the maintenance requirements on the plan. Cat scan if appropriate. Take photographs showing the original site to be used later for comparison

2.2 Contribute to identifying and reporting any plant species for removal walk the area and identify trees that are dead, dying, diseased, in poor condition, thin, too tightly packed. Trees to be felled for timber to be marked on the plan of the site. Report to supervisor, client or landowner so that appropriate permissions can be obtained.

2.3 Carry out thinning, brashing, clearing, weeding and pruning as directed, using hand tools and/or machinery thinning e.g. identify trees to be thinned - ref LO2.2 plan felling/escape routes, warn co-workers, cut with bow saw. Brashing e.g. cut off branches up to specified height using pruning saw/loppers - ensure cut is clean and close to trunk. Clearing e.g. use strimmer or slasher taking care not to damage the bases of growing trees. Hand weeding e.g. pull up/dig out weeds - remove weeds to avoid them going to seed or roots of perennials re-establishing. Pruning e.g. using loppers/secateurs. PPE refer to LO1.3, plus hard hat/visor for brashing/pruning above head level. All as directed by supervisor.

2.4 Repair any environmental damage refer to LO1.8. Damage may also occur when removing arisings/timber. If soil damage/run off is occurring use brash to shelter ground

2.5 Remove arisings/debris from the area using the correct methods of disposal, leaving the area clear, tidy, safe and in good condition refer to LO1.9. Re-use as much material as possible e.g. brash for ground cover or put through shredder to give a supply of chippings / mulch.

Learning Outcome 3. Be able to fell and coppice by hand

3.1 Contribute to identifying and mark trees to be coppiced working as part of a group walk the site to identify e.g. dead, diseased, thin, tightly packed trees for felling - use a colour marker on the bark. Identify suitable trees for coppicing e.g. hazel, hornbeam, sweet chestnut, ash, use a marker of different colour to confirm coppicing. Record trees to be coppiced on a simple plan of the site and agree actions with client or landowner.

3.2 Assess individual trees prior to any work check identified trees e.g. for direction of lean, hung up or rotten branches, rotten or ivy clad trunk or trunk leaning/supported by another tree or supporting another tree.

3.3 Prepare ground around trees as necessary carry out a risk assessment. Check the escape routes carefully to ensure they have no obstructions in the way, particularly checking there are no trip hazards e.g. remove logs or briars along line of escape route. Also check along line of fall to ensure that the falling tree will not damage boundaries/dry stone walls or drive debris/branches/splinters into the air and cause injury

3.4 Contribute to identifying the line of fall and escape routes working as part of a team carry out a risk assessment, check the site in detail and discuss escape/line of fall options e.g. ensure routes of escape are clearly available, have no obstructions in the way and everybody involved is fully aware of the escape routes. Consider possible consequences when the tree follows a particular line of fall.

3.5 Extract converted timber as necessary following the instructions of the supervisor identify suitable access routes which are likely to be least damaged by extraction activities and will be efficient and effective. Extract timber e.g. to an agreed storage area and stack up as instructed. Consider safe manual handling of the timber

3.6 Repair any environmental damage refer to LO1.8 and LO2.4.

3.7 Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe, and in good condition refer to LO1.9 and LO2.5. There is likely to be considerable debris/arisings - re-use as much of this as possible e.g. build wood piles to provide habitats for small animals and invertebrates

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning

difficulties/disabilities, should be considered and appropriate support mechanisms put in place

Learning Outcomes (LO) 1, 2 and 3
Delivery of these learning outcomes could be by supervised practical operational work giving learners the opportunity, first to practice the various tasks and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

It is important that practical assessment activities are supervised appropriately

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Minimum requirements when assessing this unit
Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

It is important that practical assessment activities are supervised appropriately.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Learners should demonstrate that they are able to successfully complete the learning outcomes and apply the related knowledge to different activities and situations, possibly linking with the optional units chosen.

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

- In identifying plant species it is be expected that the common name would be stated as a minimum
- For pre-16 year olds, powered tools must not be used as per current, relevant legislation.

- For post 16, the learners must not use any machinery/equipment unless they and the equipment comply with current, relevant legislation.
- All basic Health and Safety relating to the practical tasks in this unit should be explained prior to a demonstration by the tutor/assessor of how to complete the tasks successfully
- It is important to ensure that cutting takes place at the correct time of year e.g. to protect nesting birds/hedgehogs
- Pesticides only to be applied according to Pesticide Regulations.
- Ensure that Tree Preservation Order status is verified prior to any work being carried out.

See Skills and Education Group Awards website for further information

Practical Skills for Coastal Areas

Unit Reference	**L/501/4888**
Level	**1**
Credit Value	**4**
Guided Learning Hours	**40**
Unit Summary	This unit deals with skills related to the management of coastal areas. Learners will be involved in the practical tasks necessary to do this
Learning Outcomes (1 to 2) ***The learner will***	**Assessment Criteria (1.1 to 2.6)** ***The learner can***
1. Be able to carry out sand trapping	**1.1** Contribute to identifying and establishing the position of the fence **1.2** Correctly erect suitable sand trapping fences **1.3** Carry out thatching, when appropriate, to prevent sand blow **1.4** Leave the area clean**,** tidy and safe

2. Be able to carry out the re-vegetation of denuded dunes	**2.1** Contribute to identifying an area to be re-vegetated **2.2** Contribute to identifying and reporting any grasses already present, using simple reference materials **2.3** Apply the correct techniques for planting new dune grasses **2.4** Adhere to suitable conditions and times for planting **2.5** Repair any environmental damage **2.6** Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition

Supporting Unit Information

L/501/4888 Practical skills for coastal areas - Level 1

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

Learning Outcome 1. Be able to carry out sand trapping

1.1 Contribute to identifying and establishing the position of the fence working as part of a group identify the main site and then focus down to the specific location for the sand trap fence e.g. using maps or internet maps of the area and then focussing down to job specification/site plans or photograph(s) of site. Agree the main site and specific location with the supervisor, client or land owner taking into account habitats, the contour of the land, location of any areas to be protected from blown sand, the position of the access path/route. Provide details e.g. annotate a copy of the site plan with details of each of these aspects of site choice. Carry out a risk assessment of the sand trap fence area. Take photographs of the original site for later comparison.

1.2 Correctly erect suitable sand trapping fences erect fence e.g. dig post holes to specified depth, insert post, backfill and tamp down firmly; alternatively knock the posts in with a driveall or sledge hammer if ground conditions allow specified depth to be achieved; fit brushwood, palings or slats between posts, dig bases in if appropriate and use wire/staples/nails to secure ensuring that tension is maintained. Select tools and equipment e.g. spade types, shuv-holer, fork, mattock, bow saw, billhook, hand saw, claw hammer, pliers, wire cutters, sledge hammer, driveall, spirit level, wheelbarrow. Materials e.g. fence posts, wire, staples, slats, chestnut palings, brushwood

bundles, plastic mesh. PPE e.g. overalls, sun hat/glasses and suitable loose clothing for hot conditions plus contingency clothing against rapid changes of weather, steel toe capped footwear, gloves, goggles, hard hat. CE marked. Consider transport of tools/materials to site e.g. Land Rover or ATV and trailer with final transport by wheelbarrow/manually by volunteers - may need to put boards down for access over soft sand.

1.3 Carry out thatching, when appropriate, to prevent sand blow thatching e.g. covering dune faces with arisings from forestry, hedge trimming operations or waste products such as Christmas tree branches to reduce the impact of wind erosion or of human trampling of vulnerable areas within a dune system. When waste materials are readily available thatching is a useful way of re-using them, if regular maintenance is feasible. Usually best carried out in conjunction with planting. Prevent sand blow e.g. cover 20 to 30 per cent of the sand surface to be protected with layers of brash, sticking the ends into the sand and correctly orientating the brash so that it is not easily blown loose and discourages people walking between rows. Where brash may be blown away /used for bonfires, tie down e.g. using wire attached to stakes at the specified distances

1.4 Leave the area clean, tidy and safe clean and tidy e.g. remove excess materials, cut-offs, bits of wire, debris using wheelbarrow/bags. Remove tools and equipment - count items back in to ensure none are lost through being buried in the sand. Remove access boards. Walk site to check it is returned to its original condition and no sharp items - wire fragments are left in the sand or sticking out from stakes or posts. Rake over area.

Learning Outcome 2. Be able to carry out the re-vegetation of denuded dunes

2.1 Contribute to identifying an area to be re-vegetated refer to process followed in LO1.1 to identify specific area to be re-vegetated and agree this with client/landowner. Record on plan of site. Record reasons for area to be re-vegetated e.g. annotate on plan of site - to complement sand trap fences or thatching work carried out in LO1.2 and LO1.3. Carry out risk assessment of area to be re-vegetated. Take photographs showing original site to be used later for comparison

2.2 Contribute to identifying and reporting any grasses already present, using simple reference materials use identification reference material with specific emphasis on a pictorial approach to identify any grasses already on the site. Develop a plan of the site and use key/coding system to indicate areas/specific locations of grass

species. Report verbally and in writing to supervisor/client/landowner. Take care not to damage any plant material or create disturbance in sensitive surface vegetation during identification

2.3 Apply the correct techniques for planting new dune grasses take plants to the site e.g. in wheelbarrow/bags. Cover roots to keep them moist and also take care not to allow the plants to get too hot, water before planting. Use spade to create planting gap or dibber of suitable size but in warmer weather conditions try not to open sand up so that it dries out more easily. Plant ensuring appropriate depth of base of leaves below the surface e.g. 10 cm and in drier conditions down to damp sand. Plant from two to five or six plants per hole depending on their size. Firm around each planting. Adopt planting pattern as agreed with client/landowner e.g. spaced 45 cm apart in offset rows.

2.4 Adhere to suitable conditions and times for planting agree planting time with client/landowner as appropriate for area e.g. ideal time to plant is often in March. Avoid planting in adverse weather conditions e.g. weather that is too warm /drought – when plants will quickly dry out, frost etc.

2.5 Repair any environmental damage if damage has occurred e.g. during access to site - formation of ruts or displacement of surface vegetation - fill/rake in holes or ruts, level and re-plant/re-seed. Any damage to boundaries to be repaired to ensure livestock cannot gain access or damage to boardwalks or paths to be repaired to ensure walkers do not digress and create more erosion problems

2.6 Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition organic plant arisings or inorganic waste - rubbish, plastic. Correct disposal e.g. use on site if possible - buckthorn trimmings for fencing to discourage access or depending upon access to site remove using wheelbarrow or place in bags for disposal as instructed by supervisor. Cover safe manual handling and PPE - refer to LO1.2. Clear debris from any areas adjacent to site and clear away all tools and equipment. Walk around area to check it is safe - refer to LO1.4 and then give site a final rake if appropriate to leave it as it was found. Check this against the original photograph and also to ensure the job specification is met.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes (LO) 1 and 2

Delivery of these learning outcomes is by supervised practical operational work giving learners the opportunity, first to practice the various tasks and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

It is important that practical assessment activities are supervised appropriately

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Minimum requirements when assessing this unit

Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Learners should demonstrate that they are able to successfully complete the learning outcomes and apply the related knowledge to different activities and situations, possibly linking with the optional units chosen.

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

- In identifying plant species it is be expected that the common name would be stated as a minimum
- For pre-16 year olds, powered tools must not be used as per current, relevant legislation.
- For post 16, the learners must not use any machinery/equipment unless they and the equipment comply with current, relevant legislation.
- All basic Health and Safety relating to the practical tasks in this unit should be explained prior to a demonstration by the tutor/assessor of how to complete the tasks successfully
- Pesticides only to be applied according to Pesticide Regulations.
- Practical operations relating to this unit need to take into consideration impact on habitat management for nesting birds

See Skills and Education Group Awards website for further information

Practical Skills for Pond and Wetland Areas

Unit Reference	**R/501/4889**
Level	**1**
Credit Value	**5**
Guided Learning Hours	**40**
Unit Summary	This unit explores the steps needed to establish and maintain pond and wetland areas. Learners will be involved in the practical tasks necessary to do this
Learning Outcomes (1 to 2) ***The learner will***	**Assessment Criteria (1.1 to 2.7)** ***The learner can***
1. Be able to establish ponds and wetlands	**1.1** Contribute to identifying an area to be established **1.2** Contribute to identifying and report any plants already present **1.3** Prepare ground for sowing and planting, using appropriate hand tools or machinery **1.4** Identify and introduce plant species **1.5** Use appropriate planting methods to aid establishment **1.6** Protect spare planting material **1.7** Repair any environmental damage

	1.8 Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition
2. Be able to maintain/ preserve pond and wetland habitat	**2.1** Identify correct levels of water **2.2** Maintain sluice gates or dam control as appropriate **2.3** Identify potential sources of pollution **2.4** Clear excess or unwanted vegetation, including overhanging branches if appropriate **2.5** Excavate silted areas as needed and dispose of spoil as directed **2.6** Repair any environmental damage **2.7** Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition

Supporting Unit Information

R/501/4889 Practical skills for pond and wetland areas – Level 1

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

Learning Outcome 1. Know how to establish ponds and wetlands

1.1 Contribute to identifying an area to be established working as part of a group identify the main site and then focus down to the specific location for the pond and/or wetland area to be established e.g. using maps or internet maps of the area and then focussing down to job specification/site plans or photograph(s) of the site. Record the specific location of the pond/wetland area on a copy of the site plan or map and ensure that the main site and specific location are agreed with the supervisor, client or land owner. Carry out a risk assessment of the area to be established. Cat scan the area if digging is to take place. Take photographs of original site for later comparison.

1.2 Contribute to identifying and report any plants already present use identification reference material with specific emphasis on a pictorial approach. Develop a plan of the site and use a key/coding system to indicate areas/specific locations of species of plants already present e.g. ragged robin, water forget-me-not, brooklime, marsh marigold may be present on wet areas of land and worth retrieving for pond and wetland development. Also make note of species that might cause trouble later e.g. brambles, thistle species, nettles. Report verbally to supervisor, client or landowner on the species found, using the plan and key/coding system to inform the report.

1.3 Prepare ground for sowing and planting, using appropriate hand tools or machinery remove plants identified for inclusion in the new

pond and wetland area. Cut back existing vegetation e.g. by slasher/strimming/mowing. Remove arisings. Prepare ground to develop a suitable substrate for sowing and planting e.g. remove stones/debris, fork over or use rotary cultivator, rake ground following contours to create suitable tilth for seeds to germinate effectively, add fertiliser if appropriate to support establishment. Dig out perennial weeds to prevent them from quickly re-establishing - refer to LO1.2. Tools and machinery e.g. slasher, loppers, spade, fork, rake, brush, wheelbarrow, strimmer, rotary cultivator. PPE - ensure learners are wearing e.g. overalls, steel toe capped footwear/ Wellingtons, gloves/rubber gloves, ear muffs if using machinery, goggles if using rotary cultivator/strimmer. CE marked.

1.4 Identify and introduce plant species check websites or contact suppliers of British provenance pond**/**wetland plants and list five species that would be suitable for the pond e.g. branched bur-reed, lesser bulrush, greater spearwort, yellow water lilly, amphibious bistort or suitable for the wetland area e.g. purple loosestrife, lesser spearwort, marsh woundwort, meadow sweet, water mint - also refer to the species listed in LO1.2.

Agree with client or landowner plant species to be used and specific area of pond or wetland if appropriate. Obtain plants e.g. from wholesaler/catalogue/internet. Transport plant material to location e.g. wheelbarrow and/or bags ensuring materials do not dry out.

1.5 Use appropriate planting methods to aid establishment once area has been fully prepared plant e.g. using a hand trowel to dig planting holes for small plants - ensure appropriate depth for plant to avoid covering leaves, firm around plants to avoid air pockets. For shrubs or trees being placed a little away from the pond dig out holes ensuring appropriate depth and width, fork over base of hole, add fertiliser, may need to use a stake for support and plastic spirals around trees to protect against rabbits.

1.6 Protect spare planting material keep the roots of spare plant material in moist compost to avoid drying out and cover with sacking. Ensure that the plant material is not stored where it can get too hot or be damaged by mechanical means or treading.

1.7 Repair any environmental damage if damage has occurred e.g. during access to site when transporting physical resources - formation of ruts or displacement of surface vegetation - fill/rake in holes or ruts, level and re-plant/re-seed. Any damage to boundaries to be repaired to ensure livestock cannot gain access. Any damaged branches and roots to be pruned back to avoid disease.

1.8 Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition organic plant arisings - from area clearance or inorganic waste - rubbish, plastic. Correct disposal e.g. use on site if possible or depending upon access remove using wheelbarrow or place in bags or skip for disposal as instructed by supervisor. Cover safe manual handling and PPE - refer to LO1.3. Clear debris from any areas adjacent to site and clear away all tools and equipment. Walk around area to check it is safe and then check against the original photograph to ensure that the overall site has been left as it was found.

Learning Outcome 2. Know how to maintain/preserve pond and wetland habitat

2.1 Identify correct levels of water identify the appropriate water level e.g. by the profile of plants at the waterline and whether they are immersed or showing previously submerged foliage or identify level required with the client or landowner to ensure the pond and wetland habitat can be maintained and not be liable to drying out in periods of dry weather leading to the death of plant material and pond life.

2.2 Maintain sluice gates or dam control as appropriate ensure sluice gates and dam control are maintained on a regular basis so they can be quickly moved if needed. Test mechanisms regularly, oil/lubricate any machinery mechanisms to keep freely moving, check that ropes used to raise sluices remain sound/firmly attached - ease of use is essential in case of flooding. Clean out any debris which has collected e.g. litter, leaves.

2.3 Identify potential sources of pollution pollution can come from local farms e.g. from slurry spillages/inappropriate timing of fertiliser application that is flushed into ponds and may lead to rapid plant growth. Soil loss due to inappropriate cultivations can contribute to silting up of ponds and waterways at sluices/dams. In urban areas there could be pollution from litter/rubbish - discarded shopping trolleys/bicycles etc. or oil/diesel washed off from roads. Ponds or wetlands may also be used as areas to discard bottles or drug syringes and needles so care is needed when clearing.

2.4 Clear excess or unwanted vegetation, including overhanging branches if appropriate cut back trees/overhanging branches to prevent the fall of leaves and twigs into a pond. Use netting in autumn to catch most of the falling leaves and dead branches. Plants such as bulrushes, irises, water lilies, reed types and the various pond weeds such as Canadian pond weed will all need to be monitored for excessive growth and periodically be partially removed. Tools e.g. bow saw,

loppers, crome or rake. PPE - ensure learners are wearing e.g. overalls, steel toe capped footwear, waders or wellingtons, rubber gloves, hard hat for cutting branches. CE marked.

2.5 Excavate silted areas as needed and dispose of spoil as directed take the water level down in order to gain access, then dig out the silt with a spade or if large amounts use a small mechanised digger. The spoil can usually be recycled and used for landscaping e.g. used to contour land or as it is often very fertile - used on flower beds.

2.6 Repair any environmental damage refer to LO1.7. Silt material removed from channels e.g. between ponds or channelling run-off from fields into/away from ponds may be used to repair puddle or rutted areas.

2.7 Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition refer to LO1.8. Silt can be recycled for contouring, on flower beds or in the compost heap. Inorganic debris from ponds may include e.g. discarded supermarket trolleys, bicycles, machines, furniture, bottles, drug syringes and needles - inform supervisor of any unusual findings and follow instructions regarding safe handling or lifting.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes (LO) 1 and 2

Delivery of these learning outcomes is by supervised practical operational work giving learners the opportunity, first to practice the various tasks and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

It is important that practical assessment activities are supervised appropriately

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

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Minimum requirements when assessing this unit
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Evidence Of Achievement

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- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications

- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Learners should demonstrate that they are able to successfully complete the learning outcomes and apply the related knowledge to different activities and situations, possibly linking with the optional units chosen.

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

- For pre-16 year olds, powered tools must not be used as per current, relevant legislation.
- For post 16, the learners must not use any machinery/equipment unless they and the equipment comply with current, relevant legislation.
- All basic Health and Safety relating to the practical tasks in this unit should be explained prior to a demonstration by the tutor/assessor of how to complete the tasks successfully.
- Practical operations relating to this unit need to take into consideration impact on habitat management for nesting birds, amphibians, invertebrates and fish.

See Skills and Education Group Awards website for further information

Practical Skills for Hedgerows

Unit Reference	**J/501/4890**
Level	**1**
Credit Value	**5**
Guided Learning Hours	**40**
Unit Summary	This unit explores how to prepare, establish and maintain hedgerows. Learners will be involved in the practical tasks necessary to do this
Learning Outcomes (1 to 2) ***The learner will***	**Assessment Criteria (1.1 to 2.6)** ***The learner can***
1. Be able to establish a new or replacement hedgerow	**1.1** Contribute to identifying an area in need of planting **1.2** Contribute to identifying and reporting any plant species already present **1.3** Prepare ground for planting **1.4** Identify and prepare species to be planted **1.5** Plant material **1.6** Use appropriate methods to aid establishment, guards, weed control, support, mulch, irrigate **1.7** Repair any environmental damage **1.8** Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition

2. Be able to maintain a new or replacement hedgerow	**2.1** Contribute to surveying hedge and recording species **2.2** Remove dead wood and debris where necessary **2.3** Contribute to trimming hedge at an appropriate height using appropriate hand tools or machines **2.4** Contribute to creating correct hedge shape/profile **2.5** Repair any environmental damage **2.6** Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition

Supporting Unit Information

J/501/4890 Practical skills for hedgerows - Level 1

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

Learning Outcome 1. Know how to establish a new or replacement hedgerow

1.1 Contribute to identifying an area in need of planting working as part of a group identify the main site and then focus down to the specific location for the new or replacement hedgerow e.g. using maps or internet maps of the area and then focussing down to job specification or site plans or photograph(s) of the site. Agree main site and the specific location with supervisor, client or land owner. Develop a plan of the site and record on it the line of the hedgerow - new or replacement. Identify why replacement or new hedge is needed e.g. boundary, security. Carry out a risk assessment of the work to be done. Take a photograph of the original site for later comparison.

1.2 Contribute to identifying and reporting any plant species already present use identification reference material at the site with specific emphasis on a pictorial approach and taking seasonality into account e.g. identification pictures of buds/leaves. Develop a plan of the site and use a key/coding system to indicate areas/specific locations of species of trees, shrubs or flowers. Report verbally to supervisor, client or landowner on species found, using the plan and key/coding system to inform the report.

1.3 Prepare ground for planting remove unwanted plant material along the line of the hedgerow e.g. by slasher/strimming. Remove perennials such as nettles and docks to avoid competition for

light/minerals/water. Remove arisings. Prepare the ground as necessary e.g. dig or fork over ground or use rotary cultivator depending on the area, add fertiliser and compost to support establishment as directed by the supervisor. Remove debris, stones/boulders. Tools and machinery e.g. spade, fork, rake, brush, slasher, loppers, wheelbarrow, strimmer, rotary cultivator. PPE - e.g. overalls, steel toe capped footwear, gloves, ear muffs and goggles if using machinery. CE marked. Cover manual handling. Cat scan the area if necessary for any underground utilities.

1.4 Identify and prepare species to be planted follow the plan or instructions provided by the client/landowner indicating the species and pattern of trees/shrubs to be planted. in the hedgerow. Identify species to be planted and check with supervisor (so that pattern can be achieved) e.g. by the shape and configuration of the buds. Prepare trees **/**shrubs e.g. at planting time cut the tie on bundles and check the plants have not been damaged, particularly the root ball - carefully prune any damaged roots/branches to prevent disease, keep hessian sacks around the roots to avoid drying out.

1.5 Plant material plant in a single or double row following the spacing guidelines given by the supervisor e.g. slit plant whips - cut plastic sheet mulch, if laid, at marked positions, dig down with a spade, pull back the ground and carefully put in the roots of the whip before pushing back the ground and firming to remove air pockets. Alternatively dig planting holes. Prune back any damaged roots/branches to prevent disease. Consider seasonality of planting and types of soil suitable for planting whips.

1.6 Use appropriate methods to aid establishment, guards, weed control, support, mulch, irrigate guard e.g. plastic spirals around stems/quills to protect from rabbits. Remove weeds to avoid competition for water, nutrients, light e.g. annuals/perennials - ensure that roots are dug out to prevent re-establishment. Support trees e.g. with canes /stakes - avoid damaging the roots when putting/knocking them in. If using stakes also use tree ties. Mulch can be applied to retain moisture, add nutrients, keep down weeds e.g. plastic sheet mulch, composts. Water if necessary e.g. watering can/hose pipe

1.7 Repair any environmental damage there is likely to be damage as a result of access to the hedgerow site during transportation of tools, materials and plants especially if ground conditions are wet or boggy - wheelbarrow/sack truck/ATV and trailer. If damage has occurred e.g. muddy ground, ruts or holes - fill in, rake level and re-seed providing protection from the birds if necessary.

1.8 Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition organic plant arisings e.g. to be recycled/composted or use to make habitat piles - branches/roots etc. Inorganic waste -rubbish, string, plastic, broken guards. Correct disposal e.g. re-use on site if possible or depending upon access remove using wheelbarrow/bags or place in skip for disposal as instructed by supervisor. Cover safe manual handling and PPE - refer to LO1.3. Clear away all tools and equipment and then walk site to check it is safe. Check original photograph against end product to ensure specification is met - hedgerow planted along desired line and site left in good condition as close as possible to original

L*earning Outcome 2. Know how to maintain a new or replacement hedgerow*

2.1 Contribute to surveying hedge and recording species refer to LO1.2.

2.2 Remove dead wood and debris where necessary prune back dying wood/branches. Cut out dead material e.g. branches or could be plants that have not established - gaps to be filled in at next planting period with respect to seasonality. Remove debris from the base of the hedge with a fork or rake - the arisings could be used as habitat piles. Get rid of any old barbed wire/mesh/fence posts-remove with wheelbarrow/bags.

2.3 Contribute to trimming hedge at an appropriate height using appropriate hand tools or machines trim a section of a hedge using shears or a powered hedge cutter e.g. use hedge clippers particularly when access is an issue or use powered hedge trimmers where hedge is easily accessible from level ground as directed by supervisor. Height to be agreed with supervisor/client/landowner. Consider time spent on hedge trimmer. PPE is essential e.g. goggles, ear protection. Carry out a risk assessment and ensure that safe working practices are followed e.g. check prior to trimming for obstructions in hedgerow and also tripping or slipping hazards along the hedgerow.

2.4 Contribute to creating correct hedge shape/profile agree with supervisor / client / landowner on the shape of hedge to be achieved e.g. in keeping with other hedges in the locality and depending on its purpose - rectangular profile to 1.5 m height for livestock retention or A profile to 2m for shelter from the wind. Shape a section of the hedge using shears or a powered hedge cutter as instructed by supervisor. Ref LO2.3.

2.5 Repair any environmental damage refer to LO1.7

2.6 Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition
refer to LO1.8.

Teaching Strategies And Learning Activities

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Learning Outcomes (LO) 1 and 2
Delivery of these learning outcomes is by supervised practical operational work giving learners the opportunity, first to practice the various tasks and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Minimum requirements when assessing this unit
Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

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Evidence Of Achievement

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- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Learners should demonstrate that they are able to successfully complete the learning outcomes and apply the related knowledge to different activities and situations, possibly linking with the optional units chosen.

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

- Practical operations relating to this unit need to take into consideration impact on habitat management e.g. nesting birds/hedgehogs

See Skills and Education Group Awards website for further information

Prepare and Erect Post and Timber Fencing

Unit Reference	**L/501/4891**
Level	**1**
Credit Value	**4**
Guided Learning Hours	**40**
Unit Summary	This unit explores how to prepare and erect Post and Timber Fencing. Learners will be involved in the practical tasks necessary to do this
Learning Outcomes (1 to 3) ***The learner will***	**Assessment Criteria (1.1 to 3.6)** ***The learner can***
1. Be able to mark out a fence line	**1.1** Contribute to identifying a fence line on site **1.2** Select appropriate tools and material **1.3** Move vegetation and other obstructions as required **1.4** Mark out the position of all posts to appropriate specification as directed
2. Be able to erect posts for timber fencing	**2.1** Excavate post holes to the depth, shape and line appropriate to the style of the fence **2.2** Erect the first post and subsequent ones at the correct centres and set firm
3. Be able to attach rails	**3.1** Attach and connect rails securely at the required height according to specifications

	3.2 Use alternating joints on the rails where appropriate **3.3** Ensure that the fence follows the contour of the land **3.4** Carry out a full inspection of the fence and rectify any faults **3.5** Repair any environmental damage **3.6** Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition

Supporting Unit Information

L/501/4891 Prepare and erect post and timber fencing – Level 1

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

Learning Outcome 1. Know how to mark out a fence line

1.1 **Contribute to identifying a fence line on site** identify main site and then focus down to the specific location where the fence is to be located e.g. using maps or internet maps of the area focussing down to job specification or site plans or photograph(s) of site and agreed with supervisor, client or land owner. Need to consider contours of land and any existing features. Carry out a risk assessment of the site including the need to cat scan in relation to insertion of posts - mark on plan of site. Mark line of fence e.g. spot paint for posts. Take photograph of the original site for later comparison.

1.2 **Select appropriate tools and material** tools e.g. spade, fork, shovel, brush, hand saw, crow bar, hammer/nails, spirit level, tamper, mallet, driveall, wheelbarrow, sheeting. Material e.g. timber, posts, nails, cement/sand to secure posts. PPE e.g. overalls, steel toe capped footwear, industrial rubber gloves. CE marked

1.3 **Move vegetation and other obstructions as required** cut back or dig out perennial weeds, particularly focussing on their roots to prevent grow back. Remove or dig out obstructions after checking utilities cannot be damaged e.g. rocks, wire, old posts. Remove to a safe distance and temporarily store. Refer to LO3.6

1.4 **Mark out the position of all posts to appropriate specification as directed** find out specifications from client or landowner and work from plan of site. Measure out length of fence and calculate number of

posts and their locations. Mark positions on ground e.g. spot paint. Position so that fence constructed is aesthetically pleasing and if possible blends in with the landscape rather than being obtrusive e.g. slanting across a hill slope rather than straight up the slope

Learning Outcome 2. Know how to erect posts for timber fencing

2.1 Excavate post holes to the depth, shape and line appropriate to the style of the fence confirm with client, landowner or supervisor depth and line of posts. Excavate post holes to the depth, shape and line appropriate to the style of the fence, placing spoil on sheeting alongside hole to reduce damage to site. Ensure post hole is vertical and also not too wide e.g. width to accommodate post plus room for backfill/mortar/ concrete. May need to use crow bar to break down hard ground

2.2 Erect the first post and subsequent ones at the correct centres and set firm erect posts at correct depth using spirit level for accurate vertical positioning. Obtain help to hold post in position, put in backfill/mortar/concrete, tamp down hard to secure post firmly, repeat same procedure with other posts

Learning Outcome 3. Know how to attach rails

3.1 Attach and connect rails securely at the required height according to specification follow agreed specifications for height and distance between rails. Obtain help to hold rail at one end. Nail one end loosely and then use spirit level to ensure rail is level, once fully and accurately in place nail other end and then return to first end to securely nail. Repeat same procedure with other rails. Use blocks of wood cut to correct lengths to ensure rails are consistent distances apart

3.2 Use alternating joints on the rails where appropriate ensure rails are nailed in such a way that they overlap on each post e.g. the top and bottom rails span and are nailed to 3 posts, the ends of the middle rails are nailed to the middle of these posts and will extend one post along on each side from this first group of three posts. This will ensure the fence is more secure and firm, particularly in windy conditions and if being leant on by people or livestock

3.3 Ensure that the fence follows the contour of the land once the fence line has been agreed with the client or landowner to take into account and follow the contours of the ground this should then be followed unless unforeseen circumstances arise. Any changes must be agreed with the client or landowner. The top line of the posts should complement the contour of the ground and the top rail should be fixed

first to set the lines of the lower rails and establish a continuous and pleasing line.

3.4 Carry out a full inspection of the fence and rectify any faults e.g. during construction of the fence continue to inspect it from different angles on an on-going basis. Stand back from the fence and walk around to different viewpoints - it is much easier to rectify a fault that is identified early in the process than at the end. Faults e.g. posts out of line, not vertical, height of tops noticeably variable

3.5 Repair any environmental damage e.g. damage to access route and ground either side of the fence. Fill in holes, level and re-seed. Repair e.g. brush/shovel up any excess materials, prune back any damaged branches or roots to prevent disease gaining entry, fork/rake over compacted ground, brush up at the end. Refer to LO3.6

3.6 Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition organic plant arisings e.g. to be recycled by shredding/composting. Inorganic waste - treated off-cuts of posts/rails, stones/rubbish/plastic. Correct disposal e.g. use on site - stones to provide extra support for posts in soft ground or depending upon access remove using wheelbarrow and place in bags or skip for disposal as instructed by supervisor. Cover safe manual handling and PPE, visual inspection along fence line for safety - no tripping hazards and condition - even post height/spacing, rail height/spacing, meets specification. Check against the original photograph - LO1.1 - to ensure the site has been returned as close as possible to its original state.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes (LO) 1, 2 and 3

Delivery of these learning outcomes is by supervised practical operational work giving learners the opportunity, first to practice the various tasks and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Minimum requirements when assessing this unit
Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

It is important that practical assessment activities are supervised appropriately.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects

- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
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This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

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All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

- For pre-16 year olds, powered tools must not be used as per current, relevant legislation.
- For post 16, the learners must not use any machinery/equipment unless they and the equipment comply with current, relevant legislation.
- All basic Health and Safety relating to the practical tasks in this unit should be explained prior to a demonstration by the tutor/assessor of how to complete the tasks successfully.

See Skills and Education Group Awards website for further information

Practical Skills for Dry Stone Walls

Unit Reference	**Y/501/4893**
Level	**1**
Credit Value	**6**
Guided Learning Hours	**40**
Unit Summary	This unit explores how to prepare the area and construct a dry stone wall. Learners will be involved in the practical tasks necessary to do this
Learning Outcomes (1 to 2) ***The learner will***	**Assessment Criteria (1.1 to 2.8)** ***The learner can***
1. Be able to prepare foundations	**1.1** Contribute to identifying the area **1.2** Clear the line of rubble and vegetation **1.3** Mark out the line and arrange stones on site as directed **1.4** Identify and arrange suitable stones as directed **1.5** Ensure that foundations are to the correct depth, line and width according to style **1.6** Repair any environmental damage **1.1** Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition

2. Be able to construct a wall	**2.1** Select appropriate tools **2.2** Set up a batter frame **2.3** Select stone of a suitable size and shape **2.4** Place stone securely and safely in the wall **2.5** Insert through stones at appropriate heights and centres **2.6** Use suitable fillings at each stage **2.7** Achieve an appropriate batter for the style of wall **2.8** Securely fix copings **2.9** Repair any environmental damage **2.10** Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition

Supporting Unit Information

Y/501/4893 Practical skills for dry stone walling – Level 1

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

Learning Outcome 1. Know how to prepare foundations

1.1 Contribute to identifying the area identify main site and then focus down to specific location where dry stone wall is to be located e.g. using maps or internet maps of the area and then focussing down to job specification or site plans or photograph(s) of site. Agree main site and specific location with supervisor, client or landowner. Develop a plan of the site taking into account terrain and drainage and including points of access and transportation of materials. Carry out risk assessment of site and tasks undertaken including need to cat scan area. Photograph of the original site for later comparison.

1.2 Clear the line of rubble and vegetation identify the line of the wall and clear the area ready for work to commence. Remove vegetation e.g. grass or scrub and including perennials - dig out the roots to ensure stability. Cut back any encroaching branches. Remove rubble and litter. Wear suitable PPE e.g. overalls, steel toe cap footwear, leather gloves for stone handling, back support belt - repetitive lifting. CE marked.

1.3 Mark out the line and arrange stones on site as directed initially colour mark the line and then mark out using peg and line ensuring sufficient space on either side of the wall for access and room to work. Transport stone to the site on a power barrow or wheelbarrow and store in well drained areas to avoid damage to the ground.

1.4 Identify and arrange suitable stones as directed place stones in rows adjacent to the wall with the largest stones nearest and the smallest furthest away. Select large stones for the base, medium for the middle and smaller stones for the top. Identify coping and through stones used to strengthen the wall and infill material. Cover safe manual handling of the stones e.g. correct posture, lifting, carrying and placing stones

1.5 Ensure that foundations are to the correct depth, line and width according to style following the line dig out a trench**,** deep enough to reach a firm layer of soil or rock to provide a solid foundation on which to construct the wall - follow instructions of supervisor regarding suitable depth, fill/level any depressions. The wall profile is based on a batter frame and this is used to establish the appropriate width e.g. wider at the bottom and tapering up to a narrower top to ensure stability.

1.6 Repair any environmental damage there is likely to be damage as a result of access to the site. If damage has occurred e.g. muddy ground, ruts or holes - fill in, rake level and re-seed/plant - protect seeded areas from the birds. Prune any damaged branches or roots to avoid disease.

1.7 Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition organic plant arisings e.g. to be recycled by shredding/composting - care not to perpetuate perennial weeds, burn these if possible. Inorganic waste - broken stones, rubbish, plastic. Correct disposal e.g. use on site - store broken stones to use as fill in the middle of the wall to get stability or depending upon access remove using wheelbarrow/bags or place in skip for disposal as instructed by supervisor. Cover safe manual handling and PPE - refer to LO1.2. Clear debris from any areas adjacent to site and tidy away anything that will not be needed for the next phase of work. Carry out visual inspection to check site is safe.

Learning Outcome 2. Know how to construct a wall

2.1 Select appropriate tools e.g. spade, shovel, brush, hammer, chisel, crow bar, trowel, spirit level and may need wheelbarrow/hand sack truck for transporting larger stones.

2.2 Set up a batter frame set up a batter frame at the start of a wall section, ensure the frame is correctly aligned - level, upright and square across the foundations, support as directed Develop the frame with pegs and lines to the next batter frame as instructed

2.3 Select stone of a suitable size and shape select larger stones for base of the wall to ensure strong foundations, medium size stones in

the middle with smaller stones near the top and coping stones on top. Infill with reclaimed stone chippings/off cuts etc.

2.4 Place stone securely and safely in the wall ensure the stones are firmly placed and secured by over lapping - there must be no common line running down from the top to the bottom of the wall as this will be a weak point and may lead to a collapse. Use smaller stones to fill in gaps and secure the larger stones as necessary.

2.5 Insert through stones at appropriate heights and centres through stones link both sides of the wall with the aim of pulling the wall together to strengthen it. These large long stones are most effective when well incorporated in amongst the other stones.

2.6 Use suitable fillings at each stage as each layer is constructed ensure all gaps are filled with reclaimed filings/backfill. This provides a firm base for the next layer and secures the stones. In some instances there may be a need to mix mortar.

2.7 Achieve an appropriate batter for the style of wall the style of the wall should fit into the landscape and be in keeping with other walling around the location - this must be agreed with the client/landowner and the batter frame - widths/height constructed based on these discussions. The wall should then be built checking frequently to ensure that it accurately follows the batter.

2.8 Securely fix copings identify the appropriate coping style based on the other walls in the area. Aim for the top of the wall to follow the contour of the ground. Fix a line to set the top level. Lay the coping stones and wedge firmly or use mortar mix to secure. Take care not to group slightly less suitable stones creating weaknesses e.g. shorter than the normal width. Check that there are no loose stones at the end as these may easily become dislodged.

2.9 Repair any environmental damage refer to LO1.6.

2.10 Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition refer to LO1.7. Ensure that any broken stone that has not been reclaimed as infill material is removed from the site or re-used in other appropriate ways. Clear any remaining debris and remove all tools and equipment. Carry out a final visual inspection of the wall to check for safety. Check against the original photograph - LO1.1 - to ensure the site has been returned as close as possible to its original state.

Teaching Strategies And Learning Activities

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Learning Outcomes (LO) 1 and 2
Delivery of these learning outcomes is by supervised practical operational work giving learners the opportunity, first to practice the various tasks and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

Methods Of Assessment

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Evidence Of Achievement

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- Product evidence
- Observation reports
- Oral/written questions and answers
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- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
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This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Evidence from this unit would be appropriate to cross reference to the mandatory units 1 & 2.

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Additional Information

- For pre-16 year olds, powered tools must not be used as per current, relevant legislation
- For post 16, the learners must not use any machinery/equipment unless they and the equipment comply with current, relevant legislation
- All basic Health and Safety relating to the practical tasks in this unit should be explained prior to a demonstration by the tutor/assessor of how to complete the tasks successfully
- Practical operations relating to this unit need to take into consideration impact on habitat management

See Skills and Education Group Awards website for further information

Practical Skills for Footpath and Surfacing Work

Unit Reference	**D/501/4894**
Level	**1**
Credit Value	**5**
Guided Learning Hours	**40**
Unit Summary	This unit explores how to prepare the area, construct and maintain a footpath. Learners will be involved in the practical tasks necessary to do this
Learning Outcomes (1 to 2) ***The learner will***	**Assessment Criteria (1.1 to 2.6)** ***The learner can***
1. Be able to lay a path	**1.1** Contribute to identifying the course of the path **1.2** Select appropriate tools **1.3** Identify and remove any debris, including plant species impeding the path line as directed **1.4** Accurately and clearly mark out the path line and width to specification **1.5** Excavate the path, removing any waste material as directed **1.6** Fit edging boards and revetment as required **1.7** Lay hard-core evenly to a specified thickness, levelling and consolidating as directed

	1.8 Lay surface material evenly to a specified thickness and consolidate **1.9** Repair any environmental damage **1.10** Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition
2. Be able to maintain footpaths	**2.1** Check the condition of footpath and structures for safety and condition **2.2** Resurface a footpath as directed using appropriate tools and materials **2.3** Clear drains of obstructing debris and vegetation to maintain correct fall **2.4** Repair or replace edging as required **2.5** Repair any environmental damage **2.6** Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition

Supporting Unit Information

D/501/4894 Practical skills for footpath and surfacing work – Level 1

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

Learning Outcome 1. Be able to lay a path

1.1 Contribute to identifying the course of the path working as part of a group identify the main site and then focus down to the specific location where the path is to be constructed e.g. using maps or internet maps of the area and then focussing down to job specification or site plans or photograph(s) of the site. By group discussion decide on how the course of path is to be indicated e.g. markers and tapes

1.2 Select appropriate tools tools selected e.g. spade, shovel, fork, rake, brush, pick axe, crowbar, bow saw, tape measure, peg and line, sprit level, hand saw, hammer, wheelbarrow, risk assessment of tasks, tools and site including need to cat scan. PPE selected e.g. overalls, steel toe capped footwear, gloves, hard hat. CE marked.

1.3 Identify and remove any debris, including plant species impeding the path line as directed remove vegetation, stones and rubbish, cut back overhanging branches, dig out perennial plants in the line of the path - nettles, dock, plantain, dandelion. Cover safe manual handling and PPE, seasonality and suitable weather conditions for working

1.4 Accurately and clearly mark out the path line and width to specification tape off the area to indicate work in progress. Use the job specification to mark out the path e.g. paint spots, marker pegs and line. Accurately measure the width of the path at points for consistency along the line of the path.

1.5 Excavate the path, removing any waste material as directed excavate the path tray e.g. using spade/shovel/pick axe/crowbar depending on whether the ground is soft, rocky or hard. Remove the spoil to a storage area as directed or identify for recycling into e.g. sunken areas, digression points, repairing ruts or holes - refer to LO1.9.

1.6 Fit edging boards and revetment as required knock in posts at specified distances and nail on the edging boards. Aim to follow the general contour of the ground, smoothing out the path as practical by use of back filling and revetments e.g. use recycled spoil, stones, cut timber.

1.7 Lay hardcore evenly to a specified thickness, levelling and consolidating as directed wheelbarrow in the hardcore and tip along the line of the path, level to the specified thickness using rake and/or shovel, consolidate layers using a wacker plate to ensure compaction.

1.8 Lay surface material evenly to a specified thickness and consolidate wheelbarrow in the surface material and tip over the hardcore, level to the specified thickness, rake to ensure consistent spread, consolidate using a wacker plate.

1.9 Repair any environmental damage there is likely to be damage to the access route and the ground on either side of the path. Use recycled top soil to fill in holes or ruts, restore banks. Fork over any compacted ground. Re-seed disturbed areas using a seed mix in keeping with the native flora - may need protection from birds. Prune damaged roots and branches to avoid disease. Dig or clear channels and/or ditches to drain boggy ground and protect the path from becoming boggy.

1.10 Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition organic arisings e.g. vegetation from LO1.3 to be recycled by shredding/composting or used to protect the edges of the path - dead hedges or habitat piles. Take care not to perpetuate perennial weeds. Inorganic waste - re-use on site - bricks/stones for edging/revetments or depending upon access remove rubble/rubbish by wheelbarrow, bag or place in skip for disposal as instructed by supervisor. Cover safe manual handling and PPE - refer to LO1.2. Clear away all tools and equipment, final brush/tidy up of site and then carry out a visual check of the path for safety - no tripping/slipping hazards and in good condition - level finish, edging secure, meets specification.

Learning Outcome 2. Know how to maintain footpaths

2.1 Check the condition of footpath and structures for safety and condition check for safety by carrying out a risk assessment e.g.

check for tripping hazards, slippery patches - moss/algae, boggy/wobbly parts of the path that might force walkers onto less safe areas, protruding branches/nettles/briars/thorns, wobbly hand rails. Condition e.g. physically walk the footpath checking all aspects including the integrity and levelness of the surface, the soundness and security of any structures such as edging boards, drains, revetments, steps, hand/safety rails, gates/stiles.

2.2 Resurface a footpath as directed using appropriate tools and materials e.g. check the base level is solid and level, fill in any holes, remove tripping hazards, remove any perennial weeds growing in the path (refer to LO1.3), remove moss. Wheelbarrow in materials e.g. crush and run or bark, tip materials on the part to be resurfaced, level and consolidate. Tools e.g. spade, shovel, rake, wheelbarrow - ref LO1.2

2.3 Clear drains of obstructing debris and vegetation to maintain correct fall check the drains for blockages, remove debris at the openings such as leaves, roots, litter by hand, use draining rods to clear within the drain. Remove vegetation and roots growing into drains to avoid blockage leading to flooding. Dig debris out of drainage ditches to maintain the correct fall and check that the water continues to run. Ensure that water proof gloves and footwear are worn throughout drainage clearance operations.

2.4 Repair or replace edging as required e.g. replace rotten or damaged edging, digging out and replacing posts and cutting out new boards and nailing onto posts as needed

2.5 Repair any environmental damage refer to LO1.9. There may also be a need to repair environmental damage from people digressing off the path to take short cuts or avoid puddles/boggy patches causing braiding e.g. replace edging stones, plant thorn trees/gorse at digression points, refer to LO2.2 for removal of puddles/boggy patches, use spoil to fill in ruts in braided areas or fork over and re-seed/re-turf

2.6 Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition refer to LO1.10

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners,

including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes (LO) 1

Delivery of these learning outcomes is by supervised practical operational work giving learners the opportunity, first to practice the various tasks and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

Learning Outcomes (LO) 2

Delivery of this learning outcome is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of operational work and witness testimony, answering oral or written questions, assignments or internet research cross referenced to the knowledge evidence.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Minimum requirements when assessing this unit

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Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
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This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Evidence from this unit would be appropriate to cross reference to the mandatory units 1 & 2.

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All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

- Practical operations relating to this unit need to take into consideration impact on habitat management

See Skills and Education Group Awards website for further information

Practical Skills for Bio Swales

Unit Reference	**J/504/4469**
Level	**1**
Credit Value	**6**
Guided Learning Hours	**60**
Unit Summary	This unit will provide the learner with the knowledge and skills to create bio swales
Learning Outcomes (1 to 3) ***The learner will***	**Assessment Criteria (1.1 to 3.9)** ***The learner can***
1. Know about swales	**1.1** Identify different types of swale **1.2** State the uses of swales
2. Be able to prepare to create a bio swale	**2.1** Check for any underground and/or overground services **2.2** Contribute to identifying and marking out the line of the swale **2.3** Remove any debris or excess vegetation from the area as directed
3. Be able to create a bio swale	**3.1** Excavate to the correct depth, width and gradient as directed **3.2** Disperse soil **3.3** Line planting area

	3.4 Re-cover lining with soil **3.5** Plant lined area as directed **3.6** Prepare ground for seeding **3.7** Disperse seed **3.8** Protect area from erosion **3.9** Make good work area

Supporting Unit Information

J/504/4469 Practical skills for bio swales – Level 1

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Skills and Education Group Awards will provide specialist support for providers wishing to use this unit in order to develop and agree customised delivery and assessment regimes that maximise access and opportunities for the target learners and employers in this sub-sector and ensure that all aspects of content, delivery and assessment are fit for purpose and promote best practice in the sector.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place

Delivery of the practical learning outcomes could be by supervised practical operational work giving learners the opportunity, first to practice the various tasks and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

It is important that practical assessment activities are supervised appropriately

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Minimum requirements when assessing this unit
Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

It is important that practical assessment activities are supervised appropriately.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Learners should demonstrate that they are able to successfully complete the learning outcomes and apply the related knowledge to different activities and situations, possibly linking with the optional units chosen.

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

- For pre-16 year olds, powered tools must not be used as per current, relevant legislation.
- For post 16, the learners must not use any machinery/equipment unless they and the equipment comply with current, relevant legislation.
- All basic Health and Safety relating to the practical tasks in this unit should be explained prior to a demonstration by the tutor/assessor of how to complete the tasks successfully

See Skills and Education Group Awards website for further information

Practical Skills for Eco Grass Swales

Unit Reference	**F/504/4468**
Level	**1**
Credit Value	**4**
Guided Learning Hours	**40**
Unit Summary	This unit will provide the learner with the knowledge and skills to create eco grass swales
Learning Outcomes (1 to 3) ***The learner will***	**Assessment Criteria (1.1 to 3.6)** ***The learner can***
1. Know about swales	**1.1** Identify different types of swale **1.2** State the uses of swales
2. Be able to prepare to create an eco grass swale	**2.1** Check for any underground and/or overground services **2.2** Contribute to identifying and marking out the line of the swale **2.3** Remove any debris or excess vegetation from the area as directed
3. Be able to create an eco grass swale	**3.1** Excavate to the correct depth, width and gradient as directed **3.2** Disperse soil **3.3** Prepare ground for seeding

	3.4 Disperse seed **3.5** Protect area from erosion **3.6** Make good work area

Supporting Unit Information

F/504/4468 Practical skills for eco grass swales – Level 1

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Skills and Education Group Awards will provide specialist support for providers wishing to use this unit in order to develop and agree customised delivery and assessment regimes that maximise access and opportunities for the target learners and employers in this sub-sector and ensure that all aspects of content, delivery and assessment are fit for purpose and promote best practice in the sector.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place

Delivery of the practical learning outcomes could be by supervised practical operational work giving learners the opportunity, first to practice the various tasks and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

It is important that practical assessment activities are supervised appropriately

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Minimum requirements when assessing this unit
Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

It is important that practical assessment activities are supervised appropriately.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Learners should demonstrate that they are able to successfully complete the learning outcomes and apply the related knowledge to different activities and situations, possibly linking with the optional units chosen.

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

- For pre-16 year olds, powered tools must not be used as per current, relevant legislation.
- For post 16, the learners must not use any machinery/equipment unless they and the equipment comply with current, relevant legislation.
- All basic Health and Safety relating to the practical tasks in this unit should be explained prior to a demonstration by the tutor/assessor of how to complete the tasks successfully

See Skills and Education Group Awards website for further information

Practical Skills for Eco Mulch Swales

Unit Reference	**A/504/4470**
Level	**1**
Credit Value	**4**
Guided Learning Hours	**40**
Unit Summary	This unit will provide the learner with the knowledge and skills to create eco mulch swales
Learning Outcomes (1 to 3) ***The learner will***	**Assessment Criteria (1.1 to 3.6)** ***The learner can***
1. Know about swales	**1.1** Identify different types of swale **1.2** State the uses of swales
2. Be able to prepare to create an eco mulch swale	**2.1** Check for any underground and/or overground services **2.2** Contribute to identifying and marking out the line of the swale **2.3** Remove any debris or excess vegetation from the area as directed
3. Be able to create an eco mulch swale	**3.1** Excavate to the correct depth, width and gradient as directed **3.2** Disperse soil **3.3** Backfill with mulch

	3.4 Profile mulch **3.5** Protect area from erosion **3.6** Make good work area

Supporting Unit Information

A/504/4470 Practical skills for eco mulch swales – Level 1

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Skills and Education Group Awards will provide specialist support for providers wishing to use this unit in order to develop and agree customised delivery and assessment regimes that maximise access and opportunities for the target learners and employers in this sub-sector and ensure that all aspects of content, delivery and assessment are fit for purpose and promote best practice in the sector.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place

Delivery of the practical learning outcomes could be by supervised practical operational work giving learners the opportunity, first to practice the various tasks and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

It is important that practical assessment activities are supervised appropriately

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Minimum requirements when assessing this unit
Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

It is important that practical assessment activities are supervised appropriately.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
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- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Learners should demonstrate that they are able to successfully complete the learning outcomes and apply the related knowledge to different activities and situations, possibly linking with the optional units chosen.

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Additional Information

- For pre-16 year olds, powered tools must not be used as per current, relevant legislation.
- For post 16, the learners must not use any machinery/equipment unless they and the equipment comply with current, relevant legislation.
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See Skills and Education Group Awards website for further information

Practical Skills for Floating Reed Beds

Unit Reference	**F/504/4471**
Level	**1**
Credit Value	**5**
Guided Learning Hours	**40**
Unit Summary	This unit will provide the learner with the knowledge and skills to create floating reed beds
Learning Outcomes (1 to 3) ***The learner will***	**Assessment Criteria (1.1 to 3.6)** ***The learner can***
1. Know about floating reed beds	**1.1** Describe the characteristics of a floating reed bed **1.2** Explain why a floating reed bed would be used
2. Know about the risks involved in working near deep water	**2.1** State the risks involved in working near deep water **2.2** State what personal protective equipment should be used
3. Be able to create a floating reed bed	**3.1** Install coir matting and retaining nets into reed raft flotation frames **3.2** Locate the frame at the waters edge **3.3** Plant rafts whilst gradually launching onto water

	3.4 Join further modular rafts as directed **3.5** Anchor floating bed as directed **3.6** Make good work area

Supporting Unit Information

F/504/4471 Practical skills for floating reed beds – Level 1

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Skills and Education Group Awards will provide specialist support for providers wishing to use this unit in order to develop and agree customised delivery and assessment regimes that maximise access and opportunities for the target learners and employers in this sub-sector and ensure that all aspects of content, delivery and assessment are fit for purpose and promote best practice in the sector.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place

Delivery of the practical learning outcomes could be by supervised practical operational work giving learners the opportunity, first to practice the various tasks and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

It is important that practical assessment activities are supervised appropriately

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Minimum requirements when assessing this unit
Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

It is important that practical assessment activities are supervised appropriately.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
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- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

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Additional Information

- For pre-16 year olds, powered tools must not be used as per current, relevant legislation.
- For post 16, the learners must not use any machinery/equipment unless they and the equipment comply with current, relevant legislation.
- All basic Health and Safety relating to the practical tasks in this unit should be explained prior to a demonstration by the tutor/assessor of how to complete the tasks successfully

See Skills and Education Group Awards website for further information

Practical Skills for Grassland Areas

Unit Reference	**M/602/1973**
Level	**2**
Credit Value	**6**
Guided Learning Hours	**51**
Unit Summary	This unit explores the skills needed to establish and maintain a new area of wild flower meadow. Learners will be involved in the practical tasks necessary to do this
Learning Outcomes (1 to 2) ***The learner will***	**Assessment Criteria (1.1 to 2.7)** ***The learner can***
1. Be able to establish an area of wildflower meadow	**1.1** Conduct an initial survey and environmental impact assessment of the area **1.2** Produce a simple plan of the site, identifying and recording any existing feature **1.3** Identify and record plant species on the site by their botanical names **1.4** Identify and set out boundaries of the area to be planted **1.5** Prepare the ground for sowing and planting **1.6** Sow and plant the area **1.7** Protect the new area of planting

	1.8 Ensure the area is left clear of debris and in good and safe condition
2. Be able to maintain a wildflower meadow	**2.1** Identify the area to be maintained **2.2** Identify and record plant species present **2.3** Identify and remove weed species present **2.4** Cut sward to an appropriate height **2.5** Repair any environmental damage **2.6** Remove arisings/debris from the area leaving the site clear, tidy, safe and in good condition **2.7** Monitor the site condition after maintenance

Supporting Unit Information

M/602/1973 Practical skills for grassland areas – Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

Learning Outcome 1. Be able to establish an area of wildflower meadow

1.1 Conduct an initial survey and environmental impact assessment of the area initial survey - consider in relation to nature of the work e.g. access to site, safety and condition of site, public access/proximity and weather. Carry out a risk assessment. Cat scan if appropriate. Environmental impact assessment - consider e.g. pollution - soil, air water by chemical emissions, noise, physical disturbance, arisings from activities- grass clippings, site and wildlife, proximity to protected areas - SSSI's etc; visual/aesthetic effect of work to be carried out. Also consider environmental good practice e.g. disposal of waste materials, recycling opportunities, efficient transportation of physical resources

1.2 Produce a simple plan of the site, identifying and recording any existing feature identify the main site and then focus down to the specific location for the wildflower meadow e.g. using maps or internet maps of the area and then focussing down to job specification plans or photograph(s) of site. Agree main site and specific location with supervisor, client or land owner and then develop a simple plan of the site including records of existing features e.g. boundaries, gates, paths, steps, stiles, ditches/streams and also record trees on plan. Take photographs of original site for later comparison.

1.3 Identify and record plant species on the site by their botanical names use identification reference material with specific emphasis on

a pictorial approach - grasses, flowers. Use key/coding system to record e.g. on the plan prepared in LO1.2 the areas/specific locations of species of wild flowers/plants. Develop a list of the wild flowers/plants/grasses by their botanical names e.g. Leucanthemum vulgare - Ox-eye daisy and note perennial weeds. This list should support the key/coding on the site plan

1.4 Identify and set out boundaries of the area to be planted refer to LO1.2 for identification of the area to be planted. Set out the boundaries of the area to be planted with reference to existing features such as hedges, fences, paths, ditches and use e.g. pegs and string to identify boundaries that are not demarcated by existing features - these may need to be measured from such features

1.5 Prepare the ground for sowing and planting cut back existing vegetation e.g. by strimming/mowing/hand shears. Remove arisings. Prepare ground e.g. remove stones/ debris, fork over or use rotary cultivator, rake ground following contours to create tilth suitable for seeds to germinate effectively. Dig out perennial weeds to prevent them from quickly re-establishing- presence of these identified in LO1.2. Tools and machinery used e.g. hand shears, loppers, spade, fork, rake, brush, wheelbarrow, strimmer, rotary cultivator. PPE - ensure learners wear e.g. overalls, steel toe capped footwear, gloves, ear muffs if using machinery, goggles if using strimmer/ rotary cultivator. CE marked.

1.6 Sow and plant the area once area has been fully prepared for sowing e.g. broadcast sow seeds, rake over lightly and firm by treading or rolling lightly. Planting can be carried out using a hand trowel e.g. dig planting holes of appropriate depth for plant avoiding covering leaves or planting too shallowly which can lead to drying out of roots.

1.7 Protect the new area of planting tape off area and erect signs to keep people off the area. Precautions to deter birds e.g. set out netting or put up bird scarers to prevent birds feeding on the seed or creating dust baths. Use wire netting to keep rabbits out

1.8 Ensure the area is left clear of debris and in good and safe condition organic debris e.g. leaves, dead vegetation to be recycled by shredding/composting - care not to perpetuate perennial weeds, burn these if possible. Inorganic debris - stones, plastic, rubbish. Rake area/brush surrounding paths to clear debris. Remove materials with wheelbarrow/bags. Cover safe manual handling and PPE - refer to LO1.4. Walk around area to check it is safe and no holes, tripping hazards have been left unattended to or tools left lying. Check original photograph against end product to ensure specification is met -

wildflower meadow established, original trees, paths etc. left in good condition.

Learning Outcome 2. Be able to maintain a wildflower meadow

2.1 Identify the area to be maintained refer to process followed in LO1.2 to identify specific area to be maintained. Record reasons for area to be maintained e.g. annotate on plan of site. Agree a maintenance schedule with client / landowner. Carry out risk assessment of area to be maintained and of maintenance activities. Take photographs showing original site to be used later for comparison

2.2 Identify and record plant species present refer to LO1.2. Remember to make note of any species that may need to be controlled to maintain the wildflower meadow

2.3 Identify and remove weed species present weeds present may be identified as part of LO1.2 (there are likely to be seeds/roots left in the soil so this helps know what to expect) and LO2.2 using reference material to identify specific weeds that need to be removed. Agree with client/supervisor which weeds are to be controlled as part of the maintenance schedule. Weed specified area e.g. pull weeds or remove using hand trowel/fork - ensure perennial weed roots are completely removed. PPE - wear gloves/use knee pads when carrying out hand weeding. Care required to avoid bad posture - strained back, sharp objects, long exposure to the sun

2.4 Cut sward to an appropriate height agree with client/landowner when the sward is to be cut e.g. lawn areas, meadows for spring or summer wildflower display or areas that are to be left uncut - a meadow margin to provide food for insects. Appropriate height e.g. if summer hay meadow is being developed mow down to 5 cm from April to June then let grass and summer flowers grow until cutting by scythe or strimmer in late August/early September.

2.5 Repair any environmental damage care needs to be taken not to carry out tasks in adverse weather conditions. If damage has occurred e.g. muddy ground, holes or ruts - fill in, level and re-seed. Grass clippings left lying because of rain need to be removed or piles of clippings in areas where run-off may affect water courses need to be moved. Any damage to boundaries to be repaired to ensure livestock cannot gain access.

2.6 Remove arisings/debris from the area leaving the site clear, tidy, safe and in good condition refer to LO1.7 in context of removing arisings/debris resulting from maintenance activities. Correct disposal e.g. use on site if possible or depending upon access remove

using wheelbarrow and place in bags or skip for disposal to local authority site or private contractor as instructed by supervisor.

2.7 Monitor the site condition after maintenance visually monitor site by walking around and checking that maintenance operations are satisfying client/landowner requirements e.g. coverage of the desired species of wildflowers is developing and troublesome weeds such as nettles, thistles, docks etc. are being kept in check. Compare completed site with original photographs to provide a check that the original specifications are being maintained.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes (LO) 1 and 2

Delivery of these learning outcomes could be by supervised practical operational work giving learners the opportunity, first to practice the various tasks and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Minimum requirements when assessing this unit

Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

It is important that practical assessment activities are supervised appropriately.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
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This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

All evidence must be clearly signposted and made available for the external moderator upon request.

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Additional Information

See Skills and Education Group Awards website for further information

Practical Skills for Woodland Areas

Unit Reference	**A/602/1975**
Level	**2**
Credit Value	**6**
Guided Learning Hours	**51**
Unit Summary	This unit explores the skills needed to establish and maintain woodland areas. Learners will be involved in the practical tasks necessary to do this
Learning Outcomes (1 to 3) ***The learner will***	**Assessment Criteria (1.1 to 3.9)** ***The learner can***
1. Be able to plant woodland areas	**1.1** Identify the area to be planted and carry out an environmental impact assessment **1.2** Conduct a survey of the area recording plant and tree species present by their botanical name **1.3** Prepare and clear ground for planting using correct tools and machinery **1.4** Identify, check and prepare trees for planting **1.5** Plant transplants or whips **1.6** Carry out individual tree protection, support and weed control **1.7** Water in as necessary

	1.8 Remove arisings/debris from the area using the correct methods of disposal, leaving the area clear, tidy, safe and in good condition
2. Be able to maintain woodland areas	**2.1** Identify areas requiring maintenance **2.2** Survey the area recording plant and tree **2.3** Select and use appropriate hand tools for all operations **2.4** Carry out thinning, brashing, clearing, pruning and weeding operations **2.5** Repair any environmental damage **2.6** Remove arisings/debris from the area using the correct methods of disposal, leaving the area clear, tidy, safe and in good condition
3. Be able to fell and coppice by hand	**3.1** Identify, select and mark trees to be felled and coppiced **3.2** Assess trees, prepare ground and identify direction of felling **3.3** Make the area safe and identify escape routes **3.4** Select and use appropriate hand tools **3.5** Make appropriate cuts and control direction of fall **3.6** Fell and coppice trees **3.7** Extract and stack produce **3.8** Repair any environmental damage

	3.9 Remove arisings/debris from the area using the correct methods of disposal, leaving the area clear, tidy, safe and in good condition

Supporting Unit Information

A/602/1975 Practical skills for woodland areas - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

Learning Outcome 1. Be able to plant woodland areas

1.1 Identify the area to be planted and carry out an environmental impact assessment identify main site and then focus down to specific location where woodland area is to be planted e.g. using maps or internet maps of the area and then focussing down to job specification or site plans or photograph(s) of site. Agree main site/specific location with the supervisor, client or land owner. Environmental impact assessment - consider pollution of soil, water or air as a result of establishment activity e.g. chemical spillages/emissions, noise, physical disturbance; site and wildlife, proximity to protected areas - SSSI's etc; visual/aesthetic effect of work. Also consider environmental good practice e.g. recycling opportunities, efficient transportation of physical resources and disposal of waste materials. May need to Cat scan area to be planted - utilities. Carry out a risk assessment of work to be done. Take a photograph of original site for later comparison.

1.2 Conduct a survey of the area recording plant and tree species present by their botanical name survey - consider in relation to nature of work e.g. access to the site, safety/condition of site, public access/proximity, weather. Use identification reference material with specific emphasis on a pictorial approach - trees, flowers, grasses. Use a key/coding system to record the findings on a simple plan of the area showing areas/ specific locations of species of trees, flowers, grasses.

Develop a list of these to support the key/coding on the site plan using botanical names e.g. Quercus robur- English Oak.

1.3 Prepare and clear ground for planting using correct tools and machinery Cut back existing vegetation e.g. using strimmer/brush cutter/slasher. Clear ground e.g. remove arisings, stones/debris with wheelbarrow/bags. Prepare ground as necessary e.g. dig or fork over ground or use rotary cultivator depending on the area, add fertiliser and compost to support establishment as directed by the supervisor. Tools/machinery used e.g. loppers, secateurs, slasher, spade, fork, rake, crow bar - ground may be hard, wheelbarrow, strimmer, brush cutter. PPE - ensure learners are wearing e.g. overalls, steel toe capped footwear, gloves, hard hat with goggles/visor/ear muffs if strimming/brush cutting or cutting back branches. CE marked.

1.4 Identify, check and prepare trees for planting identify trees e.g. agree the most suitable types of tree for the location with client/landowner. Obtain healthy specimens from the tree nursery/wholesaler and plant as soon as practical after delivery taking great care to keep the roots moist at all times and not to expose them to air. At planting time cut the tie on bundles and check the trees have not been damaged, particularly the root ball - carefully prune any damaged branches/roots to prevent disease.

1.5 Plant transplants or whips seasonality to be taken into account e.g. generally autumn or spring planting but optimum timing varies from South to North of country. Avoid planting during hot, sunny, breezy days or during very wet weather - consider the effect on access to the site and comfortable and safe working. Transplants e.g. dig out the planting holes with a spade, breaking up stony ground with a crow bar if necessary and removing the debris. Break up the bottom of the hole and add compost/fertiliser. Dig the hole deep enough to come up to the soil mark on the bark and wide enough for the roots and a bit more. Whips e.g. slit plant by digging down with a spade, pull back the ground and carefully put in the roots of the whip before pushing back the ground. In both cases firm ground around the transplants/whips to avoid air pockets.

1.6 Carry out individual tree protection, support and weed control support the trees with canes or stakes - take care to avoid damaging the roots when putting/knocking in canes / stakes. If using stakes also use tree ties. Position the stakes carefully with respect to the prevailing wind. Protect from rabbits etc. using plastic spirals around the stems. It may be necessary to put up netting/fencing against rabbits and deer. Remove perennial weeds to avoid competition for

water, nutrients, light etc. Mulch can be applied to retain moisture and keep down the weeds

1.7 Water in as necessary depending on the weather conditions and seasonality it may be necessary to add water to aid establishment - definitely if planting in dry conditions e.g. the trees planted may be close enough to a tap to water them using a hose pipe, there may be a need to transport water or if distances are too great it may be possible to obtain water from nearby water courses - avoid stagnant/polluted water.

1.8 Remove arisings/debris from the area using the correct methods of disposal, leaving the area clear, tidy, safe and in good condition organic plant arisings e.g. to be recycled//composted. Inorganic waste - rubbish, plastic. Correct disposal e.g. re- use on site if possible - use shredder to produce bark chippings/mulch or depending upon access remove using wheelbarrow and place in bags or skip for disposal with local authority/private contractor. Cover safe manual handling and PPE - refer to LO1.3. Clear away all tools and equipment and then walk site to check it is safe. Check original photograph against end product to ensure specification is met - trees planted over desired area and site left n good condition as close as possible to original.

Learning Outcome 2. Be able to maintain woodland areas

2.1 Identify areas requiring maintenance refer to the process followed in LO1.1 to identify the specific area to be maintained including agreement with client/landowner. Draw up a simple plan of the area. Carry out a risk assessment of the area to be maintained and annotate the maintenance requirements on the plan. Take photographs showing the original site to be used later for comparison.

2.2 Survey the area recording plant and tree refer to LO1.2.

2.3 Select and use appropriate hand tools for all operations hand tools e.g. ref to LO1.3, hand saw, pruning saw, brush, risk assessment appropriate to operations, first aid kit. PPE e.g. ref to LO1.3, hard hat and visor if brashing/pruning back overhanging branches, high visibility jackets. CE marked.

2.4 Carry out thinning, brashing, clearing, pruning and weeding operations consider seasonality and weather conditions. Thinning e.g. identify trees to be thinned – unhealthy /dead/thin, plan felling/escape routes, warn co-workers, cut with bow saw. Brashing e.g. cut off branches up to specified height using pruning saw/loppers - ensure cut is clean and close to trunk. Clearing e.g. use strimmer or slasher taking care not to damage the bases of growing trees. Pruning e.g. using

loppers/secateurs. Hand weeding e.g. pull up/dig out weeds - remove weeds to avoid them going to seed or roots of perennials re-establishing. Take care to work within the limits of the tools used and only cut what the tool is capable of cutting - too much strain on the tool and it is likely to break.

2.5 Repair any environmental damage there is likely to be damage as a result of access to the site and removal of debris/arisings. Care needs to be taken not to carry out tasks in adverse weather conditions. If damage has occurred e.g. muddy ground, ruts or holes - fill in, rake level and re-seed. If soil run off is occurring use brash to shelter ground. Move poorly sited brash piles promptly to reduce leaching of nutrients into water courses. Any damage to boundaries to be repaired to ensure livestock cannot gain access. Prune any damaged branches or roots to avoid disease

2.6 Remove arisings/debris from the area using the correct methods of disposal, leaving the area clear, tidy, safe and in good condition refer to LO1.8. Re-use as much material as possible e.g. brash for ground cover or put through shredder to give a supply of chippings/mulch.

Learning Outcome 3. Be able to fell and coppice by hand

3.1 Identify, select and mark trees to be felled and coppiced agree actions with client or landowner. Walk the site to identify e.g. dead, diseased, thin, tightly packed trees to be felled - use a colour marker on the bark. Identify suitable trees for coppicing e.g. hazel, hornbeam, sweet chestnut, ash, use a marker of different colour to confirm coppicing and not felling. Record trees to be coppiced on a simple plan of the site. Check with client/landowner if any permissions need to be obtained with respect to the Local Authority - Tree Preservation Orders, felling licences to be obtained.

3.2 Assess trees, prepare ground and identify direction of felling consider seasonality and weather conditions. Carry out a risk assessment. Check the identified trees for direction of lean, hung up or rotten branches, clear all undergrowth away from the area of cutting and remove minor branches that might impede the cut

3.3 Make the area safe and identify escape routes refer to LO3.2. Carry out a risk assessment. Check the site in detail and look at route options e.g. ensure routes for felling and escape are clearly available and will cause minimum disturbance/damage.

Check that routes have no obstructions in the way, particularly check there are no trip hazards e.g. remove logs, briars, stones along the line

of the escape route. Ensure everybody involved is fully aware of the escape routes.

3.4 Select and use appropriate hand tools tools e.g. bow saw, pruning saw, loppers, secateurs. Ensure all learners are wearing appropriate PPE (refer to LO1.3, LO2.3) and that tools are suitable for the tasks e.g. do not tackle timber that is too thick for the tool used or breakages may result

3.5 Make appropriate cuts and control direction of fall make cuts at angles into the trunk. Remove a wedge shaped section to help control the direction of fall. When the trunk is cut from the other side the weight of the tree will fall into the gap enabling more accurate control of the fall.

3.6 Fell and coppice trees fell the trunks to be coppiced taking care to ensure they do not fall into another tree and get hung up. If this happens inform the supervisor and only assist with felling other trees to release the one initially felled under close supervision. Use loppers, pruning saw or billhook to remove the side branches, cutting as close to the trunk as possible. Trim the stumps so they are all angled away from the centre to shed rain, also safety - less of a tripping hazard, clean up any torn bark to minimise disease entry. Place the arisings in piles for use/habitat

3.7 Extract and stack produce consider e.g. suitability of the weather conditions and the possibility of slippage - avoid muddy ground or icy conditions; plan the route for extracting the timber - aim for it to be in a position that will not too cause too much damage to the surroundings. Stack cut timber in piles ensuring that this is done safely and with a secure base; not too high or likely to roll off.

3.8 Repair any environmental damage refer to LO2.5. Trim stumps, situate habitat piles to minimise the risk of disease.

3.9 Remove arisings/debris from the area using the correct methods of disposal, leaving the area clear, tidy, safe and in good condition refer to LO1.8.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes (LO) 1, 2 and 3

Delivery of these learning outcomes is by supervised practical operational work giving learners the opportunity, first to practice the various tasks and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Minimum requirements when assessing this unit
Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

It is important that practical assessment activities are supervised appropriately.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks

- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

See Skills and Education Group Awards website for further information

Practical Skills for Coastal Areas

Unit Reference	**L/602/1978**
Level	**2**
Credit Value	**5**
Guided Learning Hours	**43**
Unit Summary	This unit explores the skills needed to manage coastal areas. Learners will be involved in the practical tasks necessary to do this
Learning Outcomes (1 to 2) ***The learner will***	**Assessment Criteria (1.1 to 2.7)** ***The learner can***
1. Be able to carry out sand trapping	**1.1** Carry out a survey of the area **1.2** Carry out an environmental impact assessment to identify areas of erosion and instability **1.3** Select and check suitable materials and equipment/tools **1.4** Identify the types of barriers required for the site **1.5** Identify the proposed location of barriers and set out in the correct position **1.6** Construct two sand trapping barriers of different types **1.7** Repair any environmental damage

	1.8 Remove arisings/debris from the area using the correct methods of disposal, leaving the area clear, tidy, safe and in good condition
2. Be able to establish vegetation in coastal areas	**2.1** Identify locations where planting is required **2.2** Identify and record species already present by their botanical names **2.3** Identify, select and prepare species for establishment **2.4** Plant vegetation to the correct depth and spacing **2.5** Protect planted area **2.6** Repair any environmental damage **2.7** Remove arisings/debris from the area using the correct methods of disposal, leaving the area clear, tidy, safe and in good condition

Supporting Unit Information

L/602/1978 Practical skills for coastal areas - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

Learning Outcome 1. Be able to carry out sand trapping

1.1 Carry out a survey of the area identify the main site and then focus down to the specific location where the sand trapping activity is to be carried out e.g. using maps or internet maps of the area and then focussing down to job specification plans or photograph(s) of the site. Agree the main site and specific location with supervisor, client or land owner and then survey in relation to the nature of the work to cover e.g. access to the site, safety and condition of the site, public access/proximity, weather and tides. Develop a simple plan of the site. Carry out a risk assessment for the work to be carried out. Take photographs of original site for later comparison.

1.2 Carry out an environmental impact assessment to identify areas of erosion and instability assess the site and identify factors that might cause erosion or instability in the dune system e.g. prevailing wind direction, high tide levels and frontages that can be reached by high/spring tides; height/contours of dunes; factors affecting vegetation - shading by trees, grazing by rabbits or escaped livestock; public activities - walking and digressions from recognised paths, camp sites/fires, unauthorised use by motorbikes/vehicles, fixed structures that may lead to wind scour. Also consider environmental good practice e.g. opportunities to recycle, efficient transportation of physical resources and disposal of waste materials

1.3 Select and check suitable materials and equipment/tools select tools/equipment e.g. spade types, shuv-holer, fork, rake, mattock, bow saw, billhook, hand saw, claw hammer, staples, pliers, wire cutters/strainer, driveall, sledge hammer, spirit level, ATV and trailer, wheelbarrow. Select materials e.g. fence posts, wire, slats, chestnut palings, brushwood bundles, plastic mesh. Select PPE e.g. overalls, sun hat/glasses and loose clothing suitable for hot conditions plus contingency clothing against rapid changes of weather, steel toe capped footwear, gloves, goggles, hard hat. CE marked. Check tools/equipment in good working order e.g. clean, moving parts oiled and firmly attached, blades sharp. Check materials e.g. no splits in fence posts, brushwood bundles tightly bound. Check PPE e.g. no holes/leaks in boots or gloves, hard hat adjustable and fits

1.4 Identify the types of barriers required for the site e.g. post and strained wire barriers using plastic mesh or posts with unstrained wire supporting barriers of brushwood, slats or palings. Identify other types of barriers to wind erosion e.g. Dutch fencing, thatching or planting/seeding**.** Consider anticipated length of life of the barrier before it is buried, cost, availability and proximity of materials, aesthetic appearance, how best to get the barrier to fit acceptably into its surroundings and be respected by the public.

1.5 Identify the proposed location of barriers and set out in the correct position refer to LO1.1 regarding identification of the location and agreement with the client/ landowner. Set out the line and pattern of barriers e.g. using coloured marker poles or peg and line. Measure and mark the positions of posts e.g. using stones. Identify suitable access route to the proposed barrier to minimise environmental damage.

1.6 Construct two sand trapping barriers of different types erect barrier e.g. dig post holes to specified depth, insert post, backfill and tamp down firmly; alternatively knock the posts in with a driveall or mallet if ground conditions allow specified depth to be achieved; fit brushwood, palings or slats between posts, dig bases in if appropriate and use wire/staples/nails to secure ensuring that tension is maintained. Ensure posts follow the contours of the ground with consistent heights/spacing - check measurements with tape measure and use a spirit level to ensure posts are vertical. Constructing a strained wire fence with a plastic mesh barrier would also be an alternative type to consider.

1.7 Repair any environmental damage damage may occur during access to the site e.g. formation of ruts or displacement/covering of surface vegetation - fill/rake in holes or ruts, level, re-plant/re-seed or

uncover vegetation taking care not to cause more damage or pull plants out. Repair any damage to boundaries to ensure livestock cannot gain access, walkers remain on the desired routes. Damage to boardwalks or paths to be repaired to ensure walkers do not digress creating more erosion problems

1.8 Remove arisings/debris from the area using the correct methods of disposal, leaving the area clear, tidy, safe and in good condition organic plant arisings e.g. buckthorn trimmings. Inorganic waste e.g. rubbish, plastic. Correct disposal e.g. use on site if possible - buckthorn trimmings for fencing to discourage access or depending upon access to site remove using wheelbarrow/bags for disposal as instructed by supervisor. Cover safe manual handling and PPE - refer to LO1.3. Clear debris from any areas adjacent to site, clear away all tools/equipment. Walk around area to check it is safe - refer to LO1.6. Give site a final rake if needed to leave it as it was found, check this against the original photograph and also to ensure the job specification is met

Learning Outcome 2. Be able to establish vegetation in coastal areas

2.1 Identify locations where planting is required refer to process followed in LO1.1, use this to identify the specific area to be planted and agree this with client/landowner. Record on plan of the site. Carry out risk assessment of area to be planted. Take photographs showing original site to be used later for comparison

2.2 Identify and record species already present by their botanical names use identification reference material with specific emphasis on a pictorial approach. Use key/coding system to record e.g. on the plan prepared in LO1.1 the specific locations/ areas of species of grasses, wild flowers, plants. Develop a list of these by botanical names e.g. Ammophila arenaria - marram grass to support the key/coding on site plan.

2.3 Identify, select and prepare species for establishment discuss with client or landowner most suitable plant species for specific location to be planted. Agree plants e.g. marram grass or sand sedge in uniformly sandy areas. Obtain marram grass from suitable donor sites as close as possible to the location to be established and where stabilising vegetation will soon preclude further growth e.g. pull marram grass under supervision to ensure it is pulled at correct stage of growth - not too old/young, remove sand from roots to reduce weight in transport sacks but do not remove dead leaves. Other plants

of British provenance may be obtained from wholesaler/catalogue/internet

2.4 Plant vegetation to the correct depth and spacing take plants to site – wheelbarrow / bags. Cover roots to keep them moist and also take care not to allow the plants to get too hot, water before planting. Use spade to dig planting holes or create planting gap or dibber of suitable size. In warmer weather conditions avoid opening sand up so that it dries out more easily. Plant ensuring appropriate depth of base of leaves below the surface for marram grass e.g. 10 cm and in drier conditions down to damp sand or for shrubs/trees plant to soil mark on stem.

Plant from two to five or six marram grass plants per hole depending on size. Firm around each planting. Adopt planting pattern as agreed with client/landowner e.g. spaced 45 cm apart in offset rows for marram grass

2.5 Protect planted area planted area may already be surrounded by sand trap barriers that will prevent human traffic or use thatching or buckthorn access barriers. Warning signs to prevent access. Rabbit fencing may need to be considered in some areas.

2.6 Repair any environmental damage refer to LO1.7

2.7 Remove arisings/debris from the area using the correct methods of disposal, leaving the area clear, tidy, safe and in good condition refer to LO1.8

Teaching Strategies And Learning Activities

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Learning Outcomes (LO) 1 and 2

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- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
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- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications

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Additional Information

See Skills and Education Group Awards website for further information

Practical Skills for Pond and Wetland Areas

Unit Reference	**L/602/1981**
Level	**2**
Credit Value	**6**
Guided Learning Hours	**51**
Unit Summary	This unit explores the skills needed to establish and maintain pond and wetland areas. Learners will be involved in the practical tasks necessary to do this
Learning Outcomes (1 to 2) ***The learner will***	**Assessment Criteria (1.1 to 2.8)** ***The learner can***
1. Be able to establish ponds and wetland	**1.1** Identify and set out an area for pond/wetland construction or extension **1.2** Carry out an environmental impact assessment **1.3** Select appropriate hand tools or machinery **1.4** Excavate an area to specified size and depth according to design **1.5** Line the pond/wetland area **1.6** Identify and select plant species to be planted **1.7** Use appropriate planting methods for species and position in a suitable location **1.8** State the correct time(s) of year and environmental conditions for establishment

	1.9 Repair any environmental damage **1.10** Remove arisings/debris from the area using the correct methods of disposal, leaving the area clear, tidy, safe and in good condition
2. Be able to maintain pond and wetland	**2.1** Inspect a specified area, identify and report maintenance requirements **2.2** Identify correct water levels **2.3** Check and clear inlets and outlets where appropriate **2.4** Clear any excess or unwanted bankside or aquatic vegetation **2.5** Excavate any silted area **2.6** Replant areas **2.7** Repair any environmental damage **2.8** Remove arisings/debris from the area using the correct methods of disposal, leaving the area clear, tidy, safe and in good condition

Supporting Unit Information

L/602/1981 Practical skills for pond and wetland areas - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

Learning Outcome 1. Be able to establish ponds and wetland

1.1 Identify and set out an area for pond/wetland construction or extension identify the main site and then focus down to the specific location where the pond/wetland area is to established e.g. using maps or internet maps of the area and then focussing down to job specification or site plans or photograph(s) of site. Agree the main site and specific location with supervisor, client or land owner and then set out the outline of the pond, wetland area(s) and margins e.g. using marker pegs and line or spot paint. Cat scan the area to be excavated to check for utilities. Carry out a risk assessment of the work to be done. Photograph of the original site for later comparison.

1.2 Carry out an environmental impact assessment consider pollution of soil, water or air as a result of establishment activities e.g. chemical emissions/spillages, noise, physical disturbance, arisings from establishment activities - spoil and run-off; site and wildlife, proximity to protected areas - SSSI's etc; visual/aesthetic effect of work to be carried out. Also consider environmental good practice e.g. opportunities to recycle, efficient transportation of physical resources and disposal of waste materials.

1.3 Select appropriate hand tools or machinery tools and equipment selected e.g. spade types, fork, rake, crowbar, mattock, bow saw, brush, peg and line, sprit level, hand saw, hammer, wheelbarrow, ATV and trailer, mechanical digger, tarpaulins for top soil and spoil, planks.

PPE selected and safely used e.g. overalls, old wet suit, work or rubber gloves, steel toe-capped footwear/ wellingtons or waders. CE marked. Consider the route for access and where to put the spoil.

1.4 Excavate an area to specified size and depth according to design work from plan agreed - any changes to be communicated and agreed with client/landowner. Excavate the area to specified profile and levels and to correct depth including making allowances for sand and lining materials. Excavated materials to be place on sheeting to avoid damage to habitat. Put the top soil in one area and keep it separate from the sub-soil.

1.5 Line the pond/wetland area remove any sharp objects - stones, glass, jagged roots. Rake around the profile of the pond/wetland area to achieve a level finish. Ensure that there are no sudden changes of direction in the profile that may be difficult for the liner to follow. Place a layer of sand to the specified depth all over the profile - the liner will rest on this and the sand should protect it against the possibility of puncture. Ensure the liner is put down correctly and lies flat across the sand with minimum creasing.

1.6 Identify and select plant species to be planted check websites or contact suppliers of British provenance pond/wetland plants and list eight species that would be suitable for the pond e.g. branched bur-reed, lesser bulrush, flowering-rush, greater spearwort, yellow water lilly, amphibious bistort, arrowhead, water-plantain etc.; or suitable for the wetland area e.g. purple loosestrife, lesser spearwort, marsh woundwort, meadow sweet, water mint, ragged robin, water or tufted forget-me-not, brooklime, marsh marigold etc. Agree with the client or landowner the plant species to be used and the specific area of pond or wetland - annotate plan of the area with the agreed planting arrangements. Obtain plants e.g. from wholesaler. Check that healthy specimens have been obtained - no damage/disease. Transport plant material to site e.g. wheelbarrow and/or bags ensuring materials do not dry out.

1.7 Use appropriate planting methods for species and position in a suitable location plant chosen species both around the pond and in the pond to suit their requirements - refer to LO1.6. planting in the pond e.g. probably in baskets, space out and place on ledges, place gravel on top of the compost to avoid erosion. Around pond e.g. put topsoil around outskirts of the pond (dig out perennial weeds first), add compost to aid establishment. Keep roots covered to avoid them drying out prior to planting.

1.8 State the correct time(s) of year and environmental conditions for establishment seasonality to be taken into account e.g. the

optimum time for planting up is April/May, avoid planting in winter, during adverse weather conditions - raining/frost - consider effect on access to site and comfortable and safe working. Also avoid dry conditions as establishment can be difficult unless plants are container grown. Take care in accessing the site/transporting the plants to avoid e.g. breakages, bruising and drying out of roots.

1.9 Repair any environmental damage there is likely to be considerable environmental damage from digging out the pond and during access to the site particularly if a digger is used - it is best to use a rubber tracked digger rather than one with metal tracks. Spoil should either be removed or re-used to repair damage - ensure that subsoil is covered with top soil otherwise there will be little growth. Fill/rake in holes or ruts, level, re-plant/ re-seed. Cut back or prune damaged branches/roots to prevent disease.

1.10 Remove arisings/debris from the area using the correct methods of disposal, leaving the area clear, tidy, safe and in good condition organic debris e.g. leaves, branches to be recycled by shredding/composting - care not to perpetuate perennial weeds, burn these if possible. Aim to use spoil to repair and re-contour ground - level and re-seed if necessary. Inorganic debris e.g. stones, rubbish, pond liner trimmings, plastic - remove with wheelbarrow/bags or skip for disposal with local authority/private contractor. Rake/brush area surrounding pond/wetland to clear debris e.g. lawns, paths, stonework. Cover safe manual handling and PPE - refer to LO1.3. Walk around area to check it is safe e.g. no holes, slippery areas or tripping hazards. Check original photograph against end product to ensure specification has been met - pond/wetland area established, lawn, paths, original shrubs and trees etc. left in good condition.

Learning Outcome 2. Be able to maintain pond and wetland

2.1 Inspect a specified area, identify and report maintenance requirements refer to LO1.1 for identification of main site and specific location to be inspected. Obtain plan of site, walk the site and annotate maintenance requirements identified on the plan e.g. to include general cleaning/tidying of site, paths, pebble areas, removing debris, cleaning out pond, pulling out species that are becoming too dominant, maintaining sluices / dams / inlets and outlets etc. Report and agree maintenance requirements with client or landowner, work out a maintenance schedule.

2.2 Identify correct water levels identify the appropriate water level e.g. by the profile of plants at the waterline and whether they are immersed or showing previously submerged foliage or agree on water

levels to be maintained with the client/landowner - take seasonality into account to avoid the area drying out in the summer. Sluice gates/ dams need to be in full working order.

2.3 Check and clear inlets and outlets where appropriate inlets and outlets need to be maintained on a regular basis to avoid blockages which may lead to flooding during very wet weather e.g. check movement, oil moving parts when required to avoid seize up, regularly remove debris - leaves, branches, litter, pollution, rubbish.

2.4 Clear any excess or unwanted bankside or aquatic vegetation bankside e.g. use strimmer, hand shears or loppers as appropriate to keep down grass, cut back briars, hawthorn bushes etc. Aquatic vegetation - use crome or rake to pull our invasive pond plants e.g. Canadian pondweed, watercress, bulrushes or yellow flag irises - the later may need to have their roots broken up/cut before being pulled out of the pond to make the weight more manageable. Remember to leave vegetation on the bank, a metre or so away from the water to allow newts and insects to escape back into the pond. Some of these plants can clog up inlets/outlets and eventually lead to the pond silting up. Collect debris e.g. leaves, branches, litter etc. - organic can be composted/recycled.

2.5 Excavate any silted area silt needs to be removed to maintain the required depth of water in the pond or inlets/outlets. If left silting will eventually lead to other plants becoming established. Excavate using a digger or spade - silt removed could be recycled e.g. contouring of landscape or use on flower beds etc.

2.6 Replant areas replace dead or missing plants using the techniques in LO1.7 and taking seasonality into account. There may be a need to protect the area from rabbits.

2.7 Repair any environmental damage refer to LO1.9. Access to site and transport of tools and equipment are likely to be main causes of damage.

2.8 Remove arisings/debris from the area using the correct methods of disposal, leaving the area clear, tidy, safe and in good condition refer to LO1.10. There may be a variety of more unusual inorganic debris such as discarded shopping trolleys, bicycles etc. particularly in ponds near urban areas - beware of glass and syringes and needles. Cover safe handling and lifting of the heavier items and how to deal with syringes/needles and glass - sharps box/picker.

Teaching Strategies And Learning Activities

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Learning Outcomes (LO) 1 and 2
Delivery of these learning outcomes is by supervised practical operational work giving learners the opportunity, first to practice the various tasks and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

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Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
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- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

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Additional Information

See Skills and Education Group Awards website for further information

Practical Skills for Hedgerows

Unit Reference	**H/602/1985**
	2

Level	
Credit Value	**6**
Guided Learning Hours	**51**
Unit Summary	This unit explores the skills needed prepare and establish a new hedgerow and introduces learners to the skill of hedgelaying. Learners will be involved in the practical tasks necessary to do this
Learning Outcomes (1 to 3) ***The learner will***	**Assessment Criteria (1.1 to 3.8)** ***The learner can***
1. Be able to establish a new or replacement hedgerow	**1.1** Identify the area of hedgerow to be established **1.2** Carry out an environmental impact assessment recording species already present by their botanical names **1.3** Clear the site of debris/vegetation and set out the line of the hedge **1.4** Identify the correct time(s) of year and environmental conditions for planting/establishment **1.5** Plant at correct spacings and depths **1.6** Apply guards and support as necessary **1.7** Repair any environmental damage **1.8** Remove arisings/debris from the area using the correct methods of disposal, leaving the area clear, tidy, safe and in good condition

2. Be able to lay a hedge	**2.1** Identify the area of hedge for laying, checking it's condition and species **2.2** Identify and select hand tools to lay the hedge **2.3** Remove debris, dead and unwanted branches **2.4** Trim back where necessary and select suitable pleachers **2.5** Cut and lay pleachers to correct height and angle **2.6** Insert stakes at appropriate intervals and secure pleachers **2.7** Identify correct time(s) of year and environmental conditions for laying hedges **2.8** Repair any environmental damage **2.9** Remove arisings/debris from the area using the correct methods of disposal, leaving the area clear, tidy, safe and in good condition
3. Be able to maintain hedgerows	**3.1** Survey hedges and record species already present by their botanical names **3.2** Remove dead wood and debris where necessary **3.3** Identify the correct time(s) of year and environmental conditions for maintaining and pruning hedges **3.4** Trim a hedge at an appropriate height using hand tools or machinery **3.5** Create required hedge shape/profile **3.6** Fell and coppice trees

	3.7 Repair any environmental damage **3.8** Remove arisings/debris from the area using the correct methods of disposal, leaving the area clear, tidy, safe and in good condition

Supporting Unit Information

H/602/1985 Practical skills for hedgerows - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

Learning Outcome 1. Be able to establish a new or replacement hedgerow

1.1 Identify the area of hedgerow to be established identify the main site and then focus down to the specific location where the hedgerow is to be established e.g. using maps or internet maps of the area and then focussing down to job specification or site plans or photograph(s) of the site. Agree the main site and the specific location with the supervisor, client or land owner. Develop a plan of the site and record on it the line of the hedgerow. Carry out a risk assessment of the work to be done. Take a photograph of the original site for later comparison.

1.2 Carry out an environmental impact assessment recording species already present by their botanical names environmental impact assessment - consider pollution of soil, water or air as a result of establishment activity e.g. chemical spillages/emissions, noise, physical disturbance - run-off; site and wildlife, proximity to protected areas - SSSI's etc; visual/aesthetic effect of work to be carried out. Use identification reference material with specific emphasis on a pictorial approach - trees, flowers, shrubs. Use a key/coding system to record the findings on a simple plan of the area showing the areas/specific locations of species of trees, flowers, shrubs. Develop list of these by their botanical names e.g. Quercus robur - English Oak. This list should support the key/coding on the site plan.

1.3 Clear the site of debris/vegetation and set out the line of the hedge clear the site of vegetation using strimmer, brush cutter, scythe/slasher. Remove arisings. Remove annual and perennial weeds e.g. dig out perennials, removing all of roots to avoid re-establishment. Clear stones/debris/rubbish and remove with wheelbarrow/bags. Refer to LO1.8. Use peg and line to set out the line of the hedge. PPE - ensure learners are wearing e.g. overalls, steel toe capped footwear, gloves, hard hat with goggles/visor/ear muffs if strimming/brush cutting or cutting back branches. CE marked.

1.4 Identify the correct time(s) of year and environmental conditions for planting/establishment seasonality is vital when planting/establishing hedgerows e.g. planting deciduous plants in late autumn after the leaves have fallen will allow some root development and get the plants off to a good start in the spring, planting can be carried out in suitable conditions through the winter until early spring. Environmental conditions e.g. avoid waterlogged ground, frost and frozen ground, hot, sunny and dry conditions.

1.5 Plant at correct spacings and depths spacing - check specification or agree with client or landowner if hedgerow is to be established as a single or double row and the species to be planted e.g. mixed blackthorn and hawthorn hedge to be planted in a double row with 45cm between rows and between plants or a nursery specification for a particular mix might be stated in terms of number of plants per10 metres of hedgerow. Depth - planted to the soil mark on the stems of the plant material.

1.6 Apply guards and support as necessary support e.g. using canes and ties - take care to avoid damaging the roots when putting in canes. Protect from rabbits using plastic spirals/tubes around the stems. It may be necessary to put up netting/fencing against rabbits and deer.

1.7 Repair any environmental damage e.g. damage to the access route when bringing in plants and removing arisings and debris. Fill in holes/ruts, level and re-seed and if necessary provide protection from birds, fork/rake over compacted ground. Repair boundaries to avoid access from livestock. Prune back any damaged branches/roots to prevent disease gaining entry.

1.8 Remove arisings/debris from the area using the correct methods of disposal, leaving the area clear, tidy, safe and in good condition organic plant arisings e.g. to be recycled//composted - use shredder to produce wood chips or compost; care not to put invasive/perennial weeds in compost - burn these if possible; re-use organic materials on site if possible - branches for habitat piles. Inorganic waste - rubbish, plastic. Correct disposal e.g. depending

upon access remove using wheelbarrow and place in bags or skip for disposal with local authority/private contractor. Cover safe manual handling and PPE - refer to LO1.3. Clear away all tools and equipment and then walk site to check it is safe. Check original photograph against end product to ensure specification is met - hedgerow established along desired line and site left in good condition as close as possible to original

Learning Outcome 2. Be able to lay a hedge

2.1 Identify the area of hedge for laying, checking it's condition and species refer to the process followed in LO1.1 to identify the specific area of hedge for laying including agreement with client/landowner. Draw up a simple plan and use a key/coding system to record the species present e.g. hawthorn, ash, beech etc. and annotate key aspects of their condition such as height, number, width of stems. Carry out a risk assessment.

2.2 Identify and select hand tools to lay the hedge hand tools e.g. loppers, bow saw, pruning saw, billhook, axe, sharpening stone, rake, fork. PPE e.g. overalls, hedging gloves, steel toe capped footwear, knee pads, leggings also refer to LO1.3.

2.3 Remove debris, dead and unwanted branches remove debris from the base of the hedge with a fork or rake. Get rid of any old wire - barbed or mesh. Cut out dead branches. Identify and then cut back unwanted branches e.g. cut as close to the trunk as possible, sloping the cut to allow water to run off - this will prevent rotting which may occur if water cannot escape. Place cut material away from the hedge to avoid obstructions/tripping.

2.4 Trim back where necessary and select suitable pleachers trim back e.g. using loppers or billhook. Get rid of brambles, honeysuckle, ivy etc that will hamper access to the pleachers and elder which will not lay. Trim sufficiently to expose the pleachers but leave the top growth to ensure hedge density after laying. Pleachers can be selected from e.g. the stems that are in line, living rather than dead stems - but retain dead stems if not doing so would leave a gap, straight well-formed stems, the desired types of trees - hawthorn, different trees to ensure spacing.

Make sure enough pleachers are selected to lay a dense hedge and also take into account the specific style of hedge laying in the locality

2.5 Cut and lay pleachers to correct height and angle cut pleachers at height above ground and across width of stem as instructed. Angle cut

with the grain as instructed. Lay pleachers carefully to ensure the connection to the stump is not damaged or twisted. Lay pleachers at an angle and fill areas where there are gaps/few pleachers as instructed. Aim to get the hedge as dense as possible to prevent access by stock.

2.6 Insert stakes at appropriate intervals and secure pleachers stakes can be obtained from off cuts or by bringing them onto the site. Sharpen as instructed and knock in with a wooden mallet at a regular distance apart and along a regular line in relation to the hedge as instructed e.g. at a specified distance into the field side. Wind the pleachers along the stakes ensuring that room is left for binding and that most of the bushy growth is oriented into the field.

2.7 Identify correct time(s) of year and environmental conditions for laying hedges the seasonality of laying is essential e.g. important not to lay when the sap is rising in the spring and summer, this would also disrupt the breeding activities of mammals, birds, etc. Hedge laying normally takes place from late autumn, through winter in some parts of the country and into early spring depending upon the severity and onset of hard winter conditions. Avoid laying hedges in adverse weather conditions e.g. during rain or very wet or cold/frosty conditions. Boggy or icy ground could result in slips and injury.

2.8 Repair any environmental damage refer to LO1.7

2.9 Remove arisings/debris from the area using the correct methods of disposal, leaving the area clear, tidy, safe and in good condition refer to LO1.8. Trimmings could be shredded e.g. to produce wood chippings and mulch which could be used at the bottom of the hedge to reduce weed establishment.

Learning Outcome 3. Be able to maintain hedgerows

3.1 Survey hedges and record species already present by their botanical names prior to survey consider e.g. the nature of the work, safety and condition of the site, wildlife present - breeding birds. Refer to second part of LO1.2.

3.2 Remove dead wood and debris where necessary remove debris from the base of the hedge with a fork/rake. Cut out dead branches, prune back dying branches. The arisings could be used as habitat piles. Remove old wire - barbed/mesh or fence posts.

3.3 Identify the correct time(s) of year and environmental conditions for maintaining and pruning hedges time of year - hedgerow cutting is usually done e.g. in autumn, winter or early spring prior to the sap rising. Consider timing in relation to supply of berries/nuts for birds/mammals and also in relation to survival of the

eggs of moths/butterflies through the winter. Environmental conditions e.g. may affect timing if the ground is soft or boggy making access difficult, health and safety risks increased e.g. work during rainy conditions, when ground is slippery or during cold or icy conditions.

3.4 Trim a hedge at an appropriate height using hand tools or machinery the client or landowner should specify the desired height of hedge depending on its purpose e.g. - rectangular profile to 1.5 m height - livestock retention. A profile to 2m for shelter from the wind. Trim hedge using shears or a powered hedge cutter as instructed by supervisor. PPE to be worn e.g. goggles, ear protectors and refer to LO 1.3. Check for obstructions in hedgerow prior to trimming e.g. wire, bottles, cans, old fence rails and also tripping or slipping hazards along the line of the hedgerow

3.5 Create required hedge shape/profile examples of hedge shapes include normal and topped, A shaped and rectangular. Use shears or a powered hedge cutter as instructed by the supervisor to achieve one type of hedge shape/profile. Refer to LO3.4.

3.6 Fell and coppice trees fell trees e.g. assess each tree carefully to ensure that it is suitable for coppicing, identify the direction of fall, ensure escape routes are fully in place, make appropriate cuts and control the direction of fall. Remove trunks and trim the stumps so they are all angled away from the centre to shed rain and present less of a tripping hazard, clean up any torn bark to minimise disease. Ensure felling operations are carried out at the appropriate time of year and suitable weather conditions. Use bow saw, pruning saw, loppers. PPE e.g. refer to LO1.3.

3.7 Repair any environmental damage refer to LO1.7

3.8 Remove arisings/debris from the area using the correct methods of disposal, leaving the area clear, tidy, safe and in good condition refer to LO1.8 and LO2.9

Teaching Strategies And Learning Activities

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Methods Of Assessment

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Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
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- Interview/professional discussion
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- Tool / equipment inventory lists / maintenance schedules
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Additional Information

See Skills and Education Group Awards website for further information

Prepare and Erect Strained Wire Fencing

Unit Reference	**A/601/8803**
Level	**2**
Credit Value	**5**
Guided Learning Hours	**38**
Unit Summary	This unit explores how to prepare and erect strained wire fencing. Learners will be involved in the practical tasks necessary to do this
Learning Outcomes (1 to 2) ***The learner will***	**Assessment Criteria (1.1 to 2.9)** ***The learner can***
1. Be able to set out a strained wire fence line	**1.1** Identify and set out the line of the fence **1.2** Carry out an environmental impact assessment **1.3** Identify and select materials required **1.4** Mark out the position of all posts
2. Be able to erect a strained wire fence	**2.1** Set out the position of straining posts at specified spacings **2.2** Correctly identify and select appropriate hand tools or machinery **2.3** Install posts to specified depths **2.4** Install anchor and support straining posts

	2.5 Install intermediates securely to correct line and level **2.6** Secure wire to straining posts at correct height and tension **2.7** Secure wire correctly to intermediates and check fence **2.8** Repair any environmental damage **2.9** Remove risings/debris from the area using the correct methods of disposal and leaving the site clear, tidy and safe

Supporting Unit Information

A/601/8803 Prepare and erect strained wire fencing - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

Learning Outcome 1. Be able to set out a strained wire fence line

1.1 Identify and set out the line of the fence identify main site and then focus down to specific location where fence is to be located e.g. using maps or internet maps of area focussing down to job specification or site plans or photograph(s) of site and agreed with supervisor, client or land owner. Need to consider contours of land and any existing features. Carry out a risk assessment of site including need to cat scan in relation to insertion of posts. Record line of fence on plan of site; mark out on site e.g. using spot paint for posts or peg and line. Take photograph of the original site for later comparison.

1.2 Carry out an environmental impact assessment consider pollution of soil, water or air as a result of establishment activities e.g. chemical emissions/spillages, noise, physical disturbance; also consider effects on site and wildlife, proximity to protected areas - SSSI's etc. visual/aesthetic effect of work to be carried out. Also consider environmental good practice e.g. opportunities to recycle, efficient transportation of physical resources and disposal of waste materials.

1.3 Identify and select materials required materials e.g. hazard tape, cones, staples, wire, stock netting, posts, struts, feet, connectors/crimps, may require sand/cement for securing posts.

1.4 Mark out the position of all posts find out specifications from client or landowner and work from plan of site. Measure out length of fence and calculate number of posts and their locations. Mark positions on

ground to ensure posts are set at an equal distance apart e.g. spot paint along peg and line. Position so that fence constructed is aesthetically pleasing and if possible blends in with the landscape rather than being obtrusive e.g. slanting across a hill slope rather than straight up the slope.

Learning Outcome 2. Be able to erect a strained wire fence

2.1 Set out the position of straining posts at specified spacings refer to specification for the number and position of straining posts. Mark their positions at appropriate points of the fence line set out in LO1.1. This may be at the ends of a straight stretch or at points suitable to allow the perimeter of a field to be skirted. Use a different colour of spot paint or coloured marker poles to clearly distinguish the positions of strainer posts.

2.2 Correctly identify and select appropriate hand tools or machinery tools e.g. spade, fork, crow bar, shuv-holer, tape measure, spirit level, hand saw, hammer, pliers, strainer types, wooden mallet, driveall, tamper, wheelbarrow, ATV and trailer, tarpaulin/sacks for spoil. PPE e.g. overalls, steel toe capped footwear, gloves/industrial rubber gloves for newly treated posts. CE marked.

2.3 Install posts to specified depths if the ground is soft knock in the posts using a wooden mallet/driveall to the specified depth. In firm ground dig out a hole - use a crow bar to break down the bottom if necessary, remove debris from the hole. Insert the post and ensure it is vertical - check with spirit level. Knock post in to specified depth, backfill with hardcore and tamper down. In some situations it may be necessary to secure post with cement/concrete. Refer to LO2.4. It may be necessary to cut roots.

2.4 Install anchor and support straining posts dig a post hole as described in LO2.3 - may need to be big enough to accommodate a foot on the straining post to anchor it. Ensure the foot rests on firm ground and is supported by a stone to further prevent movement - tamp down firmly. Backfill around the straining post and tamp down firmly as directed. Insert a breast plate rock near the ground surface on the pull side of the straining post (other side from the foot). Once the first line wire is fitted a strut can be inserted to further support the straining post. This goes on the same side as the breast plate rock and it is essential that it aligns with the direction of the wire as this will help prevent the straining post from twisting. The strut may be inserted by cutting out a small section of the straining post allowing the strut to be fixed at an angle into the ground where the base of it is secured against a flat stone to produce a really solid base to resist the pull of

the strained wire. Ensure the straining post is vertical using a spirit level and check that it is fully secure before fitting more wires.

2.5 Install intermediates securely to correct line and level these are installed after the straining posts have been set in place. Space out the intermediates at the specified distances. Dig out the post holes and install as LO2.3. Ensure intermediate posts are on the correct line and their heights follow the contour of the ground.

2.6 Secure wire to straining posts at correct height and tension unwind the wire from the second straining post to the first and wrap around the post leaving a tail, move it to the specified height and staple or secure by twisting the tail around the incoming wire for a length as instructed. Use a strainer attached to the second straining post to obtain the required tension of the wire. Secure the wire to the second post and cut.

2.7 Secure wire correctly to intermediates and check fence ensure the wire is strained to the required tension and then staple onto the intermediate posts at the specified height. Angle the staples and hammer in until just touching the wire to allow tension transfer along the wire or tension adjustment if needed. Ensure the contour of the land is followed

2.8 Repair any environmental damage e.g. damage to the access route and ground either side of the fence. Fill in holes/ruts, level and re-seed. Repair e.g. brush/shovel up any excess materials, prune back any damaged branches or roots to prevent disease gaining entry, fork/rake over compacted ground, brush up at the end. Refer to LO2.9

2.9 Remove risings/debris from the area using the correct methods of disposal and leaving the site clear, tidy and safe organic plant arisings e.g. to be recycled by shredding / composting. Inorganic waste - treated off-cuts of posts/struts/wires, stones/rubbish/plastic. Correct disposal e.g. use on site - stones to provide extra support for straining posts or depending upon access remove using wheelbarrow/bags and place in skip for disposal with local authority/private contractor. Cover safe manual handling and PPE. Visual inspection along fence line for safety - no tripping hazards, no wire strands left lying in the grass and condition - even post height/spacing, wire height/spacing, meets specification and follows the contours of the land. Check against the original photograph - LO1.1 - to ensure the site has been returned as close as possible to its original state.

Teaching Strategies And Learning Activities

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including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes (LO) 1 and 2
Delivery of these learning outcomes is by supervised practical operational work giving learners the opportunity, first to practice the various tasks and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

Methods Of Assessment

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Additional Information

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Practical Skills for Footpath and Surfacing Work

Unit Reference	**H/602/1999**
Level	**2**
Credit Value	**6**
Guided Learning Hours	**53**
Unit Summary	This unit explores the skills needed to construct and maintain a footpath. Learners will be involved in the practical tasks necessary to do this
Learning Outcomes (1 to 3) ***The learner will***	**Assessment Criteria (1.1 to 3.8)** ***The learner can***
1. Be able to lay paths using either • aggregate • stone pitching • flag • bark	**1.1** Identify the line and course of the proposed path **1.2** Carry out an environmental impact assessment **1.3** Identify and select appropriate hand tools and machinery **1.4** Remove any debris and accurately mark out path line and level **1.5** Excavate path to correct line, level and width **1.6** Level and consolidate the sub-base as required **1.7** Lay and consolidate surface material to specified depth and camber/cross fall **1.8** Repair any environmental damage

	1.9 Remove arisings/debris from the area using the correct methods of disposal, leaving the area clear, tidy, safe and in good condition
2. Be able to install path drains	**2.1** Identify where side drains/cross drains are required **2.2** Identify and select appropriate hand tools and machinery **2.3** Set out the line and level of drains **2.4** Excavate drains to correct line, specified depth and fall **2.5** Install pipes and backfill with suitable material where required **2.6** Create suitable batter on open drain sides where required **2.7** Repair any environmental damage **2.8** Remove arisings/debris from the area using the correct methods of disposal, leaving the area clear, tidy, safe and in good condition
3. Be able to maintain footpaths	**3.1** Survey paths for condition and safety and record information **3.2** Identify and select appropriate hand tools and machinery **3.3** Resurface a footpath with suitable material to the specified width, line and height **3.4** Clear any obstructed drains of debris and vegetation

	3.5 Create correct depth, fall and batter as required **3.6** Repair and replace edgings and steps **3.7** Repair any environmental damage **3.8** Remove arisings/debris from the area using the correct methods of disposal, leaving the area clear, tidy, safe and in good condition

Supporting Unit Information

H/602/1999 Practical skills for footpath and surfacing work - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

Learning Outcome 1. Be able to lay paths using either aggregate, stone pitching, flag or bark

1.1 Identify the line and course of the proposed path identify the main site and then focus down to the specific location where the path is to be constructed e.g. using maps or internet maps of the area and then focussing down to job specification or site plans or photograph(s) of the site. Agree with the client or landowner the type of materials to be laid down. Take photographs of the original site for later comparison. Develop a plan of the site and record on it the line and course of the path. Carry out a risk assessment along the proposed line. Cat scan site to ensure excavations do not disrupt utilities.

1.2 Carry out an environmental impact assessment consider pollution of soil, water or air as a result of establishment activities e.g. chemical emissions/spillages, noise, physical disturbance, arisings from establishment activities - spoil and run-off; also consider effects on site and wildlife, proximity to protected areas - SSSI's etc; visual/aesthetic effect of work to be carried out. Also consider environmental good practice e.g. opportunities to recycle, efficient transportation of physical resources and disposal of waste materials.

1.3 Identify and select appropriate hand tools and machinery tools and machinery selected e.g. spade, shovel, fork, rake, brush, crowbar, mattock, bow saw, strimmer, tape measure, peg and line, sprit level, hand saw, hammer, wheelbarrow, power barrow, wacker plate. PPE

selected e.g. overalls, steel toe capped footwear, gloves, ear muffs and goggles for machinery use, hard hat for use of mattock. CE marked.

1.4 Remove any debris and accurately mark out path line and level strim along the line of the path, rake/brush to clear vegetation. Dig out perennial weeds so that they cannot re-establish. Remove rubbish, leaves, stones from the area in wheelbarrow and or bags. Using the site plan (ref to LO1.1), mark out the line of the path e.g. using spot paint and/or peg/line. Generally follow the contour of the land.

1.5 Excavate path to correct line, level and width excavate the path tray generally following the contour of the land - in some areas it may be necessary to dig out and in other areas to build up along the line of the path to avoid awkward gradients. Use surplus materials from excavations to back fill holes/depressions to ensure path is level. Fix edge boards to avoid collapse of the sides - knock in small posts and nail edge boards to them or build up the sides with spoil and profile, turf and seed or use stones.

1.6 Level and consolidate the sub-base as required tip and rake the sub-base level to the specified depth and use a wacker plate to consolidate. Fill any remaining holes or depressions to ensue sub-base is level. If appropriate lay geo-textile right up to the edge boards to avoid gaps.

1.7 Lay and consolidate surface material to specified depth and camber/cross fall use a wheelbarrow or power barrow to move the surface materials to where they will be used and then follow specifications for depth/method/pattern of laying and any requirements for a camber or cross fall to ensure that effective drainage is in place. Wedge/pack/fill gaps/rake/consolidate appropriate to the path type. Check that the finish meets the specification - even, comfortable to walk on and no holes where water might collect and weaken the surface as a result of frost action.

1.8 Repair any environmental damage there is likely to be environmental damage from transportation of materials and/or digging operations at the path site particularly if machinery is used. Spoil from the path should either be removed or re-used to repair damage, cover subsoil with top soil to support growth - fill/rake in holes or ruts, level, re-plant/re-seed as appropriate. Cut back or prune damaged branches/roots to prevent disease. Repair any damage to boundaries to ensure livestock cannot gain access

1.9 Remove arisings/debris from the area using the correct methods of disposal, leaving the area clear, tidy, safe and in good condition organic debris e.g. leaves, strimmings to be recycled by shredding/composting - care not to perpetuate perennial weeds,

burn these if possible. Re-use spoil to backfill/ re-contour banks - level/profile and re-seed if necessary. Inorganic debris e.g. stones, rubbish, plastic - remove with wheelbarrow/bags/skip for disposal with local authority/private contractor. Rake/brush area surrounding path to clear debris. Cover safe manual handling and PPE - refer to LO1.3. Walk the path to check it is safe, no holes, slippery areas or tripping hazards. Check original photograph against end product to ensure specification is met and surrounds have been returned to their original condition.

Learning Outcome 2. Be able to install path drains

2.1 Identify where side drains/cross drains are required study the line of the path in detail to identify where it would be appropriate to construct side drains/cross drains to effectively remove excess water from the area of the path. Cross drains are likely to be needed when water is flowing off a slope above the path and would normally pass over the path causing erosion. Side drains are required to avoid the area around the path and the path itself becoming saturated/boggy.

2.2 Identify and select appropriate hand tools and machinery refer to LO1.3

2.3 Set out the line and level of drains use a peg and line to set out side drains parallel to the path and cross drains to run through the path. Use a spirit level to ensure there is an appropriate fall on either type of drain to allow water to be removed effectively.

2.4 Excavate drains to correct line, specified depth and fall excavate trenches for drains following the lines set out, check the depth is sufficient to allow for any fill underneath drainage pipes and that depth and fall meet specification.

2.5 Install pipes and backfill with suitable material where required place pipes in the prepared trench and connect. Ensure a consistent fall and avoid sharp angles which would require connections and may become more easily blocked. Use materials excavated to backfill if stone and rubble or otherwise use 12mm drainage stone or smaller to allow water to percolate through.

2.6 Create suitable batter on open drain sides where required construct batter to match specification/instructions

2.7 Repair any environmental damage refer to LO1.8. Fork over any compacted areas.

2.8 Remove arisings/debris from the area using the correct methods of disposal, leaving the area clear, tidy, safe and in good condition refer to LO1.9. Check safety in relation to newly constructed drains.

Learning Outcome 3. Be able to maintain footpaths

3.1 Survey paths for condition and safety and record information survey paths - consider in relation to the nature of the work e.g. access to the site, safety and condition of the site, public access/proximity and weather. Record the survey findings as a report or annotate the plan of the site - refer to LO1.1. Present the findings to the landowner or client and agree the maintenance schedule needed to avoid health and safety risks to users and/or to avoid erosion and the path becoming less comfortable to walk upon.

3.2 Identify and select appropriate hand tools and machinery refer to LO1.3.

3.3 Resurface a footpath with suitable material to the specified width, line and height remove the top layer to a specified depth across the full width of the path. Resurface with new material to specified depth/method/pattern of laying and to match the camber/cross fall of the rest of the path. Wedge/pack/fill gaps/rake/consolidate appropriate to the path type - use wacker plate if necessary to fully consolidate.

3.4 Clear any obstructed drains of debris and vegetation remove any materials which may block the free flow of water such as leaves, vegetation, roots, moss, dead material. Blocked drains can lead to saturated/flooded ground and can also lead to erosion and undermining of the path. Walkers may damage habitat on either side of the path if forced to leave it because of puddles/boggy areas.

3.5 Create correct depth, fall and batter as required work to specifications as set out by the client/landowner. Ensure depth of resurface is sufficient to bind with the lower layer. Check fall of drains and batter of open drains, correct these if do not meet specification.

3.6 Repair and replace edgings and steps if edgings are damaged, rotten or moved out of place they need to be replaced or repaired - refer to LO1.5. If the sides of the path start to break down the path is more likely to collapse, erode or fall away and become unsafe to walk on. The same situation applies e.g. to wooden steps - collapse could lead to injury if edgings are not replaced or repaired.

3.7 Repair any environmental damage refer to LO1.8.

3.8 Remove arisings/debris from the area using the correct methods of disposal, leaving the area clear, tidy, safe and in good condition refer to LO1.9. Check safety in relation to newly resurfaced parts of the path, newly edged areas.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes (LO) 1, 2 and 3
Delivery of these learning outcomes is by supervised practical operational work giving learners the opportunity, first to practice the various tasks and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Minimum requirements when assessing this unit
Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.
It is important that practical assessment activities are supervised appropriately.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

See Skills and Education Group Awards website for further information

Practical Skills for Steps and Gates

Unit Reference	**H/501/7232**

Level	**2**
Credit Value	**6**
Guided Learning Hours	**30**
Unit Summary	This unit explores how to prepare the area and construct a gate and steps suitable for a particular location. Learners will be involved in the practical tasks necessary to do this
Learning Outcomes (1 to 2) ***The learner will***	**Assessment Criteria (1.1 to 2.9)** ***The learner can***
1. Be able to construct and install wooden gates	**1.1** Identify the location for a gate and select a suitable gate type and dimensions **1.2** Correctly identify and select appropriate hand tools or machinery **1.3** Select and check suitable materials and cut to size with appropriate tools or machinery **1.4** Select and fit suitable hinges and catches **1.5** Transport and install the gate safely and securely **1.6** Repair any environmental damage **1.7** Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition
2. Know how to construct steps	**2.1** Identify appropriate materials sensitive to the site

	2.2 Identify the line of steps and dimensions of treads and risers **2.3** Correctly identify and select appropriate hand tools or machinery **2.4** Mark out the step line, width and location of risers **2.5** Excavate for steps **2.6** Construct treads and risers and fix securely and accurately **2.7** Fit side supports and handrails as required **2.8** Repair any environmental damage **2.9** Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition

Supporting Unit Information

H/501/7232 Practical skills for steps and gates - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

Learning Outcome 1. Be able to construct and install wooden gates

1.1 Identify the location for a gate and select a suitable gate type and dimensions identify main site and then focus down to the specific location where the gate is to be installed e.g. using maps or internet maps of the area focussing down to job specification or site plans or photograph(s) of site, record location of the gate on a simple plan of area and agree this with supervisor, client or land owner. Suitable gate type e.g. fit for purpose - to provide access for livestock - five barred gate, walkers or wheelchair users - kissing gate designs, horse riders - bridle gate; fits into and in keeping with specific locality with respect to aesthetic appearance. Dimensions e.g. accurate measurement to ensure gate will fit into the gap, height appropriate to purpose. Carry out a risk assessment of the site including the need to cat scan in relation to insertion of gate posts. Take original photograph on which to make a comparison.

1.2 Correctly identify and select appropriate hand tools or machinery e.g. spade, fork, crow bar, shuv-holer, post hole borer, driveall, brush, rake. tape measure, spirit level, hand saw, hack saw, hammer, sledge hammer, spanner, screw driver, plane, power drill, tamper, wheelbarrow, sack truck, tarpaulin for spoil. PPE e.g. overalls, steel toe capped footwear, gloves/industrial rubber gloves - newly treated gates. CE marked.

1.3 Select and check suitable materials and cut to size with appropriate tools or machinery materials selected e.g. oak gate and suitable sized gateposts, hinges and suitable latch type plus screws - galvanised, may require sand/cement for securing posts. Check e.g. wood used fits in with the locality, pressure treated, durable, galvanised fittings. Cut to size e.g. may need planning or cutting with a hand saw to ensure an exact fit.

1.4 Select and fit suitable hinges and catches select hinges e.g. galvanised, heavy duty, swing in one or both directions, appropriate to the type/style of gate being fitted; catches e.g. easy to fit and operate, operable from both sides, long lasting. Gate should open and close easily and be secure when closed. Fitting e.g. use galvanised screws/ bolts, not prone to corrode easily/break - screwdriver/powered screwdriver - normally battery operated. Ensure spacing/level in accordance with client/landowner requirement

1.5 Transport and install the gate safely and securely cover safe manual handling during transport and fitting - gates are often quite heavy and/or awkward. Transport to the site in appropriate weather conditions avoiding boggy ground or icy conditions when more likely to slip. Use a truck - pedestrian operated or powered wheelbarrow. Ensure help is available - more than one person may be needed to lift the gate into position.

Place the gate on a block(s) so it is above ground level and won't scrape along the ground after installation. Use a spirit level to ensure it is vertical and secure using screwdriver/powered screwdriver. Check the gate is free moving, does not catch.

1.6 Repair any environmental damage e.g. damage to the access route and ground either side of the gate. Fill in holes/ruts, fork/rake over compacted ground, level and re-seed. Repair e.g. brush/shovel up any excess materials, prune back any damaged branches or roots to prevent disease gaining entry. Brush up at the end.

1.7 Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe, and in good condition organic plant arisings e.g. to be recycled by shredding/composting. Inorganic waste - treated off-cuts of gate, stones, rubbish, plastic. Correct disposal e.g. use on site - stones to provide extra support for gate posts or depending upon access remove using wheelbarrow/power barrow and place in bags or skip for disposal with local authority/private contractor. Cover safe manual handling and PPE. Brush/rake area surrounding gate and then visually inspect for safety - no tripping hazards and condition - even height, free swing, specification met. Check against the original photograph - LO1.1 - to

ensure the site has been returned as close as possible to its original state.

Learning Outcome 2. Know how to construct steps

2.1 Identify appropriate materials sensitive to the site materials e.g. railway sleepers, logs, stone, preservative treated timber, aggregate/fill, mortar, chicken wire, nails. Sensitive to site e.g. logs or timber for steps in woodland or stone if required for specific locations e.g. SSSI's/National Parks.

2.2 Identify the line of steps and dimensions of treads and risers identify main site and then focus down to the specific location where the steps are to be located e.g. using maps or internet maps of the area focussing down to job specification or site plans or photograph(s) of site, record location of the steps on a simple plan of area and agree this with supervisor, client or land owner. Identify the dimensions required within the specification and discuss and confirm with supervisor, client or land owner e.g. width of 1.2m, riser height 20 cm and tread depth specified to vary within sets to accommodate a variable slope. Carry out a risk assessment and CAT scan for services in urban environments.

2.3 Correctly identify and select appropriate hand tools or machinery select tools or machinery e.g slasher, bow saw, loppers, mattock, fork, spade, rake, brush, crowbar, hammer, chisel, mell, spirit level, pegs, wheel barrow, powered barrow, wacker plate, tarpaulin, first aid kit. Select PPE e.g. overalls, heavy duty steel toe cap footwear gloves, safety helmet - felling branches/trees, goggles - hammering stone. CE marked.

2.4 Mark out the step line, width and location of risers mark out line and width e.g. with peg and line. Ensure marked out width will fit steps within the line of the existing path. Measure out and use spot paint to identify the specific lines and dimensions of treads and risers. Refer to LO2.2. Put in risers at the most suitable locations with the aim of avoiding too much environmental damage e.g. try to avoid roots, large rocks/outcrops.

2.5 Excavate for steps dig out the steps to appropriate width and depth using spade, fork and crowbar as needed. Place spoil on sheeting next to paths/steps. Aim to obtain a firm base for each step. Thoroughly clean out debris, if specified add a layer of sand covered with geo-textile to prevent weeds growing up through the steps.

2.6 Construct treads and risers and fix securely and accurately knock in stakes vertically at the points set out, check they are vertical using a spirit level. Nail or screw on the risers checking that each is

level. Back fill with excavated spoil if appropriate or use materials brought in e.g. crush and run, bark chippings, tamp down or use wacker plate to ensure consolidation. Ensure no trip hazards e.g. stakes standing proud. Check everything is firmly in place with no potential of loosening or collapsing.

2.7 Fit side supports and hand rails as required cut to specified lengths and nail or screw side supports to the risers. Incorporate additional stakes on the outside if necessary to ensure they are secure. Fit handrails e.g. these may be carried by posts knocked into the ground or cemented into prepared holes. Rails should be pre-drilled and fitted to the posts with screws at an appropriate height to be effective. They must be strongly fitted e.g. to withstand someone tripping and grabbing the rail for support. Ensure that the style of the steps/handrails fits in with the locality.

2.8 Repair any environmental damage refer to LO1.6 in the context of the steps.

2.9 Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe, and in good condition refer to LO1.7 in the context of the steps.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes (LO) 1 and 2

Delivery of these learning outcomes is by supervised practical operational work giving learners the opportunity, first to practice the various tasks and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

Learning Outcomes (LO) 3

Delivery of this learning outcomes is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of operational work and witness testimony, answering oral or written questions, assignments or internet research cross referenced to the knowledge evidence.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Minimum requirements when assessing this unit
Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

It is important that practical assessment activities are supervised appropriately.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment

- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Learners should demonstrate that they are able to successfully complete the learning outcomes and apply the related knowledge to different activities and situations, possibly linking with the optional units chosen.

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

See Skills and Education Group Awards website for further information

Practical Skills for Dry Stone Walling

Unit Reference	**H/503/2801**
Level	**2**
Credit Value	**4**
Guided Learning Hours	**30**
Unit Summary	This unit explores how to dismantle and construct dry stone walls on the correct foundations. Learners will be involved in the practical tasks necessary to do this
Learning Outcomes (1 to 3) ***The learner will***	**Assessment Criteria (1.1 to 3.9)** ***The learner can***
1. Be able to dismantle a wall	**1.1** Carry out an environmental impact assessment **1.2** Clear debris and remove all lying stone to suitable locations **1.3** Safely remove top stones and place at correct distance from wall **1.4** Take down a wall and grade stone placing it in appropriate locations **1.5** Repair any environmental damage **1.6** Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition

2. Be able to lay foundations	**2.1** Identify line of wall and remove debris and obstructions **2.2** Correctly identify and select appropriate hand tools or machinery **2.3** Set out and excavate line of wall accurately **2.4** Select and lay suitable stones to correct depth, width, line and level **2.5** Be able to ensure the foundation is secure **2.6** Repair any environmental damage **2.7** Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition
3. Be able to construct a wall	**3.1** Construct and set up batter frames to the correct dimensions for the wall **3.2** Correctly identify and select appropriate hand tools **3.3** Select suitable size stones and lay securely with the correct orientation for each course **3.4** Lay each course to the correct line and level with appropriate joints and batter **3.5** Ensure appropriate filling is used and is of suitable size **3.6** Lay through stones at appropriate heights and centres **3.7** Securely fix copings **3.8** Repair any environmental damage

	3.9 Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition

Supporting Unit Information

H/503/2801 - Practical skills for dry stone walling - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

Learning Outcome 1. Be able to dismantle a wall

1.1 **Carry out an environmental impact assessment** environmental impact assessment - consider pollution of soil, water or air as a result of establishment activity e.g. chemical spillages/emissions, noise, physical disturbance of wall/surrounds - ground damage/run -off; wildlife in/around wall, proximity to protected areas - SSSI's etc.; aesthetic/visual effect of work to be carried out. Consider environmental good practice e.g. opportunities to recycle, efficient transportation of physical resources and disposal of waste materials.

1.2 **Clear debris and remove all lying stone to suitable locations** Clear debris e.g. strim along sides of wall, rake vegetation clear, expose fallen stone. Remove rubbish e.g. plastic, old posts/barbed wire - wheelbarrow and/or bags - ref LO1.6; incorporate cut vegetation in habitat piles/surrounds. Remove lying stone e.g. avoid triggering falls, separate stones to help sorting; consider efficiency - placement on both sides of wall, larger stones closest, safe working space, avoid placing stone on sloping/slippery areas

1.3 **Safely remove top stones and place at correct distance from wall** safely remove e.g. PPE - overalls, steel toe cap footwear, leather gloves for stone handling, back support belt - repetitive lifting; CE marked; check area before starting - tripping/slipping hazards; training in safe lifting/carrying/lowering - positioning, posture, grip; general -

regular rest periods, know own limits - ask for help. Distance e.g. 1.5 times wall height.

1.4 **Take down a wall and grade stone placing it in appropriate locations** take down e.g. layer by layer to minimise instability, place removed stones/fill on both sides of wall, stones on side they were taken from. Place stone in appropriate locations e.g. leave working gap between wall and placed stones, largest stones closest to wall, grading smaller stones towards the line of top stones - LO1.3, place piles of fill close to the working area - consider easy access, avoiding obstruction of working area

1.5 **Repair any environmental damage** there may be damage as a result of access to the site e.g. muddy ground, ruts or holes - fill in, rake level and re-seed/plant - protect seeded areas from the birds. Prune any damaged branches or roots to avoid disease.

1.6 **Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition** organic debris e.g. strimmed plants - LO1.2. Re-use e.g. small stones to fill wall, spoil to re-contour banks/fill ruts - level/profile/re-seed as necessary. Inorganic debris e.g. rubbish, plastic, barbed wire - remove with wheelbarrow/bags/skip for disposal with local authority/private contractor. Check Local Authority procedures regarding hazardous waste e.g. barbed wire/glass. Rake area surrounding wall to clear unused stones/debris.

Cover safe manual handling/PPE - LO1.3. Walk line of wall to check safety - no holes, slippery areas or tripping hazards. Check original photo against end product - specification met/surrounds returned to original condition.

Learning Outcome 2. Be able to lay foundations

2.1 **Identify line of wall and remove debris and obstructions** line of wall e.g. new wall identify specific location using maps or internet maps of area, then focus down to job specification or site plans or photo(s) of site. Existing wall e.g. follow line of existing foundations. Agree specific location with supervisor, client or landowner. Develop a plan of the site taking into account terrain, drainage, access points, materials transportation. Carry out risk assessment of site and tasks to be undertaken - need to cat scan area. Take photos of original site for later comparison. Remove debris e.g. LO1.2 and LO1.6. Remove obstructions e.g. remove any branches encroaching or fallen, perennials.

2.2 **Correctly identify and select appropriate hand tools or machinery** e.g. slasher, bow saw for clearing; fork, spade, mattock to

dig foundation trench; peg/line for setting out; crowbar, rollers, power barrow - moving stones; sledge hammer, tarpaulin - spoil.

2.3 Set out and excavate line of wall accurately set out e.g. initially colour mark line of new wall, set out line/width of wall using peg/lines or batter frames if large foundation stones need higher lines. Excavate e.g. use spade to make vertical edges outside of lines (5cm), excavate so that foundation stones when placed are level with surface.

2.4 Select and lay suitable stones to correct depth, width, line and level select e.g. largest stones with good profile, keep back stones for other purposes - throughs, select stones with complimenting shapes. Lay e.g. place stones so outer edges follow line of wall, sizes balanced along each side, contact between stones maximised, long edges placed inwards rather than along the wall, width is achieved with minimal gap in middle, surface reasonably level to ensure stability of next layer.

2.5 Be able to ensure the foundation is secure e.g. profile the trench base as needed to match the base of foundation stones/avoid wedging where possible, check security by standing on stones and feeling for any wobbles.

2.6 Repair any environmental damage e.g. ref to LO 1.5. fork over ground compacted by heavy foundation stones. Re-use spoil from trench e.g. to re-profile banks, fill in ruts.

2.7 Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition refer to LO1.6. Ensure that any unused/awkward foundation stones are removed / incorporated unobtrusively into site.

Learning Outcome 3. Be able to construct a wall

3.1 Construct and set up batter frames to the correct dimensions for the wall construct batter frame e.g. to specified profile, height of wall, widths of base and top, ties to indicate height of through stones; check profile meets specification, both sides matching inclination, ties horizontal. Set up batter frame e.g. on base of foundation trench or stones, check/adjust until vertical and level - spirit level/plumb line, prop in place. Develop the frame with lines/guidelines to the next batter frame.

3.2 Correctly identify and select appropriate hand tools e.g. batter frame/line bars, spirit level/plumb line for checking level/vertical; walling hammer(s) /goggles if used, wheelbarrow, crow bar.

3.3 Select suitable size stones and lay securely with the correct orientation for each course suitable size e.g. larger stones at base grading to smaller towards the top layers - except through/coping stones. Lay securely e.g. judicious stone selection/placement so stones

rest securely, avoid wedging if possible, fill middle area as wall is built - LO2.4,. Correct orientation e.g. flat side downwards, smoothest face outward, any grain/foliation lines horizontal, stones horizontal/tilt slightly upwards towards middle.

3.4 Lay each course to the correct line and level with appropriate joints and batter line and level e.g. select, stone of same/similar height, work to layer whole section of wall on both sides before moving upwards, ensure no stones project out of line/batter, regularly check level against guidelines and line against batter frames. Appropriate joints e.g. aim to lay stones so each joint is crossed by stone in successive layer with about half of the stone on either side, avoid joints running together for several layers.

3.5 Ensure appropriate filling is used and is of suitable size appropriate filling e.g. angular stones/stone chippings, avoid earth or smooth stones that might slide. Suitable size e.g. larger filling stones - foundation/lower layers, smaller filling as move up wall.

3.6 Lay through stones at appropriate heights and centres lay e.g. heavier throughs in lower layers, ensure both sides level and throughs cross joints on both sides; if more than one layer of throughs is specified ensure succeeding layers placed about mid-way between lower layers. Heights and centres e.g. in layers/at distances between through stones as specified/in keeping with existing walls of same style.

3.7 Securely fix copings identify appropriate coping style based on other walls in area. Aim for top of wall to follow contour of ground. Fix a line to set top level. Lay coping stones, wedge firmly or use mortar mix to secure. Take care not to group slightly less suitable stones creating weaknesses e.g. shorter than normal width. Check no loose stones at end as these may easily be dislodged.

3.8 Repair any environmental damage e.g. ref to LO 1.5, LO2.6.

3.9 Remove arisings/debris from the area using correct methods of disposal, leaving the site clear, tidy, safe and in good condition refer to LO1.6, LO2.7. Ensure any broken stone that has not been reclaimed as fill material is removed from site or re-use in other appropriate ways. Clear any remaining debris and remove all tools/equipment. Carry out a final visual inspection of wall to check for safety. Check against the original photo - LO2.1 - to ensure site has been returned as close as possible to original state.

Teaching Strategies And Learning Activities

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Methods Of Assessment

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The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Minimum requirements when assessing this unit
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It is important that practical assessment activities are supervised appropriately.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)

- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

See Skills and Education Group Awards website for further information

Practical Skills for Effluent Cleansing Reed Beds

Unit Reference	**J/504/4472**
Level	**2**
Credit Value	**6**
Guided Learning Hours	**60**
Unit Summary	This unit will provide the learner with the knowledge and skills to create effluent cleansing reed beds
Learning Outcomes (1 to 3) ***The learner will***	**Assessment Criteria (1.1 to 3.8)** ***The learner can***
1. Know about reed beds	**1.1** Describe the characteristics of an effluent cleansing reed bed **1.2** Explain why an effluent cleansing reed bed would be used
2. Be able to prepare to create an effluent cleansing reed bed	**2.1** Check for any underground and/or overground hazards **2.2** Contribute to identifying and marking out the area of the reed bed and the required work area **2.3** Remove any debris or excess vegetation from the area as directed
3. Be able to create an effluent cleansing reed bed	**3.1** Excavate to the correct depth, width and gradient as directed

	3.2 Ramp spoil **3.3** Line area, anchoring as appropriate **3.4** Install pipework and risers for effluent inflow as directed **3.5** Install pipework for clean water outflow as directed **3.6** Install infill as directed **3.7** Plant reed bed as directed **3.8** Make good work area

Supporting Unit Information

J/504/4472 Practical skills for effluent cleansing reed beds – Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Skills and Education Group Awards will provide specialist support for providers wishing to use this unit in order to develop and agree customised delivery and assessment regimes that maximise access and opportunities for the target learners and employers in this sub-sector and ensure that all aspects of content, delivery and assessment are fit for purpose and promote best practice in the sector.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place

Delivery of the practical learning outcomes could be by supervised practical operational work giving learners the opportunity, first to practice the various tasks and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

It is important that practical assessment activities are supervised appropriately

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Minimum requirements when assessing this unit
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Evidence Of Achievement

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- Product evidence
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- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding

- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Learners should demonstrate that they are able to successfully complete the learning outcomes and apply the related knowledge to different activities and situations, possibly linking with the optional units chosen.

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

- For pre-16 year olds, powered tools must not be used as per current, relevant legislation.
- For post 16, the learners must not use any machinery/equipment unless they and the equipment comply with current, relevant legislation.
- All basic Health and Safety relating to the practical tasks in this unit should be explained prior to a demonstration by the tutor/assessor of how to complete the tasks successfully

See Skills and Education Group Awards website for further information

Practical Skills for Naturalised Reed Beds

Unit Reference	**L/504/4473**
Level	**2**
Credit Value	**6**
Guided Learning Hours	**60**
Unit Summary	This unit will provide the learner with the knowledge and skills to create naturalised reed beds
Learning Outcomes (1 to 3) ***The learner will***	**Assessment Criteria (1.1 to 3.5)** ***The learner can***
1. Know about reed beds	**1.1** Describe the characteristics of a naturalised reed bed **1.2** Explain why a naturalised reed bed would be used
2. Be able to prepare to create a naturalised reed bed	**2.1** Check for any underground and/or overground hazards **2.2** Contribute to identifying and marking out the required work area **2.3** Remove any debris or excess vegetation from the area as directed
3. Be able to create a naturalised reed bed	**3.1** Excavate to the correct depth, width and gradient as directed

	3.2 Ramp spoil and/or create levies **3.3** Install infill as directed **3.4** Plant area to create a naturalised wetland environment as directed **3.5** Make good work area

Supporting Unit Information

L/504/4473 Practical skills for naturalised reed beds – Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Skills and Education Group Awards will provide specialist support for providers wishing to use this unit in order to develop and agree customised delivery and assessment regimes that maximise access and opportunities for the target learners and employers in this sub-sector and ensure that all aspects of content, delivery and assessment are fit for purpose and promote best practice in the sector.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place

Delivery of the practical learning outcomes could be by supervised practical operational work giving learners the opportunity, first to practice the various tasks and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

It is important that practical assessment activities are supervised appropriately

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

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- Tool / equipment inventory lists / maintenance schedules
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Additional Information

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See Skills and Education Group Awards website for further information

Access and Security in the Countryside

Unit Reference	**J/602/2000**
Level	**2**
Credit Value	**5**
Guided Learning Hours	**43**
Unit Summary	This unit explores access and security issues on countryside sites and requirements for disabled visitors. It also looks at planning visitor information to aid interpretation of a site. Learners will be involved in the practical tasks necessary to do this
Learning Outcomes (1 to 3) ***The learner will***	**Assessment Criteria (1.1 to 3.3)** ***The learner can***
1. Be able to survey and plan for access and recreation	**1.1** Carry out a site survey recording • visitor use • environmental impact of recreation • condition of paths and/or steps • security features • facilities • access **1.2** Produce a brief work plan for the site to • improve access and facilities for recreation and public use • repair any environmental damage
2. Be able to plan for disabled access	**2.1** Carry out a survey of a site recording its suitability for a range of disabled visitors

	2.2 Produce a brief work plan for the site to improve disabled access and recreation activities with specification for • specific disabled access features • facilities
3. Plan for visitor information and interpretation	**3.1** Produce a representative plan for a specified part of the site indicating • a variety of types of interpretation that could be used • the themes to be interpreted • the target audience **3.2** Identify and recognise information which would be suitable for visitors **3.3** Design a leaflet or interpretive panel for a specified part of the site

Supporting Unit Information

J/602/2000 Access and security in the countryside - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

Learning Outcome 1. Be able to survey and plan for access and recreation

1.1 Carry out a site survey recording

- **visitor use** survey on a seasonal basis eg. to determine number of visitors or survey on a weekly basis the visitor profile - young/elderly users, walkers, bird watchers etc or survey visitor ethnic groupings. Cover how numbers are recorded e.g. clicker for surveyor, form for visitor. Summarise findings in a useful format
- **environmental impact of recreation** survey pollution factors e.g. - litter, noise, chemical - oil, physical disturbance - site/wildlife. Environmental good practice - efficient transportation of physical resources, appropriate disposal of waste materials, litter prevention
- **condition of paths and/or steps** walk along the full length of paths and survey e.g. safety aspects - holes, uneven ground, moss, digression routes. Survey all steps/ hand/safety rails to make sure they are firm and secure
- **security features** survey e.g. the boundaries to check they are fully in place and effective; that signs/instructions/warning signs are clearly visible; if the site has restricted access check that it is fully in place - locked gates, warning signs or areas that ought to be taped off/fenced.
- **facilities** survey on site facilities e.g. are they still appropriate, are they safe and secure, are they accessible?

- **access** survey e.g. all access routes to ensure they are not blocked or restricted, to ensure harmonious access flow - no clash access to facilities or conflict between in and out access

1.2 Produce a brief work plan for the site to

- **improve access and facilities for recreation and public use** consider what is currently in place. Can it be improved and how? What would be the benefits? The work plan might include improvements to the network of paths e.g. use of ramps/ hand rails, dealing with slippery patches/moss, uneven/uncomfortable/muddy/ puddled/overgrown sections. The benefits might be e.g. people use the paths and do not digress, the paths are usable by the elderly or wheelchair users. Improvements to facilities might include e.g. strategically sited benches, picnic areas, litter bins, hides. The benefits might be e.g. more family groups use the site, less litter, increased public awareness of rare species or the behaviour of wildlife
- **repair any environmental damage** the work plan might address damage that had occurred to or around walking routes e.g. holes - fill in, level, consolidate; damage due to poor drainage - install drainage pipe, path edgings falling to pieces - repair /replace rotten wood, this might also apply to steps, stiles, gates, wooden rails etc.

Learning Outcome 2. Be able to plan for disabled access

2.1 Carry out a survey of a site recording its suitability for a range of disabled visitors consider the needs of various disability groups e.g. the blind or visually impaired, the elderly, arthritic, wheelchair or Zimmer/walking frame users. Survey the site to assess its suitability for chosen disability groupings e.g. blind or visually impaired users - does the site have a tap rail for those who use a stick, is Braille provided on signs, are there clearly visible painted directions, are boardwalks and steps wide enough for a blind person and guide dog to negotiate side by side, are there dangers that a blind person with stick or dog might not detect - protruding branches/rocks

2.2 Produce a brief work plan for the site to improve disabled access and recreation activities with specification for

- **specific disabled access features** based on findings of survey, aim to address any issues identified when drawing up work plan e.g. construction of zigzag ramps to replace/supplement steps, the addition of hand rails, easily opened gates, levelling out access routes - fill in holes. Visitor information points to impart message by visual means and an alternative e.g. audio or Braille or hearing loop or interactive

- **facilities** work plan for access to facilities e.g. ramps or hand rails into facilities or. facilities to be user friendly for particular disability groups e.g. wheelchair access to picnic areas and wheelchair friendly tables or regular benches/seats along walking routes used by the elderly

Learning Outcome 3. Plan for visitor information and interpretation

3.1 Produce a representative plan for a specified part of the site indicating

- **a variety of types of interpretation that could be used t**ypes of interpretation of a theme could employ e.g. text, visual displays - diagrams, plans, flow charts; audio - verbal explanations, music, sounds of natural phenomena such as rain, waves, bees buzzing, sound of machinery - chainsaws, cars; olfactory - smells of flowers, trees; tactile - different textures of rock or foliage; presented to the audience - working model of a process or presented with the participation of the audience - working model that requires the audience to do things that assist the process
- **the themes to be interpreted** e.g. conservation of water on the site, protection and breeding success of rare species, health benefits of the countryside or green spaces to users
- **the target audience** e.g. could be children from schools or with families, pensioner groups, the visually impaired, students with learning difficulties, visitors from other countries, holidaymakers

3.2 Identify and recognise information which would be suitable for visitors information to help interpret a theme could be available in a number of different forms e.g. use of sound recordings, videos, Braille, photographs, posters and signs, different languages, natural products - wood, leaves, feathers, machinery, live filming and sound recording and transmission - to visitor centres of nesting or feeding birds, guided walks and talks etc., leaflets, brief questionnaires. The way the information is presented to help interpret a theme needs to be e.g. clear, easy to understand, engaging, stimulating and it also needs to be available promptly because most visitors will not wait long.

3.3 Design a leaflet or interpretive panel for a specified part of the site decide e.g. the key theme, who is the target audience, what is the best method to inform that audience, what specific information needs to be in the leaflet or panel, how can this be made as engaging as possible e.g. a leaflet could be linked to a walk around the site with the positions on the leaflet map linked to numbered posts and features of interest at each point. These might follow themes such as wildlife,

ecology, geology, historic to present day. Seasonality will need to be considered for some themes.

Teaching Strategies And Learning Activities

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Learning Outcomes (LO) 1, 2 and 3
Delivery of these learning outcomes is by supervised practical operational work giving learners the opportunity, first to practice the various tasks and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

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Methods Of Assessment

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Additional Information

See Skills and Education Group Awards website for further information

Load and Unload Physical Resources within the Work Area

Unit Reference	**J/502/1421**
Level	**2**
Credit Value	**2**
Guided Learning Hours	**15**
Unit Summary	The aim of this unit is to provide the learner with the knowledge and skills required to load and unload physical resources within the work area. The type of physical resources and methods of loading and unloading can be applied to a number of environments
Learning Outcomes (1 to 6) ***The learner will***	**Assessment Criteria (1.1 to 6.2)** ***The learner can***
1. Be able to load and unload physical resources	**1.1** Assess the load to be moved to determine the method of lifting required **1.2** Carry out lifting operations safely, in accordance with instructions **1.3** Move heavy and bulky items correctly, in accordance with Instructions **1.4** Position resources safely, securely and in a manner which protects them from damage and contamination including • products or materials • equipment

2. Be able to select, use and maintain relevant equipment	**2.1** Select appropriate equipment for this area of work **2.2** Use equipment according to relevant legislation and manufacturers' instructions **2.3** Prepare, maintain and store equipment in a safe and effective working condition
3. Be able to work safely and minimise environmental damage	**3.1** Work in a way which maintains health and safety and is consistent with current legislation, codes of practice and any additional requirements **3.2** Carry out work in a manner which minimises environmental damage
4. Know how to load and unload physical resources	**4.1** State the reasons for, and methods of, labelling resources for transportation **4.2** Describe how to assess the load to be moved to determine the safest the method of lifting **4.3** Describe the safe lifting and carrying techniques which should be used **4.4** Describe the loading and unloading requirements for transportation such as positioning, stacking and the weight of loads **4.5** Explain the ways of securing resources for transit in order to maintain safety and minimise damage **4.6** Describe appropriate methods of protecting resources from contamination and adverse weather conditions

	4.7 Outline the methods for the safe stacking of products **4.8** Describe suitable methods of storing resources
5. Know the types of equipment required and how to maintain them	**5.1** Describe the equipment which will be required for the activity and relevant legal restrictions on operation **5.2** Describe the methods of maintaining the equipment used
6. Know relevant health and safety legislation and environmental good practice	**6.1** Outline the current health and safety legislation, codes of practice and any additional requirements **6.2** Describe how environmental damage can be minimised

Supporting Unit Information

J/502/1421 Load and unload physical resources within the work area – Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number on the left e.g. LO1.3

Note 2: The example of a physical resource in this case will be animal feed sacks. Activities for other physical resources need to follow this example

LO1, LO2 and LO3 are the key areas of competence for this unit

Learning Outcome 1. Be able to load and unload physical resources

1.1 Assess the load to be moved to determine the method of lifting required carry out pre-lift checks. Consider load, individual capability, task and environment to determine the method of lifting by hand or with mechanical aids such as trolleys or sack trucks. Consider duel – lifting if by hand.

1.2 Carry out lifting operations safely, in accordance with instructions demonstrate safe lifting techniques e.g. assess, plan, prepare, perform

1.3 Move heavy and bulky items correctly, in accordance with instructions consider mechanical aids and bio-mechanical techniques. Cross reference to LO4.3

1.4 Position resources safely, securely and in a manner which protects them from damage and contamination position resources safely and securely e.g. – not damaged, no cross contamination, secured for both products or materials and any equipment. Refer to LO1.1. Demonstrate reducing load by splitting to more manageable load etc.

Learning Outcome 2. Be able to select, use and maintain relevant equipment

2.1 Select appropriate equipment for this area of work e.g. trolley, sack truck, lifting aids. Select correct PPE cross reference to LO3.1.

2.2 Use equipment according to relevant legislation and manufacturers' instructions Use relevant equipment according to Manufacturer's / supplier's / supervisor's instructions Maintain and ensure correct storage of tools and equipment follow guidance for working on slopes etc. including differing ground conditions and different types of terrain.

2.3 Prepare, maintain and store equipment in a safe and effective working condition Ensure equipment is safe to use ,undertake PUWER check and if applicable LOLER checks

Learning Outcome 3. Be able to work safely and minimise environmental damage

3.1 Work in a way which maintains health and safety and is consistent with current legislation, codes of practice and any additional requirements e.g. Health and Safety, Environmental Protection and Waste Acts, COPs as applicable and additional requirements such as HSE recommended weights to lift. Ensure correct PPE selected and used in safe and appropriate manner Safety boots, overalls, gloves, ear and eye protections and high visibility clothing.

3.2 Carry out work in a manner which minimises environmental damage e.g. by carefully planning site access, working in appropriate weather conditions, care not to damage load or allow cross contamination. Clear immediately and spillages and keep work area clean and free from unauthorised access.

LO4, LO5 and LO6 are the key areas of knowledge for this unit.

Learning Outcome 4. Know how to load and unload physical resources

4.1 State the reasons for, and methods of, labelling resources for transportation e.g. this way up and content of load, weight and type and state what to do if any hazards are foreseen.

4.2 Describe how to assess the load to be moved to determine the safest the method of lifting refer to L.O. 1.1 (load, individual capability, task and environment).

4.3 Describe the safe lifting and carrying techniques which should be used e.g. travel route clear and well lit; get close to load as possible - slide - don't stretch; correct foot position; adopt good posture - bend the knees, get secure grip (gloves); keep back straight

- maintain spine curve by lifting the head; lift using thigh muscles; avoid jerking; smooth lift; keep load close to body; heaviest side to trunk.

4.4 Describe the loading and unloading requirements for transportation such as positioning, stacking and the weight of loads describe how to split heavy loads, ensure they are stable, cover sharp and abrasive edges ensure even distribution when stacking, loading or unloading.

4.5 Explain the ways of securing resources for transit in order to maintain safety and minimise damage e.g. how to secure loads with ropes or netting.

4.6 Describe appropriate methods of protecting resources from contamination and adverse weather conditions e.g. no cross contamination, secure packaging and protection from elements such as rain or direct sunlight e.g. sheeting

4.7 Outline the methods for the safe stacking of products describe how high, wide stacks should be and how you would prevent any toppling over e.g. follow manufacturers' instructions for stacking.

4.8 Describe suitable methods of storing resources follow manufactures' instructions for differing types of products e.g. how high to stack, correct way up and labels to front.

Learning Outcome 5. Know the types of equipment required and how to maintain them

5.1 Describe the equipment which will be required for the activity and relevant legal restrictions on operation refer to LO 2. Correct pre-use checks undertaken to ensure the safety of operator and equipment. Describe e.g. trolleys, sack trucks any mechanical aids for lifting. Report any faults. Refer to HASAW act and Manual Handling Regulations.

5.2 Describe the methods of maintaining the equipment used Ensure PUWER and if applicable LOLER checks in place and recorded. Maintain equipment according to manufactures' instructions or guidelines.

Learning Outcome 6. Know the relevant health and safety legislation and environmental good practice

6.1 Outline the current health and safety legislation, codes of practice and any additional requirements e.g. Management of Health & Safety at Work Regulations Environmental Protection e.g. Environmental Protection Acts Waste e.g. Hazardous Waste Regulations PUWER, LOLER, Manual Handling Regulations.

6.2 Describe how environmental damage can be minimised e.g. clear up any spillages, don't cross contaminate loads. Ensure any hazardous wastes is correctly secured and packaged and clearly labelled.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes (LO)1, 2, 3

Delivery of these learning outcomes is by supervised practical operational work giving learners the opportunity, first to practice the various tasks involved in preparing to load and unload physical resources within the work area and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria and therefore competence.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

Learning Outcomes (LO) 4, 5 and 6

Delivery of these learning outcomes is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of operational work and witness testimony, answering oral or written questions, assignments or internet research cross referenced to the knowledge evidence.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Centres will need to devise assessment tasks which should be practical where possible e.g. Learning Outcomes 1, 2 and 3 link together and competence can be assessed practically by observation or by generation of diverse evidence. These could also link to Learning Outcomes 4, 5and 6 to allow knowledge evidence to be gathered during the practical activities

It is important that practical assessment activities are supervised appropriately.

Minimum requirements when assessing this unit

Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

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All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

Useful sources of reference

- The Health and Safety Executive website http://www.hse.gov.uk/ has useful information about identifying what health and safety legislation applies to areas of work and lists of Acts, Statutory instruments and legal publications
- The Office of Public Information website http://www.opsi.gov.uk has year by year lists of UK Acts and Statutory Instruments
- The website http://www.netregs.gov.uk/ provides helpful guidance about environmental regulations.
- HSE website on recommended weights to lift and manual handling regulations etc
- The Provision and Use of Work Equipment Regulations PUWER
- All plant or equipment used at work, either in the office or in the field, comes under PUWER.
- The Lifting Operations and Lifting Equipment Operations LOLER. LOLER regulations apply in all premises and work situations. There are responsibilities for those in control of equipment, employers and employees.

See Skills and Education Group Awards website for further information

Transport Physical Resources within the Work Area

Unit Reference	**J/502/1404**
Level	**2**
Credit Value	**2**
Guided Learning Hours	**15**
Unit Summary	The aim of this unit is to provide the learner with the knowledge and skills required to transport physical resources within the work area. The type of physical resources and methods of transportation can be applied to a number of environments
Learning Outcomes (1 to 6) ***The learner will***	**Assessment Criteria (1.1 to 6.1)** ***The learner can***
1. Be able to transport physical resources within the work area	**1.1** Transport resources using powered or manual transportation equipment **1.2** Minimise damage to the resources and environment during manoeuvres and transit **1.3** Ensure that load is secure and protected from contamination and adverse weather conditions **1.4** Monitor load during transit and take action if required **1.5** Provide clear and accurate information for recording purposes

2. Be able to select, use and maintain relevant equipment	**2.1** Select appropriate equipment for this area of work **2.2** Use equipment according to relevant legislation **2.3** Prepare, maintain and store equipment in a safe and effective working condition
3. Be able to work safely and minimise environmental damage	**3.1** Work in a way which maintains health and safety and is consistent with current legislation, codes of practice and any additional requirements
4. Know how to transport physical resources within the work area	**4.1** Describe the ways of handling transportation equipment to minimise damage to resources in transit **4.2** Describe the methods of protecting resources from contamination and adverse weather conditions during transit **4.3** State the reasons for monitoring loads during transit and the actions to take in case of problems with • imbalance • contamination • adverse weather
5. Know the types of equipment required and how to maintain them	**5.1** Describe the equipment which will be required for the activity and relevant legal restrictions on operation **5.2** Describe the methods of maintaining the equipment used
6. Know relevant health and safety legislation and	**6.1** Outline the current health and safety legislation, codes of practice and any additional requirements

environmental good practice	

Supporting Unit Information

J/502/1404 Transport physical resources within the work area - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number on the left e.g. LO1.3

Note 2: The example of a physical resource in this case will be animal feed sacks. Activities for other physical resources need to follow this example.

LO1, LO2 and LO3 are the key areas of competence for this unit

Learning Outcome 1. Be able to transport physical resources within the work area

1.1 Transport resources using powered or manual transportation equipment carry out pre transport checks. Consider Load, Individual capability, Task and Environment to determine the method of transportation by hand or with mechanical aids such as trolleys or sack trucks or powered such as forklifts. Consider duel – lifting if by hand.

1.2 Minimise damage to the resources and environment during manoeuvres and transit minimise damage to environment by ensuring e.g. no spillages, minimal damage to structures and surfaces by selection of correct transporters

1.3 Ensure that load is secure and protected from contamination and adverse weather conditions demonstrate use of safe load secured and protection from elements such as rain or direct sunlight select correct method of securing load, e.g. ropes ,nets, protective covers

1.4 Monitor load during transit and take action if required demonstrate monitoring of load during transit by both visual and physical checks of load stability, weight and content of load, e.g. if load becomes unstable secure before continuing task.

1.5 Provide clear and accurate information for recording purposes complete relevant organisational documentation e.g. PUWER check list.

Learning Outcome 2. Be able to select, use and maintain relevant equipment

2.1 Select appropriate equipment for this area of work e.g. trolley, sack truck, lifting aids, forklift etc. Select correct PPE cross reference to L.O.3

2.2 Use equipment according to relevant legislation use relevant equipment according to Manufacturer's / supplier's / supervisor's instructions

2.3 Prepare, maintain and store equipment in a safe and effective working condition Maintain and ensure correct storage of equipment follow guidance for working on slopes etc including differing ground conditions and different types of terrain. Ensure equipment is safe to use ,undertake PUWER check and if applicable LOLER checks

Learning Outcome 3. Be able to work safely and minimise environmental damage

3.1 Work in a way which maintains health and safety and is consistent with current legislation, codes of practice and any additional requirements e.g. Health and Safety, Environmental Protection and Waste Acts, COPs as applicable and additional requirements such as HSE recommended weights to lift. Ensure correct PPE selected and used in safe manner Safety boots, overalls, gloves, ear and eye protections and high visibility clothing. Environmental damage caused by activity to be minimised e.g. by carefully planning site access, working in appropriate weather conditions, care not to damage load or allow cross contamination. Clear immediately and spillages and keep work area clean and free from unauthorised access. Cross reference to L.O.6

LO4, LO5 and LO6 are the key areas of knowledge for this unit

Learning Outcome 4. Know how to transport physical resources within the work area

4.1 Describe the ways of handling transportation equipment to minimise damage to resources in transit e.g. correct stacking, sound packaging, secured safely with ropes, nets or sheeting.

4.2 Describe the methods of protecting resources from contamination and adverse weather conditions during transit e.g. –no cross contamination, secure packaging and protection from

elements such as rain or direct sunlight e.g. sheeting ensure they are stable, cover sharp and abrasive edges.

4.3 State the reasons for monitoring loads during transit and the actions to take in case of problems with describe how high, wide stacks should be and how you would prevent any **imbalance** e.g. follow manufacturers' instructions for stacking, readjust the load. **Contamination** e.g. isolate the source, clean up the contamination, dispose of any waste material as per type (hazardous or organic) complete relevant documentation. **Adverse weather** e.g. rain- cover with waterproof sheeting.

Learning Outcome 5. Know the types of equipment required and how to maintain them

5.1 Describe the equipment which will be required for the activity and relevant legal restrictions on operation refer to LO 2. Correct pre-use checks undertaken to ensure the safety of operator and equipment. Describe e.g. trolleys, sack trucks any mechanical aids for lifting. Forklifts etc. Report any faults. Refer to HASAW act and Manual Handling Regulations.

5.2 Describe the methods of maintaining the equipment used ensure PUWER and if applicable LOLER checks in place and recorded. Maintain equipment according to manufactures' instructions or guidelines.

Learning Outcome 6. Know the relevant health and safety legislation and environmental good practice

6.1 Outline the current health and safety legislation, codes of practice and any additional requirements Health and Safety e.g. Management of Health & Safety at Work Regulations Environmental Protection e.g. Environmental Protection Acts Waste e.g. Hazardous Waste Regulations. PUWER, LOLER, Manual Handling Regulations.. Describe how environmental damage can be minimised e.g. clear up any spillages, don't cross contaminate loads. Ensure any hazardous wastes is correctly secured and packaged and clearly labelled.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners,

including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes (LO)1, 2, 3,

Delivery of these learning outcomes is by supervised practical operational work giving learners the opportunity, first to practice the various tasks involved in transporting physical resources within the work area and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria and therefore competence.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

Learning Outcomes (LO) 4, 5 and 6

Delivery of these learning outcomes is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of operational work and witness testimony, answering oral or written questions, assignments or internet research cross referenced to the knowledge evidence.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria.

Centres will need to devise assessment tasks which should be practical where possible e.g. Learning Outcomes 1, 2 and 3 link together and competence can be assessed practically by observation or by generation of diverse evidence. These could also link to Learning Outcomes 4, 5and 6 to allow knowledge evidence to be gathered during the practical activities.

It is important that practical assessment activities are supervised appropriately.

Minimum requirements when assessing this unit

Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
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It is important that practical assessment activities are supervised appropriately

Additional Information

Useful sources of reference

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- The Office of Public Information website http://www.opsi.gov.uk has year by year lists of UK Acts and Statutory Instruments
- The website http://www.netregs.gov.uk/ provides helpful guidance about environmental regulations
- The Provision and Use of Work Equipment Regulations PUWER. All plant or equipment used at work, either in the office or in the field, comes under PUWER
- The Lifting Operations and Lifting Equipment Operations LOLER. LOLER regulations apply in all premises and work situations. There are responsibilities for those in control of equipment, employers and employees

See Skills and Education Group Awards website for further information

Installing Drainage Systems

Unit Reference	**D/502/1229**
Level	**2**
Credit Value	**3**
Guided Learning Hours	**23**
Unit Summary	The aim of this unit is to provide the learner with the skills, knowledge and understanding to install drainage systems under minimal direction or guidance. The learner will be required to select and use hand tools, powered equipment and materials correctly, competently and safely and to decide the appropriate timing of operations, the work methods to be used and to check the results and correct any faults
Learning Outcomes (1 to 6) ***The learner will***	**Assessment Criteria (1.1 to 6.3)** ***The learner can***
1. Be able to install drainage systems	**1.1** Position reference marks according to specification **1.2** Install drainage system to specification: • sub surface systems • surface channels • sustainable drainage systems **1.3** Adopt practices to minimise damage to existing structures and services **1.4** Restore surface to near original condition

2. Be able to select, use and maintain equipment for installing drainage	**2.1** Select appropriate equipment for this area of work **2.2** Use equipment according to instructions **2.3** Prepare, maintain and store equipment in a safe and effective working condition
3. Be able to work safely and minimise environ mental damage	**3.1** Work in a way which maintains health and safety and is consistent with current legislation, codes of practice and any additional requirements **3.2** Carry out work in a manner which minimises environmental damage **3.3** Dispose of waste safely and correctly **3.4** Describe the safety aspects of working in trenches
4. Know the principles of drain installation	**4.1** Explain why soil drainage is beneficial for plant growth **4.2** State the importance of setting accurate levels and falls **4.3** Describe why the type, size, depth and spacing of drainage pipes/tiles, varies with the soil texture
5. Know the types of equipment required an d how to maintain them	**5.1** Describe the equipment which will be necessary for installing drainage **5.2** Describe methods of maintaining the equipment in a fit state for use

6. Know the current health and safety legislation and environmental practice	**6.1** Outline the current health and safety legislation, codes of practice and any additional requirements **6.2** Describe how environmental damage can be minimised **6.3** Describe the correct methods for disposing of organic and inorganic waste

Supporting Unit Information

D/502/1229 Installing drainage systems – Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means exclusive

LO1, LO2 and LO3 are the key areas of competence for this unit

Learning Outcome 1. Be able to install drainage systems

1.1 Position reference marks according to specification reference marks; datum points, existing features (e.g. buildings, plants, services), position, height/depth, gradients; marked by fixed pegs, line marking on surface, laser, optical levels, lines, boards

1.2 Install drainage system to specification

- sub surface systems: rigid plastic pipe, perforated plastic pipe, concrete pipe, gravel backfill, French drains, to included jointing, inspection chambers, sediment traps, outfalls to waterways,
- surface channels; gulleys, channels, preformed or formed on site, to include grids and traps,
- sustainable drainage systems; paving, gravels and permeable membranes, attenuation ponds and pits, swales

1.3 Adopt practices to minimise damage to existing structures and services planning of installation to avoid existing features, use of plans, maps and scanning equipment to locate features, identification and marking of existing features (refer to LO1.1), marking of installed features on site, monitoring of operations on site, removing of features (e.g. furniture, gates, plants, turf), use of plans and cat scan to identify and avoid underground services (e.g. electricity, gas, water, phone lines, sewage)

1.4 Restore surface to near original condition backfilling, (e.g. with soil or other intrinsic material, gravel then soil, gravel only) levelling, compacting, replacing surface (e.g. gravel, tarmac, concrete, turf), replanting of plants (including subsequent aftercare), replacing items removed from site (refer to LO1.3) use material to match existing.

Learning Outcome 2. Be able to select, use and maintain equipment for installing drainage

2.1 Select appropriate equipment for this area of work PPE e.g. waterproof clothing, steel toe-capped boots, UV Protection, gloves, hats, eye and ear protection. Marking and measuring equipment e.g. laser levels, optical levels, spirit levels, tape measures, optical measures. Excavation equipment; hand tools (e.g. spades, shovels, trenching spade, pick axe, mattock, wheelbarrow), tractor mounted back hoe and excavators, 360 excavator, trenchless drainers. Backfilling equipment; scrapers, compactors, levels. Miscellaneous equipment e.g. cultivators and scrapers for site clearance, transport equipment (e.g. tractor and trailer – flat or tipper), turf strippers, pruning equipment CAT Scanners, pesticide equipment for site clearance or subsequent care of plants.

2.2 Use equipment according to instructions equipment only used only in appropriate conditions (e.g. avoiding frost, snow, heavy rain or muddy conditions especially on sloping sites) and for approved purpose, use of skilled and appropriately trained operatives, monitoring during operations

2.3 Prepare, maintain and store equipment in a safe and effective working condition. Refer to LO2.1 for range of equipment. Methods of maintaining the equipment to include;
Daily checking and cleaning as required of all equipment to avoid contamination of the harvested product; lubrication of machinery as directed by manufacturer; periodic servicing of power units; checking equipment is clean during operation (to reduce contamination of other resources or the environment (e.g. roads and other parts of the site) checking and cleaning all equipment after use to ensure readiness for next operation. All equipment and machinery returned to safe and secure storage (e.g. secure yard, building or covered area).

Learning Outcome 3. Be able to work safely and minimise environmental damage

3.1 Work in a way which maintains health and safety and is consistent with current legislation, codes of practice and any additional requirements work activities carried out consistently with

current legislation, codes of practice and any additional requirements, which apply to this area of work. Risk assessment is carried out or studied and implemented. Health and Safety e.g. Management of Health and Safety at Work Regulations; Environmental Protection Acts; Waste Regulations, Code of Practice for Using Plant Protection Products, and other legislation/regulations. Additional requirements including customer and site regulations, Codes of practice and relevant legislation (e.g. LOLER, PUWER, Manual Handling, Stop Safe). **Additional requirements** Contact Local Authority e.g. if working within a Conservation Area or close to a local Nature Reserve or other designated area, Environment Agency notifications for activities affecting controlled water e.g. outfalls from drainage systems. Additional requirements for working safely in trenches or confined spaces (e.g. Construction (Health, Safety and Welfare) Regulations 1996.)

3.2 Carry out work in a manner which minimises environmental damage avoid pollution by run-off of water or and sediments to controlled water from working areas, drains or storage areas by use of bunds, attenuation pools and lagoons to retain water, avoiding working in adverse conditions, use of permeable surfaces, in event of run-off take steps at a local level to contain pollution, notify appropriate bodies e.g. Environment Agency. Minimise use of non-sustainable materials e.g. quarried minerals by checking source of all materials, reducing usage and wastage of all materials, recycle and re-use.

3.3 Dispose of waste safely and correctly organic waste – reduce waste removed from plant maintenance area by shredding and mulching or habitats, waste plant material composted (unless the material poses a threat to plant health e.g. diseased material and perennial weeds). Inorganic waste – wastes from servicing and maintenance of equipment disposed of in appropriate container; wastage of packaging minimised and where unavoidable recycled or disposed of in appropriate container; inorganic waste is carefully controlled until disposed of through licensed contractor.

3.4 Describe the safety aspects of working in trenches risk involved in working in trenches; collapse of sides causing damage to equipment and harm to person working in trench, risk to vehicles near trenches, risk of people falling in open trenches. Action – assessment of risk, temporary supports used to support excavations to prevent slippage and instability especially for deep trenches, soft or unstable soils/materials, wet conditions, or sites near to traffic; maintaining suitable access and egress, barriers around open trenches, use of trenchless drainage equipment.

LO4, LO5 and LO6 are the key area of knowledge for this unit

Learning Outcome 4. Know the principles of drain installation

4.1 Explain why soil drainage is beneficial for plant growth benefits of drainage; lower water table, reduced risk of root damage due to water-logging (absence of oxygen to root system), improved aeration of lower levels of soil, better deep penetration of roots, reduced risk of surface flooding, reduce soil damage by erosion and compaction by machinery

4.2 State the importance of setting accurate levels and falls levels; to achieve adequate depth of all drains (avoids damage by vehicles, cultivations or frost), better function of the system, appropriate height of outfall to provide clear flow, reducing backing-up in flood conditions (increases risk of sedimentation). Gradients; essential to achieve correct depth of drains and outfall, gradient needed to maintain flow, constant gradient needed to reduce risk of sedimentation in the pipes.

4.3 Describe why the type, size, depth and spacing of drainage pipes/tiles varies with the soil texture soil texture determines permeability of the soil (horizontally and vertically), lowering of water table is greatest along the line of the drain, reducing with distance from pipe, deep pipes will drain a wider strip. Heavy soils with low permeability will require closer spacing, deeper drains and mole drains to improve performance; Unstable sandy or organic soils will require rigid pipes to avoid undulations. Fast draining soils (e.g. sands) are likely to need greater capacity that clays

Learning Outcome 5. Know the types of equipment required and how to maintain them

5.1 Describe the equipment which will be necessary for installing drainage refer to LO2.1.

5.2 Describe methods of maintaining the equipment in a fit state for use refer to LO2.3

Learning Outcome 6. Know the current health and safety legislation and environmental practice

6.1 Outline the current health and safety legislation, codes of practice and any additional requirements refer to LO3.1

6.2 Describe how environmental damage can be minimised refer to LO3.2

6.3 Describe correct methods for disposing of organic and inorganic waste refer to LO3.3

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes 1, 2 and 3
Delivery of these learning outcomes is by supervised practical work installing drainage systems giving learners the opportunity, first to practice the various tasks involved and then to be observed competently doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of work installing drainage systems photographs or video could be taken to provide evidence of progress. Copies of plans or records can be used to provide evidence of quantity of work and of sufficiency of evidence.

Learning Outcomes 4, 5 and 6
Delivery of these learning outcomes is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of work preparing and transporting plants and resources, records and witness testimony, answering oral or written questions, referenced to the knowledge evidence.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Centres will need to devise assessment tasks which should be practical where possible e.g. Learning Outcomes 1, 2 and 3 link together and competence can be assessed practically by observation or by generation of

diverse evidence. These could also link to Learning Outcomes 4, 5 and 6 to allow knowledge evidence to be gathered during the practical activities.

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Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

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Useful sources of reference

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- The Office of Public Information website http://www.opsi.gov.uk has year by year lists of UK Acts and Statutory Instruments
- The Department for Environment, Food and Rural Affairs website has up to date information about legislation, codes of practice and consultations in the horticultural / agricultural sectors
- The Environment Agency website http://www.environment-agency.gov.uk provides guidance about environmental permitting, pollution and emissions, hazardous waste, water etc
- The website http://www.netregs.gov.uk/ provides guidance about environmental regulations.
- The Code of Practice - Protecting our Water, Soil and Air has references in Section 9
- HSE information sheet Construction Information Sheet No 8 (Revision 1).
- Local Authority websites for Building Control Department

Learners should be directed to relevant publications and websites e.g.

- Horticulture Week (www.hortweek.com)
- The Landscaper (www.landscapermagazine.com)
- DEFRA website and publications (http://www.defra.gov.uk/hort/index.htm)
- Principles of Horticulture by C.R. Adams, et al / Paperback / Published 1998
- The Complete Book of the Greenhouse by Ian G. Walls, et al / Paperback / Published 1996
- A Handbook for Horticultural Students by Peter Dawson
- The Commercial Greenhouse by James William Boodley
- Greenhouse Operation and Management by Paul Nelson
- Farm Horticulture by George W. Wood

See Skills and Education Group Awards website for further information

Maintain Drainage Systems

Unit Reference	**T/502/1222**
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) ***The learner will***	**Assessment Criteria (1.1 to 4.3)** ***The learner can***
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
3. Know how to inspect and maintain drainage systems	**3.1** Describe the schedule of inspections required to identify faults and problems **3.2** Describe how to identify and correct impeded drainage and its causes **3.3** State how to identify and deal with any problems with drainage systems **3.4** Describe the main causes of drain malfunction, including leaks and blockages and methods that can be used to deal with them **3.5** Describe the factors affecting flow rates in the drains **3.6** State the importance of maintaining drainage systems so they work effectively and efficiently **3.7** Describe the principles of drainage design **3.8** State why it is important to keep working areas clean according to clients' requirements **3.9** State what records need to be kept and why
4. Know the current health and safety legislation and environmental practice	**4.1** Outline the current health and safety legislation, codes of practice and any additional requirements, which apply to this area of work **4.2** Describe how environmental damage can be minimised **4.3** Describe the correct methods for disposing of organic and inorganic waste

Supporting Unit Information

T/502/1222 Maintain drainage systems – Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

LO1 and LO2 are the key areas of competence for this unit

Learning Outcome 1. Be able to inspect and maintain drainage systems

1.1&2 Inspect and assess drainage systems according to agreed schedules / **restore drainage systems to full effectiveness and to agreed schedule** drainage systems safely inspected, assessed and restored to full effectiveness according to agreed schedules e.g. CCTV survey and remedial work to agreed dates, hours of work, parts of system to be inspected, section to be replaced, method and materials used, type of report, summary, certification of work completed.

1.3 Record inspections and work undertaken inspections and work undertaken recorded e.g. CCTV survey results, interpretation of findings and recommendations for restorative work.

1.4 Maintain effective working relations with all relevant people throughout effective working relations maintained e.g. by providing client with well presented, clear information about the findings of the inspection and work needed.

Learning Outcome 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 work activities carried out consistently with current legislation e.g. Health and Safety, Environmental Protection Acts, COPs as applicable, risk assessment and additional requirements. Refer to LO4.1

2.2 Carry out work in a manner which minimises environmental damage e.g. by working in appropriate weather conditions. No dig repairs, careful planning of drainage outfall.

2.3 Dispose of waste safely and correctly waste e.g. organic - green or inorganic - stones / concrete, broken pipe sections, product cleared from pipes, sub-soil. Correctly- refer to LO4.3. Safely e.g. PPE, safe lifting.

LO3 and LO4 are the key areas of knowledge for this unit

Learning Outcome 3. Know how to inspect and maintain drainage systems

3.1 Describe the schedule of inspections required to identify faults and problems e.g. timing, parts of drainage system to be covered and methods to be used during routine inspections to identify faults and problems.

3.2 Describe how to identify and correct impeded drainage and its causes impeded drainage: Surface effects e.g. wet patches / standing water. Check e.g. dig hole, half fill with water and leave for 24 hours to drain. Correct e.g. by restoring effectiveness of existing drainage system, installing soakaway.
Causes of impeded drainage e.g. heavy or compacted soils, naturally high water table, collapsed ground, faults in drainage system such as leaking pipes or ingress of roots.

3.3 State how to identify and deal with any problems with drainage systems see LO 3.2 / 3.4 & 3.5

3.4 Describe the main causes of drain malfunction, including leaks and blockages and methods that can be used to deal with them e.g. rodding, CCTV surveys, sonar traces, pipe profiling. Determine if problem can be solved without loss of integrity of system e.g. check if outfall is being affected by blockages, clear blockages in system by rodding or jet washing. Integrity lost - e.g. no dig repair using various lining techniques such as spray, slip lining or cured in place pipe lining.

3.5 Describe the factors affecting flow rates in the drains e.g. pipes blocked by leaves, misaligned pipes with leakage causing soil loss below leaking joint, silting, roots entering and clogging pipe work. Methods to deal with problems e.g. above problems - place grid over entrance to pipe, restore support for pipe work, wrap pipe in Geo Textile fabric to slow ingress of roots and stop silt getting into pipe, lining techniques to allow existing pipe work to be restored if effective.

3.6 State the importance of maintaining drainage systems so they work effectively and efficiently e.g. water pressure, the fall, all

trenches sloping downhill, size of pipes, groundwater levels, blockage, breakage or silting. e.g. to avoid wet soil, unsuitable for many flowers, shrubs, trees and affecting lawns with possibility of further damage to soil if walked on.

3.7 Describe the principles of drainage design e.g. normal pattern of drainage design, materials currently in use, depths, sizes, distances and falls of pipes, materials used around pipes, outflow or storage of water in soak-away systems, access / inspection facilities.

3.8 State why it is important to keep working areas clean according to clients' requirements clean working areas e.g. possible dirt and biological agents in pipe work such as hepatitis types and leptospirosis, utility and aesthetic concerns. Client satisfaction.

3.9 State what records need to be kept and why e.g. contact details, inspection report and evidence such as camera inspection, contacts with Local Authorities or Environment Agency. Evidence of problem to justify work recommended and pricing.

Learning Outcome 4. Know the current health and safety legislation and environmental practice

4.1 Outline the current health and safety legislation, codes of practice and any additional requirements, which apply to this area of work e.g. Health and Safety at Work Act, Management of Health & Safety at Work Regulations, Provision and Use of Work Equipment Regulations

Environmental Protection e.g. Environmental Protection Acts covering waste disposal

Codes of Practice e.g. Protecting our Water, Soil and Air

Additional requirements: Contact Local Authority e.g. if working within a Conservation Area or close to a local Nature Reserve. Environment Agency notifications for activities affecting watercourses, groundwater. Aquifers e.g. discharge of water into a brook

Working safely in trenches or confined spaces. Need for CAT scan if digging

Tractors - Safe Stop, ensure tetanus vaccination up to date

Hygiene precautions e.g. personal hygiene, protective barrier creams.

4.2 Describe how environmental damage can be minimised refer to examples in LO2.

4.3 Describe the correct methods for disposing of organic and inorganic waste duty of care - controlled wastes. Where to dispose e.g. check costs, procedures and which Local Authority sites accept types of waste such as oil / filters from maintenance tractors. Method

of disposal e.g. recycle / reuse - bag / bin or consider skip hire / private disposal with a licensed contractor. If quantities justify check.

Environment Agency procedures regarding hazardous waste e.g. blockage materials from pipe work, needles or syringes, waste oil. Refer to LO2.3

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes 1 and 2
Delivery of these learning outcomes is by assessment of competence for those who have experience in this area of work or by supervised maintenance of drainage systems giving learners the opportunity, first to practice the various tasks involved and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of maintenance work photographs or video could be taken to provide evidence of progress.

Learning Outcomes 3 and 4
Delivery of these learning outcomes is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of drainage maintenance activities and witness testimony, answering oral or written questions, assignments or internet research cross referenced to the knowledge evidence.

Learners who have not yet completed the necessary training or certification to use machinery, equipment and materials must be supervised by a suitably qualified person

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Centres will need to devise assessment tasks which should be practical where possible e.g. Learning Outcomes 1 and 2 link together and competence can be assessed practically by observation or by generation of diverse evidence. These could also link to Learning Outcomes 3 and 4 to allow knowledge evidence to be gathered during the practical activities

It is important that practical assessment activities are supervised appropriately.

Simulation will not be acceptable where this unit is included in qualifications which verify competent performance.

Minimum requirements when assessing this unit
Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include some of the following

- Product evidence
- Observation reports
- Oral/written questions and answers
- Inspection reports/notes/diaries/reflective accounts
- Worksheets/job sheets//workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence/CCTV survey results
- Case studies/assignments/projects

- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory and safety checklists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

It is important that practical assessment activities are supervised appropriately.

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

Useful sources of reference

- The Health and Safety Executive website http://www.hse.gov.uk/ has useful information about identifying what health and safety legislation applies to areas of work and lists of Acts, Statutory instruments and legal publications
- The Office of Public Information website http://www.opsi.gov.uk has year by year lists of UK Acts and Statutory Instruments
- Local Authority websites for Building Control Department
- The Department for Environment, Food and Rural Affairs website has up to date information about legislation, codes of practice and consultations in the horticultural / agricultural sectors
- The Environment Agency website http://www.environment-agency.gov.uk provides guidance about environmental permitting, pollution and emissions, hazardous waste, water etc
- The website http://www.netregs.gov.uk/ provides helpful guidance about environmental regulations.
- The Code of Practice - Protecting our Water, Soil and Air has a useful list of references in Section 9

See Skills and Education Group Awards website for further information

Maintain Equipment and Machines

Unit Reference	**L/502/1520**
Level	**2**
Credit Value	**4**
Guided Learning Hours	**30**
Unit Summary	The aim of this unit is to provide the learner with the knowledge and skills required to carry out routine maintenance of equipment and machines. The maintenance should be carried out in line with the manufacturer's guidance and/or instructions
Learning Outcomes (1 to 5) ***The learner will***	**Assessment Criteria (1.1 to 5.3)** ***The learner can***
1. Be able to prepare equipment and machines for maintenance	**1.1** Identify the equipment and machines requiring maintenance **1.2** Check that the equipment and machines requiring maintenance are safe, and completely isolated from the power source **1.3** Take the correct precautions to minimise dangers from contamination and hazardous chemicals **1.4** Keep the work area safe and in a condition suitable for the maintenance procedure **1.5** Obtain and prepare tools and materials suitable for the maintenance procedure

2. Be able to carry out maintenance procedures	**2.1** Maintain equipment and machines in accordance with manufacturers' instructions, standard procedure and legislation **2.2** Clean, service and store tools after use
3. Be able to work safely and minimise environmental damage	**3.1** Work in a way which maintains health and safety and is consistent with relevant legislation, codes of practice and any additional requirements **3.2** Minimise the escape of substances and dispose of hazardous and non-hazardous waste safely and correctly
4. Know how to prepare and carry out maintenance for equipment and machines	**4.1** Outline the methods for preparing equipment and machines • manual • mechanical **4.2** Describe the dangers created by stored energy and how these should be responded to during the preparation stage **4.3** State the hazardous chemicals and substances which may be present and ways in which they should be dealt with **4.4** Describe the type of tools, equipment and materials required for the maintenance procedure **4.5** Describe types of protective clothing required and the reasons why it must be worn **4.6** Describe the methods for maintaining equipment and machines and the possible consequences of not maintaining **4.7** Outline the levels of responsibility in relation to the

	maintenance of equipment and machinery and whom to go to for advice **4.8** Describe safe and suitable methods of storing tools, equipment and machinery
5. Know relevant health and safety and legislation and environmental good practice	**5.1** Describe the correct methods for disposing of waste **5.2** Outline the current health and safety legislation codes of practice and any additional requirements **5.3** Outline the legislative requirements relating to the maintenance of equipment and machinery

Supporting Unit Information

L/502/1520 Maintain equipment and machines - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number on the left e.g. LO1.3

Note 2: The example of equipment or a machine in this case will be a tractor. Activities for other equipment or machines need to follow this example

LO1, LO2 and LO3 are the key areas of competence for this unit

Learning Outcome 1. Be able to prepare equipment and machines for maintenance

1.1 Identify the equipment and machines requiring maintenance

1.2 Check that the equipment and machines requiring maintenance are safe, and completely isolated from the power source adopt Safe Stop methods (see guidance in teaching strategy and learning activities). Check statutory Guarding requirements. Ensure that tractor is away from all power sources and completely isolated. Undertake PUWER check.

1.3 Take the correct precautions to minimise dangers from contamination and hazardous chemicals ensure spill kits are in place, Signage in place and only authorised persons allowed to enter work area. COSHH checks undertaken. Storage of waste both hazardous and non-hazardous in correct containers. Select correct PPE- cross reference to LO5

1.4 Keep the work area safe and in a condition suitable for the maintenance procedure risk assessment undertaken and area kept clear of obstructions and work area kept clean. Adequate lighting and ventilation in place and correct PPE worn including e.g. Safety boots (free from mud or oil) ear defenders, eye protection, gloves etc.

Consider fuel storage. Report any faults identified on relevant documentation. Ensure no unauthorised access to work area.

1.5 Obtain and prepare tools and materials suitable for the maintenance procedure ensure all tools and materials required are on site and in clean and serviceable conditions and are stored in correct place. Keep work area tidy and clear of obstructions. Cross reference to LO4.

Learning Outcome 2. Be able to carry out maintenance procedures

2.1 Maintain equipment and machines in accordance with manufacturers' instructions, standard procedure and legislation identify all controls on equipment or machinery to be maintained (in this case a tractor) Interpret instrument readings. Carry out maintenance checks. Mount vehicle, carry out safety checks and start engine, demonstrate correct cold starting procedures. Use correct tools for each task. Manufacturer's / supplier's / supervisor's instructions followed for, maintenance, storage of tools / equipment /disposal of waste and reporting of any faults.

2.2 Clean, service and store tools after use ensure that all tools checked, cleaned and are stored safely in the correct place such as a workshop. Report any faults and defects in the appropriate manner to the person in charge. Ensure PUWER compliance. Ensure personal hygiene at all times. Cross reference to LO4

Learning Outcome 3. Be able to work safely and minimise environmental damage

3.1 Work in a way which maintains health and safety and is consistent with relevant legislation, codes of practice and any additional requirements Work activities carried out consistently with current legislation e.g. Health and Safety, Environmental Protection and Waste Acts, COPs as applicable and additional requirements. Ensure correct PPE selected and used in safe manner). Safety boots, overalls, gloves, ear and eye protections. Ensure site is secure and free from any unauthorised access. Signage in place whilst work being undertaken. Communications systems in place such as pre agreed hand signals or mobile phones etc. Ensure correct manual handling techniques adopted.

3.2 Minimise the escape of substances and dispose of hazardous and non-hazardous waste safely and correctly ensure that all precautions are in place to prevent the escape of hazardous substances and that all safety measures are in place. Hazards to be minimised e.g. by carefully planning site access, working in appropriate weather conditions, care not to discharge pollutants into controlled waters.

Waste disposed of correctly and safely e.g. organic - green or inorganic - metal, batteries, sharps, waste oils and contaminated materials in designated containers. If contaminated waste carried ensure that correct documentation and records are kept up to date and accurate. Ensure that equipment and machines and tools are cleaned after operation to prevent e.g. corrosion, personal contamination. Remove unwanted residues safely using appropriate methods e.g. compressed air, water, and brush. Cross reference to LO5.

LO4 and LO5 are the key areas of knowledge for this unit.

Learning Outcome 4. Know how to prepare and carry out maintenance for equipment and machines

4.1 Outline the methods for preparing equipment and machines all records completed e.g. Dynamic Risk Assessment (D.R.A.), PUWER checks. LOLER checks if applicable. Time usage records. Complete any relevant reports (faults etc. - and report these. Stop operations if faults found) Follow manufacturers' instructions for both **manual** (i.e. hand cleaning) and **mechanical** (e.g. power washer or airline) and follow all safety guidelines

4.2 Describe the dangers created by stored energy and how these should be responded to during the preparation stage Identify sources of stored energy and any associated dangers (i.e. batteries, hydraulic piping etc.) and safely disable prior to any maintenance work being undertaken on any equipment or machinery by adopting SAFE STOP.

4.3 State the hazardous chemicals and substances which may be present and ways in which they should be dealt with have knowledge of COSHH and be able to identify hazardous chemicals and the correct safety measures in place to deal with any spillages. (E.g. oils, detergents - have spill-mats and cleaning materials available and if used dispose of correctly dependant on waste type). Ensure that correct PPE is worn at all times refer to LO 3.

4.4 Describe the type of tools, equipment and materials required for the maintenance procedure tools (e.g. Hand held spanners, etc. and mechanical e.g. power washers, airlines etc.). Equipment (e.g. trolley jack or mechanical lifts) and materials (spill mats, sawdust, absorbent materials).

4.5 Describe types of protective clothing required and the reasons why it must be worn e.g. overalls to prevent contamination, eye protections, ear defenders, safety boots, hard hats if applicable, gloves,

high visibility clothing and give reasons why these should be worn such as personal protection and legal requirements.

4.6 Describe the methods for maintaining equipment and machines and the possible consequences of not maintaining follow manufacturer's guidelines and describe methods for maintaining equipment and machinery. Name possible consequences of not maintaining (e.g. lack of performance, danger to operator, non-compliance of legislation such as PUWER, LOLER, increased running costs etc.)

4.7 Outline the levels of responsibility in relation to the maintenance of equipment and machinery and whom to go to for advice understand and describe the level of responsibility in relation to maintaining equipment e.g. HASAW Act, company policies and procedures. Name who to report to e.g. line manager or supervisor.

4.8 Describe safe and suitable methods of storing tools, equipment and machinery i.e. correct designated areas, machinery left in safe conditions (switched off, left safe, immobilised) tools left clean and ready for use. Access to keys etc only to authorised personnel. All documentation completed and records kept up to date of maintenance carried out and any faults found reported to supervisor.

Learning Outcome 5. Know relevant health and safety legislation and environmental good practise

5.1 Describe the correct methods for disposing of waste e.g. asbestos, batteries, waste oil. Identify organic and inorganic waste and describe the differing disposal requirements such as designated containers and areas. Describe differing PPE types for differing waste materials such as contaminated wastes. Ensure records are accurate and up to date.

5.2 Outline the current health and safety legislation codes of practice and any additional requirements Health and Safety e.g. Management of Health and Safety at Work Regulations
Environmental Protection e.g. Environmental Protection Acts
Waste e.g. Hazardous Waste Regulations
Codes of Practice e.g. Protecting our Water, Soil and Air.
Additional requirements including Local Authority permissions e.g. planning permission and Environment Agency notifications e.g. activities affecting watercourses, groundwater, aquifers. Safe Stop, PUWER, LOLER. Correct signage, directional signs in place, work area isolated and no unauthorised access. Identify hazards and take appropriate actions.

5.3 Outline the legislative requirements relating to the maintenance of equipment and machinery PUWER, LOLER, COSHH. Safe Stop. Competent operators only.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes (LO)1, 2, 3
Delivery of these learning outcomes is by supervised practical operational work giving learners the opportunity, first to practice the various tasks involved in maintaining equipment and machinery and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria and therefore competence.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

Learning Outcomes (LO) 4 and 5
Delivery of these learning outcomes is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of operational work and witness testimony, answering oral or written questions, assignments or internet research cross referenced to the knowledge evidence.
It is important that practical assessment activities are supervised appropriately.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Centres will need to devise assessment tasks which should be practical where possible e.g. Learning Outcomes 1, 2 and 3 link together and can be assessed practically by observation or by generation of diverse evidence. These could also link to Learning Outcomes 4, 5, to allow knowledge evidence to be gathered during the practical activities

Minimum requirements when assessing this unit

Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

Individual units and qualifications are subject to specific additional requirements as stipulated by SSC Assessment Strategy.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

Useful sources of reference

- The Health and Safety Executive website http://www.hse.gov.uk/ has useful information about identifying what health and safety legislation applies to areas of work and lists of Acts, Statutory instruments and legal publications
- The Office of Public Information website http://www.opsi.gov.uk has year by year lists of UK Acts and Statutory Instruments
- The website http://www.netregs.gov.uk/ provides helpful guidance about environmental regulations
- The Environment Agency website http://www.environment-agency.gov.uk provides guidance about environmental permitting, pollution and emissions, waste and water etc
- The Code of Practice - Protecting our Water, Soil and Air has a useful list of references in Section 9
- The leaflet from HSE Books Tractor Action ISBN 0 7176 2711X will provide useful information on maintenance
- **SAFE STOP**
  - Make sure the handbrake is fully applied
  - Make sure all controls and equipment are left safe
  - Stop the Engine
  - Remove the key
- The Provision and Use of Work Equipment Regulations PUWER. All plant or equipment used at work, either in the office or in the field, comes under PUWER.
- The Lifting Operations and Lifting Equipment Operations LOLER. LOLER regulations apply in all premises and work situations. There are responsibilities for those in control of equipment, employers and employees.

See Skills and Education Group Awards website for further information

Excavate and Form Foundations for Fencing

Unit Reference	**T/501/7042**
Level	**2**
Credit Value	**3**
Guided Learning Hours	**23**
Unit Summary	The aim of this unit is to provide the learner with the knowledge, understanding and skills required to enable learners to excavate and form foundations for fencing under minimal direction or guidance
Learning Outcomes (1 to 8) ***The learner will***	**Assessment Criteria (1.1 to 8.4)** ***The learner can***
1. Work safely and in line with requirements	**1.1** Work safely in line with health and safety requirements **1.2** Complete work in a manner which causes minimal disturbance to the environment **1.3** Dispose of waste and excess materials safely
2. Be able to select, prepare and maintain tools and equipment	**2.1** Select and prepare tools, equipment and resources ready for use **2.2** Maintain tools, equipment and resources in a clean and serviceable condition throughout excavation

3. Be able to excavate foundations to comply with (fence) specifications	**3.1** Use recommended working practices to excavate ground
4. Be able to form foundations to comply with (fence) specification	**4.1** Place concrete/or other suitable material and compact to provide for foundation strength, size, profile and finish **4.2** Establish provision to support the future installation of posts
5. Be able to deal with difficulties	**5.1** Deal with difficulties experienced during work within levels of responsibility **5.2** Request advice on how to deal with difficulties outside level of own responsibility
6. Know the relevant legislation and codes of practice	**6.1** Outline the health and safety, legislation and codes of practice associated with excavation work **6.2** Identify the environmental issues associated with the disposal of waste, excess materials and concrete/other material
7.Know how to excavate for fence foundations	**7.1** Name the types and correct use of equipment used for excavating post holes and strip trenches **7.2** Outline how and when temporary supports should be used to support excavations
8. Know how to form	

foundations for fencing specifications	**8.1** Outline the materials and ratios used in concrete/other suitable material **8.2** Explain the methods used for mixing, placing, compacting, finishing and curing concrete/other suitable material **8.3** Outline the methods used for forming pockets in concrete/other suitable material for future fixing **8.4** Outline the techniques used for casting-in fixing items

Supporting Unit Information

T/501/7042 Excavate and form foundations for fencing – Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means exclusive

LO1, LO2, LO3, LO4 and LO5 are the key areas of competence for this unit

Learning Outcome 1. Work safely and in line with requirements

1.1 Work safely in line with health and safety requirements risk assessment studied and implemented. Work activities carried out consistently with current legislation, codes of practice and any additional requirements. Health and Safety e.g. Health and Safety at Work Act, Management of Health & Safety at Work Regulations, Provision and Use of Work Equipment Regulations Town and Country Planning, England e.g. Town and Country Planning (General Permitted Development) (Amendment) (No 2) (England) - refer to Class F Environmental Protection e.g. Environmental Protection Acts covering waste disposal, Codes of Practice e.g. Protecting our Water, Soil and Air.

1.2 Complete work in a manner which causes minimal disturbance to the environment work is completed in a manner which causes minimal disturbance to environment;
Use and wastage of materials is minimised, (e.g. waste material recycled or re-used, use of crushed building waste instead of quarried stone). Pollution from the site is minimised (e.g. run-off of water and suspended materials is controlled, dust is controlled, noise levels

reduced, packaging materials controlled). Disturbance and loss of habitat is minimised, important features (e.g. feeding or nesting areas, plants) are marked and protected. Waste is disposed of in line with legislation, codes of practice and policies; e.g. duty of care - controlled wastes, organisations policy for handling of wastes (storage, local authority site/scheme, licensed contractor, recycle / reuse).

1.3 Dispose of waste and excess materials safely waste and excess materials handled and disposed of safely. Organic waste – reduce waste removed from cropping area (by careful selection of cop, waste material returned to the field (unless the material poses a threat to plant health e.g. diseased material and perennial weeds). Inorganic waste – wastes from servicing and maintenance of equipment disposed of in appropriate container; wastage of packaging minimised and where unavoidable recycled or disposed of in appropriate container; inorganic waste is carefully controlled until disposed of through licensed contractor

Learning Outcome 2. Be able to select, prepare and maintain tools and equipment

2.1 Select and prepare tools, equipment and resources ready for use appropriate equipment and resources for this area of work is selected and made ready for use; Preparation for operation as detailed by the manufacturer's / suppliers / supervisor's instructions, current legislation and codes of practice for safe use. Preparation of range of equipment e.g.

Marking out equipment – levels, pegs, strings (used to ensure accurate positioning) – checking as clean and not damaged, setting up and calibration of levels;

Equipment for excavating trenches

Hand tools (spade, shovel, pick axe, mattock), checked as clean, undamaged

Mechanical (back hoe, 360^{o} diggers, trenchers) (used for removing soil/other material to form trench, removal/loading of material, back-filling) serviced as required, greased/oiled, refuelled, lights checked, hoses checked for wear or leaks, appropriate bucket fitted for task;

For post-holes – hand tools as above, mechanical (post-hole borers hand operated or tractor mounted). Preparation as for excavating.

2.2 Maintain tools, equipment and resources in a clean and serviceable condition throughout excavation tools, equipment and resources maintained in a clean and serviceable condition throughout excavation, securely and safely stored when not in use (refer to LO2.1 for range of equipment). Monitoring, refuelling, storage, protection.

Learning Outcome 3. Be able to excavate foundations to comply with (fence) specifications

3.1 Use recommended working practices to excavate ground recommended working practices is used to excavate ground. Work is carried out (see LO2.1 for range of activities) according to instructions, equipment is only used for purpose and in conditions recommended by manufacturer/supplier, risk assessment implemented, codes of practice and legislation complied with (refer to LO1.1), work is carried out according to plan or instructions to meet purpose and appearance.

Learning Outcome 4. Be able to form foundations to comply with (fence) specification

4.1 Place concrete/or other suitable material and compact to provide for foundation strength, size, profile and finish. Concrete/or other suitable material placed and compacted to provide for foundation strength, size, profile and finish according to plans or instructions.

Concrete made up of; Cement (Portland), Sharp Sand, Aggregate (Normally 20mm for fencing) or Ballast (sand/aggregate mix), water; Ratios;

Wet mixes – e.g. 1 part cement; 2.5 parts sand; 3.5 aggregate

Dry mixes – e.g. 1 part cement; 2 parts sand; 4 parts aggregate

Mixing – by hand or by mixer, addition of wetting agents, water

Placing – using hand tools or direct from delivery vehicle

Compacting – tamping by hand, use of vibrators

Finishing – rough or smooth, by hand or machine

Curing – (preventing of excessively fast drying), use of water sprinklers, flooding or covering with plastic.

Other materials – stone and or gravel, quarry waste, intrinsic material (e.g. soil/sub-soil); placed in layers, tamped and consolidated

4.2 Establish provision to support the future installation of posts pockets formed using shutters, formers, sockets, reinforcing included in foundation. Anchors, bases (e.g. met-posts), bolts and fittings set in foundation material, material tamped round to ensure firm, levels used to ensure accurate positioning.

Learning Outcome 5. Be able to deal with difficulties

5.1 Deal with difficulties experienced during work within levels of responsibility e.g. problems with equipment or other resources (shortage of fuel, materials replaced/replenished from store). Work

stopped when conditions become unfavourable or if unsafe to proceed (e.g. heavy rain, ice, machinery failure, presence of unauthorised persons on site) (refer to LO1.1 for circumstances and codes of practice), obstructions to excavations cleared.

5.2 Request advice on how to deal with difficulties outside level of own responsibility advice is requested on how to deal with difficulties outside level of own responsibility
e.g. problems with equipment failures reported to supervisor, need to order more materials reported to supervisor, difficulties in meeting specifications on plans referred to supervisor or architect/designer/client

LO6, LO7 and LO8 are the key area of knowledge for this unit

Learning Outcome 6. Know the relevant legislation and codes of practice

6.1 Outline the health and safety, legislation and codes of practice associated with excavation work (refer to LO1.1)

6.2 Identify the environmental issues associated with the disposal of waste, excess materials and concrete/other material identify the environmental issues associated with the disposal of waste, excess materials and concrete/other material; (refer to LO1.2)
Production of materials; mineral inputs into production (e.g. quarried limestone impacting on landscape, energy use, noise, dust), energy input to manufacturing (e.g. operation of kilns, transport) waste (e.g. dusts, Carbon Dioxide),
Use of materials; energy use (e.g. transport, mixers, cutting equipment), loss of habitat, drainage (lack of attenuation), visual impact, use of wood products
Waste; water and pollutants from sites, carbon dioxide and other gases from combustion, waste packaging, noise, dust, materials from site clearance, removal of excess or unused materials.
Waste disposal: duty of care - controlled wastes, organisations policy for handling of wastes (storage, local authority site/scheme, licensed contractor, recycle / reuse).

Learning Outcome 7. Know how to excavate for fence foundations

7.1 Name the types and correct use of equipment used for excavating post holes and strip trenches refer to LO2.1 for range of equipment and methods of use.

7.2 Outline how and when temporary supports should be used to support excavations

shuttering and boards used to support to prevent slippage and instability, protect workforce and equipment. Use for; deep trenches, soft or unstable soils/materials, wet conditions, near to traffic

Learning Outcome 8. Know how to form foundations for fencing specifications

8.1 Outline the materials and ratios used in concrete/other suitable material refer to LO4.1 for details

8.2 Explain the methods used for mixing, placing, compacting, finishing and curing concrete/other suitable material refer to LO4.1 for details

8.3 Outline the methods used for forming pockets in concrete/other suitable material for future fixing refer to LO4.2 for details

8.4 Outline the techniques used for casting-in fixing items refer to LO4.2 for details

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes 1, 2, 3, 4 and 5

Delivery of these learning outcomes is by supervised practical work excavating and forming foundations for fencing giving learners the opportunity, first to practice the various tasks involved and then to be observed competently doing each task to demonstrate achievement of the assessment criteria.

Learning Outcomes 6, 7, and 8

Delivery of these learning outcomes is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of work excavating and forming foundations for fencing, records and witness testimony, answering oral or written questions, referenced to the knowledge evidence.

Prior to, during and after completion of work excavating and forming foundations for fencing photographs or video could be taken to provide evidence of progress. Copies of packhouse or field records can be used to provide evidence of quantity of work and of sufficiency of evidence.

It is important that practical assessment activities are supervised appropriately.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Centres will need to devise assessment tasks which should be practical where possible e.g. Learning Outcomes 1, 2, 3, 4 and 5 link together and competence can be assessed practically by observation or by generation of diverse evidence. These could also link to Learning Outcomes 6, 7 and 8 to allow knowledge evidence to be gathered during the practical activities

It is important that practical assessment activities are supervised appropriately.

Minimum requirements when assessing this unit

Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers

- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

Useful sources of reference

- The Health and Safety Executive website http://www.hse.gov.uk/ has useful information about identifying what health and safety legislation applies to areas of work and lists of Acts, Statutory instruments and legal publications
- The Office of Public Information website http://www.opsi.gov.uk has year by year lists of UK Acts and Statutory Instruments
- The Department for Environment, Food and Rural Affairs website has up to date information about legislation, codes of practice and consultations in the horticultural / agricultural sectors
- The Environment Agency website http://www.environment-agency.gov.uk provides guidance about environmental permitting, pollution and emissions, hazardous waste, water etc
- http://www.netregs.gov.uk/ provides helpful guidance about environmental regulations.

- The Code of Practice - Protecting our Water, Soil and Air has list of references in Section 9
- Local Authority websites for Building Control Department
- The Paving Expert website at http://www.pavingexpert.com/ provides comprehensive information about foundations and materials

Learners should be directed to relevant publications and websites e.g.

- The Landscaper (www.landscapermagazine.com)
- DEFRA website and publications (http://www.defra.gov.uk/hort/index.htm)
- Principles of Horticulture by C.R. Adams, et al / Paperback / Published 1998
- A Handbook for Horticultural Students by Peter Dawson
- Farm Horticulture by George W. Wood

See Skills and Education Group Awards website for further information

Collect, Sort and Process Materials for Recycling

	A/502/3182

Unit Reference	
Level	**2**
Credit Value	**3**
Guided Learning Hours	**23**
Unit Summary	The aim of this unit is to provide the learner with the knowledge and skills required to identify and collect recyclable materials using appropriate procedures and methods. It also covers the sorting and processing of recyclable materials
Learning Outcomes (1 to 7) ***The learner will***	**Assessment Criteria (1.1 to 7.3)** ***The learner can***
1. Be able to collect materials for recycling	**1.1** Identify three of the following materials as suitable or unsuitable for recycling • paper • card • glass • plastic • aluminium • other metals • compostable materials • textiles • electrical goods • wood • hazardous waste **1.2** Use at least two of the following methods to collect recyclable materials • kerb side • single materials • multi-materials • trade collection • civic recycling centre

	• park-up collection **1.3** Use at least two of the following types of equipment to collect recyclable materials: • vehicles • boxes/bins • bags • skips • other equipment
2. Be able to sort materials for recycling	**2.1** Use one of the following methods to sort materials • hand sorting • machine sorting
3. Be able to process materials for recycling	**3.1** Use two of the following processing methods • baling • bagging • guillotining • preparation for transfer to third party • composting **3.2** Deal with non-recyclable material
4. Be able to use equipment in recycling materials	**4.1** Prepare, check, maintain and use equipment for collecting, sorting and processing materials for recycling • vehicles • boxes/bins • bags • skips • other equipment
5. Protect your own and others health and safety	**5.1** Protect your own health and safety and that of other workers and the public

6. Know how to collect, sort and process materials for recycling	**6.1** Explain the different methods of collecting and sorting recyclable materials • kerb side • single materials • multi-materials • trade collection • civic recycling centre • park-up collection **6.2** Explain the differences between recyclable, non-recyclable and hazardous materials **6.3** Describe the different roles of those involved in the recycling and waste industries including local authorities, the private sector and community groups and charities **6.4** Explain what a recycling unit can or cannot collect and how it deals with non-recyclable material **6.5** Explain how to reduce, reuse and recycle and how to make others aware of this **6.6** Outline the equipment needed to collect, sort and process materials for recycling and how to prepare, check maintain and use it **6.7** Describe the processes that materials require in order to be recycled • baling • bagging • guillotining • preparation for transfer to third party • composting
7. Know the relevant health and safety and	**7.1** Describe your own role and responsibilities during collection, processing and sorting work

other legislation in recycling materials	**7.2** Detail your own responsibilities under health and safety and other relevant legislation **7.3** Describe the implications for your work of current health and safety, environmental and waste legislation

Supporting Unit Information

A/502/3182 Collect, sort and process materials for recycling - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

LO1, LO2, LO3, LO4 and LO5 are the key area of competence for this unit

Learning Outcome 1. Be able to collect materials for recycling

1.1 Identify three of the following materials as suitable or unsuitable for recycling: Paper, Card, Glass, Plastic, Aluminium, Other metals, Compostable materials, Textiles, Electrical goods, Wood, Hazardous waste, for example: **Paper** - Suitable e.g. newspaper, office printing paper. Unsuitable e.g. paper with coatings - plastic, dirty/wet paper; **Card** - Suitable e.g. cardboard boxes - cereals, pet food. Unsuitable e.g. card with plastic/foil liners; **Glass** - Suitable e.g. jars, bottles - clean, no lids. Unsuitable e.g. pyrex, glass panes; **Plastic** - Suitable e.g. plastic bottles - flattened. Unsuitable e.g. margarine tubs, yoghurt pots; **Aluminium** - Suitable e.g. aluminium foil - balled and placed in aluminium can. Unsuitable e.g. foil sheets/unclean. There is some variation between local authorities depending on what resources are available for recycling.

1.2 Use at least two of the following methods to collect recyclable materials: Kerb side e.g. periodic collection house to house of specific target materials such as shoes/clothing left at the doorstep/kerb or regular municipal collection of specified single or multi-materials and separate non-recyclable waste. **Single materials** e.g. paper/plastic types separated into colour coded bags/containers -

loaded separately in hoppers on collection vehicle. **Multi-materials** e.g. glass jars/bottles, paper, cans/tins etc. mixed together in bags or wheelie bins (separated from non-recyclable material) and loaded without segregation on collection vehicle. **Trade collection** e.g. glass from hospitality businesses or paper/card from offices in larger bins - 240-1100litre - may be collected less frequently and loaded mechanically. **Civic recycling centre** e.g. materials can be dropped off by the public - batteries, engine oil, paper, scrap metal, wood etc. placed in designated containers, skips or areas - use will involve placement/checking/emptying containers, making space, checking correct placement materials, rejecting materials etc. **Park-up collection** e.g. people drive to known collection sites to drop off old furniture, books, tools, bicycles etc., use involves similar activities as for civic recycling centres

1.3 Use at least two of the following types of equipment to collect recyclable materials Vehicles e.g. van types for making house to house collections of clothes, shoes or specialist items such as bikes, furniture, tins of paint. **Boxes/bins** e.g. to collect paper/cardboard or glass bottles. **Bags** e.g. to collect clothes/shoes or green waste for composting. **Skips** e.g. to collect building rubble/bricks. **Other equipment** e.g. baling machines - plastic/cardboard, glass bottle crushers, compactors for materials such as cardboard in trade wheelie bins.

Learning Outcome 2. Be able to sort materials for recycling

2.1 Use one of the following methods to sort materials: Hand sorting e.g. manually sort materials in the shed/warehouse into those that can be re-used, recycled or any non-recyclable materials or manually sort to assess percentage of dirty/non-recyclable material prior to acceptance/rejection. **Machine sorting** e.g. sort materials on a conveyor picking line to remove recyclable materials/contaminants.

Learning Outcome 3. Be able to process materials for recycling

3.1 Use two of the following processing methods: Baling e.g. set binding mechanism, load baling machine - cardboard/plastics, operate machine, repeat until all batches compressed, tie-off, unload bale. **Bagging** e.g. load bags with recyclable materials according to bag colour/type, maximise use of bag space, manageable weight for handling. **Guillotining** e.g. set cutting parameters, manually load bales/plastic/rubber/ stone/carpet, operate guillotine, remove cut product. **Preparation for transfer to third party** physical e.g. collected materials inspected for contaminants, bulked up -

baling/loading in containers, weighed - proof of weight obtained, transported to/picked up by third party. Checks and paperwork e.g. use a checklist to satisfy Duty of Care (and other legal requirements) - waste transfer note issued/appropriately signed for each collection, registered waste carrier being used, check that disposal facilities are correctly permitted etc. **Composting** e.g. green waste - gather raw materials, inspect to ensure no larger than specified/contaminant materials present - large logs/meat products, shred bulky materials, transport/convey to composting windrows/piles.

3.2 Deal with non-recyclable material e.g. segregate batches of non-recyclable material - contamination/presence of hazardous waste, follow organisation's agreed systems of work to arrange re-loading/transfer for incineration/landfill depending on why rejected.

Learning Outcome 4. Be able to use equipment in recycling materials

4.1 Prepare, check, maintain and use equipment for collecting, sorting and processing materials for recycling: Vehicles prepare e.g. add fuel, oil, water etc. Check e.g. roadworthy - steering, brakes, indicators etc; fit to do job - lifting/materials segregation systems etc; safety mechanisms working - reversing alarm, mirrors. Maintain e.g. clean vehicle body, interior/waste hoppers, lubricate as appropriate. Use e.g. drive or collect recyclables and load vehicle. **Boxes/bins** prepare e.g. move into vehicle. Check e.g. empty, no holes/contamination - paint/grease. Maintain e.g. clean, attend to any sharp parts. Use e.g. load/unload/move to processing as appropriate. **Bags** prepare e.g. move into vehicle, stack, unroll. Check e.g. for holes/wear and tear. Maintain e.g. shake out rubbish, straighten and fold. Use e.g. load/unload/move to processing as appropriate. **Skips.** Prepare e.g. empty - ensure completely clear of materials, lock door; full - ensure even/safe load, sheet up. Check e.g. condition/safety of skip - structure/lugs/doors. Maintain e.g. clean skip inside/outside, promptly report any problems requiring specialised maintenance. Use e.g. load effectively to maximise use of space, sheet up. **Other equipment** example is Bailer. Prepare e.g. load/set up baling tape/wire. Check e.g. operation, emergency stop, door closure. Maintain e.g. sweep out debris, clean interior. Use e.g. refer to LO3.1. NB - follow organisation's agreed systems of work/checklists for equipment preparation and checking.

Learning Outcome 5. Protect your own and others health and safety

5.1 Protect your own health and safety and that of other workers and the public risk assessment e.g. routes, collection, sorting and processing equipment, systems of work, storage areas; effective pre-operation preparation/checking procedures prior to use of vehicles/equipment. Own H & S e.g. wear appropriate PPE/high visibility gear, safe manual handling, maintain personal hygiene. H & S of other workers e.g. check every time that other workers are clear before reversing/operating machinery, promptly report unsafe equipment/hazardous materials.

H & S of public e.g. careful timing of activities, awareness of vulnerable people, avoid leaving tripping/slipping hazards.

LO6 and LO7 are the key areas of knowledge for this unit

Learning Outcome 6. Know how to collect, sort and process materials for recycling

6.1 Explain the different methods of collecting and sorting recyclable materials refer to LO1.2 for collection methods. Sorting: **Kerb side** e.g. single focus of collection toys/clothes - sort at warehouse, or municipal collection see single or multi materials: - **Single materials** e.g. sorting into hoppers at collection or **Multi-materials** e.g. sorting at the Materials Recycling Facility using a combination of manual sorting, conveyors, screens, separators. **Trade collection** e.g. sorted to filter recyclable materials - need for 'Duty of Care' Trade Waste Agreement with trade waste contractor. **Civic recycling centre** e.g. skips, bins or dropping areas for specified recyclables sorted prior to visit - attendants assist finding correct containers. **Park-up collection** e.g. bins/containers sited next to parking areas and identified for collection of specific recyclable materials.

6.2 Explain the differences between recyclable, non-recyclable and hazardous materials recyclable materials e.g. raw/processed waste materials which can be used again or broken down to extract materials for reuse. Non-recyclable materials e.g. either cannot be reused/broken down for extraction of useful components - technology gaps, not cost effective, lack of demand for components, hazardous materials - risks/costs. All recyclable/non- recyclable materials may to some extent be a hazard to human health and/or environment but materials designated as hazardous can potentially cause more harm unless correctly managed - stringent controls apply to handling /

movement / recovery of hazardous recyclable waste or to its disposal if it is non-recyclable.

6.3 Describe the different roles of those involved in the recycling and waste industries including local authorities, the private sector and community groups and charities Role of local authorities e.g. manage/maintain collection/segregation of waste and treatment infrastructures, meet local/national statutory targets for recycling/reducing disposal in landfill sites. Private sector e.g. private companies contracted by local authorities to provide services including collection, pre-treatment, recycling - operation of Materials Recycling Facilities, disposal. Community groups and charities e.g. interested in delivering environmental/social/educational benefits for community, often operating on a not for profit basis/donating profits to charity and starting small scale recycling operations which may develop onto a more commercial footing.

6.4 Explain what a recycling unit can or cannot collect and how it deals with non-recyclable material collects e.g. single/mixed recyclables - paper/bottles/cans/green waste or single focus - toys/clothes. Cannot collect e.g. food waste, types of plastic, electrical equipment, hazardous waste - batteries, light bulbs, pesticides etc; consider positioning/state of materials containers. Non-recyclable material e.g. left for normal refuse collections/special arrangements - hazardous materials - clinical/asbestos.

6.5 Explain how to reduce, reuse and recycle and how to make others aware of this reduce e.g. choose items that will have a long life span, hire, share or borrow items rather than purchasing new. Reuse e.g. check if items can be mended when they appear to be broken, check for return schemes. Recycle e.g. sell/return computers to outlets where parts can be disassembled for recycling. Make others aware e.g. cost effective publicity - leaflet drops, newsletters, press/local radio releases, posters etc.

6.6 Outline the equipment needed to collect, sort and process materials for recycling and how to prepare, check maintain and use it refer to LO4.1

6.7 Describe the processes that materials require in order to be recycled: Baling, Bagging, Guillotining, Preparation for transfer to third party, Composting LO3.1

Learning Outcome 7. Know the relevant health and safety and other legislation in recycling materials

7.1 Describe your own role and responsibilities during collection, processing and sorting work role e.g. drive collection van or pick up sacks/containers from kerbside and load into hoppers. Responsibilities

e.g. pre-operation checks, cleanliness of van, provision of PPE any tools/equipment that may be needed - brush and shovel. LO5.1.

7.2 Detail your own responsibilities under health and safety and other relevant legislation Health & safety - brief consideration of responsibilities as relevant under e.g. Health and Safety at Work Act, Management of Health & Safety at Work Regs, Provision and Use of Work Equipment Regs (PUWER), Work at Height Regs etc. Health & Safety at Work Act e.g. responsibility to ensure own health and safety and of others affected by the activities; employer's responsibilities including providing adequate training. Other relevant legislation - brief consideration responsibilities as relevant e.g. Environmental Protection Act, Duty of Care Regs, Hazardous Waste Directive. Duty of Care Regs e.g. responsibility to ensure waste disposed of with licence/in accordance with terms of licence; does not escape from containment; transfer only to authorised persons - registered carriers/sites authorised to take waste; Waste Transfer Note - appropriately signed and keep for two years. Ref to LO3.1.

7.3 Describe the implications for your work of current health and safety, environmental and waste legislation In relation to collection, sorting and processing of materials for recycling consider health and safety implications e.g. need for information, instruction, training, certification of competence; risk assessment, manual handling, hygiene, workplace transport, first aid provision, reporting and recording requirements. Consider environmental and waste implications e.g. need to recover/dispose of waste safely with respect to human health and the environment, the reduce, reuse, recycle' waste management hierarchy, targets for collecting/recycling - specific streams of waste such as packaging, oil, batteries, electrical equipment, etc., prevention/reduction of landfill and biodegradable waste.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes (LO) 1, 2, 3, 4 and 5

Delivery of these learning outcomes is by supervised practical operational work giving learners the opportunity, first to practice the various tasks and

then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

Learning Outcomes (LO) 6 and 7
Delivery of this learning outcomes is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of operational work and witness testimony, answering oral or written questions, assignments or internet research cross referenced to the knowledge evidence.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Minimum requirements when assessing this unit
Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

It is important that practical assessment activities are supervised appropriately.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence

- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

See Skills and Education Group Awards website for further information

Prepare Sites to Create Habitats

Unit Reference	**Y/502/3237**
Level	**2**
Credit Value	**3**
Guided Learning Hours	**23**
Unit Summary	The aim of this unit is to provide the learner with the knowledge and skills required to prepare sites for the creation of a range of habitats. This involves the establishment of suitable site conditions. Sites may be rural or urban and are likely to have a range of proposed uses including conservation, recreation and education
Learning Outcomes (1 to 6) ***The learner will***	**Assessment Criteria (1.1 to 6.2)** ***The learner can***
1. Be able to prepare sites for habitats	**1.1** Prepare the site to encourage the growth of vegetation **1.2** Provide drainage to create or maintain the required conditions **1.3** Carry out work in a way which keeps the site clear of any unnecessary obstacles and waste material
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 relevant 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
3. Be able to select, use and maintain relevant equipment	**3.1** Select and use appropriate equipment for this area of work **3.2** Prepare, maintain and store equipment in a safe and effective working condition
4. Know how to prepare sites to create habitats	**4.1** Describe the effect which site conditions will have on the growth of vegetation, habitat quality and landscape value covering • soil • water • slopes and levels • container/planters **4.2** State the implications of site drainage for habitat management **4.3** Describe the environmental value of work sites, the potential effects of work on the environment and how to control these covering • biodiversity • historical/archaeological value **4.4** State how work needs to consider and fit into local biodiversity action plans **4.5** Describe how to interpret job specifications **4.6** State how to identify hazards, assess risks and interpret risk assessments

5. Know relevant health and safety legislation and environmental good practice	**5.1** Outline the current health and safety legislation, codes of practice and any additional requirements including any permissions or licences **5.2** Describe how environmental damage can be minimised **5.3** Describe the correct methods for disposing of waste
6. Know the types of equipment required and how to maintain them	**6.1** Describe the equipment which will be required for the activity **6.2** Describe the methods of maintaining the range of equipment

Supporting Unit Information

Y/502/3237 Prepare sites to create habitats - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

Learning Outcome 1. Be able to prepare sites for habitats

1.1 Prepare the site to encourage the growth of vegetation carry out a risk assessment of site including need to CAT scan if digging. Clear inorganic debris e.g. bricks, rubbish. Clear unwanted vegetation e.g. brambles, annual/perennial weeds, cut overhanging branches back. Contour site e.g. level, fill depressions, create banks, dig out areas for wetlands/ponds. Create conditions for seeding and/or planting e.g. seeding - fork over area/use a rotary cultivator, rake level to achieve desired tilth, firm surface; planting e.g. roughly fork area, dig planting holes of appropriate width/depth, add compost/fertiliser. Take photograph of the original site for later comparison.

1.2 Provide drainage to create or maintain the required conditions provide drainage e.g. dig new open drainage ditch, lay underground drainage pipe system ensuring appropriate fall or maintain existing systems - remove blockages/sediment, replace broken pipes. Maintain required conditions e.g. prevent an area becoming boggy, drain water into a wetland area, and intercept sediment/run M off from agricultural land.

1.3 Carry out work in a way which keeps the site clear of any unnecessary obstacles and waste material unnecessary obstacles e.g. materials - tree guards, tools, skip, inappropriately sequenced work - felled trees. Waste material e.g. organic - cut grass or inorganic - spoil, stones, plastic bags. Draw a simple plan of site and indicate on

plan e.g. access routes in/out for people, equipment, plant; storage areas for materials to be used or waste materials to be re-used/removed - consider sequence of use and where materials will be re-used - top soil/sub soil, firmness of ground, damage to structures.

Learning Outcome 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 relevant legislation, codes of practice and any additional requirements Health & Safety e.g. safe manual handling, PPE. Relevant legislation e.g. Environmental Protection, Rights of Way and Countryside Acts, Conservation of Habitats and Species Regs. COPs as applicable e.g. First Aid at Work ACOP. Additional requirements e.g. Local Authority site designation checks, Local Biodiversity Action Plans (LBAP's) - LO4.3 & LO4.4, permissions - Tree Preservation Orders, felling licences, Internal Drainage Board or Environment Agency notifications e.g. groundwater/drainage affected. Refer to LO5.1.

2.2 Carry out work in a manner which minimises environmental damage e.g. assistance with habitat site survey, avoid compromising existing drainage/access structure or damaging established plants/trees, careful timing - birds nesting, avoid working in unsuitable weather - raining/wet ground, use of low ground pressure vehicles - ATV's and keep use to the minimum, work in accordance with local biodiversity plans

2.3 Dispose of waste safely and correctly waste e.g. ref to LO1.3. Correct disposal e.g. use on site - spoil to fill depressions/level site or depending upon access remove using wheelbarrow, place in bags or skip for disposal with local authority/licensed contractor. If hazardous waste found check Local Authority procedures e.g. barbed wire. Safely e.g. PPE - refer to LO3.1, hygiene, safe lifting/manual handling, correct handling - syringes/needles - pickers and into sharps box.

Learning Outcome 3. Be able to select, use and maintain relevant equipment

3.1 Select and use appropriate equipment for this area of work PPE selected and safely used e.g. overalls, work gloves, steel toe capped footwear, goggles, ear defenders, hard hat. CE marked. Tools and equipment selected e.g. spade, shovel, fork, rake, brush, roller, rotary cultivator, crowbar, mattock, bow saw, strimmer, tape measure, pegs and line, wheelbarrow, ATV and trailer. Use of tools - refer to LO3.2.

3.2 Prepare, maintain and store equipment in a safe and effective working condition use equipment only for the operation and in

situations as detailed by manufacturer's / supplier's / supervisor's instructions, current legislation and codes of practice for safe: Preparation e.g. spade blade cleaned. Use e.g. push tread with sole of foot to avoid slippage/scrapping Achilles tendon area. Maintenance e.g. clean/oil after use, wooden handle rub with linseed oil. Storage e.g. securely hanging from handle, accessible, blade down. Secure e.g. valuable tools locked away. Maintain records e.g. repairs and maintenance. Report faults to line manager e.g. tool return records. Refer to LO6.2

Learning Outcome 4. Know how to prepare sites to create habitats

4.1 Describe the effect which site conditions will have on the growth of vegetation, habitat quality and landscape value covering: Soil growth of vegetation e.g. consider the effect of soil fertility on the ease of establishment of semi-natural habitats - wildflower meadows, woodlands. Habitat quality e.g. consider the effect of the current soil make up - stoniness, depth, drainage, pH etc. on the types or diversity of plants that will flourish on site. **Water** growth of vegetation e.g. consider effect of well drained or water retentive areas on vegetation types likely to be found. Habitat quality - consider e.g. how seasonal water availability contributes to/sustains different habitats through the year - meadows, wet grass/boggy areas, ponds. **Slopes and levels** growth of vegetation e.g. consider effect of direction of facing of slope or level on types or amount of vegetation growth. Habitat quality e.g. consider what factors of different slope/level facings contribute to/sustain different vegetation types - rainfall, water retention, light. **Container/planters** Growth of vegetation e.g. consider effect of controlled conditions - nutrient supply, water, control of weeds on plant growth. Habitat quality e.g. consider effect of same controlled conditions on diversity vegetation growth. **Landscape value** e.g. consider each of site conditions above in relation to different interests such as wildlife conservation, recreation - walking, production - timber, aesthetic value.

4.2 State the implications of site drainage for habitat management consider site drainage in relation to the habitat management objectives e.g. need to add, remove or maintain water at site, is a drainage system already in place, is it functioning, how much of site does it affect - check for field ditches, sub surface drainage systems etc.; can it be modified to address the objectives; what are the implications of altering the drainage system - affect on site land use, adjacent land use, on flora and fauna, on any existing LBAP's/historic significance; who owns the land, what permissions need to be obtained.

4.3 Describe the environmental value of work sites, the potential effects of work on the environment and how to control these covering environmental value of work sites e.g. SSSI's, site subject to LBAP, historical interest. Potential effects of work on environment e.g. disturbance of species listed under the Habitats Directive, change of conditions and species mix. Control: **Biodiversity** e.g. survey site, make changes slowly - monitor effects, care not to introduce hard to control species to vulnerable sites. **Historical/archaeological value** e.g. survey/research site - identify what is there, carry out work in keeping with local tradition to preserve character/structure of sites.

4.4 State how work needs to consider and fit into local biodiversity action plans where to find LBAP e.g. Local Authority website. Work needs to link into both species and habitat action plans e.g. active management steps to prevent drying out or to maintain soil moisture, prevent encroachment of scrub and also to create conditions suitable for the support of specific LBAP species - food sources, conditions.

4.5 Describe how to interpret job specifications in relation to habitat preparation work e.g. site location, dimensions, equipment/materials to be used, methods of access to and transport within site, vegetation clearance/contouring requirements, removal route.

4.6 State how to identify hazards, assess risks and interpret risk assessments identify hazards e.g. walk site, knowledge/training in tools/equipment to be used, experience. Hazards recognised e.g. sharp and/or heavy tools, thorns - tetanus. Preparation of relevant risk assessment e.g. what is probability - percentage chance of each hazard causing injury/adversely affecting health, who/how many might be harmed, how serious the effects and what precautions can be taken to eliminate/minimise risks.

Learning Outcome 5. Know relevant health and safety legislation and environmental good practice

5.1 Outline the current health and safety legislation, codes of practice and any additional requirements including any permissions or licences Health and Safety e.g. Health and Safety at Work Act, Management of Health & Safety at Work Regs, Provision and Use of Work Equipment Regs, Environmental e.g. Environmental Protection Acts, Wildlife e.g. Wildlife & Countryside Act, Conservation (Natural Habitats etc.) Regs (as amended), Habitats Directive. Additional requirements e.g. Natural England notification of listed operations e.g. SSSI's (and SPA's). Refer to LO2.1

5.2 Describe how environmental damage can be minimised refer to LO2.2.

5.3 Describe the correct methods for disposing of waste duty of care - controlled wastes. Refer to LO2.3.

Learning Outcome 6. Know the types of equipment required and how to maintain them

6.1 Describe the equipment which will be required for the activity refer to LO3.1

6.2 Describe the methods of maintaining the range of equipment e.g. keep tools cleaned of mud/sap, blades sharp, metal surfaces oiled, wooden surfaces periodically rubbed with linseed oil, check security of attachments. ATV e.g. daily service checks - fuel, engine oil, tyre condition/pressure, front and rear brake operation; weekly - air filter, nuts/bolts - follow manufacturer's instructions/schedules - refer to LO3.2

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes (LO) 1, 2 and 3

Delivery of these learning outcomes is by supervised practical operational work giving learners the opportunity, first to practice the various tasks and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

Learning Outcomes (LO) 4, 5 and 6

Delivery of this learning outcomes is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of operational work and witness testimony, answering oral or written questions, assignments or internet research cross referenced to the knowledge evidence.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Minimum requirements when assessing this unit
Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

It is important that practical assessment activities are supervised appropriately.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment

- Tool / equipment inventory lists / maintenance schedules

- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

See Skills and Education Group Awards website for further information

Manage Vegetation by Coppicing

Unit Reference	**J/600/2653**
Level	**2**
Credit Value	**4**
Guided Learning Hours	**30**
Unit Summary	The aim of this unit is to provide the learner with the knowledge and skills required to carry out practical habitat management using coppicing as a management technique. Work on sites must be carried out in line with appropriate permissions and licences
Learning Outcomes (1 to 7) ***The learner will***	**Assessment Criteria (1.1 to 7.9)** ***The learner can***
1. Be able to select, use and maintain relevant equipment for managing vegetation by coppicing	**1.1** Select appropriate equipment for this area of work **1.2** Use equipment according to relevant legislation and manufacturer's instructions **1.3** Prepare, maintain and store equipment in a safe and effective working condition
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 relevant 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 **2.4** Recognise any hazards and reduce any associated risks to an acceptable level
3. Be able to carry out the coppicing operation in line with site management requirements	**3.1** Select vegetation according to the site management plan and any prevailing constraints **3.2** Manage vegetation by coppicing and according to the site management plan **3.3** Deal with any produce or superfluous material according to the site management plan **3.4** Take the appropriate action to remedy any incidental damage which occurs during the management of vegetation
4. Know how to carry out the coppicing safely	**4.1** Describe the management technique of coppicing
5. Know how to recognise the vegetation to be managed	**5.1** State how to recognise the age, state and type of vegetation to be managed **5.2** State how to Interpret job specifications
6. Know the types of equipment required and how to maintain them	**6.1** Describe the equipment and tools which will be required for coppicing **6.2** Describe the methods of maintaining the range of equipment
7. Know relevant health	**7.1** Outline the current health and safety legislation, codes of practice and any additional requirements

and safety legislation and environmental good practice	**7.2** State the implications of the legislation which affects your work including any permissions or licences which are required **7.3** State how your work fits into local biodiversity action plans **7.4** Describe how environmental damage can be minimised **7.5** State what action to take in the case of incidental damage to habitat, wildlife or landscape **7.6** Describe the correct methods for disposing of waste **7.7** Describe how to Identify hazards and assess risks **7.8** State how to interpret risk assessments **7.9** State the environmental value of work sites, the potential effects of your work on the environment and how to control these

Supporting Unit Information

J/600/2653 Manage vegetation by coppicing - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

LO1, LO2 and LO3 are the key areas of competence for this unit

Learning Outcome 1. Be able to select, use and maintain relevant equipment for managing vegetation by coppicing

1.1 Select appropriate equipment for this area of work PPE selected and safely used e.g. overalls, hedging gloves, heavy duty leather working boots, safety helmet, knee pads. CE marked. Tools and equipment selected e.g. billhook, bow saw, pruning saw, slasher, sharpening stone.

1.2&3 Use equipment according to relevant legislation and manufacturer's instructions / Prepare, maintain and store equipment in a safe and effective working condition use equipment only for the operation and in situations as detailed by the manufacturer's / supplier's / supervisor's instructions, current legislation and codes of practice for safe: preparation e.g. billhook brought to site with blade covered for safety, blade already sharpened. Use e.g. stems up to 7 cm, check for anything that will interfere with cut, always cut away from body. Maintenance e.g. clean sap from blade and oil, clean mud from handle, sharpen in tool store. Storage e.g. in slatted rack or box - make sure billhook cannot fall. Secure e.g. valuable tools locked away, fuel and oil clearly labelled and stored separately, shadow board - check return. Maintain records e.g. maintenance and repairs. Report faults to line manager.

Learning Outcome 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 relevant legislation, codes of practice and any additional requirements work activities carried out consistently with current legislation e.g. Health and Safety, Environmental Protection and Wildlife and Countryside Acts, Hedgerow Regulations, COPs as applicable, risk assessment. Additional requirements such as vaccination against tetanus, precautions against Weil's disease - waterproof gloves/hygiene or exposure to the sun - sun block - refer to LO7.1

2.2 Carry out work in a manner which minimises environmental damage e.g. carefully plan site access / removal produce, do not coppice in spring to avoid nesting birds, work in accordance with local biodiversity plans, awareness of rare species in coppice - mark site of bat roost trees and plan to ensure no disturbance

2.3 Dispose of waste safely and correctly waste e.g. organic - green vegetation, branches, twigs or inorganic - fly tipped waste, old barbed wire. Correctly - refer to LO6.3. Safely e.g. PPE, hygiene, safe lifting, safe handling / disposal of needles / syringes / glass near urban areas

2.4 Recognise any hazards and reduce any associated risks to an acceptable level Hazards recognised e.g. cuts / scratches and tetanus, sharp and / or heavy tools, slippery / rocky / mossy ground, falling branches / trees, sunny or wet weather
Associated risks reduced to an acceptable level: hierarchy of precautions:
Eliminate hazard e.g. tetanus vaccination
Reduce hazard e.g. do not work when it is raining heavily
Use less risky option e.g. single edged billhook especially when learning
Prevent access to hazard e.g. power take off guards
Organise work to reduce exposure to hazards e.g. warning signs
PPE e.g. safety helmets, hedging gauntlets
Welfare facilities e.g. first aid kit and other welfare items such as sun block, sterile water

Learning Outcome 3. Be able to carry out the coppicing operation in line with site management requirements

3.1 Select vegetation according to the site management plan and any prevailing constraints coppicing plan fits within site management plan and may include e.g. rotation and scheduling of coupes to be coppiced, adjacent coupes cut sequentially, coupe area and shape, need to regenerate neglected coppice, rides to be developed. Prevailing constraints e.g. cost / staff time / legal implications, market / on-site need for produce, weather conditions

3.2 Manage vegetation by coppicing and according to the site management plan e.g. undergrowth such as brambles cleared, scheduled coupes coppiced, re-growth protected with fencing or dead hedges. According to site management plan - refer to LO3.1

3.3 Deal with any produce or superfluous material according to the site management plan produce e.g. cordwood, faggots, fence or tree stakes. Processing e.g. faggots or walking sticks bundled and tied. Stacking and storage e.g. firewood, wood for charcoal stored in a cord, stakes and poles stored around tree trunks until use. Brash placed in habitat piles. Superfluous material - organic e.g. cleared undergrowth rotting wood burnt on bonfire to clear site - taking due care about smoke, fumes and gases - obtain permission of Landowner, check with Local Authority if in doubt. Inorganic - refer to LO2.3

3.4 Take the appropriate action to remedy any incidental damage which occurs during the management of vegetation e.g. branches damaged by falling trees trimmed, damage to ditches / revetments / walls / fences - made good, heavily rutted rides - filled in, drainage if cost effective

LO4, LO5, LO6 and LO7 are the key areas of knowledge for this unit

Learning Outcome 4. Know how to carry out the coppicing safely

4.1 Describe the management technique of coppicing coppicing technique to achieve purposes such as marketable produce e.g. organise cutting system for coupe including access, stacking of produce and brash, cut trunks low and cleanly with cuts angled to shed water and encourage re-growth. Activities carried out to management plan schedule with regard to health and safety and legal considerations - refer to LO7.1 and LO7.2

Learning Outcome 5. Know how to recognise the vegetation to be managed

5.1 State how to recognise the age, state and type of vegetation to be managed

Age e.g. standard / old neglected coppice trees accurately aged using an increment borer or felling tree and counting annual rings.

State e.g. in rotation and well managed, neglected and needing regeneration, coppice and standard trees.

Type of vegetation e.g. willow, hazel, sweet chestnut. Recognise characteristics of common coppice species

5.2 State how to interpret job specifications e.g. coupe location and size, type of coppice, workers available, produce and extraction, restocking needs, protecting re-growth

Learning Outcome 6. Know the types of equipment required and how to maintain them

6.1 Describe the equipment and tools which will be required for coppicing - refer to LO1.1

6.2 Describe the methods of maintaining the range of equipment - refer to LO1.2&3

Learning Outcome 7. Know relevant health and safety legislation and environmental good practice

7.1 Outline the current health and safety legislation, codes of practice and any additional requirements e.g. Health and Safety at Work Act, Management of Health & Safety at Work Regulations, Provision and Use of Work Equipment Regulations, Environmental Protection e.g. Environmental Protection Acts covering waste disposal Wildlife e.g. Wildlife and Countryside Act, Hedgerow Regulations, Habitats Directive. Additional requirements including e.g. Local Authority checks for site designations, Hedgerow Regulations, LBAP's. Forestry Commission - felling licences - refer to LO7.2, Natural England notifications e.g. SSSI's (and SPA's) - notification of listed operations, Environment Agency notifications e.g. activities affecting watercourses, groundwater

7.2 State the implications of the legislation which affects your work including any permissions or licences which are required Implications of legislation which affects work: Forestry Commission licence to fell growing trees or to carry out work in woodlands in the vicinity of species protected under the Habitats Directive. Local Planning Authority (LPA) consent needed for cutting down or working on trees under a Tree Preservation Order. In Conservation areas notice to LPA of intention to cut down a tree. Identify conditions that apply, exemptions, penalties for non-compliance

7.3 State how your work fits into local biodiversity action plans how work fits into local biodiversity action plans (LBAP's). Where to find LBAP e.g. Local Authority website. Work needs to link into both species and habitat action plans e.g. species rich coppice areas or supporting uncommon / local species.

7.4 Describe how environmental damage can be minimised minimising environmental damage - refer to examples in LO2.2

7.5 State what action to take in the case of incidental damage to habitat, wildlife or landscape - refer to LO3.4

7.6 Describe the correct methods for disposing of waste duty of care - controlled wastes. Where to dispose e.g. check costs, procedures and which Local Authority sites accept types of waste. Method of disposal e.g. recycle / reuse - bag or bin or consider skip hire / private disposal with a licensed contractor - refer to LO2.3 and LO3.3. Check Local Authority procedures regarding hazardous waste from coppice areas e.g. fly-tipped, barbed wire, needles / syringes / glass - refer to LO2.3

7.7 Describe how to Identify hazards and assess risks identify hazards e.g. walk site, knowledge / training in tools / machinery to be used, experience. Hazards - refer to LO2.4. Preparation of relevant risk assessment e.g. what is the probability - percentage or high/medium/low of each hazard causing injury / adversely affecting health, who / how many might be harmed, how serious the effects and what precautions can be taken to eliminate / minimise risks

7.8 State how to interpret risk assessments e.g. generic / local hazards, likelihood of injury to self/others, precautions to be taken to eliminate the hazard or reasonable precautions to reduce the risks to a low level. Hierarchy of precautions - refer to LO2.4

7.9 State the environmental value of work sites, the potential effects of your work on the environment and how to control these environmental value of work sites e.g. SSSI's, SINC's, site subject to LBAP, value as habitat for wildlife varies depending on management. Potential effects of work on the environment e.g. increased deer population, patchy re-growth allowing strong weed growth, removal of invertebrate habitat, smoke from bonfires affecting bat roost. Control e.g. deer fencing / dead hedges, plant new trees to fill gaps, make habitat piles, identify location (s) of bat roost sites and site bonfires elsewhere with permission from Landowner

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the practical skills and knowledge development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes 1, 2 and 3

Delivery of these learning outcomes is by assessment of competence for those who have experience in this area of work or by supervised coppicing

activities giving learners the opportunity, first to practice the various tasks involved and then to be observed correctly doing each task to demonstrate competence in each of the assessment criteria.

Prior to, during and after completion of coppicing activities photographs or video could be taken to provide evidence of progress.

Learning Outcomes 4, 5, 6 and 7
Delivery of these learning outcomes is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of coppicing activities and witness testimony, answering oral or written questions, assignments or internet research cross referenced to the knowledge evidence

It is important that practical assessment activities are supervised appropriately

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Centres will need to devise assessment tasks which should be practical where possible e.g. Learning Outcomes 1, 2 and 3 link together and can be assessed practically by observation or by generation of diverse evidence. These could also link to Learning Outcomes 4, 5, 6 and 7 to allow knowledge evidence to be gathered during the practical activities

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include some of the following

- Product evidence
- Observation reports
- Oral/written questions and answers

- Reports/notes diaries/reflective accounts
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory and safety checklists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

It is important that practical assessment activities are supervised appropriately.

Additional Information

Useful sources of reference

- The Health and Safety Executive website http://www.hse.gov.uk/ has useful information about identifying what health and safety legislation applies to areas of work and lists of Acts, Statutory instruments and legal publications
- National Federation of Biological Recording website http://www.nbn-nfbr.org.uk/nfbr.php lists all Local / Biological Recording Centres - Useful to find local Biodiversity Action Plans
- The Natural England website http://www.naturalengland.org.uk/ has information about countryside protection schemes and land management for the benefit of wildlife, landscape. Also licences and enforcement
- Local Authority websites for Local Planning Authority permissions and LBAP's
- The Department for Environment, Food and Rural Affairs website has up to date information about legislation, codes of practice and consultations in the horticultural / agricultural sectors

- The Environment Agency website http://www.environment-agency.gov.uk provides guidance about environmental permitting, pollution and emissions, hazardous waste, water etc
- The Forestry Commission www.forestry.gov.uk application for licences
- Horticultural Code of Practice - Helping to prevent the spread of invasive non-native species
- The Code of Practice - Protecting our Water, Soil and Air has a useful list of references in Section 9
- BTCV Woodlands / Tree Planting and Aftercare - practical handbooks

See Skills and Education Group Awards website for further information

Manage Vegetation by Cutting/Mowing

Unit Reference	**H/600/2658**
Level	**2**
Credit Value	**4**
Guided Learning Hours	**30**
Unit Summary	The aim of this unit is to provide the learner with the knowledge and skills required to carry out practical habitat management using cutting/mowing as a management technique Work on sites must be carried out in line with appropriate permissions and licences
Learning Outcomes (1 to 7) ***The learner will***	**Assessment Criteria (1.1 to 7.9)** ***The learner can***
1. Be able to select, use and maintain relevant equipment for managing vegetation by cutting/mowing	**1.1** Select appropriate equipment for this area of work **1.2** Use equipment according to relevant legislation and manufacturer's instructions **1.3** Prepare, maintain and store equipment in a safe and effective working condition
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 relevant 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 **2.4** Recognise any hazards and reduce any associated risks to an acceptable level
3. Be able to carry out the cutting/mowing operation in line with site management require ments	**3.1** Select vegetation according to the site management plan and any prevailing constraints **3.2** Manage vegetation by cutting/mowing and according to the site management plan **3.3** Deal with any produce or superfluous material according to the site management plan **3.4** Take the appropriate action to remedy any incidental damage which occurs during the management of vegetation
4. Know how to carry out the cutting/mowing safely	**4.1** Describe the management technique of cutting/mowing
5. Know how to recognise the vegetation to be managed	**5.1** State how to recognise the age, state and type of vegetation to be managed **5.2** State how to interpret job specifications
6. Know the types of equipment required a nd how to maintain them	**6.1** Describe the equipment and tools which will be required for cutting/mowing **6.2** Describe the methods of maintaining the range of equipment
7. Know relevant health	**7.1** Outline the current health and safety legislation, codes of practice and any additional requirements

and safety legislation and environmental good practice	**7.2** State the implications of the legislation which affects your work including any permissions or licences which are required **7.3** State how your work fits into local biodiversity action plans **7.4** Describe how environmental damage can be minimised **7.5** State what action to take in the case of incidental damage to habitat, wildlife or landscape **7.6** Describe the correct methods for disposing of waste. **7.7** Describe how to Identify hazards and assess risks **7.8** State how to interpret risk assessments **7.9** State the environmental value of work sites, the potential effects of your work on the environment and how to control these

Supporting Unit Information

H/600/2658 Manage vegetation by cutting/mowing - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means exclusive

LO1, LO2 and LO3 are the key area of competence for this unit

Learning Outcome 1. Be able to select, use and maintain relevant equipment for managing vegetation by cutting/mowing

1.1&3 Select appropriate equipment for this area of work PPE selected and safely used e.g. overalls, hedging gloves, safety working boots, safety helmet / mesh visor, ear defenders. CE marked. Tools and equipment selected e.g. scythe, sickle, shears, mower (flail, rotary or reciprocating), strimmer, brush cutter, loppers, secateurs

1.2&3 Use equipment according to relevant legislation and manufacturer's instructions / prepare, maintain and store equipment in a safe and effective working condition equipment used only for the operation and in situations as detailed by the manufacturer's / supplier's / supervisor's instructions, current legislation and codes of practice for safe: Preparation e.g. scythe brought to site with blade covered for safety, blade already sharpened. Use e.g. only in clear areas, suitable vegetation (grass, and other soft vegetation). Maintenance e.g. clean blade and oil, clean mud from handle, sharpen as required. Storage e.g. hang on wall - make sure scythe cannot fall. Secure e.g. valuable tools locked away. Maintain records e.g. maintenance and repairs. Report faults to line manager.

Learning Outcome 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 relevant legislation, codes of practice and any additional requirements work activities carried out consistently with current legislation e.g. Health and Safety, Environmental Protection and Wildlife and Countryside Acts, Hedgerow Regulations, COPs as applicable, risk assessment and additional requirements - refer to LO7.1

2.2 Carry out work in a manner which minimises environmental damage environmental damage minimised - refer to LO7.4

2.3 Dispose of waste safely and correctly refer LO1.1 for PPE whilst handling, LO7.6 for disposal of waste.

2.4 Recognise any hazards and reduce any associated risks to an acceptable level Risk assessment carried out, hazards recognised e.g. cuts / scratches and tetanus, sharp and / or heavy tools, slippery / rocky / mossy ground, falling branches / trees, sunny or wet weather, presence of rats - Weil's diseases
Hierarchy of precautions: eliminate hazard e.g. tetanus vaccination; Reduce hazard e.g. avoid working in heavy rain, use less risky option e.g. shears

Prevent access to hazard e.g. guards on blades, exclusion zones around working sites, organise work to reduce exposure to hazards e.g. warning signs PPE e.g. face masks, ear defenders, glove
Welfare facilities e.g. first aid kit, other welfare items such as sun block, sterile water

Learning Outcome 3. Be able to carry out the cutting/mowing operation in line with site management requirements

3.1 Select vegetation according to the site management plan and any prevailing constraints: working plan fits within site management plan and may include removal of damaged, diseased plants (overcrowded, obstructing access or impeding growth of other plants). Prevailing constraints e.g. cost / staff time / legal implications, market / on-site need for produce, weather conditions

3.2 Manage vegetation by cutting/mowing and according to the site management plan; refer to LO3.1

3.3 Deal with any produce or superfluous material according to the site management plan: Produce e.g. hay or silage. Brash or vegetation placed in habitat piles. Superfluous material – refer to LO7.6 for disposal procedures

3.4 Take the appropriate action to remedy any incidental damage which occurs during the management of vegetation incidental damage remedied e.g. plants damaged by machinery trimmed, damage to features (e.g. hedges, fences, ditches) made good, damage to access routes - surface made good

LO4, LO5, LO6 and LO7 are the key areas of knowledge for this unit

Learning Outcome 4. Know how to carry out the cutting/mowing safely

4.1 Describe the management technique of cutting/mowing cutting/mowing technique to achieve purposes of allowing other vegetation to develop or allow access, organise working system including access, stacking of vegetation and brash, cut vegetation at height required in plan, avoid damage to roots of plants, maintain exclusion zones if appropriate, activities carried out to management plan. Schedule with regard to health and safety and legal considerations (refer to LO7.1 and LO7.2)

Learning Outcome 5. Know how to recognise the vegetation to be managed

5.1 State how to recognise the, age, state and type of vegetation to be managed recognition of age, state and type of vegetation to be managed: State e.g. overgrown or well-managed, neglected and needing regeneration. Type of vegetation e.g. grass, heath, woodland under-storey, waste-ground. Recognise characteristics of common species e.g. grasses, heathers, bracken, ragwort, willow herbs and clovers.

5.2 State how to interpret job specifications how to interpret job specifications e.g. location and size of area to be mowed or cut, type of material to be removed, workers available, produce and extraction, (mowings, hay) protecting or controlling re-growth

Learning Outcome 6 Know the types of equipment required and how to maintain them

6.1 Describe the equipment and tools which will be required for cutting/mowing refer to LO1.1

6.2 Describe the methods of maintaining the range of equipment refer to LO1.2 and LO1.3

Learning Outcome 7. Know relevant health and safety legislation and environmental good practice

7.1 Outline the current health and safety legislation, codes of practice and any additional requirements e.g. Management of Health & Safety at Work Regulations; LOLER, PUWER, Manual Handling, Environmental Protection Acts covering waste disposal; e.g. Hazardous Waste Regulations; Duty of care - controlled wastes, Wildlife e.g. Wildlife and Countryside Act, Hedgerow Regulations, Habitats Directive, Codes of Practice e.g. Protecting our Water, Soil and Air; Additional requirements including site designations (e.g. SSSI, AONB,LNR, National Park), notification of listed operations, and planning consents, LBAP's, client regulations, environmental health requirements, stewardship schemes, Environment Agency notifications e.g. activities affecting watercourses, groundwater

7.2 State the implications of the legislation which affects your work including any permissions or licences which are required: need to ensure that work does not contravene any regulation or code of practice (refer to LO7.1) or permissions to carry out the work on that land; Forestry Commission to carry out work in woodlands in the vicinity of species protected under the Habitats Directive, identify conditions that apply, exemptions, penalties for non-compliance

7.3 State how your work fits into local biodiversity action plans how work fits into local biodiversity action plans (LBAP's). Where to find LBAP e.g. Local Authority website. Work needs to link into both species and habitat action plans e.g. species rich woodland areas or supporting uncommon / local species

7.4 Describe how environmental damage can be minimised e.g. carefully plan site access, removal of spare material, avoid work that will disturb habitats, work in accordance with local biodiversity plans, awareness of rare species in area - mark site of bat roost trees, nesting birds, breeding animals, vulnerable habitats, plan to ensure no disturbance

7.5 State what action to take in the case of incidental damage to habitat, wildlife or landscape refer to examples in LO7.4. Stop activity to prevent further damage, report to supervisor immediately, take local action to prevent further damage, report to relevant authority if appropriate (e.g. Environment Agency)

7.6 Describe the correct methods for disposing of waste organic waste; avoid removing waste from area, material produced should be used for habitat piles, shredded, composted, (unless the material poses a threat to plant health e.g. diseased material).
Inorganic waste – wastes from servicing and maintenance of equipment and hazardous waste from areas e.g. fly-tipped rubbish disposed of in appropriate container and carefully controlled until

disposed of through licensed contractor.
Refer to LO2.3 (wastes) and LO3.3 (site management) and LO7.1 (legislation and codes of practice)

7.7 Describe how to Identify hazards and assess risks carry out risk assessment, identify hazards e.g. walk site, knowledge / training in tools / machinery to be used, experience. Hazards - refer to LO2.4. Assess and record risks e.g. what is the probability - percentage or high/medium/low of each hazard causing injury / adversely affecting health, who / how many might be harmed, how serious the effects

7.8 State how to interpret risk assessments e.g. generic / local hazards, likelihood of injury to self/others, precautions to be taken to eliminate the hazard or reasonable precautions to reduce the risks to a low level. Hierarchy of precautions - refer to LO2.4

7.9 State the environmental value of work sites, the potential effects of your work on the environment and how to control these e.g. SSSI's, SINC's, site subject to LBAP, value as habitat for wildlife varies depending on management. Potential effects of work on the environment e.g. increased rabbit population, patchy re-growth allowing strong weed growth, removal of invertebrate habitat. Control e.g. rabbit fencing / dead hedges, plant new trees to fill gaps, make habitat piles; identify location (s) of vulnerable habitats on sites.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes 1, 2 and 3

Delivery of these learning outcomes is by assessment of competence for those who have experience in this area of work or by supervised cutting/mowing activities giving learners the opportunity, first to practice the various tasks involved and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of cutting/mowing activities photographs or video could be taken to provide evidence of progress.

Learning Outcomes 4, 5, 6 and 7

Delivery of these learning outcomes is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of cutting/mowing activities and witness testimony, answering oral or written questions, assignments or internet research cross referenced to the knowledge evidence

Learners who have not yet completed the necessary training or certification to use machinery, equipment and materials must be supervised by a suitably qualified person

It is important that practical assessment activities are supervised appropriately.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Centres will need to devise assessment tasks which should be practical where possible e.g. Learning Outcomes 1, 2 and 3 link together and can be assessed practically by observation or by generation of diverse evidence. These could also link to Learning Outcomes 4, 5, and 6 to allow knowledge evidence to be gathered during the practical activities

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)

- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Additional Information

Useful sources of reference

- The Health and Safety Executive website http://www.hse.gov.uk/ has useful information about identifying what health and safety legislation applies to areas of work and lists of Acts, Statutory instruments and legal publications
- National Federation of Biological Recording website http://www.nbn-nfbr.org.uk/nfbr.php lists all Local / Biological Recording Centres - Useful to find local Biodiversity Action Plans
- The Natural England website http://www.naturalengland.org.uk/ and Countryside Council for Wales www.ccw.gov.uk/ have information about countryside protection schemes and land management for the benefit of wildlife, landscape. Also licences and enforcement
- Local Authority websites for Local Planning Authority permissions and LBAP's
- Visit Department for Environment, Food and Rural Affairs website www.**defra**.gov.uk or Welsh Assembly Government countryside website www.**countryside**.wales.gov.uk/ *for* up to date information about legislation, codes of practice and consultations in the horticultural / agricultural sectors
- The Environment Agency website http://www.environment-agency.gov.uk provides guidance about environmental permitting, pollution and emissions, hazardous waste, water etc
- The Forestry Commission www.forestry.gov.uk application for licences
- Horticultural Code of Practice - Helping to prevent the spread of invasive non-native species
- The Code of Practice - Protecting our Water, Soil and Air has a useful list of references in Section 9

- Managing Habitats for Conservation by William J Sutherland and David A Hill
- BTCV Books on-line http://handbooks.btcv.org.uk/handbooks/index
- BTCV practical handbooks
  Woodlands - ISBN 0946752338
  Hedging - ISBN 0946752176
  Toolcare - ISBN 0946752249
  Tree Planting and Aftercare - ISBN 0946752257

See Skills and Education Group Awards website for further information

Manage Vegetation by Felling

Unit Reference	**T/600/2678**
Level	**2**
Credit Value	**4**
Guided Learning Hours	**30**
Unit Summary	The aim of this unit is to provide the learner with the knowledge and skills required to carry out practical habitat management using felling as a management technique Work on sites must be carried out in line with appropriate permissions and licences
Learning Outcomes (1 to 7) ***The learner will***	**Assessment Criteria (1.1 to 7.9)** ***The learner can***
1. Be able to select, use and maintain relevant equipment for managing vegetation by felling	**1.1** Select appropriate equipment for this area of work **1.2** Use equipment according to relevant legislation and manufacturer's instructions **1.3** Prepare, maintain and store equipment in a safe and effective working condition
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 relevant 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 **2.4** Recognise any hazards and reduce any associated risks to an acceptable level
3. Be able to carry out the felling operation in line with site management requirements	**3.1** Select vegetation according to the site management plan and any prevailing constraints **3.2** Manage vegetation by felling and according to the site management plan **3.3** Deal with any produce or superfluous material according to the site management plan **3.4** Take the appropriate action to remedy any incidental damage which occurs during the management of vegetation
4. Know how to carry out the felling safely	**4.1** Describe the management technique of felling
5. Know how to recognise the vegetation to be managed. State how to recognise	**5.1** State how to recognise the age, state and type of vegetation to be managed **5.2** State how to Interpret job specifications
6. Know the types of equipment required and how to maintain them	**6.1** Describe the equipment and tools which will be required for felling **6.2** Describe the methods of maintaining the range of equipment

7. Know relevant health and safety legislation and environmental go od practice	**7.1** Outline the current health and safety legislation, codes of practice and any additional requirements **7.2** State the implications of the legislation which affects your work including any permissions or licences which are required **7.3** State how your work fits into local biodiversity action plans **7.4** Describe how environmental damage can be minimised **7.5** State what action to take in the case of incidental damage to habitat, wildlife or landscape **7.6** Describe the correct methods for disposing of waste **7.7** Describe how to Identify hazards and assess risks **7.8** State how to interpret risk assessments **7.9** State the environmental value of work sites, the potential effects of your work on the environment and how to control these

Supporting Unit Information

T/600/2678 Manage vegetation by felling - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means exclusive

LO1, LO2 and LO3 are the key area of competence for this unit

Learning Outcome 1. Be able to select, use and maintain relevant equipment for managing vegetation by felling

1.1 Select appropriate equipment for this area of work PPE selected and safely used e.g. overalls, hedging gloves, safety working boots, safety helmet / mesh visor, knee pads; chainsaw safety equipment (safety trousers/gloves/visor/ear defenders). CE marked. Tools and equipment selected e.g. billhook, bow saw, pruning saw, axe, sharpening stone, chainsaw, loppers.

1.1&3 Use equipment according to relevant legislation and manufacturer's instructions / **Prepare, maintain and store equipment in a safe and effective working condition** Equipment used only for the operation and in situations as detailed by the manufacturer's/supplier's/supervisor's instructions, current legislation and codes of practice for safe: Preparation e.g. bow saw brought to site with blade covered for safety, blade already sharpened. Use e.g. stems up to 7 cm, check for anything that will interfere with cu. Maintenance e.g. clean sap from blade and oil, clean mud from handle, sharpen in tool store. Storage e.g. in slatted rack or box - make sure saw cannot fall. Secure e.g. valuable tools locked away. Maintain records e.g. maintenance and repairs. Report faults to line manager.

Learning Outcome 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 relevant legislation, codes of practice and any additional requirements work activities carried out consistently with current legislation e.g. Health and Safety, Environmental Protection and Wildlife and Countryside Acts, Hedgerow Regulations, COPs as applicable, risk assessment and additional requirements - refer to LO7.1

2.2 Carry out work in a manner which minimises environmental damage refer to LO7.4

2.3 Dispose of waste safely and correctly: refer LO1.1 for PPE whilst handling, LO7.6 for disposal of waste

2.4 Recognise any hazards and reduce any associated risks to an acceptable level Risk assessment carried out, hazards recognised e.g. cuts / scratches and tetanus, sharp and / or heavy tools, slippery / rocky / mossy ground, falling branches / trees, sunny or wet weather, presence of rats (Weil's diseases)

Associated risks reduced to an acceptable level:

Hierarchy of precautions: Eliminate hazard e.g. tetanus vaccination; Reduce hazard e.g. do not work when it is raining heavily, use less risky option e.g. single edged billhook or loppers

Prevent access to hazard e.g. chainsaw guards, organise work to reduce exposure to hazards e.g. warning signs PPE e.g. safety helmets, hedging gauntlets

Welfare facilities e.g. first aid kit, other welfare items such as sun block, sterile water

Learning Outcome 3. Be able* to carry out the felling operation in line with site *management requirements

3.1 Select vegetation according to the site management plan and any prevailing constraints Vegetation selected according to the site management plan: Working plan fits within site management plan and may include removal of damaged, diseased wood or unwanted branches or plants (overcrowded, obstructing access or impeding growth of other trees). Prevailing constraints e.g. cost / staff time / legal implications, market / on-site need for produce, weather conditions

3.2 Manage vegetation by felling and according to the site management plan (refer to LO3.1)

3.3 Deal with any produce or superfluous material according to the site management plan: Produce e.g. cordwood, faggots,

fence or tree stakes. Processing e.g. faggots or walking sticks bundled and tied. Stacking and storage e.g. firewood, wood for charcoal stored in a cord, stakes and poles stored around tree trunks until use. Brash placed in habitat piles. Superfluous material – refer to LO7.6 for disposal procedures

3.4 Take the appropriate action to remedy any incidental damage which occurs during the management of vegetation e.g. branches damaged by falling trees trimmed, damage to features (e.g. fences, hedges, walls, access routes) - made good, damage to access routes - surface made good

LO4, LO5, LO6 and LO7 are the key areas of knowledge for this unit

Learning Outcome 4. Know how to carry out the felling safely

4.1 Describe the management technique of felling Know how to carry out the felling safely Felling technique to achieve purposes of allowing other trees to develop, organise working system including access, stacking of produce and brash, direction of fall, cut trunks low and cleanly with cuts angled to shed water. Exclusion zone maintained, Activities carried out to management plan. Schedule with regard to health and safety and legal considerations - refer to LO7.1 and LO7.2

L*earning Outcome 5. Know how to recognise the vegetation to be managed*

5.1 State how to recognise the age, state and type of vegetation to be managed: Age e.g. standard / old neglected trees accurately aged using an increment borer or felling tree and counting annual rings. State e.g. overcrowded or well-managed, neglected and needing regeneration, scrub and standard trees. Type of vegetation e.g. deciduous, evergreen, native or non-native, desirable or not required. Recognise characteristics of common woodland species e.g. willow, oak, sweet chestnut

5.2 State how to Interpret job specifications e.g. location and size of area to be felled, type of material to be removed, workers available, produce and extraction, restocking needs, protecting re-growth, access and removal routes

Learning Outcome 6. Know the types of equipment required and how to maintain them

6.1 Describe the equipment and tools which will be required for felling (refer to LO1.1)

6.2 Describe the methods of maintaining the range of equipment (refer to LO1.2 and LO1.3)

Learning Outcome 7. Know relevant health and safety legislation and environmental good practice

7.1 Outline the current health and safety legislation, codes of practice and any additional requirements e.g. Management of Health & Safety at Work Regulations; LOLER, PUWER, Manual Handling, Environmental Protection Acts covering waste disposal; e.g. Hazardous Waste Regulations; Duty of care - controlled wastes, Wildlife e.g. Wildlife and Countryside Act, Hedgerow Regulations, Habitats Directive, Codes of Practice e.g. Protecting our Water, Soil and Air; Additional requirements including site designations (e.g. SSSI, AONB,LNR, National Park), notification of listed operations, and planning consents, LBAP's. Forestry Commission felling licences - refer to LO7.2, client regulations, environmental health requirements, stewardship schemes, , Environment Agency notifications e.g. activities affecting watercourses, groundwater

7.2 State the implications of the legislation which affects your work including any permissions or licences which are required: Need to ensure that work does not contravene any regulation or code of practice (refer to LO7.1) or permissions to carry out the work on that land; Forestry Commission licence to fell growing trees or to carry out work in woodlands in the vicinity of species protected under the Habitats Directive. Local Planning Authority (LPA) consent needed for cutting down or working on trees under a Tree Preservation Order. In Conservation areas notice to LPA of intention to cut down a tree, identify conditions that apply, exemptions, penalties for non-compliance

7.3 State how your work fits into local biodiversity action plans (LBAP's). Where to find LBAP e.g. Local Authority website. Work needs to link into both species and habitat action plans e.g. species rich woodland areas or supporting uncommon / local species

7.4 Describe how environmental damage can be minimised e.g. carefully plan site access, removal of spare material, avoid work that will disturb habitats, work in accordance with local biodiversity plans, awareness of rare species in area - mark site of bat roost trees, nesting birds, breeding animals and other vulnerable habitats, plan to ensure no disturbance

7.5 State what action to take in the case of incidental damage to habitat, wildlife or landscape (refer to examples in LO7.4) – stop activity to prevent further damage, report to supervisor, take local

action to prevent further damage (repair features, support damaged plants), report to relevant authority if appropriate (e.g. Environment Agency, LPA)

7.6 Describe the correct methods for disposing of waste Organic waste; avoid removing waste from area, material produced should be used for habitat piles, chipped, composted, (unless the material poses a threat to plant health e.g. diseased material).
Inorganic waste – wastes from servicing and maintenance of equipment and hazardous waste from woodland areas e.g. fly-tipped rubbish disposed of in appropriate container and carefully controlled until disposed of through licensed contractor.
Refer to LO2.3 (wastes) and LO3.3 (site management) and LO7.1 (legislation and codes of practice)

7.7 Describe how to identify hazards and assess risks e.g. walk site, knowledge / training in tools / machinery to be used, experience. Hazards - refer to LO2.4. Assess and record risks e.g. what is the probability - percentage or high/medium/low of each hazard causing injury / adversely affecting health, who / how many might be harmed, how serious the effects

7.8 State how to interpret risk assessments e.g. generic / local hazards, likelihood of injury to self/others, precautions to be taken to eliminate the hazard or reasonable precautions to reduce the risks to a low level. Hierarchy of precautions - refer to LO2.4

7.9 State the environmental value of work sites, the potential effects of your work on the environment and how to control these Environmental value of work sites e.g. SSSI's, SINC's, site subject to LBAP, value as habitat for wildlife varies depending on management. Potential effects of work on the environment e.g. increased deer population, patchy re-growth allowing strong weed growth, removal of invertebrate habitat, Control e.g. deer fencing / dead hedges, plant new trees to fill gaps, make habitat piles, identify location (s) of bat roost sites

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners.
The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes 1, 2 and 3
Delivery of these learning outcomes is by assessment of competence for those who have experience in this area of work or by supervised felling activities giving learners the opportunity, first to practice the various tasks involved and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of felling activities photographs or video could be taken to provide evidence of progress.

Learning Outcomes 4, 5, 6 and 7
Delivery of these learning outcomes is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of felling activities and witness testimony, answering oral or written questions, assignments or internet research cross referenced to the knowledge evidence

Learners who have not yet completed the necessary training or certification to use machinery, equipment and materials must be supervised by a suitably qualified person

It is important that practical assessment activities are supervised appropriately

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Centres will need to devise assessment tasks which should be practical where possible e.g. Learning Outcomes 1, 2 and 3 link together and can be assessed practically by observation or by generation of diverse evidence. These could also link to Learning Outcomes 4, 5, and 6 to allow knowledge evidence to be gathered during the practical activities

It is important that practical assessment activities are supervised appropriately.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Additional Information

Useful sources of reference

- The Health and Safety Executive website http://www.hse.gov.uk/ has useful information about identifying what health and safety legislation applies to areas of work and lists of Acts, Statutory instruments and legal publications
- National Federation of Biological Recording website http://www.nbn-nfbr.org.uk/nfbr.php lists all Local / Biological Recording Centres - Useful to find local Biodiversity Action Plans
- The Natural England website http://www.naturalengland.org.uk/ and Countryside Council for Wales www.ccw.gov.uk/ have information about countryside protection schemes and land management for the benefit of wildlife, landscape. Also licences and enforcement

- Local Authority websites for Local Planning Authority permissions and LBAP's
- Visit Department for Environment, Food and Rural Affairs website www.**defra**.gov.uk or Welsh Assembly Government countryside website www.**countryside**.wales.gov.uk/ *for* up to date information about legislation, codes of practice and consultations in the horticultural / agricultural sectors
- The Environment Agency website http://www.environment-agency.gov.uk provides guidance about environmental permitting, pollution and emissions, hazardous waste, water etc
- The Forestry Commission www.forestry.gov.uk application for licences
- Horticultural Code of Practice - Helping to prevent the spread of invasive non-native species
- The Code of Practice - Protecting our Water, Soil and Air has a useful list of references in Section 9
- Managing Habitats for Conservation by William J Sutherland and David A Hill
- BTCV Books on-line http://handbooks.btcv.org.uk/handbooks/index
- BTCV practical handbooks
  Woodlands - ISBN 0946752338
  Hedging - ISBN 0946752176
  Toolcare - ISBN 0946752249
  Tree Planting and Aftercare - ISBN 0946752257

See Skills and Education Group Awards website for further information

Manage Vegetation by Hedge Maintenance

Unit Reference	**T/600/2681**
Level	**2**
Credit Value	**4**
Guided Learning Hours	**30**
Unit Summary	The aim of this unit is to provide the learner with the knowledge and skills required to carry out practical habitat management using hedge maintenance as a management technique Work on sites must be carried out in line with appropriate permissions and licences
Learning Outcomes (1 to 7) ***The learner will***	**Assessment Criteria (1.1 to 7.9)** ***The learner can***
1. Be able to select, use and maintain relevant equipment for managing vegetation by hedge maintenance	**1.1** Select appropriate equipment for this area of work **1.2** Use equipment according to relevant legislation and manufacturer's instructions **1.3** Prepare, maintain and store equipment in a safe and effective working condition
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 relevant 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 **2.4** Recognise any hazards and reduce any associated risks to an acceptable level
3. Be able to carry out the hedge maintenance operation in line with site management requirements	**3.1** Select vegetation according to the site management plan and any prevailing constraints **3.2** Manage vegetation by hedge maintenance and according to the site management plan **3.3** Deal with any produce or superfluous material according to the site management plan **3.4** Take the appropriate action to remedy any incidental damage which occurs during the management of vegetation
4. Know how to carry out the hedge maintenance safely	**4.1** Describe the management technique of hedge maintenance
5. Know how to recognise the vegetation to be managed	**5.1** State how to recognise the age, state and type of vegetation to be managed **5.2** State how to Interpret job specifications
6. Know the types of equipment required and how to maintain them	**6.1** Describe the equipment and tools which will be required for hedge maintenance **6.2** Describe the methods of maintaining the range of equipment
7. Know relevant health and safety	**7.1** Outline the current health and safety legislation, codes of

legislation and environmental good practice	practice and any additional requirements **7.2** State the implications of the legislation which affects your work including any permissions or licences which are required **7.3** State how your work fits into local biodiversity action plans **7.4** Describe how environmental damage can be minimised **7.5** State what action to take in the case of incidental damage to habitat, wildlife or landscape **7.6** Describe the correct methods for disposing of waste. **7.7** Describe how to Identify hazards and assess risks **7.8** State how to interpret risk assessments **7.9** State the environmental value of work sites, the potential effects of your work on the environment and how to control these
Mapping to National Occupational Standards O29NCU87.2	

Supporting Unit Information

T/600/2681 Manage vegetation by hedge maintenance - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

LO1, LO2 and LO3 are the key areas of competence for this unit

Learning Outcome 1. Be able to select, use and maintain relevant equipment for managing vegetation by hedge maintenance

1.1 Select appropriate equipment for this area of work PPE selected and safely used e.g. overalls, hedging gloves, heavy duty leather working boots, safety helmet, knee pads. CE marked. Tools and equipment selected e.g. spade, mattock, axe, billhook, bow saw, and sharpening stone.

1.2&3Use equipment according to relevant legislation and manufacturer's instructions / Prepare, maintain and store equipment in a safe and effective working condition Use equipment only for the operation and in situations as detailed by the manufacturer's / supplier's / supervisor's instructions, current legislation and codes of practice for safe: Preparation e.g. mattock brought to site disassembled, head threaded down haft, seated tightly by dropping haft onto hard surface. Use e.g. do not lift too high. Maintenance e.g. clean, sharpen and oil head. Storage e.g. do not store with head attached or able to fall. Secure e.g. valuable tools locked away, fuel and oil clearly labelled and stored separately, shadow board - check return. Maintain records e.g. maintenance and repairs. Report faults to line manager.

Learning Outcome 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 relevant legislation, codes of practice and any additional requirements e.g. Health and Safety, Environmental Protection and Wildlife and Countryside Acts, Hedgerow Regulations, COPs as applicable, risk assessment Additional requirements such as vaccination against tetanus, precautions against Weil's disease - waterproof gloves/hygiene or exposure to the sun - sun block - refer to LO7.1

2.2 Carry out work in a manner which minimises environmental damage e.g. sequential maintenance - berry crop, correct timing to avoid nesting birds, grass buffer strips, not using trees as fencing supports, working in accordance with local biodiversity plans, awareness of rare species in hedge

2.3 Dispose of waste safely and correctly: e.g. organic - green vegetation, twigs and branches or inorganic - fly tipped waste, old barbed wire / netting. Correctly - refer to LO7.6. Safely e.g. PPE, hygiene, safe lifting, safe handling / disposal of needles / syringes / glass near urban areas

2.4 Recognise any hazards and reduce any associated risks to an acceptable level e.g. working at heights, cuts / scratches and tetanus, sharp and / or heavy tools, slippery / rocky ground, falling branches / trees, sunny or wet weather Associated risks reduced to an acceptable level: Hierarchy of precautions:

Eliminate hazard e.g. tetanus vaccination
Reduce hazard e.g. do not work when it is raining heavily
Use less risky option e.g. single edged billhook especially when learning
Prevent access to hazard e.g. power take off guard
Organise work to reduce exposure to hazards e.g. area taped off, warning signs
PPE e.g. hedging gauntlets and forearm protection
Welfare facilities e.g. first aid kit and other welfare items such as sun block, sterile water

Learning Outcome 3. Be able to carry out the hedge maintenance operation in line with site management requirements

3.1 Select vegetation according to the site management plan and any prevailing constraints Site hedge requirements e.g. well-trimmed, stock proof, hedges that support diversity of wildlife, trees for timber / log production. Work scheduled e.g. newly planted hedges, mature hedge trimming rotation, hedges rested prior to laying, associated maintenance ditches/banks/fences / grass

verges/headlands, need for timber, logs, faggots, needs of livestock / wildlife. Prevailing constraints e.g. cost / staff time / training and qualifications, legal implications, weather conditions

3.2 Manage vegetation by hedge maintenance and according to the site management plan e.g. newly planted hedges pruned, weed control activities. Mature hedges trimming rotated - maintain stock proof condition. Gaps filled. Fencing to protect. Mature hedges laid / coppiced. Branches on trees for timber trimmed to reduce formation knots. According to site management plan - refer to LO3.1

3.3 Deal with any produce or superfluous material according to the site management plan Produce e.g. trees cut for timber or logs according to schedule, trimmings shredded to produce compost, hazel stakes to be used for hedge laying activities, trimmings placed in habitat piles. Superfluous material: Organic e.g. dead rotting wood, twigs burnt on bonfire to clear site - taking due care about smoke, fumes and gases - obtain permission of Landowner, check with Local Authority if in doubt. Inorganic e.g. barbed wire, sheets of galvanised tin - refer to LO7.6

3.4 Take the appropriate action to remedy any incidental damage which occurs during the management of vegetation e.g. damage to banks, ditches, revetments or fences - made good, tree sparrow nesting habitat removed - suitable nesting boxes close to site

LO4, LO5, LO6 and LO7 are the key areas of knowledge for this unit

Learning Outcome 4. Know how to carry out the hedge maintenance safely

4.1 Describe the management technique of hedge maintenance Management technique of hedge maintenance: Various hedge maintenance techniques such as trimming / laying / layering / coppicing / pruning / gap filling can be used to achieve the purposes of the hedging system e.g. laying a stock proof hedge - prepared and initial trimming, pleachers selected, cut, laid and staked, binding, final trimming. Hedge maintenance activities carried out to site management plan schedule and with regard to health and safety and legal considerations - refer to LO7.1 and LO7.2

Learning Outcome 5. Know how to recognise the vegetation to be managed

5.1 State how to recognise the age, state and type of vegetation to be managed: Age e.g. rule of thumb - number of woody species in

27.5 metre length of hedge reflects how many centuries hedge has existed and limitations of rule. State e.g. trimmed and well managed, laid, remnant. Type of vegetation e.g. primarily hawthorn or mixed species - oak, elm, ash, holly, hazel. Recognise characteristics of common hedgerow species

5.2 State how to interpret job specifications e.g. location, dimensions, planting requirements, preparation of ground including existing vegetation control, protection, mulching

Learning Outcome 6. Know the types of equipment required and how to maintain them

6.1 Describe the equipment and tools which will be required for hedge maintenance Types of equipment / tools - refer to LO1.1

6.2 Describe the methods of maintaining the range of equipment - refer to LO1.2&3

Learning Outcome 7. Know relevant health and safety legislation and environmental good practice

7.1 Outline the current health and safety legislation, codes of practice and any additional requirements Health and Safety e.g. Health and Safety at Work Act, Management of Health & Safety at Work Regulations, Provision and Use of Work Equipment Regulations, Environmental Protection e.g. Environmental Protection Acts covering waste disposal Wildlife e.g. Wildlife and Countryside Act, Hedgerow Regulations, Habitats Directive

Codes of Practice e.g. Horticultural Code of Practice - Helping to prevent the spread of invasive non-native species, Protecting our Water, Soil and Air

Additional requirements including e.g. Local Authority checks for. Site designations, Hedgerow Regulations, LBAP's. Forestry Commission - felling licences - refer to 7.2 Natural England notifications e.g. SSSI's (and SPA's) - notification of listed operations. Environment Agency notifications e.g. activities affecting watercourses, groundwater

7.2 State the implications of the legislation which affects your work including any permissions or licences which are required: Forestry Commission licence to fell growing trees. Natural England licence to work in hedgerows in the vicinity of species protected under Habitats Directive. Local Planning Authority (LPA) consent needed for removal certain hedgerows - Hedgerow Regulations or cutting down/working on trees under a Tree Preservation Order. In

Conservation areas notice to LPA of intention to cut down tree. Identify conditions that apply, exemptions, penalties for non-compliance

7.3 State how your work fits into local biodiversity action plans (LBAP's). Where to find LBAP e.g. Local Authority website. Work needs to link into both species and habitat action plans e.g. species rich hedgerows or supporting uncommon species, local species mixture linkage of habitats of existing biodiversity value, availability of grant aid

7.4 Describe how environmental damage can be minimised - refer to examples in LO2.2

7.5 State what action to take in the case of incidental damage to habitat, wildlife or landscape: Refer to LO3.4

7.6 Describe the correct methods for disposing of waste. Duty of care – controlled wastes. Where to dispose e.g. check costs, procedures and which Local Authority sites accept types of waste. Method of disposal e.g. recycle / reuse - bag or bin or consider skip hire / private disposal with a licensed contractor - refer to LO2.3 and LO3.3. Check Local Authority procedures regarding hazardous waste from hedgerows e.g. fly-tipped, barbed wire, needles / syringes / glass - refer to LO2.3 and LO3.3

7.7 Describe how to identify hazards and assess risks e.g. walk site, knowledge / training in tools / machinery to be used, experience. Hazards - refer to LO2.4. Preparation of relevant risk assessment e.g. what is the probability - percentage or high/medium/low of each hazard causing injury / adversely affecting health, who / how many might be harmed, how serious the effects and what precautions can be taken to eliminate / minimise risks

7.8 State how to interpret risk assessments e.g. generic / local hazards, likelihood of injury to self/others, precautions to be taken to eliminate the hazard or reasonable precautions to reduce the risks to a low level. Hierarchy of precautions - refer to LO2.4

7.9 State the environmental value of work sites, the potential effects of your work on the environment and how to control these Environmental value of work sites e.g. Ancient hedgerows, SSSI's, SINC's, site subject to LBAP. Potential effects of work on the environment e.g. disruption of wildlife corridor, aesthetically out of keeping with hedges of historic significance. Control: Biodiversity e.g. correct trimming frequency/ intensity. Historical/archaeological value: e.g. preserve structure, characteristics, diversity of ancient hedgerows.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the practical skills and knowledge development of their particular learners.

The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes 1, 2 and 3
Delivery of these learning outcomes is by assessment of competence for those who have experience in this area of work or by supervised hedgerow maintenance giving learners the opportunity, first to practice the various tasks involved and then to be observed correctly doing each task to demonstrate competence in each of the assessment criteria.

Prior to, during and after completion of hedgerow maintenance work photographs or video could be taken to provide evidence of progress.

Learning Outcomes 4, 5, 6 and 7
Delivery of these learning outcomes is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of hedgerow planting, trimming or laying work and witness testimony, answering oral or written questions, assignments or internet research cross referenced to the knowledge evidence.

It is important that practical assessment activities are supervised appropriately

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Centres will need to devise assessment tasks which should be practical where possible e.g. Learning Outcomes 1, 2 and 3 link together and can be assessed practically by observation or by generation of diverse evidence.

These could also link to Learning Outcomes 4, 5, 6 and 7 to allow knowledge evidence to be gathered during the practical activities

It is important that practical assessment activities are supervised appropriately.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include some of the following

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes diaries/reflective accounts
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory and safety checklists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Additional Information

Useful sources of reference

- The Health and Safety Executive website http://www.hse.gov.uk/ has useful information about identifying what health and safety legislation applies to areas of work and lists of Acts, Statutory instruments and legal publications

- National Federation of Biological Recording website http://www.nbn-nfbr.org.uk/nfbr.php lists all Local / Biological Recording Centres - Useful to find local Biodiversity Action Plans
- The Natural England website http://www.naturalengland.org.uk/ has information about countryside protection schemes and land management for the benefit of wildlife, landscape
- Local Authority websites for Local Planning Authority permissions and LBAP's
- The Department for Environment, Food and Rural Affairs website has up to date information about legislation, codes of practice and consultations in the horticultural / agricultural sectors
- The Environment Agency website http://www.environment-agency.gov.uk provides guidance about environmental permitting, pollution and emissions, hazardous waste, water etc
- The Forestry Commission www.forestry.gov.uk application for licences
- The website http://www.netregs.gov.uk/ provides helpful guidance about environmental regulations.
- The Code of Practice - Protecting our Water, Soil and Air has a useful list of references in Section 9
- BTCV Hedging a practical handbook

See Skills and Education Group Awards website for further information

Manage Vegetation by Mulching

Unit Reference	**F/600/2683**
Level	**2**
Credit Value	**4**
Guided Learning Hours	**30**
Unit Summary	The aim of this unit is to provide the learner with the knowledge and skills required to carry out practical habitat management using mulching as a management technique Work on sites must be carried out in line with appropriate permissions and licences
Learning Outcomes (1 to 7) ***The learner will***	**Assessment Criteria (1.1 to 7.9)** ***The learner can***
1. Be able to select, use and maintain relevant equipment for managing vegetation by mulching	**1.1** Select appropriate equipment for this area of work **1.2** Use equipment according to relevant legislation and manufacturer's instructions **1.3** Prepare, maintain and store equipment in a safe and effective working condition
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 relevant 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 **2.4** Recognise any hazards and reduce any associated risks to an acceptable level
3. Be able to carry out the mulching operation in line with site management requirements	**3.1** Select vegetation according to the site management plan and any prevailing constraints **3.2** Manage vegetation by mulching and according to the site management plan **3.3** Deal with any produce or superfluous material according to the site management plan **3.4** Take the appropriate action to remedy any incidental damage which occurs during the management of vegetation
4. Know how to carry out the mulching safely	**4.1** Describe the management technique of mulching
5. Know how to recognise the vegetation to be managed	**5.1** State how to recognise the age, state and type of vegetation to be managed **5.2** State how to interpret job specifications
6. Know the types of equipment required and how to maintain them	**6.1** Describe the equipment and tools which will be required for mulching **6.2** Describe the methods of maintaining the range of equipment
7. Know relevant health and safety legislation and	**7.1** Outline the current health and safety legislation, codes of practice and any additional requirements

environmental good practice	**7.2** State the implications of the legislation which affects your work including any permissions or licences which are required **7.3** State how your work fits into local biodiversity action plans **7.4** Describe how environmental damage can be minimised **7.5** State what action to take in the case of incidental damage to habitat, wildlife or landscape **7.6** Describe the correct methods for disposing of waste. **7.7** Describe how to Identify hazards and assess risks **7.8** State how to interpret risk assessments **7.9** State the environmental value of work sites, the potential effects of your work on the environment and how to control these

Supporting Unit Information

F/600/2683 Manage vegetation by mulching - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means exclusive

LO1, LO2 and LO3 are the key area of competence for this unit

Learning Outcome 1. Be able to select, use and maintain relevant equipment for managing vegetation by mulching

1.1 Select appropriate equipment for this area of work PPE selected and safely used e.g. overalls, hedging gloves, safety boots, (CE marked). Tools and equipment selected e.g. shovels, spades, forks, wheelbarrows, rakes, tractor and trailer, ATV

1.2&3 Use equipment according to relevant legislation and manufacturer's instructions / Prepare, maintain and store equipment in a safe and effective working condition equipment used only for the operation and in situations as detailed by the manufacturer's / supplier's / supervisor's instructions, current legislation and codes of practice for safe: preparation e.g. spade/fork brought to site with blade/prongs covered for safety, checked for sharpness. Use e.g. suitable tools for type of vegetation and mulch to be used (plastic, fibre mats, woodchips, municipal waste, straw or other material). Maintenance e.g. clean tools and oil, clean mud from handles. Storage e.g. hang on wall - make sure spades/forks cannot fall. Secure e.g. valuable tools locked away. Maintain records e.g. maintenance and repairs. Report faults to line manager.

Learning Outcome 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 relevant legislation, codes of practice and any additional requirements work activities carried out consistently with current legislation e.g. Health and Safety, Environmental Protection and Wildlife and Countryside Acts, Hedgerow Regulations, COPs as applicable, risk assessment and additional requirements - refer to LO7.1

2.2 Carry out work in a manner which minimises environmental damage refer to LO7.4

2.3 Dispose of waste safely and correctly refer LO1.1 for PPE whilst handling, LO7.6 for disposal of waste

2.4 Recognise any hazards and reduce any associated risks to an acceptable level risk assessment carried out, hazards recognised e.g. cuts / scratches and tetanus, sharp and / or heavy tools, slippery / rocky / mossy ground, falling branches / trees, sunny or wet weather, presence of rats (Weil's diseases)
Associated risks reduced to an acceptable level
Hierarchy of precautions: Eliminate hazard e.g. tetanus vaccination; Reduce hazard e.g. do not work when it is raining heavily, use less risky option e.g. wheelbarrows (rather than vehicle)

Prevent access to hazard e.g. exclusion zones around working sites, organise work to reduce exposure to hazards e.g. warning signs PPE e.g. gloves,
Welfare facilities e.g. first aid kit and other welfare items such as sun block, sterile water

Learning Outcome 3. Be able to carry out the mulching operation in line with site management requirements

3.1 Select vegetation according to the site management plan and any prevailing constraints area to be mulched selected according to the site management plan: Working plan fits within site management plan (may include removal of some plants to facilitate mulching). Prevailing constraints e.g. cost / staff time / legal implications, weather and ground conditions (heavy rain, frost, snow, ice)

3.2 Manage vegetation by mulching and according to the site management plan refer to LO3.1

3.3 Deal with any produce or superfluous material according to the site management plan produce e.g. brash or vegetation placed

in habitat piles. Superfluous material – refer to LO7.6 for disposal procedures

3.4 Take the appropriate action to remedy any incidental damage which occurs during the management of vegetation e.g. branches or plants damaged by machinery trimmed, damage to ditches - made good, damage to access routes - surface made good

LO4, LO5, LO6 and LO7 are the key areas of knowledge for this unit

Learning Outcome 4. Know how to carry out the mulching safely

4.1 Describe the management technique of mulching mulching technique to achieve purposes of suppressing weeds species to allow other vegetation to develop or allow access e.g. organise working system including access for material, mulch spread at depth required in plan (e.g. mulch mats round newly planted trees, 50mm (minimum) bark mulch in planted shrubs), avoid damage to roots of plants. Activities carried out to management plan. Schedule with regard to health and safety and legal considerations - refer to LO2.1, LO7.1 and LO7.2

Learning Outcome 5. Know how to recognise the vegetation to be managed

5.1 State how to recognise the age, state and type of vegetation to be managed state e.g. overgrown or well-managed, neglected and needing regeneration, recently planted or established. Type of vegetation e.g. grass, heath, woodland under-storey, waste-ground. Recognise characteristics of common species e.g. grasses, heathers, hazel, oak, ash. Recognise materials for mulching – plastic membranes, fibre mats, woodchips, municipal waste, straw or other material

5.2 State how to interpret job specifications e.g. location and size of area to be mulch, type of material to be used (mats, bark, straw), depth required, workers available, protecting or controlling re-growth

Learning Outcome 6. Know the types of equipment required and how to maintain them

6.1 Describe the equipment and tools which will be required for mulching equipment and tools - refer to LO1.1

6.2 Describe the methods of maintaining the range of equipment refer to LO1.2 and LO1.3

Learning Outcome 7. Know relevant health and safety legislation and environmental good practice

7.1 Outline the current health and safety legislation, codes of practice and any additional requirements Health and Safety e.g. Management of Health & Safety at Work Regulations; LOLER, PUWER, Manual Handling, Environmental Protection Acts covering waste disposal; e.g. Hazardous Waste Regulations; Duty of care - controlled wastes, Wildlife e.g. Wildlife and Countryside Act, Hedgerow Regulations, Habitats Directive, Codes of Practice e.g. Protecting our Water, Soil and Air; Additional requirements including site designations (e.g. SSSI, AONB,LNR, National Park), notification of listed operations, and planning consents, LBAP's, client regulations, environmental health requirements, stewardship schemes, , Environment Agency notifications e.g. activities affecting watercourses, groundwater

7.2 State the implications of the legislation which affects your work including any permissions or licences which are required need to ensure that work does not contravene any regulation or code of practice (refer to LO7.1) or permissions to carry out the work on that land; Forestry Commission to carry out work in woodlands in the vicinity of species protected under the Habitats Directive, identify conditions that apply, exemptions, penalties for non-compliance

7.3 State how your work fits into local biodiversity action plans (LBAP's). Where to find LBAP e.g. Local Authority website. Work needs to link into both species and habitat action plans e.g. species rich woodland areas or supporting uncommon / local species

7.4 Describe how environmental damage can be minimised e.g. carefully plan site access, removal of spare material, avoid work that will disturb habitats, work in accordance with local biodiversity plans, awareness of rare species in area - mark site of bat roost trees, nesting birds, breeding animals and other vulnerable habitats, plan to ensure no disturbance

7.5 State what action to take in the case of incidental damage to habitat, wildlife or landscape actions to take in the case of incidental damage to habitat, wildlife or landscape (refer to examples in LO7.4) – stop activity to prevent further damage, report to supervisor immediately, take local action to prevent further damage, report to relevant authority if appropriate (e.g. Environment Agency)

7.6 Describe the correct methods for disposing of waste organic waste; avoid removing waste from area, material produced should be used for habitat piles, shredded, composted, (unless the material poses a threat to plant health e.g. diseased material).
Inorganic waste – bags or containers, wastes from servicing and maintenance of equipment and hazardous waste from areas e.g. fly-

tipped rubbish disposed of in appropriate container and carefully controlled until disposed of through licensed contractor.
Refer to LO2.3 (wastes) and LO3.3 (site management) and LO7.1 (legislation and codes of practice)

7.7 Describe how to identify hazards and assess risks identify hazards e.g. walk site, knowledge / training in tools / machinery to be used, experience. Hazards - refer to LO2.4. Assess and record risks e.g. what is the probability - percentage or high/medium/low of each hazard causing injury / adversely affecting health, who / how many might be harmed, how serious the effects

7.8 State how to interpret risk assessments e.g. generic / local hazards, likelihood of injury to self/others, precautions to be taken to eliminate the hazard or reasonable precautions to reduce the risks to a low level. Hierarchy of precautions - refer to LO2.4

7.9 State the environmental value of work sites, the potential effects of your work on the environment and how to control these e.g. SSSI's, SINC's, site subject to LBAP, value as habitat for wildlife varies depending on management. Potential effects of work on the environment e.g. suppression of vegetation, removal of invertebrate habitat, Control e.g. reduce area to be mulched – use only for young plantations, avoid use of plastic membranes, identify location (s) of vulnerable habitats on sites.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes 1, 2 and 3

Delivery of these learning outcomes is by assessment of competence for those who have experience in this area of work or by supervised mulching activities giving learners the opportunity, first to practice the various tasks involved and then to be observed competently doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of mulching activities photographs or video could be taken to provide evidence of progress.

Learning Outcomes 4, 5, 6 and 7

Delivery of these learning outcomes is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of mulching activities and witness testimony, answering oral or written questions, assignments or internet research cross referenced to the knowledge evidence

Learners who have not yet completed the necessary training or certification to use machinery, equipment and materials must be supervised by a suitably qualified person

It is important that practical assessment activities are supervised appropriately

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Centres will need to devise assessment tasks which should be practical where possible e.g. Learning Outcomes 1, 2 and 3 link together and can be assessed practically by observation or by generation of diverse evidence. These could also link to Learning Outcomes 4, 5, and 6 to allow knowledge evidence to be gathered during the practical activities

It is important that practical assessment activities are supervised appropriately.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes

- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Additional Information

Useful sources of reference

- The Health and Safety Executive website http://www.hse.gov.uk/ has useful information about identifying what health and safety legislation applies to areas of work and lists of Acts, Statutory instruments and legal publications
- National Federation of Biological Recording website http://www.nbn-nfbr.org.uk/nfbr.php lists all Local / Biological Recording Centres - Useful to find local Biodiversity Action Plans
- The Natural England website http://www.naturalengland.org.uk/ and Countryside Council for Wales www.ccw.gov.uk/ have information about countryside protection schemes and land management for the benefit of wildlife, landscape. Also licences and enforcement
- Local Authority websites for Local Planning Authority permissions and LBAP's
- Visit Department for Environment, Food and Rural Affairs website www.**defra**.gov.uk or Welsh Assembly Government countryside website www.**countryside**.wales.gov.uk/ for up to date information about legislation, codes of practice and consultations in the horticultural / agricultural sectors
- The Environment Agency website http://www.environment-agency.gov.uk provides guidance about environmental permitting, pollution and emissions, hazardous waste, water etc
- Forestry Commission www.forestry.gov.uk application for licences

- Horticultural Code of Practice - Helping to prevent the spread of invasive non-native species
- The Code of Practice - Protecting our Water, Soil and Air has a useful list of references in Section 9
- Managing Habitats for Conservation by William J Sutherland and David A Hill
- BTCV Books on-line http://handbooks.btcv.org.uk/handbooks/index
- BTCV practical handbooks:
  Woodlands - ISBN 0946752338
  Toolcare - ISBN 0946752249
  Tree Planting and Aftercare - ISBN 0946752257

See Skills and Education Group Awards website for further information

Manage Vegetation by Spraying

Unit Reference	**J/600/2684**
Level	**2**
Credit Value	**4**
Guided Learning Hours	**30**
Unit Summary	The aim of this unit is to provide the learner with the knowledge and skills required to carry out practical habitat management using spraying as a management technique. Work on sites must be carried out in line with appropriate permissions and licences
Learning Outcomes (1 to 7) ***The learner will***	**Assessment Criteria (1.1 to 7.9)** ***The learner can***
1. Be able to select, use and maintain relevant equipment for managing vegetation by spraying	**1.1** Select appropriate equipment for this area of work **1.2** Use equipment according to relevant legislation and manufacturer's instructions **1.3** Prepare, maintain and store equipment in a safe and effective working condition
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 relevant 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 **2.4** Recognise any hazards and reduce any associated risks to an acceptable level
3. Be able to carry out the spraying operation in line with site management requirements	**3.1** Select vegetation according to the site management plan and any prevailing constraints **3.2** Manage vegetation by spraying and according to the site management plan **3.3** Deal with any produce or superfluous material according to the site management plan **3.4** Take the appropriate action to remedy any incidental damage which occurs during the management of vegetation
4. Know how to carry out the spraying safely	**4.1** Describe the management technique of spraying
5. Know how to recognise the vegetation to be managed	**5.1** State how to recognise the age, state and type of vegetation to be managed **5.2** State how to interpret job specifications
6. Know the types of equipment required and how to maintain them	**6.1** Describe the equipment and tools which will be required for spraying

	6.2 Describe the methods of maintaining the range of equipment
7. Know relevant health and safety legislation and environmental good practice	**7.1** Outline the current health and safety legislation, codes of practice and any additional requirements **7.2** State the implications of the legislation which affects your work including any permissions or licences which are required **7.3** State how your work fits into local biodiversity action plans **7.4** Describe how environmental damage can be minimised **7.5** State what action to take in the case of incidental damage to habitat, wildlife or landscape **7.6** Describe the correct methods for disposing of waste. **7.7** Describe how to Identify hazards and assess risks **7.8** State how to interpret risk assessments **7.9** State the environmental value of work sites, the potential effects of your work on the environment and how to control these

Supporting Unit Information

J/600/2684 Manage vegetation by spraying - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1:Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means exclusive

LO1, LO2 and LO3 are the key area of competence for this unit

Learning Outcome 1. Be able to select, use and maintain relevant equipment for managing vegetation by spraying

1.1 Select appropriate equipment for this area of work PPE selected and safely used e.g. overalls, safety boots, aprons, spray suits, visor, CE marked. Tools and equipment selected e.g. sprayer (knapsack or vehicle mounted) granule applicator (refer to LO2.1 for legislation requirements)

1.2&3 Use equipment according to relevant legislation and manufacturer's instructions / Prepare, maintain and store equipment in a safe and effective working condition equipment used only for the operation and in situations as detailed by the manufacturer's / supplier's / supervisor's instructions, current legislation and codes of practice for safe: Preparation e.g. knapsack sprayer brought to site in secure vehicle separated from occupants, checked for leaks. Use e.g. suitable sprayer and material selected for type of vegetation to be controlled (grass, herbaceous weeds, scrub, tree stumps). Maintenance e.g. checking and calibrating. Storage e.g. in secure store or case. Maintain records e.g. maintenance and repairs, materials used, area, rates, how much used, weather conditions. Report faults and issues to line manager.

Learning Outcome 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 relevant legislation, codes of practice and any additional requirements work activities carried out consistently with current legislation e.g. Health and Safety, Environmental Protection and Wildlife and Countryside Acts, Code of Practice for Using Plant Protection Products, COPs as applicable, risk assessment and additional requirements - refer to LO7.1

2.2 Carry out work in a manner which minimises environmental damage refer to LO7.4

2.3 Dispose of waste safely and correctly refer LO1.1 for PPE whilst handling, LO7.6 for disposal of waste

2.4 Recognise any hazards and reduce any associated risks to an acceptable level Risk assessment carried out, hazards recognised e.g. cuts / scratches and tetanus, sharp and / or heavy tools, slippery / rocky / mossy ground, falling branches / trees, sunny or wet weather, contamination by chemicals, presence of rats (Weil's diseases)
Associated risks reduced to an acceptable level:
Hierarchy of precautions: Eliminate hazard e.g. tetanus vaccination;

Reduce hazard e.g. do not work when it is raining heavily, use less risky option e.g. non-chemical methods of control,
Prevent access to hazard e.g. exclusion zones around working sites and after application, organise work to reduce exposure to hazards e.g. warning signs PPE e.g. face masks, overalls, gloves, aprons
Welfare facilities e.g. first aid kit, other welfare items such as sun block, sterile water

Learning Outcome 3. Be able to carry out the spraying operation in line with site management requirements

3.1 Select vegetation according to the site management plan and any prevailing constraints Working plan fits within site management plan and may include treatment of damaged, diseased plants (overcrowded, obstructing access or impeding growth of other plants).
Prevailing constraints e.g. cost / staff time / legal implications (including need for trained and licensed operators) refer to LO2.1, weather conditions

3.2 Manage vegetation by spraying and according to the site management plan refer to LO3.1

3.3 Deal with any produce or superfluous material according to the site management plan produce or superfluous material not applicable for this unit.

3.4 Take the appropriate action to remedy any incidental damage which occurs during the management of vegetation e.g. spillages controlled to prevent spread into the environment, Environment Agency notified immediately - refer to LO7.4

LO4, LO5, LO6 and LO7 are the key areas of knowledge for this unit

Learning Outcome 4. Know how to carry out the spraying safely

4.1 Describe the management technique of spraying spraying technique to remove excessive or unwanted vegetation and allow other vegetation to develop or allow access or other operations to take place, control of vegetation that is difficult to control by other means. Organise work including access, excluding other persons, ensure weather and ground conditions appropriate for activity (refer to codes of practice LO2.1) avoid damage to non-target species, according to manufacturer's instructions. Activities carried out to management plan. with regard to health and safety and legal considerations - refer to LO7.1 and LO7.2

Learning Outcome 5. Know how to recognise the vegetation to be managed

5.1 State how to recognise the age, state and type of vegetation to be managed state e.g. overgrown or well-managed, neglected and needing regeneration. Type of vegetation e.g. grass, heath, woodland, scrub, waste-ground. Recognise characteristics of common species e.g. grasses, heathers, bracken, elder, hazel, brambles

5.2 State how to Interpret job specifications e.g. location and size of area to be cleared by spraying, type of material to be controlled, workers available, protecting or controlling re-growth

Learning Outcome 6. Know the types of equipment required and how to maintain them

6.1 Describe the equipment and tools which will be required for spraying equipment and tools - refer to LO1.1

6.2 Describe the methods of maintaining the range of equipment (refer to LO1.2 and LO1.3)

Learning Outcome 7. Know relevant health and safety legislation and environmental good practice

7.1 Outline the current health and safety legislation, codes of practice and any additional requirements Health and Safety e.g. Management of Health & Safety at Work Regulations; protective clothing and application equipment cleaned following use as specified in Code of Practice for Using Plant Protection Products, LOLER, PUWER, Manual Handling, Environmental Protection Acts covering waste disposal; e.g. Hazardous Waste Regulations; Duty of care - controlled wastes, Wildlife e.g. Wildlife and Countryside Act, Hedgerow Regulations, Habitats Directive
Codes of Practice e.g. Protecting our Water, Soil and Air
Additional requirements including felling licenses, site designations (e.g. SSSI, AONB,LNR, National Park), notification of listed operations, and planning consents, LBAP's, client regulations, environmental health requirements, stewardship schemes, , Environment Agency notifications e.g. activities affecting watercourses, groundwater

7.2 State the implications of the legislation which affects your work including any permissions or licences which are required: need to ensure that work does not contravene any regulation or code of practice (refer to LO7.1) or permissions to carry out the work on that land; Forestry Commission to carry out work in woodlands in the vicinity of species protected under the Habitats Directive, identify conditions that apply, exemptions, penalties for non-compliance

7.3 State how your work fits into local biodiversity action plans (LBAP's). Where to find LBAP e.g. Local Authority website. Work needs to link into both species and habitat action plans e.g. species rich woodland areas or supporting uncommon / local species

7.4 Describe how environmental damage can be minimised e.g. use pesticides only in accordance with codes of practice (refer to LO2.1), avoid damage to non-target species, carefully plan site access, avoid work that will disturb habitats, work in accordance with local biodiversity plans, awareness of rare species in area - mark site of bat roost trees, nesting birds, breeding animals and other vulnerable habitats, plan to ensure no disturbance

7.5 State what action to take in the case of incidental damage to habitat, wildlife or landscape (refer to examples in LO7.4) – stop activity to prevent further damage, report to supervisor immediately, take local action to prevent further damage (absorb spilt material using sand or proprietary material, create barriers to prevent contamination of controlled water, report to relevant authority if appropriate (e.g. Environment Agency)

7.6 Describe the correct methods for disposing of waste organic waste; not applicable
Inorganic waste – chemical containers disposed in accordance with Code of Practice for Using Plant Protection Products and manufacturers recommendations, wastes from servicing and maintenance of equipment and hazardous waste from areas e.g. fly-tipped rubbish disposed of in appropriate container and carefully controlled until disposed of through licensed contractor.
Refer to LO2.3 (wastes) and LO3.3 (site management) and LO7.1 (legislation and codes of practice)

7.7 Describe how to identify hazards and assess risks e.g. walk site, knowledge / training in tools / machinery to be used, experience. Hazards - refer to LO2.4. Assess and record risks e.g. what is the probability - percentage or high/medium/low of each hazard causing injury / adversely affecting health, who / how many might be harmed, how serious the effects

7.8 State how to interpret risk assessments e.g. generic / local hazards, likelihood of injury to self/others, precautions to be taken to eliminate the hazard or reasonable precautions to reduce the risks to a low level. Hierarchy of precautions - refer to LO2.4

7.9 State the environmental value of work sites, the potential effects of your work on the environment and how to control these e.g. SSSI's, SINC's, site subject to LBAP, value as habitat for wildlife varies depending on management. Potential effects of work on the environment e.g. impact on non-target species, patchy re-growth allowing strong weed growth, removal of invertebrate habitat. Control e.g. minimise use of chemicals, select less harmful materials, avoid non-target species, select appropriate weather conditions (avoid et, windy, frosty conditions), identify location (s) of vulnerable habitats on sites and avoid.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners.

The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes 1, 2 and 3
Delivery of these learning outcomes is by assessment of competence for those who have experience in this area of work or by supervised spraying activities giving learners the opportunity, first to practice the various tasks involved and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of spraying activities photographs or video could be taken to provide evidence of progress.

Learning Outcomes 4, 5, 6 and 7
Delivery of these learning outcomes is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of spraying activities and witness testimony, answering oral or written questions, assignments or internet research cross referenced to the knowledge evidence

Learners who have not yet completed the necessary training or certification to use machinery, equipment and materials must be supervised by a suitably qualified person

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Centres will need to devise assessment tasks which should be practical where possible e.g. Learning Outcomes 1, 2 and 3 link together and can be assessed practically by observation or by generation of diverse evidence. These could also link to Learning Outcomes 4, 5, and 6 to allow knowledge evidence to be gathered during the practical activities

It is important that practical assessment activities are supervised appropriately
Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Additional Information

Useful sources of reference

- The Health and Safety Executive website http://www.hse.gov.uk/ has useful information about identifying what health and safety legislation applies to areas of work and lists of Acts, Statutory instruments and legal publications
- National Federation of Biological Recording website http://www.nbn-nfbr.org.uk/nfbr.php lists all Local / Biological Recording Centres - Useful to find local Biodiversity Action Plans
- The Natural England website http://www.naturalengland.org.uk/ and Countryside Council for Wales www.ccw.gov.uk/ have information about countryside protection schemes and land management for the benefit of wildlife, landscape. Also licences and enforcement
- Local Authority websites for Local Planning Authority permissions and LBAP's
- Visit Department for Environment, Food and Rural Affairs website www.**defra**.gov.uk or Welsh Assembly Government countryside website www.**countryside**.wales.gov.uk/ *for* up to date information

about legislation, codes of practice and consultations in the horticultural / agricultural sectors

- The Environment Agency website http://www.environment-agency.gov.uk provides guidance about environmental permitting, pollution and emissions, hazardous waste, water etc.
- The Forestry Commission www.forestry.gov.uk application for licences
- Horticultural Code of Practice - Helping to prevent the spread of invasive non-native species
- The Code of Practice - Protecting our Water, Soil and Air has a useful list of references in Section 9
- Managing Habitats for Conservation by William J Sutherland and David A Hill
- BTCV Books on-line http://handbooks.btcv.org.uk/handbooks/index
- BTCV practical handbooks

  Woodlands - ISBN 0946752338

  Hedging - ISBN 0946752176

  Toolcare - ISBN 0946752249

  Tree Planting and Aftercare - ISBN 0946752257

See Skills and Education Group Awards website for further information

Manage Vegetation by Thinning

Unit Reference	**H/600/2689**
Level	**2**
Credit Value	**30**
Guided Learning Hours	**4**
Unit Summary	The aim of this unit is to provide the learner with the knowledge and skills required to carry out practical habitat management using thinning as a management technique. Work on sites must be carried out in line with appropriate permissions and licences
Learning Outcomes (1 to 7) ***The learner will***	**Assessment Criteria (1.1 to 7.9)** ***The learner can***
1. Be able to select, use and maintain relevant equipment for managing vegetation by thinning	**1.1** Select appropriate equipment for this area of work **1.2** Use equipment according to relevant legislation and manufacturer's instructions **1.3** Prepare, maintain and store equipment in a safe and effective working condition
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 relevant 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 **2.4** Recognise any hazards and reduce any associated risks to an acceptable level
3. Be able to carry out the thinning operation in line with site management requirements	**3.1** Select vegetation according to the site management plan and any prevailing constraints **3.2** Manage vegetation by thinning and according to the site management plan **3.3** Deal with any produce or superfluous material according to the site management plan **3.4** Take the appropriate action to remedy any incidental damage which occurs during the management of vegetation
4. Know how to carry out the thinning safely	**4.1** Describe the management technique of thinning
5. Know how to recognise the vegetation to be managed	**5.1** State how to recognise the age, state and type of vegetation to be managed **5.2** State how to Interpret job specifications
6 Know the types of equipment required and how to maintain them	**6.1** Describe the equipment and tools which will be required for thinning **6.2** Describe the methods of maintaining the range of equipment
7. Know relevant health and safety	**7.1** Outline the current health and safety legislation, codes of practice and any additional requirements

legislation and environmental good practice	**7.2** State the implications of the legislation which affects your work including any permissions or licences which are required **7.3** State how your work fits into local biodiversity action plans **7.4** Describe how environmental damage can be minimised **7.5** State what action to take in the case of incidental damage to habitat, wildlife or landscape **7.6** Describe the correct methods for disposing of waste. **7.7** Describe how to Identify hazards and assess risks **7.8** State how to interpret risk assessments **7.9** State the environmental value of work sites, the potential effects of your work on the environment and how to control these

Supporting Unit Information

H/600/2689 Manage vegetation by thinning - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means exclusive

LO1, LO2 and LO3 are the key area of competence for this unit

Learning Outcome 1. Be able to select, use and maintain relevant equipment for managing vegetation by thinning

1.1 **Select appropriate equipment for this area of work** PPE selected and safely used e.g. overalls, hedging gloves, safety working boots, safety helmet / mesh visor, knee pads; chainsaw safety equipment (safety trousers/gloves/visor/ear defenders). CE marked. Tools and equipment selected e.g. billhook, bow saw, pruning saw, axe, sharpening stone, chainsaw, loppers

1.2&3 **Use equipment according to relevant legislation and manufacturer's instructions / Prepare, maintain and store equipment in a safe and effective working condition** equipment used only for the operation and in situations as detailed by the manufacturer's / supplier's / supervisor's instructions, current legislation and codes of practice for safe: Preparation e.g. bow saw brought to site with blade covered for safety, blade already sharpened. Use e.g. stems up to 7 cm, check for anything that will interfere with cut. Maintenance e.g. clean sap from blade and oil, clean mud from handle, sharpen in tool store. Storage e.g. in slatted rack or box - make sure saw cannot fall. Secure e.g. valuable tools locked away. Maintain records e.g. maintenance and repairs. Report faults to line manager.

Learning Outcome 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 relevant legislation, codes of practice and any additional requirements work activities carried out consistently with current legislation e.g. Health and Safety, Environmental Protection and Wildlife and Countryside Acts, Hedgerow Regulations, COPs as applicable, risk assessment and additional requirements - refer to LO7.1

2.2 Carry out work in a manner which minimises environmental damage refer to LO7.4

2.3 Dispose of waste safely and correctly refer LO1.1 for PPE whilst handling, LO7.6 for disposal of waste

2.4 Recognise any hazards and reduce any associated risks to an acceptable level risk assessment carried out, hazards recognised e.g. cuts / scratches and tetanus, sharp and / or heavy tools, slippery / rocky / mossy ground, falling branches / trees, sunny or wet weather, presence of rats (Weil's diseases)
Hierarchy of precautions: Eliminate hazard e.g. tetanus vaccination;

Reduce hazard e.g. do not work when it is raining heavily, use less risky option e.g. single edged billhook or loppers
Prevent access to hazard e.g. chainsaw guards, organise work to reduce exposure to hazards e.g. warning signs PPE e.g. safety helmets, hedging gauntlets
Welfare facilities e.g. first aid kit, other welfare items such as sun block, sterile water

Learning Outcome 3. Be able to carry out the thinning operation in line with site management requirements

3.1 Select vegetation according to the site management plan and any prevailing constraints working plan fits within site management plan and may include removal of damaged, diseased wood or unwanted branches or plants (overcrowded, obstructing access or impeding growth of other trees). Prevailing constraints e.g. cost / staff time / legal implications, market / on-site need for produce, weather conditions

3.2 Manage vegetation by thinning and according to the site management plan vegetation manage by thinning according to site management plan - refer to LO3.1

3.3 Deal with any produce or superfluous material according to the site management plan produce e.g. cordwood, faggots, fence or tree stakes. Processing e.g. faggots or walking sticks bundled and tied. Stacking and storage e.g. firewood, wood for charcoal stored in a cord, stakes and poles stored around tree trunks until use. Brash placed in habitat piles. Superfluous material – refer to LO7.6 for disposal procedures

3.4 Take the appropriate action to remedy any incidental damage which occurs during the management of vegetation incidental damage remedied e.g. branches damaged by falling trees trimmed, damage to features (e.g. ditches, fences, walls gates) - made good, damage to access routes - surface made good

LO4, LO5, LO6 and LO7 are the key areas of knowledge for this unit

Learning Outcome 4. Know how to carry out the thinning safely

4.1 Describe the management technique of thinning thinning technique to achieve purposes of allowing other trees or parts of tree to develop e.g. organise working system including access, stacking of produce and brash, select and cut trunks according to plan, low and cleanly with cuts angled to shed water, establish exclusion zone if appropriate. Activities carried out to management plan. Schedule with regard to health and safety and legal considerations - refer to LO7.1 and LO7.2

Learning Outcome 5. Know how to recognise the vegetation to be managed

5.1 State how to recognise the age, state and type of vegetation to be managed
recognition of age, state and type of vegetation to be managed. **Age** e.g. recent planting, standard / old neglected trees accurately aged using an increment borer or felling tree and counting annual rings. **State** e.g. overcrowded or well-managed, neglected and needing regeneration, scrub and standard trees. **Type** of vegetation e.g. deciduous, evergreen, native or non-native, desirable or not required. Recognise characteristics of common woodland species e.g. willow, oak, sweet chestnut

5.2 State how to interpret job specifications e.g. location and size of area to be thinned, type of material to be removed, workers available, produce and extraction, restocking needs, protecting re-growth

Learning Outcome 6. Know the types of equipment required and how to maintain them

6.1 Describe the equipment and tools which will be required for thinning equipment and tools for thinning - refer to LO1.1

6.2 Describe the methods of maintaining the range of equipment methods of maintaining range of equipment - refer to LO1.2 and LO1.3

Learning Outcome 7. Know relevant health and safety legislation and environmental good practice

7.1 Outline the current health and safety legislation, codes of practice and any additional requirements Health and Safety e.g. Management of Health & Safety at Work Regulations; LOLER, PUWER, Manual Handling, Environmental Protection Acts covering waste disposal; e.g. Hazardous Waste Regulations; Duty of care - controlled wastes, Wildlife e.g. Wildlife and Countryside Act, Hedgerow Regulations, Habitats Directive, Codes of Practice e.g. Protecting our Water, Soil and Air; Additional requirements including site designations (e.g. SSSI, AONB,LNR, National Park), notification of listed operations, and planning consents, LBAP's. Forestry Commission felling licences - refer to LO7.2, client regulations, environmental health requirements, stewardship schemes, Environment Agency notifications e.g. activities affecting watercourses, groundwater

7.2 State the implications of the legislation which affects your work including any permissions or licences which are required implications of legislation which affects work: Need to ensure that work does not contravene any regulation or code of practice (refer to LO7.1) or permissions to carry out the work on that land; Forestry Commission licence to fell growing trees or to carry out work in woodlands in the vicinity of species protected under the Habitats Directive. Local Planning Authority (LPA) consent needed for cutting down or working on trees under a Tree Preservation Order. I n Conservation areas notice to LPA of intention to cut down a tree, identify conditions that apply, exemptions, penalties for non-compliance

7.3 State how your work fits into local biodiversity action plans how work fits into local biodiversity action plans (LBAP's). Where to find LBAP e.g. Local Authority website. Work needs to link into both species and habitat action plans e.g. species rich woodland areas or supporting uncommon / local species

7.4 Describe how environmental damage can be minimised e.g. carefully plan site access, removal of spare material, avoid work that will disturb habitats, work in accordance with local biodiversity plans, awareness of rare species in area - mark site of bat roost trees, nesting

birds, breeding animals and other vulnerable habitats, plan to ensure no disturbance

7.5 State what action to take in the case of incidental damage to habitat, wildlife or landscape refer to examples in LO7.4 – stop activity to prevent further damage, report to supervisor immediately, take local action to prevent further damage, report to relevant authority if appropriate (e.g. Environment Agency)

7.6 Describe the correct methods for disposing of waste organic waste; avoid removing waste from area, material produced should be used for habitat piles, chipped, composted, (unless the material poses a threat to plant health e.g. diseased material).
Inorganic waste – wastes from servicing and maintenance of equipment and hazardous waste from woodland areas e.g. fly-tipped rubbish disposed of in appropriate container and carefully controlled until disposed of through licensed contractor.
Refer to LO2.3 (wastes) and LO3.3 (site management) and LO7.1 (legislation and codes of practice)

7.7 Describe how to identify hazards and assess risks risk assessment carried out, identify hazards e.g. walk site, knowledge / training in tools / machinery to be used, experience. Hazards - refer to LO2.4. Assess and record risks e.g. what is the probability - percentage or high/medium/low of each hazard causing injury / adversely affecting health, who / how many might be harmed, how serious the effects

7.8 State how to interpret risk assessments e.g. generic / local hazards, likelihood of injury to self/others, precautions to be taken to eliminate the hazard or reasonable precautions to reduce the risks to a low level. Hierarchy of precautions - refer to LO2.4

7.9 State the environmental value of work sites, the potential effects of your work on the environment and how to control these e.g. SSSI's, SINC's, site subject to LBAP, value as habitat for wildlife varies depending on management. Potential effects of work on the environment e.g. increased deer population, patchy re-growth allowing strong weed growth, removal of invertebrate habitat. Control e.g. deer fencing / dead hedges, plant new trees to fill gaps, make habitat piles, identify location (s) of bat roost sites

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes 1, 2 and 3
Delivery of these learning outcomes is by assessment of competence for those who have experience in this area of work or by supervised thinning activities giving learners the opportunity, first to practice the various tasks involved and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of thinning activities photographs or video could be taken to provide evidence of progress.

Learning Outcomes 4, 5, 6 and 7
Delivery of these learning outcomes is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of thinning activities and witness testimony, answering oral or written questions, assignments or internet research cross referenced to the knowledge evidence

Learners who have not yet completed the necessary training or certification to use machinery, equipment and materials must be supervised by a suitably qualified person

It is important that practical assessment activities are supervised appropriately

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria
Centres will need to devise assessment tasks which should be practical where possible e.g. Learning Outcomes 1, 2 and 3 link together and can be assessed practically by observation or by generation of diverse evidence.

These could also link to Learning Outcomes 4, 5, and 6 to allow knowledge evidence to be gathered during the practical activities

It is important that practical assessment activities are supervised appropriately.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Additional Information

Useful sources of reference

- The Health and Safety Executive website http://www.hse.gov.uk/ has useful information about identifying what health and safety legislation

applies to areas of work and lists of Acts, Statutory instruments and legal publications

- National Federation of Biological Recording website http://www.nbn-nfbr.org.uk/nfbr.php lists all Local / Biological Recording Centres - Useful to find local Biodiversity Action Plans
- The Natural England website http://www.naturalengland.org.uk/ and Countryside Council for Wales www.ccw.gov.uk/ have information about countryside protection schemes and land management for the benefit of wildlife, landscape. Also licences and enforcement
- Local Authority websites for Local Planning Authority permissions and LBAP's
- Visit Department for Environment, Food and Rural Affairs website www.**defra**.gov.uk or Welsh Assembly Government countryside website www.**countryside**.wales.gov.uk/ *for* up to date information about legislation, codes of practice and consultations in the horticultural / agricultural sectors
- The Environment Agency website http://www.environment-agency.gov.uk provides guidance about environmental permitting, pollution and emissions, hazardous waste, water etc
- The Forestry Commission www.forestry.gov.uk application for licences
- Horticultural Code of Practice - Helping to prevent the spread of invasive non-native species
- The Code of Practice - Protecting our Water, Soil and Air has a useful list of references in Section 9
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  Tree Planting and Aftercare - ISBN 0946752257

See Skills and Education Group Awards website for further information

Manage Vegetation by Uprooting

Unit Reference	**H/600/2692**
Level	**2**
Credit Value	**4**
Guided Learning Hours	**30**
Unit Summary	The aim of this unit is to provide the learner with the knowledge and skills required to carry out practical habitat management using uprooting as a management technique Work on sites must be carried out in line with appropriate permissions and licences
Learning Outcomes (1 to 7) ***The learner will***	**Assessment Criteria (1.1 to 7.9)** ***The learner can***
1. Be able to select, use and maintain relevant equipment for managing vegetation by uprooting	**1.1** Select appropriate equipment for this area of work **1.2** Use equipment according to relevant legislation and manufacturer's instructions **1.3** Prepare, maintain and store equipment in a safe and effective working condition
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 relevant 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 **2.4** Recognise any hazards and reduce any associated risks to an acceptable level
3. Be able to carry out the uprooting operation in line with site management requirements	**3.1** Select vegetation according to the site management plan and any prevailing constraints **3.2** Manage vegetation by uprooting and according to the site management plan **3.3** Deal with any produce or superfluous material according to the site management plan **3.4** Take the appropriate action to remedy any incidental damage which occurs during the management of vegetation
4. Know how to carry out the uprooting safely	**4.1** Describe the management technique of uprooting
5. Know how to recognise the vegetation to be managed	**5.1** State how to recognise the age, state and type of vegetation to be managed **5.2** State how to interpret job specifications
6. Know the types of equipment required and how to maintain them	**6.1** Describe the equipment and tools which will be required for uprooting **6.2** Describe the methods of maintaining the range of equipment
7. Know relevant health and safety	**7.1** Outline the current health and safety legislation, codes of practice and any additional requirements

legislation and environmental good practice	**7.2** State the implications of the legislation which affects your work including any permissions or licences which are required **7.3** State how your work fits into local biodiversity action plans **7.4** Describe how environmental damage can be minimised **7.5** State what action to take in the case of incidental damage to habitat, wildlife or landscape **7.6** Describe the correct methods for disposing of waste. **7.7** Describe how to Identify hazards and assess risks **7.8** State how to interpret risk assessments **7.9** State the environmental value of work sites, the potential effects of your work on the environment and how to control these

Supporting Unit Information

H/600/2692 Manage vegetation by uprooting - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means exclusive

LO1, LO2 and LO3 are the key area of competence for this unit

Learning Outcome 1. Be able to select, use and maintain relevant equipment for managing vegetation by uprooting

1.1 **Select appropriate equipment for this area of work** PPE selected and safely used e.g. overalls, hedging gloves, safety working boots, safety helmet / mesh visor, knee pads. CE marked. Tools and equipment selected e.g. spade, fork, axe, mattock, loppers, excavator/back-hoe

1.2&3 **Use equipment according to relevant legislation and manufacturer's instructions / Prepare, maintain and store equipment in a safe and effective working condition** equipment used only for the operation and in situations as detailed by the manufacturer's / supplier's / supervisor's instructions, current legislation and codes of practice for safe: Preparation e.g. spade/fork brought to site with blade/prongs covered for safety, checked for sharpness. Use e.g. suitable tools for type of vegetation to be uprooted (grass, herbaceous weeds, scrub, trees). Maintenance e.g. clean blades and oil, clean mud from handles, sharpen in tool store. Storage e.g. hang on wall - make sure spades/forks cannot fall. Secure e.g. valuable tools locked away. Maintain records e.g. maintenance and repairs. Report faults to line manager

Learning Outcome 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 relevant legislation, codes of practice and any additional requirements work activities carried out consistently with current legislation e.g. Health and Safety, Environmental Protection and Wildlife and Countryside Acts, Hedgerow Regulations, COPs as applicable, risk assessment and additional requirements - refer to LO7.1

2.2 Carry out work in a manner which minimises environmental damage refer to LO7.4

2.3 Dispose of waste safely and correctly waste disposed of correctly and safely - refer LO1.1 for PPE, LO7.6 waste disposal

2.4 Recognise any hazards and reduce any associated risks to an acceptable level risk assessment carried out, hazards recognised e.g. cuts / scratches and tetanus, sharp and / or heavy tools, slippery / rocky / mossy ground, falling branches / trees, sunny or wet weather, presence of rats (Weil's diseases), underground services
Hierarchy of precautions: Eliminate hazard e.g. tetanus vaccination; Reduce hazard e.g. avoid work in heavy rain, use less risky option e.g. spades/forks

Prevent access to hazard e.g. guards on blades, exclusion zones around working sites, organise work to reduce exposure to hazards e.g. warning signs PPE e.g. face masks, ear defenders, gloves
Welfare facilities e.g. first aid kit, other welfare items such as sun block, sterile water

Learning Outcome 3. Be able to carry out the uprooting operation in line with site management requirements

3.1 Select vegetation according to the site management plan and any prevailing constraints working plan fits within site management plan and may include removal of damaged, diseased plants (overcrowded, obstructing access or impeding growth of other plants). Prevailing constraints e.g. cost / staff time / legal implications, weather and ground conditions

3.2 Manage vegetation by uprooting and according to the site management plan refer to LO3.1

3.3 Deal with any produce or superfluous material according to the site management plan produce or superfluous material dealt with according to the site management plan: Produce e.g. roots of herbage

species, brash or vegetation placed in habitat piles. Superfluous material – refer to LO7.6 for disposal procedures

3.4 Take the appropriate action to remedy any incidental damage which occurs during the management of vegetation incidental damage remedied e.g. holes in site filled and levelled, branches damaged by machinery trimmed, damage to ditches - made good, damage to access routes - surface made good

LO4, LO5, LO6 and LO7 are the key areas of knowledge for this unit

Learning Outcome 4. Know how to carry out the uprooting safely

4.1 Describe the management technique of uprooting uprooting technique to achieve purposes of allowing other vegetation to develop or allow access e.g. organise working system including access, stacking of vegetation and brash, remove roots and stumps to depth required in plan, identify (CAT scan, plans, observation) and avoid damage to roots of other plants or underground services. Activities carried out to management plan. Schedule with regard to health and safety and legal considerations - refer to LO2.1, LO7.1 and LO7.2

Learning Outcome 5. Know how to recognise the vegetation to be managed

5.1 State how to recognise the age, state and type of vegetation to be managed Recognition of age, state and type of vegetation to be managed: State e.g. overgrown or well-managed, neglected and needing regeneration. Type of vegetation e.g. grass, heath, woodland, scrub, waste-ground. Recognise characteristics of common species e.g. grasses, heathers, bracken, elder, hazel, brambles

5.2 State how to interpret job specifications e.g. location and size of area to be cleared by uprooting, type of material to be removed, workers available, waste produced (e.g. stumps, roots) and extraction, protecting or controlling re-growth

Learning Outcome 6. Know the types of equipment required and how to maintain them

6.1 Describe the equipment and tools which will be required for uprooting equipment and tools - refer to LO1.1

6.2 Describe the methods of maintaining the range of equipment methods of maintaining tools and equipment - refer to LO1.2 and LO1.3

Learning Outcome 7. Know relevant health and safety legislation and environmental good practice

7.1 Outline the current health and safety legislation, codes of practice and any additional requirements Health and Safety e.g. Management of Health & Safety at Work Regulations; LOLER, PUWER, Manual Handling, Environmental Protection Acts covering waste disposal; e.g. Hazardous Waste Regulations; Duty of care - controlled wastes, Wildlife e.g. Wildlife and Countryside Act, Hedgerow Regulations, Habitats Directive, Codes of Practice e.g. Protecting our Water, Soil and Air; Additional requirements including felling licenses, site designations (e.g. SSSI, AONB,LNR, National Park), notification of listed operations, and planning consents, LBAP's, client regulations, environmental health requirements, stewardship schemes, Environment Agency notifications e.g. activities affecting watercourses, groundwater

7.2 State the implications of the legislation which affects your work including any permissions or licences which are required need to ensure that work does not contravene any regulation or code of practice (refer to LO7.1) or permissions to carry out the work on that land; Forestry Commission to carry out work in woodlands in the vicinity of species protected under the Habitats Directive. In Conservation areas notice to LPA of intention to cut down a tree, identify conditions that apply, exemptions, penalties for non-compliance

7.3 State how your work fits into local biodiversity action plans (LBAP's). Where to find LBAP e.g. Local Authority website. Work needs to link into both species and habitat action plans e.g. species rich woodland areas or supporting uncommon / local species

7.4 Describe how environmental damage can be minimised e.g. carefully plan site access, removal of waste material (e.g. roots, stumps), avoid work that will disturb habitats, work in accordance with local biodiversity plans, awareness of rare species in area - mark site of bat roost trees, nesting birds, breeding animals and other vulnerable habitats, plan to ensure no disturbance, identify other features on the site (plants, fences, revetments, access routes) and have pan to avoid damage

7.5 State what action to take in the case of incidental damage to habitat, wildlife or landscape actions to take in the case of incidental damage to habitat, wildlife or landscape (refer to examples in LO7.4) – stop activity to prevent further damage, report to supervisor immediately, take local action to prevent further damage, report to relevant authority if appropriate (e.g. Environment Agency)

7.6 Describe the correct methods for disposing of waste. organic waste; avoid removing waste from area, material produced should be used for habitat piles, shredded, composted, (unless the material poses a threat to plant health e.g. diseased material).
Inorganic waste – wastes from servicing and maintenance of equipment and hazardous waste from areas e.g. fly-tipped rubbish disposed of in appropriate container and carefully controlled until disposed of through licensed contractor.
Refer to LO2.3 (wastes) and LO3.3 (site management) and LO7.1 (legislation and codes of practice)

7.7 Describe how to identify hazards and assess risks e.g. walk site, knowledge / training in tools / machinery to be used, experience, locate (Cat scan, maps, plans) underground services (e.g. pipes and cables). Hazards - refer to LO2.4. Assess and record risks e.g. what is the probability - percentage or high/medium/low of each hazard causing injury / adversely affecting health, who / how many might be harmed, how serious the effects

7.8 State how to interpret risk assessments e.g. generic / local hazards, likelihood of injury to self/others, precautions to be taken to eliminate the hazard or reasonable precautions to reduce the risks to a low level. Hierarchy of precautions - refer to LO2.4

7.9 State the environmental value of work sites, the potential effects of your work on the environment and how to control these environmental value of work sites e.g. SSSI's, SINC's, site subject to LBAP, value as habitat for wildlife varies depending on management, removal of unwanted plants to allow more desirable species to develop. Potential effects of work on the environment e.g. increased rabbit population, patchy re-growth allowing strong weed growth, removal of invertebrate habitat. Control e.g. rabbit fencing / dead hedges, plant new trees to fill gaps, make habitat piles, identify location (s) of vulnerable habitats on sites

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes 1, 2 and 3

Delivery of these learning outcomes is by assessment of competence for those who have experience in this area of work or by supervised uprooting activities giving learners the opportunity, first to practice the various tasks involved and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of uprooting activities photographs or video could be taken to provide evidence of progress.

Learning Outcomes 4, 5, 6 and 7
Delivery of these learning outcomes is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of uprooting activities and witness testimony, answering oral or written questions, assignments or internet research cross referenced to the knowledge evidence

Learners who have not yet completed the necessary training or certification to use machinery, equipment and materials must be supervised by a suitably qualified person

It is important that practical assessment activities are supervised appropriately

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Centres will need to devise assessment tasks which should be practical where possible e.g. Learning Outcomes 1, 2 and 3 link together and can be assessed practically by observation or by generation of diverse evidence. These could also link to Learning Outcomes 4, 5, and 6 to allow knowledge evidence to be gathered during the practical activities

It is important that practical assessment activities are supervised appropriately.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Additional Information

Useful sources of reference

- The Health and Safety Executive website http://www.hse.gov.uk/ has useful information about identifying what health and safety legislation applies to areas of work and lists of Acts, Statutory instruments and legal publications
- National Federation of Biological Recording website http://www.nbn-nfbr.org.uk/nfbr.php lists all Local / Biological Recording Centres - Useful to find local Biodiversity Action Plans
- The Natural England website http://www.naturalengland.org.uk/ and Countryside Council for Wales www.ccw.gov.uk/ have information about countryside protection schemes and land management for the benefit of wildlife, landscape. Also licences and enforcement

- Local Authority websites for Local Planning Authority permissions and LBAP's
- Visit Department for Environment, Food and Rural Affairs website www.**defra**.gov.uk or Welsh Assembly Government countryside website www.**countryside**.wales.gov.uk/ *for* up to date information about legislation, codes of practice and consultations in the horticultural / agricultural sectors
- The Environment Agency website http://www.environment-agency.gov.uk provides guidance about environmental permitting, pollution and emissions, hazardous waste, water etc
- The Forestry Commission www.forestry.gov.uk application for licences
- Horticultural Code of Practice - Helping to prevent the spread of invasive non-native species
- The Code of Practice - Protecting our Water, Soil and Air has a useful list of references in Section 9
- Managing Habitats for Conservation by William J Sutherland and David A Hill
- BTCV Books on-line http://handbooks.btcv.org.uk/handbooks/index
- BTCV practical handbooks
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  Toolcare - ISBN 0946752249
  Tree Planting and Aftercare - ISBN 0946752257

See Skills and Education Group Awards website for further information

Manage Vegetation by Pruning

Unit Reference	**J/600/2698**
Level	**2**
Credit Value	**4**
Guided Learning Hours	**30**
Unit Summary	The aim of this unit is to provide the learner with the knowledge and skills required to carry out practical habitat management using pruning as a management technique. Work on sites must be carried out in line with appropriate permissions and licences
Learning Outcomes (1 to 7) ***The learner will***	**Assessment Criteria (1.1 to 7.9)** ***The learner can***
1. Be able to select, use and maintain relevant equipment for managing vegetation by pruning	**1.1** Select appropriate equipment for this area of work **1.2** Use equipment according to relevant legislation and manufacturer's instructions **1.3** Prepare, maintain and store equipment in a safe and effective working condition
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 relevant 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 **2.4** Recognise any hazards and reduce any associated risks to an acceptable level
3. Be able to carry out the pruning operation in line with site management requirements	**3.1** Select vegetation according to the site management plan and any prevailing constraints **3.2** Manage vegetation by pruning and according to the site management plan **3.3** Deal with any produce or superfluous material according to the site management plan **3.4** Take the appropriate action to remedy any incidental damage which occurs during the management of vegetation
4. Know how to carry out the pruning safely	**4.1** Describe the management technique of pruning
5. Know how to recognise the vegetation to be managed	**5.1** State how to recognise the age, state and type of vegetation to be managed **5.2** State how to interpret job specifications
6. Know the types of equipment required and how to maintain them	**6.1** Describe the equipment and tools which will be required for pruning **6.2** Describe the methods of maintaining the range of equipment

7. Know relevant health and safety legislation and environmental good practice	**7.1** Outline the current health and safety legislation, codes of practice and any additional requirements **7.2** State the implications of the legislation which affects your work including any permissions or licences which are required **7.3** State how your work fits into local biodiversity action plans **7.4** Describe how environmental damage can be minimised **7.5** State what action to take in the case of incidental damage to habitat, wildlife or landscape **7.6** Describe the correct methods for disposing of waste **7.7** Describe how to identify hazards and assess risks **7.8** State how to interpret risk assessments **7.9** State the environmental value of work sites, the potential effects of your work on the environment and how to control these

Supporting Unit Information

J/600/2698 Manage vegetation by pruning - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means exclusive

LO1, LO2 and LO3 are the key area of competence for this unit

Learning Outcome 1. Be able to select, use and maintain relevant equipment for managing vegetation by pruning

1.1&3 Select appropriate equipment for this area of work PPE selected and safely used e.g. overalls, hedging gloves, safety working boots, safety helmet / mesh visor, knee pads; chainsaw safety equipment (safety trousers/gloves/visor/ear defenders). CE marked. Tools and equipment selected e.g. billhook, bow saw, pruning saw, axe, sharpening stone, chainsaw, loppers, secateurs

1.2&3 Use equipment according to relevant legislation and manufacturer's instructions / prepare, maintain and store equipment in a safe and effective working condition equipment used only for the operation and in situations as detailed by the manufacturer's/supplier's/supervisor's instructions, current legislation and codes of practice for safe: Preparation e.g. bow saw brought to site with blade covered for safety, blade already sharpened. Use e.g. stems up to 7 cm, check for anything that will interfere with cut. Maintenance e.g. clean sap from blade and oil, clean mud from handle, sharpen/replace blade in tool store. Storage e.g. in slatted rack or box - make sure saw cannot fall. Secure e.g. valuable tools locked away. Maintain records e.g. maintenance and repairs. Report faults to line manager.

Learning Outcome 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 relevant legislation, codes of practice and any additional requirements e.g. Health and Safety, Environmental Protection and Wildlife and Countryside Acts, Hedgerow Regulations, COPs as applicable, risk assessment and additional requirements - refer to LO7.1

2.2 Carry out work in a manner which minimises environmental damage refer to LO7.4

2.3 Dispose of waste safely and correctly refer LO1.1 for PPE whilst handling, LO7.6 for disposal of waste

2.4 Recognise any hazards and reduce any associated risks to an acceptable level risk assessment carried out, hazards recognised e.g. cuts / scratches and tetanus, sharp and / or heavy tools, slippery / rocky / mossy ground, falling branches / trees, sunny or wet weather, presence of rats (Weil's diseases)

Associated risks reduced to an acceptable level:

Hierarchy of precautions: Eliminate hazard e.g. tetanus vaccination;

Reduce hazard e.g. do not work in heavy rain, use less risky option e.g. loppers

Prevent access to hazard e.g. chainsaw guards, organise work to reduce exposure to hazards e.g. warning signs PPE e.g. safety helmets, hedging gauntlets

Welfare facilities e.g. first aid kit, other welfare items such as sun block, sterile water

Learning Outcome 3. Be able to carry out the pruning operation in line with site management requirements

3.1 Select vegetation according to the site management plan and any prevailing constraints working plan fits within site management plan and may include removal of damaged, diseased wood or unwanted branches or plants (overcrowded, obstructing access or impeding growth of other trees). Prevailing constraints e.g. cost / staff time / legal implications, market / on-site need for produce, weather conditions

3.2 Manage vegetation by pruning and according to the site management plan refer to LO3.1

3.3 Deal with any produce or superfluous material according to the site management plan produce e.g. cordwood, firewood, chipped

prunings. Stacking and storage e.g. firewood, chippings stored for use later or removal from site. Brash placed in habitat piles. Superfluous material – refer to LO7.6 for disposal procedures

3.4 Take the appropriate action to remedy any incidental damage which occurs during the management of vegetation e.g. branches damaged by falling branches trimmed, damage to features (e.g. walls, fences, access routes) - made good, damage to access routes - surface made good

LO4, LO5, LO6 and LO7 are the key areas of knowledge for this unit

Learning Outcome 4. Know how to carry out the pruning safely

4.1 Describe the management technique of pruning pruning technique to achieve purposes of removing dead, damaged or unwanted growth allowing other parts of plant to develop e.g. organise working system including access, stacking of produce and brash, cut branches required by management plan at appropriate height, cut branches close to trunks. Activities carried out to management plan. Schedule with regard to health and safety and legal considerations, set up exclusion zones if appropriate - refer to LO7.1 and LO7.2

Learning Outcome 5. Know how to recognise the vegetation to be managed

5.1 State how to recognise the age, state and type of vegetation to be managed recognition of age, state and type of vegetation to be managed: Age e.g. recently planted, standard / old neglected trees accurately aged using an increment borer or pruning tree and counting annual rings. State e.g. overcrowded or well-managed, neglected and needing regeneration, scrub and standard trees. Type of vegetation e.g. deciduous, evergreen, native or non-native, desirable or not required. Recognise characteristics of common woodland species e.g. willow, oak, sweet chestnut

5.2 State how to interpret job specifications how to interpret job specifications e.g. location and size of area to be pruned, type of material to be removed, workers available, produce and extraction, restocking needs, protecting re-growth

Learning Outcome 6. Know the types of equipment required and how to maintain them

6.1 Describe the equipment and tools which will be required for pruning refer to LO1.1

6.2 Describe the methods of maintaining the range of equipment methods of maintaining range of equipment (refer to LO1.2 and LO1.3)

Learning Outcome 7. Know relevant health and safety legislation and environmental good practice

7.1 Outline the current health and safety legislation, codes of practice and any additional requirements e.g. Management of Health & Safety at Work Regulations; LOLER, PUWER, Manual Handling, Environmental Protection Acts covering waste disposal; e.g. Hazardous Waste Regulations; Duty of care - controlled wastes, Wildlife e.g. Wildlife and Countryside Act, Hedgerow Regulations, Habitats Directive, Codes of Practice e.g. Protecting our Water, Soil and Air; Additional requirements including site designations (e.g. SSSI, AONB,LNR, National Park), notification of listed operations, and planning consents, LBAP's. Forestry Commission felling licences - refer to LO7.2, client regulations, environmental health requirements, stewardship schemes, Environment Agency notifications e.g. activities affecting watercourses, groundwater

7.2 State the implications of the legislation which affects your work including any permissions or licences which are required need to ensure that work does not contravene any regulation or code of practice (refer to LO7.1) or permissions to carry out the work on that land; Forestry Commission licence to fell growing trees or to carry out work in woodlands in the vicinity of species protected under the Habitats Directive. Local Planning Authority (LPA) consent needed for cutting down or working on trees under a Tree Preservation Order. In Conservation areas notice to LPA of intention to cut down a tree, identify conditions that apply, exemptions, penalties for non-compliance

7.3 State how your work fits into local biodiversity action plans (LBAP's). Where to find LBAP e.g. Local Authority website. Work needs to link into both species and habitat action plans e.g. species rich woodland areas or supporting uncommon / local species

7.4 Describe how environmental damage can be minimised e.g. carefully plan site access, removal of spare material, avoid work that will disturb habitats, work in accordance with local biodiversity plans, awareness of rare species in area - mark site of bat roost trees, nesting birds, breeding animals, other vulnerable habitats, plan to avoid disturbance

7.5 State what action to take in the case of incidental damage to habitat, wildlife or landscape actions to take in the case of incidental damage to habitat, wildlife or landscape (refer to examples in LO7.4) – stop activity to prevent further damage, report to supervisor immediately, take local action to prevent further damage (repair features, remove fallen material), report to relevant authority if appropriate (e.g. Environment Agency)

7.6 Describe the correct methods for disposing of waste organic waste; avoid removing waste from area, material produced should be used for habitat piles, chipped, composted, (unless the material poses a threat to plant health e.g. diseased material).
Inorganic waste – wastes from servicing and maintenance of equipment, hazardous waste from woodland areas e.g. fly-tipped rubbish disposed of in appropriate container, carefully controlled until disposed of through licensed contractor
Refer to LO2.3 (wastes) and LO3.3 (site management) and LO7.1 (legislation and codes of practice)

7.7 Describe how to identify hazards and assess risks carry out risk assessment, identify hazards e.g. walk site, knowledge / training in tools / machinery to be used, experience. Hazards - refer to LO2.4. Assess and record risks e.g. what is the probability - percentage or high/medium/low of each hazard causing injury / adversely affecting health, who / how many might be harmed, how serious the effects

7.8 State how to interpret risk assessments e.g. generic / local hazards, likelihood of injury to self/others, precautions to be taken to eliminate the hazard or reasonable precautions to reduce the risks to a low level. Hierarchy of precautions - refer to LO2.4

7.9 State the environmental value of work sites, the potential effects of your work on the environment and how to control these e.g. SSSI's, SINC's, site subject to LBAP, value as habitat for wildlife varies depending on management. Potential effects of work on the environment e.g. increased deer population, patchy re-growth allowing strong weed growth, removal of invertebrate habitat. Control e.g. deer fencing / dead hedges, plant new trees to fill gaps, make habitat piles, identify location (s) of bat roost sites

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners.

The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes 1, 2 and 3

Delivery of these learning outcomes is by assessment of competence for those who have experience in this area of work or by supervised pruning activities giving learners the opportunity, first to practice the various tasks involved and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of pruning activities photographs or video could be taken to provide evidence of progress.

Learning Outcomes 4, 5, 6 and 7

Delivery of these learning outcomes is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of pruning activities and witness testimony, answering oral or written questions, assignments or internet research cross referenced to the knowledge evidence

Learners who have not yet completed the necessary training or certification to use machinery, equipment and materials must be supervised by a suitably qualified person

It is important that practical assessment activities are supervised appropriately

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Centres will need to devise assessment tasks which should be practical where possible e.g. Learning Outcomes 1, 2 and 3 link together and can be assessed practically by observation or by generation of diverse evidence. These could also link to Learning Outcomes 4, 5, and 6 to allow knowledge evidence to be gathered during the practical activities

It is important that practical assessment activities are supervised appropriately.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Additional Information

Useful sources of reference

- The Health and Safety Executive website http://www.hse.gov.uk/ has useful information about identifying what health and safety legislation applies to areas of work and lists of Acts, Statutory instruments and legal publications

- National Federation of Biological Recording website http://www.nbn-nfbr.org.uk/nfbr.php lists all Local / Biological Recording Centres - Useful to find local Biodiversity Action Plans
- The Natural England website http://www.naturalengland.org.uk/ and Countryside Council for Wales www.ccw.gov.uk/ have information about countryside protection schemes and land management for the benefit of wildlife, landscape. Also licences and enforcement
- Local Authority websites for Local Planning Authority permissions and LBAP's
- Visit Department for Environment, Food and Rural Affairs website www.**defra**.gov.uk or Welsh Assembly Government countryside website www.**countryside**.wales.gov.uk/ *for* up to date information about legislation, codes of practice and consultations in the horticultural / agricultural sectors
- The Environment Agency website http://www.environment-agency.gov.uk provides guidance about environmental permitting, pollution and emissions, hazardous waste, water etc
- The Forestry Commission www.forestry.gov.uk application for licences
- Horticultural Code of Practice - Helping to prevent the spread of invasive non-native species
- The Code of Practice - Protecting our Water, Soil and Air has a useful list of references in Section 9
- Managing Habitats for Conservation by William J Sutherland and David A Hill
- BTCV Books on-line http://handbooks.btcv.org.uk/handbooks/index
- BTCV practical handbooks

  Woodlands - ISBN 0946752338

  Hedging - ISBN 0946752176

  Toolcare - ISBN 0946752249

  Tree Planting and Aftercare - ISBN 0946752257

See Skills and Education Group Awards website for further information

Team Work in Environmental Studies

Unit Reference	**M/501/4883**
Level	**1**
Credit Value	**3**
Guided Learning Hours	**30**
Unit Summary	This unit explores effective communication to enable co-operative working when planning tasks and working towards achieving goals. Learners will also be asked to review their contributions and agree ways to improve work with others
Learning Outcomes (1 to 3) ***The learner will***	**Assessment Criteria (1.1 to 3.2)** ***The learner can***
1. Understand objectives for group activities	**1.1** Confirm given objectives and contribute to the planning of a specific group task **1.2** Work co-operatively with colleagues and person in charge of the activity to achieve the group's objectives
2. Be able to reflect on performance	**2.1** Review their individual and the groups' performance to identify how the objectives were met **2.2** Identify how they could improve their performance when working in a team

3. Be able to communicate effectively	**3.1** Report unexpected findings to the person in charge of the activity **3.2** Communicate with colleagues and person in charge to achieve the group's objectives

Supporting Unit Information

M/501/4883 Team work in environmental studies – Level 1

Indicative Content

Learners should understand the importance of

- Checking that they understand what has to be achieved together
- Identifying what needs to be done, their individual responsibilities and the arrangements for working together
- Communicating clearly and effectively to all involved in the activity
- Reviewing the group's and their individual performance to identify what went well, what went less well and how to suggest improvements

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place

Learning Outcomes (LO) 1, 2 and 3

Delivery of these learning outcomes is by generation of knowledge evidence which could be linked to practical work e.g. by observation of operational work and witness testimony, answering oral or written questions, assignments or internet research cross referenced to the knowledge evidence.

It is important that practical assessment activities are supervised appropriately

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Learners should demonstrate that they are able to successfully complete the learning outcomes and apply the related knowledge to different activities and situations, possibly linking with the optional units chosen.

It is important that practical assessment activities are supervised appropriately.

Evidence Of Achievement

As this is a practically based qualification, the main types of valid, authentic evidence included in each learner portfolio would be records of direct observation and oral questioning. Other types of valid, authentic assessment evidence could include

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Additional Information

See Skills and Education Group Awards website for further information

Maintain and Develop Personal Performance

Unit Reference	**F/502/1689**
Level	**2**
Credit Value	**2**
Guided Learning Hours	**15**
Unit Summary	The aim of this unit is to provide the learner with the knowledge and skills to be able to agree and develop their own personal performance with an appropriate person The learner will maintain and develop personal performance with regard to • working to targets and completing specific tasks • quality of work
Learning Outcomes (1 to 3) ***The learner will***	**Assessment Criteria (1.1 to 3.6)** ***The learner can***
1. Maintain personal performance	**1.1** Identify current competence and areas for development using relevant techniques and processes **1.2** Carry out work in accordance with responsibilities and organisational requirements
2. Develop personal performance	**2.1** Agree personal performance and targets with an appropriate person **2.2** Review performance and progress regularly and use the outcome to plan future development activities

	2.3 Seek advice from an appropriate person if clarification is required concerning specific tasks **2.4** Seek constructive feedback and advice from others and use it to help maintain and improve performance
3. Know how to develop personal performance	**3.1** State own limits of responsibility in relation to specific tasks and activities **3.2** State who to obtain advice from in relation to specific tasks and activities **3.3** List the correct procedures for obtaining advice **3.4** State the risks involved in not obtaining advice where specific tasks and activities are unclear **3.5** Describe how to determine and agree development needs and personal targets **3.6** State why personal performance should be reviewed

Supporting Unit Information

F/502/1689 Maintain and develop personal performance - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number on the left e.g. A.C1.3

Note 2: The example of maintaining and developing personal performance in this case will be in the workplace. Activities for maintaining and developing personal performance need to follow this example

LO1 and LO2 are the key areas of competence for this unit

Learning Outcome 1. Maintain personal performance

1.1 Identify opportunities within the workplace where current competence can be proven e.g. certification of previous qualifications and training events attended etc. identify areas for development within the workplace by identifying skills lacking possibly using personal performance targets already agreed with line mangers. Refer to Staff Appraisals, reviews and peer observations

1.2 Carry out work in accordance with responsibilities and organisational requirements carry out works to agreed standard and within the responsibilities of own role and to organisational requirements through both written and verbal instruction. Retention of records could be a useful source of evidence for this along with any feedbacks on performance from line managers or customers or fellow workers in the form of witness testimony.

Learning Outcome 2. Develop personal performance

2.1 Agree personal performance and targets with an appropriate person agree and document a personal development plan and identify targets for a set period of time

2.2 Review performance and progress regularly and use the outcome to plan future development activities this LO will be achieved by regular reviews probably either 6 monthly or quarterly and these will need to be documented. Take the opportunity to plan any future identified needs.

2.3 Seek advice from an appropriate person if clarification is required concerning specific tasks will be achieved by demonstrating communications either verbally or in writing if clarification on anything agreed in LO2 above.

2.4 Seek constructive feedback and advice from others and use it to help maintain and improve performance constructive feedback may be evidenced at LO2 above or from feedback from colleagues and peers and customers or partner organisations.

LO3 is the key area of knowledge for this unit

Learning Outcome 3. Know how to develop personal performance

3.1 State own limits of responsibility in relation to specific tasks and activities be able to state the roles and responsibilities of own role for identified tasks and activities. Give details of own role from job description.

3.2 State who to obtain advice from in relation to specific tasks and activities this will be from for example a supervisor or technical expert for the field in which advice is required.

3.3 List the correct procedures for obtaining advice be able to list correct procedures for obtaining advice for example on Health and Safety issues identified in the workplace maybe faulty equipment and to know who to go to to obtain the correct advice such as a line manager or supervisor .

3.4 State the risks involved in not obtaining advice where specific tasks and activities are unclear be able to demonstrate the risks to the individual and the organisation when task outcomes are unclear and give an example of what could go wrong if acting on unsound or inaccurate advice. Example such as a faulty machine or equipment not being repaired and the possible dangers and consequences to self and others in workplace

3.5 Describe how to determine and agree development needs and personal targets refer to L.O. 2.1 and describe the process.

3.6 State why personal performance should be reviewed be able to state the reasoning behind reviewing the objectives and targets set and understand the need to ensure that the organisations and the individual's targets are met. Example as for Health and Safety issues

identified that require action to ensure staff safety and legal requirements of the organisation.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes (LO)1 and 2
Delivery of these learning outcomes is by supervised practical operational work giving learners the opportunity, first to practice the various tasks involved in maintaining and developing personal performance and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria and therefore competence.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

Learning Outcomes (LO)3
Delivery of this learning outcomes is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of operational work and witness testimony, answering oral or written questions, assignments or internet research cross referenced to the knowledge evidence.

It is important that practical assessment activities are supervised appropriately

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Centres will need to devise assessment tasks which should be practical where possible e.g. Learning Outcomes 1 and 2 link together and competence can be assessed practically by observation or by generation of diverse evidence. These could also link to Learning Outcomes 3 to allow knowledge evidence to be gathered during the practical activities

Minimum requirements when assessing this unit
Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

Individual units and qualifications are subject to specific additional requirements as stipulated by SSC Assessment Strategy.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

Useful sources of reference

- The Health and Safety Executive website http://www.hse.gov.uk/ has useful information about identifying what health and safety legislation applies to areas of work and lists of Acts, Statutory instruments and legal publications
- The Office of Public Information website http://www.opsi.gov.uk has year by year lists of UK Acts and Statutory Instruments

See Skills and Education Group Awards website for further information

Establish and Maintain Effective Working Relationships with Others

Unit Reference	**T/502/1690**
Level	**2**
Credit Value	**2**
Guided Learning Hours	**15**
Unit Summary	The aim of this unit is to provide the learner with the knowledge and skills required to work effectively with others under minimal direction through clear communication and co-operation The learner will establish and maintain effective working relationships with the colleagues, supervisors and managers, persons external to the team, department or organisation
Learning Outcomes (1 to 2) ***The learner will***	**Assessment Criteria (1.1 to 2.5)** ***The learner can***
1. Maintain working relationships with others	**1.1** Identify opportunities to improve working practices with the appropriate person **1.2** Carry out activities requiring co-operation with others in accordance with required procedures **1.3** Communicate with others in a way which promotes effective working relationships **1.4** Keep others informed about work plans or activities which affect them

	1.5 Seek assistance from others without causing undue disruption to normal work activities **1.6** Respond in a timely and positive way when others ask for help or information
2. Understand why good working practices are important	**2.1** State why good working relationships are important **2.2** Suggest ways in which good working relationships can be maintained **2.3** State the methods of dealing with disagreements within the workplace **2.4** Describe own level of responsibility in relation to dealing with disagreements **2.5** State why effective communication is important

Supporting Unit Information

T/502/1690 Establish and maintain effective working relationships with others
- Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number on the left e.g. AC 1.3

Note 2: The example of establish and maintain effective working relationships with others in this case will be in the workplace. Activities for effective working relationships need to follow this example

LO1 is the key area of competence for this unit

Learning Outcome 1. Maintain working relationships with others

1.1 Identify opportunities to improve working practices with the appropriate person identify opportunities within the workplace where working practices could be improved (e.g. Health and Safety, types of PPE, methods of operation, and allocation and use of resources) and identify appropriate persons such as work colleagues, supervisors and customers or partners who these may benefit. Also refer to satisfying contractual requirements if appropriate.

1.2 Carry out activities requiring co-operation with others in accordance with required procedures implement some of the above in LO1.1. Carry out activities involving third parties such as other departments or organisations and gaining permissions or authorisations to undertake tasks

1.3 Communicate with others in a way which promotes effective working relationships demonstrate different communication skills e.g. e-mails, written, verbal, hand signals

1.4 Keep others informed about work plans or activities which affect them refer to LO3 and demonstrate that the above have been

undertaken in timely manner and within the regulations and policies of the organisation, ensuring legal compliance at all times.

1.5 Seek assistance from others without causing undue disruption to normal work activities demonstrate a cross department or within department agreement and provide evidence of assistance being given (written, verbal) whilst maintaining efficiency within the workplace.

1.6 Respond in a timely and positive way when others ask for help or information provide evidence and demonstrate that information's requested have been delivered in a timely and positive manner

LO2 is the key area of knowledge for this unit

Learning Outcome 2. Understand why good working practices are important

2.1 State why good working relationships are important state evidences of good working relationships and the importance of them through written and verbal communications. Demonstrate knowledge of why this is good e.g. Efficiency, cost effectiveness, trust, building relationships that benefit all parties involved etc.

2.2 Suggest ways in which good working relationships can be maintained communications, openness, honesty, timing of works, taking into account others needs of customers and clients.

2.3 State the methods of dealing with disagreements within the workplace demonstrate knowledge of the organisations policy and procedures. Reporting procedures and hierarchy of control such as who you report to.

2.4 Describe own level of responsibility in relation to dealing with disagreements describe where you are in terms of organisational chart and the hierarchy (note legislation and roles and responsibilities dependent upon the type of disagreement)

2.5 State why effective communication is important as in LO1.3

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes (LO)1

Delivery of this learning outcomes is by supervised practical operational work giving learners the opportunity, first to practice the various tasks involved in establishing and maintaining effective working relationships with others and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria and therefore competence.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

Learning Outcomes (LO) 2

Delivery of this learning outcomes is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of operational work and witness testimony, answering oral or written questions, assignments or internet research cross referenced to the knowledge evidence.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Centres will need to devise assessment tasks which should be practical where possible e.g. Learning Outcomes 1 and 2 link together and competence can be assessed practically by observation or by generation of diverse evidence. These could also link to Learning Outcomes 3 and 4 to allow knowledge evidence to be gathered during the practical activities

It is important that practical assessment activities are supervised appropriately.

Minimum requirements when assessing this unit

Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

Individual units and qualifications are subject to specific additional requirements as stipulated by SSC Assessment Strategy.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

Useful sources of reference

- The Health and Safety Executive website http://www.hse.gov.uk/ has useful information about identifying what health and safety legislation applies to areas of work and lists of Acts, Statutory instruments and legal publications
- The Office of Public Information website http://www.opsi.gov.uk has year by year lists of UK Acts and Statutory Instruments
- The website http://www.netregs.gov.uk/ provides helpful guidance about environmental regulations

See Skills and Education Group Awards website for further information

Communicate With the Public and Others

Unit Reference	**L/600/2699**
Level	**2**

Credit Value	**3**
Guided Learning Hours	**23**
Unit Summary	The aim of this unit is to provide the learner with the knowledge and skills required to communicate clearly with both individual members of the public, groups and others effectively. The learner will be able to respond to queries and requests for information encourage others to ask questions and clarify information
Learning Outcomes (1 to 5) ***The learner will***	**Assessment Criteria (1.1 to 5.1)** ***The learner can***
1. Be able to communicate with the public and others	**1.1** Communicate with members of the public and others effectively and in a way which promotes the organisation **1.2** Communicate information which is suitable to the needs of members of the public and others **1.3** Respond to requests for information clearly and accurately and refer queries appropriately **1.4** Encourage members of the public and others to ask questions or seek explanation **1.5** Suggest suitable sources of information to members of the public and others **1.6** Communicate appropriate health and safety information
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
3. Know how to communicate with the public and others	**3.1** Explain why effective methods of communication are needed **3.2** Describe how to encourage queries and comments from members of the public and others **3.3** List different sources of information suitable for members of the public and others - internal and external **3.4** State the correct procedures for handling and communicating confidential information
4. Know the current health and safety legislation and environmental good practice	**4.1** Outline the current health and safety legislation, codes of practice and any additional requirements, which apply to this area of work
5. Understand the values of the organisation	**5.1** Identify the values of the organisation e.g. policies and practices for customer care, promotion of environmental good practice or equality of opportunity

Supporting Unit Information

L/600/2699 Communicate with the public and others - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

Note 2: Cross references are first to learning outcomes (LO) e.g. LO1 and then to the assessment criteria number on the left e.g. LO1.3

LO1, LO2 are the key areas of competence for this unit

Learning Outcome 1. Be able to communicate with the public and others

1.1 **Communicate with members of the public and others effectively and in a way which promotes the organisation** using a range of communication methods when communicating e.g. verbal, written, body language, electronic. Promote organisation whilst communicating e.g. describing products and services, what the organisation has to offer, being polite and setting high standards in regard to the organisation. issuing customer surveys to obtain direct feedback

1.2 **Communicate information which is suitable to the needs of members of the public and others** give the relevant up to date information to public or others, e.g. giving them instruction on how to care for plants, pricing details, delivery schedules, problems or delays with proposed project work.

1.3 **Respond to requests for information clearly and accurately and refer queries appropriately** respond by providing feedback and offering assistance to any question that may have been asked of you, e.g. specific planting information, deadlines for a project, contact information for supervisors, products or services offered by the organisation. Refer any queries to the appropriate person i.e. supervisor, line manager, site foreman, contractor.

1.4 Encourage members of the public and others to ask questions or seek explanation during communication use open questions to allow discussion to clarify specific details and gain explanations on any matters. Ask if there are any questions or if they would like things further explained. Use of questionnaires and feedback forms.

1.5 Suggest suitable sources of information to members of the public and others offer assistance regarding information offering them a range of sources e.g. books, leaflets, internet, supervisors. Advice on where to obtain suitable information e.g. information points, libraries, specific websites.

1.6 Communicate appropriate health and safety information communicate all relevant health and safety information e.g. risk assessments, site specific details, awareness of safety signage, health and safety posters, restricted areas appropriate personal protective equipment and clothing for use onto site. Refer to any organisational policies and procedures.

Learning Outcome 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 demonstrate safe working on site to cover safety requirements, e.g. complying with risk assessments and other site specific guideline. See LO1.6. Wearing suitable personal protective equipment and clothing consistent with risk assessments, following all organisational policies and procedures in relation to safety. Working safely with tools/machinery and following any manufacturer's safety instructions. Complying with any safety information when using materials such as chemicals or other materials. Also see LO4.1.

LO3, LO4 and LO5 are the key areas of knowledge for this unit

Learning Outcome 3. Know how to communicate with the public and others

3.1 Explain why effective methods of communication are needed communication methods could include, verbal, written, electronic and why these should be effective e.g. to establish an understanding, give reliable information in a manner to be understood i.e. Health and safety. Explain possible consequences of non-effective communication and on how these would impact on your job role e.g. potential for accidents, incorrect activities being carried out.

3.2 Describe how to encourage queries and comments from members of the public and others encourage members of the public and others to discuss any issues they might have and too encourage the use of surveys in order to gather feedback for use by organisation to improve effectiveness. Use of questionnaires.

3.3 List different sources of information suitable for members of the public and others-internal and external sources of information could include, books, leaflets, internet, guidance from others, dissemination of information through meetings, emails for organisation's internal staff. Organisation may have website which internal and external people could be directed towards. Also see LO1.5.

3.4 State the correct procedures for handling and communicating confidential information explain the organisations policies and procedures relating to communicating confidential information and explain the relevant legislation that governs this confidentiality, e.g. Data Protection Act 1998. Specific internal Policies and procedures relating to confidential information.

Learning Outcome 4. Know the current health and safety legislation and environmental good practice

4.1 Outline the current health and safety legislation, codes of practice and any additional requirements, which apply to this area of work examples of legislation covering health and safety or environmental factors e.g. The Health and Safety and Work Act 1974, Control Of Substances Hazardous to Health 1988, Reporting Injuries Diseases, Dangerous Occurrence Regulations 1995, Personal Protective Equipment at Work Regulations 1992, Provision and Use of Work Equipment Regulations 1998, Environmental Act 1995. Also see LO1.6 and LO2.1.

Learning Outcome 5. Understand the values of the organisation

5.1 Identify the values of the organisation e.g. policies and practices for customer care, promotion of environmental good practice or equality of opportunity relevant policies and procedures within the organisation relevant to dealing with customers or the public e.g. customer charter, mission statements. Examples of how environmental good practice or equal opportunities is promoted, e.g. organisational policies and procedures, team meetings, memos, information sheets. Organisational websites if available.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes 1 and 2. Delivery of these learning outcomes could be generated by observations during natural work activities, use of witness testimonies and other suitable forms of diverse evidence.
These should be assessed to ensure the candidates are competent for these learning outcomes.

Prior to, during and after completion of establishment work photographs or video could be taken to provide evidence of progress.

Learning Outcomes 3, 4 and 5 Delivery of these learning outcomes is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of communication and witness testimony, answering oral or written questions, assignments or internet research cross referenced to the knowledge evidence.

Learners who have not yet completed the necessary training or certification to use machinery, equipment and materials must be supervised by a suitably qualified person

It is important that practical assessment activities are supervised appropriately

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Centres will need to devise assessment tasks which should be practical where possible e.g. Learning Outcomes 1, and 2 link together and can be assessed practically by observation or by generation of diverse evidence. These could also link to Learning Outcomes 3, 4, and 5 to allow knowledge evidence to be gathered during the practical activities

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include some of the following

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes/diaries/reflective accounts
- Worksheets/job sheets/planting plans/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory and safety checklists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Minimum requirements when assessing this unit

Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

Useful sources of reference

- http://www.instituteofcustomerservice.com/default.aspx This site is a great source of reference for all learning outcomes
- The Health and Safety Executive website http://www.hse.gov.uk/ has useful information about identifying what health and safety legislation applies to areas of work and lists of Acts, Statutory instruments and legal publications
- The Office of Public Information website http://www.opsi.gov.uk has year by year lists of UK Acts and Statutory Instruments
- The website http://www.netregs.gov.uk/ provides helpful guidance about environmental regulations.
- The Environment Agency website http://www.environment-agency.gov.uk provides guidance about environmental permitting, pollution and emissions, waste and water etc
- The Code of Practice - Protecting our Water, Soil and Air has a useful list of references in Section 9 a useful list of references in Section 9

See Skills and Education Group Awards website for further information

Work With and Consult the Local Community

Unit Reference	**L/502/3168**
Level	**2**
Credit Value	**3**
Guided Learning Hours	**23**
Unit Summary	The aim of this unit is to provide the learner with the knowledge and skills required to work with the local community and community issues. This may be through specific projects, such as running a local bat group, or becoming involved in longer term projects such as helping to set up and run a community wildlife area. The emphasis is upon building a relationship with local people through consultation and co-operation. The object is not only to spread environmental awareness, but also to foresee possible areas of conflict, and to find solutions agreeable to all. Consultation must include an element of education and awareness raising for it to be effective
Learning Outcomes (1 to 2) ***The learner will***	**Assessment Criteria (1.1 to 2.6)** ***The learner can***
1. Work with and consult the local community	**1.1** Identify opportunities for formal and informal consultation and co-operation with the local community, seeking specialist advice where appropriate **1.2** Establish and maintain contacts with relevant individuals and organised groups within the local community

	1.3 Engage with individuals and groups within the local community to develop understanding and awareness as part of consultation **1.4** Use appropriate communication methods to seek the opinions of individuals and groups within the local community
2. Understand the importance of working with and consulting the local community	**2.1** Describe the types of opportunities available for co-operation and consultation with the local community **2.2** Describe the ways in which contact with the local community can be established **2.3** Describe the reasons for and importance of consultation with the local community in gathering feedback **2.4** Describe the likely impact of the organisation's work on the local community **2.5** Outline why it is important that those you are consulting with understand the issues which they are being consulted on **2.6** Describe the methods of gauging community opinion and the importance of providing feedback

Supporting Unit Information

L/502/3168 Work with and consult the local community - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means exclusive

LO1 is the key area of competence for this unit

Learning Outcome 1. Work with and consult the local community

1.1 Identify opportunities for formal and informal consultation and co-operation with the local community, seeking specialist advice where appropriate formal consultation and co-operation through formal meetings, correspondence (mail, email) with elected representatives (e.g. councillors), formal consultative bodies (e.g. local councils, Countryside Council for Wales, National Park (NP) and Area of Outstanding Natural Beauty (AONB) boards), land-owners or managers, with local interest groups (e.g. Bat groups, conservation groups, action groups, funding bodies, colleges and schools) or stakeholders. Surveys and fact finding by questionnaire, formal interview, feedback after events or proposals (written or verbal), complaints and other issues raised by stakeholders

Informal consultation by conversation (face to face or telephone), site visits, correspondence received, ideas boards, suggestion boxes, blogs, Specialist advice from managers, specialists with the organisation, consultants and advisers, consultative bodies (e.g. English Nature, CCW, Local boards and councils)

1.2 Establish and maintain contacts with relevant individuals and organised groups within the local community consultations and dialogues with relevant organisations (refer to LO1.1 for range)

established (e.g. by response to informal approach, need for advice and support, or as a statutory requirement, existing links on other matters) and maintained (e.g. by exchange of contact details, formal meeting schedules, action planning, exchange of information, formal agreement)

1.3 Engage with individuals and groups within the local community to develop understanding and awareness as part of consultation local community to include visitors (groups, family, individuals), local residents, local groups and clubs (e.g. guides, scouts, gardening groups, local action groups), local businesses, staff and volunteers Engagement by casual meeting and discussion, attendance at events, formal consultation and feedback, Refer to LO1.1 and LO1.2

1.4 Use appropriate communication methods to seek the opinions of individuals and groups within the local community communication by face to face dialogue (one to one, group), talks and presentations, formal meetings, telephone including mobiles and tele-conferences, electronic (e.g. email, text, blogs, social networking), local newspapers, radio and newsletters

LO2 is the key area of knowledge for this unit

Learning Outcome 2. Understand the importance of working with and consulting the local community

2.1 Describe the types of opportunities available for co-operation and consultation with the local community refer to LO1.1. for details

2.2 Describe the ways in which contact with the local community can be established. refer to LO1.2 for details

2.3 Describe the reasons for and importance of consultation with the local community in gathering feedback reasons – statutory requirement (e.g. for planning consent or conditions, funding), to identify stakeholder requirements and aspirations as part of the planning or development process, for monitoring impact, to monitor effectiveness of project or management process, to avoid conflicts and respond to difficulties arising.

Importance – e.g. to ensure compliance with requirements (statutory, organisational policy, funding), to garner public support, to avoid adverse publicity, to seek broader ideas, to promote inclusiveness and ownership of projects

2.4 Describe the likely impact of the organisation's work on the local community likely impact will depend on project or management process but could include improvement to or loss of access or amenity,

harm to or enhancement of the environment (e.g. range or number of species, views, additional or reduced pollution, additional features and access routes), increased visitor numbers with additional problems of noise, parking, dog fouling, reduction of anti-social activities (e.g. vandalism, dumping), better education facility, improved local communication.

2.5 Outline why it is important that those you are consulting with understand the issues which they are being consulted on
understanding of the issues – proposals, eventual outcomes, short-term impacts, benefits, disadvantages, impacts, time-scales, who is involved, what will happen to information supplied, confidentiality,
To avoid wasting time, to ensure you get the right data at the right time, avoid negative feedback and misleading responses, to identify opportunities for further dialogue and monitoring, to identify supportive and antagonistic individuals or groups within the community

2.6 Describe the methods of gauging community opinion and the importance of providing feedback community opinion gathered by direct dialogue (formal or informal) with groups or individuals, use of questionnaires, suggestion boxes, blogs, usage levels
Opinion gauged by recording all responses, identifying specific issues raised, numerical assessment of respondents to questionnaires, or data provided by other means (refer to LO1.1 for details). Analysis by project manager or staff, specialist within the organisation, consultant
Feedback by – dialogue (formal or informal) display boards and attending events, information boards, talks and presentation, newsletters, local newspapers, meeting minutes and action plans, delegate reports. Refer to LO1.3 and LO1.4 for further details

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners.

The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcome 1
Delivery of this learning outcome is by supervised activities working with and consulting local communities giving learners the opportunity, first to practice

the various tasks involved and then to be observed competently doing each task to demonstrate achievement of the assessment criteria.

Learning Outcome 2
Delivery of this learning outcome is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of working with and consulting local communities and witness testimony, answering oral or written questions, assignments or internet research cross referenced to the knowledge evidence

It is important that practical assessment activities are supervised appropriately

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Centres will need to devise assessment tasks which should be practical where possible e.g. Learning Outcomes 1 and 2 link together and can be assessed practically by observation or by generation of diverse evidence allowing knowledge evidence to be gathered during the practical activities

It is important that practical assessment activities are supervised appropriately

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Observation reports
- Oral/written questions and answers
- Reports/notes
- Meeting minutes
- Delegate reports

- Diaries
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Additional Information

Useful sources of reference

- The Health and Safety Executive website http://www.hse.gov.uk/ has useful information about identifying what health and safety legislation applies to areas of work and lists of Acts, Statutory instruments and legal publications
- National Federation of Biological Recording website http://www.nbn-nfbr.org.uk/nfbr.php lists all Local / Biological Recording Centres - Useful to find local Biodiversity Action Plans
- The Natural England website http://www.naturalengland.org.uk/ and Countryside Council for Wales www.ccw.gov.uk/ have information about countryside protection schemes and land management for the benefit of wildlife, landscape. Also licences and enforcement
- Local Authority websites for Local Planning Authority permissions and LBAP's
- Visit Department for Environment, Food and Rural Affairs website www.**defra**.gov.uk or Welsh Assembly Government countryside website www.**countryside**.wales.gov.uk/ *for* up to date information about legislation, codes of practice and consultations in the horticultural / agricultural sectors
- The Environment Agency website http://www.environment-agency.gov.uk provides guidance about environmental permitting, pollution and emissions, hazardous waste, water etc
- Managing Habitats for Conservation by William J Sutherland and David A Hill
- BTCV Books on-line http://handbooks.btcv.org.uk/handbooks/index

See Skills and Education Group Awards website for further information

Encourage Involvement in Recycling

Unit Reference	**H/502/3189**
Level	**2**
Credit Value	**3**
Guided Learning Hours	**23**
Unit Summary	The aim of this unit is to provide the learner with the knowledge and skills required to encourage others to become involved in recycling
Learning Outcomes (1 to 3) ***The learner will***	**Assessment Criteria (1.1 to 3.1)** ***The learner can***
1. Be able to promote recycling to others	**1.1** Promote recycling to at least two of the following groups • colleagues • visitors • children and young people • volunteers • community / environmental groups • local businesses **1.2** Promote the reduction, reuse and recycling of at least three of the following materials • paper • card • glass • plastic • aluminium • other metals • compostable materials • textiles • electrical goods

	• wood • furniture **1.3** Use appropriate methods to communicate information on recycling • verbal • personal note • leaflets • newsletter • stickers **1.4** Encourage others to understand that reduction, reuse and recycling are part of the sustainable use of the planet's resources
2. Understand the need to encourage and involve people in recycling	**2.1** Explain the importance of the sustainable use of the planet's resources **2.2** Explain the 'Reduce, Reuse, Recycle' waste management hierarchy **2.3** Outline the roles of local and national authorities in meeting national and local recycling targets **2.4** Explain the range of different methods that may be used in recycling
3. Know the implications of this work in respect of health and safety, waste legislation and regulations	**3.1** Describe the implications for this work of health and safety, environmental and waste legislation and regulations

Supporting Unit Information

H/502/3189 Encourage involvement in recycling - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

Learning Outcome 1. Be able to promote recycling to others

1.1 Promote recycling to at least two of the following groups

Colleagues e.g. lunchtime short seminars on recycling topics, recognise/reward achievable ideas - making recycling more convenient, using more recycled products.

Visitors e.g. use well placed signs asking visitors to recycle with the recycling method immediately available - bins for plastic bottles, separate rubbish bins.

Children and young people e.g. ensuring safety, make up a bag full of different items of rubbish, ask children to identify what they would normally throw away, if there is anything that could be reused - stimulate imaginative reuse, what could be recycled, ask children what happens to the rubbish if it is not recycled.

Volunteers e.g. encourage volunteers to recycle waste vegetation by composting or shredding - use as a mulch, dead branches/logs used to provide habitat piles. **Community/environmental groups** e.g. use newspaper articles/local radio to involve in local collection days - aluminium cans/foil to sell into cash for cans schemes - money raised for local charity causes.

Local businesses e.g. leaflet drop to local businesses informing where different materials could be recycled, financial/energy saving benefits to the business

1.2 Promote the reduction, reuse and recycling of at least three of

the following materials: paper, card, glass, plastic, aluminium, other metals, compostable materials, textiles, electrical goods, wood, furniture, for example: **Paper** - reduction e.g. communicate electronically/do not print, if printing use both sides**.** Reuse e.g. use recycled paper, use for packing. Recycle e.g. shred and recycle paper onto compost heap or use for animal bedding if appropriate paper/ink. **Glass** - reduction e.g. return bottles if possible - milk bottles. Reuse e.g. bottles and jars can be used again for a variety of purposes - home-made jams/pickles, vases, holding small change. Recycle e.g. clean bottles and jars and remove tops prior to recycling in bottle banks - separate out glass colours. **Electrical goods** - reduction e.g. choose items with a long life span, hire or borrow items rather than purchasing new. Reuse e.g. check if items can be mended when they are broken, check for return schemes. Recycle e.g. swop items that are no longer needed for useful items. Local Authority recycling centres often accept electrical items.

1.3 Use appropriate methods to communicate information on recycling.

- **Verbal** e.g. talk to individuals/small groups, grab attention using thought provoking details about future consequences of not living more sustainably - ref LO1.4, give details of what needs to be done, how, personal benefits of taking action, contacts
- **Personal note** e.g. to a colleague or business leader to inform them of a recycling opportunity - how to get involved, benefits of good publicity
- **Leaflets** e.g. promoting exchange**/**swopping/donation schemes for recyclable items
- **Newsletter** e.g. to update technical details - methods of ensuring an effective composting process, organisation progress, local groups and businesses involved, recognition/awards achieved, new technologies/equipment being used.
- **Stickers** e.g. praise stickers at school or to provoke thought about recycling.

1.4 Encourage others to understand that reduction, reuse and recycling are part of the sustainable use of the planet's resources give learners opportunities to research on the internet/books/audio visual material to identify attention catching facts/figures on aspects of sustainability - population growth, raw material usage, amount of waste produced in the UK annually. Encourage others e.g. by incorporating these facts/figures in the communication methods used in LO1.3 to emphasise the importance of sustainability, identify real benefits to others - both direct and

indirect, show how easy it can be to reduce, reuse and recycle - ref to LO2.2 for the waste management hierarchy.

Learning Outcome 2. Understand the need to encourage and involve people in recycling

2.1 Explain the importance of the sustainable use of the planet's resources consider e.g. human demands on planet's resources, likely outcomes if no changes are made, how is sustainable use of resources important in this context. Demands on the planet's resources e.g. increasing human population, expectations of developed and developing nations for water, food, energy, housing and material possessions. Likely outcomes e.g. increased use of raw materials will eventually exhaust their availability, energy production using fossil fuels contributes to global warming, increased need for space to dispose of waste products, all lead to depletion of the world's ecosystems upon which humans depend. Importance e.g. reduces rate of depletion of raw materials, reduces energy usage, reduces need to find space for waste product disposal. Over longer term may contribute significantly to on-going survival, quality of life, wellbeing of human race.

2.2 Explain the 'Reduce, Reuse, Recycle' waste management hierarchy consider priority e.g. waste management hierarchy is in order of least to most adverse impact on environment so reduce would be first choice, reuse second, recycle third with disposal the undesirable option. Using specific examples - ref LO1.2, explain what each term means e.g. reduce refers to considering first if a resource is really needed, if yes then what is minimum amount of resource fit for purpose; reuse refers to using a resource more than once for same/different purposes on subsequent occasions; recycle refers to extracting materials from used resources and using these to make up new resources.

2.3 Outline the roles of local and national authorities in meeting national and local recycling targets role local authorities - local targets e.g. manage/maintain waste collection, segregation, treatment infrastructures including recycling/ composting – using contractors as necessary; inform, encourage, engage the public to maximise recycling/composting, minimise waste sent to landfill sites. National targets e.g. meet statutory targets for recycling/reducing disposal in landfill sites especially biodegradable waste. Role national authorities – local reduce, re-use, recycle waste; foster development of recycling infrastructure at local level including development of markets for materials recovered. National targets e.g. to implement regulation to

reduce waste overall/amount sent to landfill; target activity towards areas of greatest environmental and economic need/scope for improvement. National authorities involved e.g. Defra, WRAP, Environment Agency.

2.4 Explain the range of different methods that may be used in recycling methods depend upon the specific materials to be recycled e.g. garden/kitchen waste/shredded paper/used animal bedding may be recycled by composting, systems are available to compost all kitchen waste, building materials may be taken to materials reclaim/salvage yards, some electrical goods may be returned to the manufacturer, household items may be donated to charity shops/organisations or sold on at car boot sales, some materials have returns systems - milk bottles, cash for materials schemes - cans and both of these may increase in future, local authority or supermarket recycling banks for specific materials such as glass, clothing, paper, local authority sites may also cater for more specific recycling - oil, electrical equipment, wood, some schemes collect materials such as printer cartridges/mobile phones and give donation to charity/schools, paint reuse schemes, reverse vending machines for plastic, wood can be recycled to make household or garden furniture or shavings used in compost.

Learning Outcome 3. Know the implications of this work in respect of health and safety, waste legislation and regulations

3.1 Describe the implications for this work of health and safety, environmental and waste legislation and regulations in relation to collection, sorting and processing of materials for recycling consider health and safety implications e.g. need for information, instruction, training, certification of competence; risk assessment, manual handling, hygiene, workplace transport, first aid provision, reporting and recording requirements. Consider environmental and waste implications e.g. need to recover/dispose of waste safely with respect to human health/environment; the reduce, reuse, recycle' waste management hierarchy; targets for collecting/recycling - specific streams of waste such as packaging, oil, batteries etc. prevention/reduction of landfill/biodegradable waste.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners,

including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes (LO) 1 and 2
Delivery of these learning outcomes is by supervised practical operational work giving learners the opportunity, first to practice the various tasks and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

Learning Outcomes (LO) 3
Delivery of this learning outcomes is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of operational work and witness testimony, answering oral or written questions, assignments or internet research cross referenced to the knowledge evidence.

It is important that practical assessment activities are supervised appropriately.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Minimum requirements when assessing this unit
Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

See Skills and Education Group Awards website for further information

Promote Responsible Public Use of the Environment

Unit Reference	**H/502/3161**
	2

Level	
Credit Value	**4**
Guided Learning Hours	**30**
Unit Summary	The aim of this unit is to provide the learner with the knowledge and skills required to safeguard members of the public and the environment
Learning Outcomes (1 to 4) ***The learner will***	**Assessment Criteria (1.1 to 4.1)** ***The learner can***
1. Be able to safeguard members of the public and others	**1.1** Maintain the safety of the public and others during visits to the site **1.2** Work safely encouraging everyone throughout all activities to follow current legislation, codes of practice, organisational policies and procedures
2. Be able to safeguard the environment	**2.1** Provide information and advice to encourage members of the public to use the site in a way which is consistent with its purpose and condition **2.2** Identify visitors and others who may cause a threat and take the appropriate action to minimise any damage or risk, covering two of the following • to the site and its contents • to flora and fauna • to own personal health and safety • to other people's health and safety
3. Know how to safeguard	**3.1** Outline organisational codes of practice and requirements about the care of visitors and other members of the public, e.g. supporting people in

members of the public and the environment	terms of their safety and welfare by providing information and advice **3.2** State the needs of the public and others, and when to influence their use of the site and offer advice or help **3.3** State why the organisation may have certain access policies or specific areas for public access **3.4** Explain the importance of balancing the needs of the site with the needs of the public and others **3.5** Describe the features of the site and the effects the public and others may have on it **3.6** Outline threats the public may pose to • the site and its contents • flora and fauna • own personal health and safety • other people's health and safety **3.7** Explain how to handle people who cause a threat to sites in an effective, safe and courteous way
4. Know relevant health and safety legislation and environmental good practice	**4.1** Outline the current health and safety legislation, codes of practice and any additional requirements

Supporting Unit Information

H/502/3161 Promote responsible public use of the environment - Level 2

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

LO1 and LO2 are the key areas of competence for this unit

Learning Outcome 1. Be able to safeguard members of the public and others

1.1 **Maintain the safety of the public and others during visits to the site.** Signs established to manage access in acceptable directions, information boards to encourage careful use. Members of public and others to be instructed to stay on recognised walkways. Signage in place to warn members of the public and others of any work in progress. Instructions given clearly and any dangers identified. Examples could be deep waters or unprotected edges and any stock or wildlife known to be present in the area.

1.2 **Work safely encouraging everyone throughout all activities to follow current legislation, codes of practice, organisational policies and procedures** Work activities carried out consistently with current legislation e.g. Health and Safety, Environmental Protection and Wildlife and Countryside Acts, COPs as applicable, risk assessment. Additional requirements such as vaccination against tetanus, precautions against ticks etc. Work in a way that minimises risk to self/others and the environment (e.g. follow instructions, refer to LO 1.1, stop work if any unsafe act seen).
Fence off any areas of danger or areas that require protection.
Risk assessments in place.
Ensure that the correct PPE is worn for relevant tasks such as Eye Protection (safety goggles) ear protection (Ear defenders) safety boots and gloves etc.

Minimise disturbance by using hand tools rather than powered tools. Ensure correct disposal of differing waste according to type. Organic - grass cuttings, timbers or non-organic - plastics or fuel wastes

Learning Outcome 2. Be able to safeguard the environment

2.1 Provide information and advice to encourage members of the public to use the site in a way which is consistent with its purpose and condition provide information and advice to encourage members of the public to use the site in a way which is consistent with its purpose and condition. Signs in place to identify site status such as SSSI or SAC. Refer to L.O 1.1.

2.2 Identify visitors and others who may cause a threat and take the appropriate action to minimise any damage or risk identify visitors (authorised /invited) and others(uninvited /trespassers) who may cause a threat and take the appropriate action to minimise any damage or risk, covering two of the following

- **visitors to the site** and its contents e.g. visitors to keep to authorised areas and not to disturb or remove any contents. Out of control dogs.
- **to flora and fauna** e.g. carefully planning site access, correct timing of cutting to avoid nesting birds / favour identified target species, grazing and / or browsing with species and stocking densities to achieve conservation aims, working in accordance with local biodiversity plans, awareness of rare species
- **to own personal health and safety** e.g. correct choice and use of PPE refer to L.O.1.2
- **to other people's health and safety** e.g. ensure others have correct PPE and keep others away by correct signage and warnings refer to L.O.1.1

LO3 and LO4 are the key areas of knowledge for this unit

Learning outcome 3. Know how to safeguard public and others

3.1 Outline organisational codes of practice and requirements about the care of visitors and other members of the public, e.g. supporting people in terms of their safety and welfare by providing information and advice (leaflets ,spoken word)

3.2 State the needs of the public and others, and when to influence their use of the site and offer advice or help e.g. public access, grazing rights etc., timings to prevent and minimise damage to resident stock and plant species

3.3 State why the organisation may have certain access policies or specific areas for public access e.g. protected sites such as SSSI, SAC etc. sensitive times such as known breeding times or close seasons and times when flora and fauna at most vulnerable refer to L.O.2.2

3.4 Explain the importance of balancing the needs of the site with the needs of the public and others e.g. local usage such as grazing rights, rights of way, migratory animals and birds, minimal disturbance to site, emergency procedures

3.5 Describe the features of the site and the effects the public and others may have on it e.g. SSSI, SAC, other designated area. Sensitive areas and any damage to rare plants or the balance of the site and human impact by indiscriminate waste disposal or other intrusive activities.

3.6 Outline threats the public may pose to

- the site and its contents-refer to L.O. 2.2
- flora and fauna- refer to L.O.2.2
- own personal health and safety- refer to L.O.2.2
- other people's health and safety- refer to L.O.2.2

3.7 Explain how to handle people who cause a threat to sites in an effective, safe and courteous way e.g. be firm but fair, be polite, call for help if required. Note car registration numbers and report to appropriate person such as supervisor or site controller. Explain your own legal rights and responsibilities.

Learning Outcome 4. Know relevant health and safety legislation and environmental good practice

4.1 Outline the current health and safety legislation, codes of practice and any additional requirements

Health and Safety e.g. Health and Safety at Work Act, Management of Health & Safety at Work Regulations, Provision and Use of Work Equipment Regulations

Environmental Protection e.g. Environmental Protection Acts covering waste disposal Wildlife and conservation e.g. Wildlife and Countryside Act, Conservation (Natural Habitats &c.) Regulations (as amended), Habitats Directive

Health and Safety Executive guidance - Cattle and public access in England / Wales

Additional requirements including e.g. LBAP's Natural England and Countryside Council for Wales notifications e.g. SSSI's (and SPA's SAC's) - notification of listed operations. Environment Agency notifications e.g. activities affecting watercourses, groundwater

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes 1 and 2
Delivery of these learning outcomes is by assessment of competence for those who have experience in this area of work or by supervised practical environmental management work giving learners the opportunity, first to practice the various tasks involved and then to be observed correctly doing each task to demonstrate competence in each of the assessment criteria.

Prior to, during and after completion of environmental habitat management work photographs or video could be taken to provide evidence of progress.

Learning Outcomes 3 and 4
Delivery of these learning outcomes is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of environmental habitat management activities and witness testimony, answering oral or written questions, assignments or internet research cross referenced to the knowledge evidence

Learners who have not yet completed the necessary training or certification to use machinery, equipment and materials must be supervised by a suitably qualified person

It is important that practical assessment activities are supervised appropriately

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Centres will need to devise assessment tasks which should be practical where possible e.g. Learning Outcomes 1and 2 link together and can be assessed practically by observation or by generation of diverse evidence. These could also link to Learning Outcomes 3 and 4, to allow knowledge evidence to be gathered during the practical activities

It is important that practical assessment activities are supervised appropriately

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include some of the following

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes/diaries/reflective accounts
- Worksheets/job sheets/planting plans/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory and safety checklists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

Minimum requirements when assessing this unit

Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

Useful sources of reference

- The Health and Safety Executive website http://www.hse.gov.uk/ has useful information about identifying what health and safety legislation applies to areas of work and lists of Acts, Statutory instruments and legal publications
- National Federation of Biological Recording website http://www.nbn-nfbr.org.uk/nfbr.php lists all Local / Biological Recording Centres - Useful to find local Biodiversity Action Plans
- The Natural England website http://www.naturalengland.org.uk/ has information about countryside protection schemes and land management for the benefit of wildlife the public and landscape. Also licences and enforcement
- Local Authority websites for Local Planning Authority permissions and LBAP's
- County Council websites for historic, environmental and archaeological services
- Internal Drainage Board websites to check compliance with by-laws
- The Department for Environment, Food and Rural Affairs website has up to date information about legislation, codes of practice and consultations in the horticultural / agricultural sectors
- The Environment Agency website http://www.environment-agency.gov.uk provides guidance about environmental permitting, pollution and emissions, hazardous waste, water etc
- Horticultural Code of Practice - Helping to prevent the spread of invasive non-native species

- The Code of Practice - Protecting our Water, Soil and Air has a useful list of references in Section 9
- BTCV Footpaths, Fencing and Dry Stone Walling - practical handbooks

See Skills and Education Group Awards website for further information

Involve People in Community Recycling

Unit Reference	**T/502/3231**
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 involve groups in community recycling
Learning Outcomes (1 to 3) ***The learner will***	**Assessment Criteria (1.1 to 3.1)** ***The learner can***
1. Be able to involve groups within the community in a recycling project	**1.1** Clearly explain their organisation's community recycling objectives and the ways in which communities can become involved **1.2** Actively involve at least three of the following groups within the community in their recycling project • community groups • less able • children and young people • volunteers • environmental groups • local businesses **1.3** Encourage groups within the community to use appropriate methods of waste reduction • reduction • re-use • recycling

	1.4 Assist community groups in identifying outlets for at least three of the following unwanted materials • paper • card • glass • plastic • aluminium • other metals • compostable materials • textiles • electrical goods • wood • furniture **1.5** Provide the following types of information and guidance to groups within the community • information on recycling • information relating to your organisation • referral to others with greater expertise in community recycling
2. Understand how to involve people in community recycling	**2.1** Outline the range of groups that exist within a community and their respective objectives • community groups • less able • children and young people • volunteers • environmental groups • local businesses **2.2** Describe organisational procedures for promoting community recycling **2.3** Describe how to involve groups within the community in your recycling project **2.4** Describe how to identify waste reduction needs

	2.5 Summarise the various outlets that may be available **2.6** Outline the sources of information and guidance on community recycling
3. Understand the implications for work in respect of health and safety, waste legislation and regulations	**3.1** Describe the implications for the work of health and safety, environmental and waste legislation and regulations

Supporting Unit Information

T/502/3231 Involve people in community recycling - Level 3

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means all inclusive

Learning Outcome 1. Be able to involve groups within the community in a recycling project

1.1 Clearly explain their organisation's community recycling objectives and the ways in which communities can become involved recycling objectives e.g. delivery of environmental/social/educational benefits whilst maintaining financial sustainability and operating on a not for profit basis; clarity may be assisted if set out in SMART form - Specific, Measureable, Achievable, Realistic, Timed. Explain e.g. verbally to community groups by giving workshops, talks or in written form - leaflets, posters, newsletters. Clearly e.g. keep messages simple, design message with target audience/objectives in mind, use facts and figures for impact, explain what needs to be done, when, where. Benefits - community/environment. Community involvement e.g. supply of materials for re-use or recycling, assisting with organisation or skills/expertise, help getting message across, buying products of recycling - compost or for re-use - paint/furniture.

1.2 Actively involve at least three of the following groups within the community in their recycling project: Community groups, Less able, Children and young people, Volunteers, Environmental groups, Local businesses actively involve e.g. explain - refer to LO1.1, arrange pick-up, organise activity - allocate jobs according to skills/abilities, explain/show individuals what they need to do, do a risk

assessment and inform individuals, provide PPE/identification, thank/celebrate/congratulate participation. **Community groups** e.g. youth/crime prevention/rambling/natural history / heritage / allotment/residents groups etc. Actively involve e.g. residents in supply of materials to be re-used/recycled, youth/crime prevention - collection/ delivery and/or painting/carpentry work to recycle unused paints or used furniture. **Less able** depending on the nature of any impairment e.g. take telephone calls in response to promotion campaigns, to seek sponsorship, to organise packing/storage of materials to be recycled, to carry out leaflet drops. **Local businesses** e.g. use of company meeting room - seminars/workshops, expertise - financial/to chair meetings, storage/parking space, production of leaflets/newsletters in return for publicity, sponsorship.

1.3 Encourage groups within the community to use appropriate methods of waste reduction encourage e.g. inform groups why reduction, re-use and recycling are necessary on a local/national/global scale, benefits to community now and children in future - return of usable product, job/volunteering opportunities, development of community spirit, change of attitudes etc. money raising. **Reduction** e.g. choose items that will have a long life span, hire, share or borrow items rather than purchasing new, use what is purchased - food/paint.

Re-use e.g. check if items can be mended when they appear to be broken, check for return schemes, set up a community refurbishment scheme using good parts taken from old items such as bikes/furniture - sell back into community/for charity or sell parts - ebay, check legal issues. **Recycling** e.g. use rubble for hard core, kitchen/garden waste to make compost for garden/allotment.

1.4 Assist community groups in identifying outlets for at least three of the following unwanted materials: Paper, Card, Glass, Plastic, Aluminium, Other metals, Compostable materials, Textiles, Electrical goods, Wood, Furniture, for example:

- **plastic** e.g. margarine tubs/drinks or shampoo bottles - home recycling bin, local recycling centre, local food chain store recycling bins, street car parks
- **textiles** e.g. donate to local charity shops or organisations that send clothes to other countries, find ways to sell clothes such as jumble/car boot/garage sales - proceeds to charity, local recycling centre, local food chain store recycling bins
- **furniture** e.g. contact the Furniture Re-use Network, Starter Packs Association

Assist community groups e.g. provide recycling directory or direct

towards appropriate websites such as recyclenow, freecycle, lovefoodhatewaste etc.

1.5 Provide the following types of information and guidance to groups within the community: information on recycling e.g. types of recyclable materials, where, storage/collection/transport methods, preparation of materials useful contacts. Ref to LO1.1, LO1.4. **Information relating to your organisation** e.g. status - charity/not for profit, aims/objectives, what is/is not being collected and why, area covered by project, collection times, drop off sites, success stories, contact details. **Referral to others with greater expertise in community recycling** e.g. local council waste management teams, other local/regional recycling organisations, consultants, ref LO2.6.

Learning Outcome 2. Understand how to involve people in community recycling

2.1 Outline the range of groups that exist within a community and their respective objectives refer to LO1.2 - Community Groups. Community groups. Range e.g. heritage / allotment/residents/rambling groups. Objectives e.g. environmental, social benefits, employment, charitable. **Less able** range e.g. wheelchair users, hearing/sight/learning deficiencies. Objectives e.g. social interaction, fulfilment, opportunities to get involved. **Children and young people** range e.g. school groups, youth clubs, scout/guide. Objectives e.g. to protect the world they will inherit, learning/development. **Volunteers.** Range e.g. conservation - BTCV, canal restoration, recycling, gardens**.** Objectives e.g. skills development, CV building, helping others/environment. **Environmental groups.** Range e.g. Friends of the Earth, RSPB, and Wildlife Trusts. Objectives e.g. species protection, biodiversity, develop green economy. **Local businesses** range e.g. shops - bakers, garages, offices, garden centres. Objectives e.g. profit, good publicity, efficient disposal of waste materials.

2.2 Describe organisational procedures for promoting community recycling promotion activities e.g. mailings, leaflet drops, newsletters, public demonstrations/exhibitions, newspaper articles, press/local radio releases. Organisational procedures for e.g. identifying target audience, developing message, deciding media to be used, producing the materials - in house - leaflets or outside expertise - posters, authorisation/approval of message/materials, timing of release and distribution of materials, receipt of incoming enquiries, follow up actions - clear understanding of responsibilities.

2.3 Describe how to involve groups within the community in your recycling project e.g. effective initial market research - recycling

wants/needs of local groups, barriers to this happening, other expectations; ensure community/target groups are represented in/have a say in organisation's decision making/working structures, identify group objectives for participating, ref to LO2.1, e.g. good publicity for businesses and identify cost effective ways to provide - sponsored by statements/logos on leaflets/vehicles; provide incentives - discounted access to re-usable/recycled items, opportunities to develop new skills; ensure convenience - location of drop off sites for materials/timing of collections; acknowledge/thank supporters and celebrate success.

2.4 Describe how to identify waste reduction needs identify, quantify and cost what is being used e.g. in households - food, clothing, electrical goods; or in a manufacturing business - raw materials and in both situations electricity, water. Identify, quantify and cost what is being wasted e.g. in the household - segregate uneaten food that is thrown away or in a manufacturing business - raw materials/reject products that are left after manufacturing, energy used to rework or on rejected products, storage and transport. Record findings e.g. tabular or graphic forms to facilitate interpretation/decision making. Identify and rank the areas of greatest cost and prioritise these for first attention.

2.5 Summarise the various outlets that may be available refer to LO1.4.

2.6 Outline the sources of information and guidance on community recycling compile reference list of organisations for general/specific guidance e.g. local council waste management team, other local/regional recycling organisations - waste networks/directories, there are many excellent websites - good starting points are the Defra or Directgov websites, www.communitywaste.org.uk, www.wrap.org.uk or city websites such as Recycle for Greater Manchester; also identify books/case studies.

Learning Outcome 3. Understand the implications for work in respect of health and safety, waste legislation and regulations

3.1 Describe the implications for the work of health and safety, environmental and waste legislation and regulations in relation to collection, sorting and processing of materials for recycling consider health and safety implications e.g. need for information, instruction, training, certification of competence; risk assessment, manual handling, hygiene, workplace transport, first aid provision, reporting and recording requirements. Link implications back to key legislations/regulations e.g. Health and Safety at Work Act - responsibility to ensure own health and safety and of others who might

be affected by the activities, employer's responsibilities including provision of adequate training. Consider environmental and waste implications e.g. need to recover/dispose of waste safely with respect to human health/environment; the reduce, reuse, recycle' waste management hierarchy; targets for collecting and recycling - specific streams of waste such as packaging, electrical equipment, oil, batteries etc; prevention/reduction of landfill and biodegradable waste. Link implications back to key legislations/regulations e.g. EU Waste Framework Directive - covers waste collection, transport, recovery and disposal, defines waste, requires members of EU to recover/dispose of waste safely with respect to human health/environment, puts in place the reduce, reuse, recycle' waste management hierarchy, is supported by other directives/associated regulations.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes (LO) 1 and 2
Delivery of these learning outcomes is by supervised practical operational work giving learners the opportunity, first to practice the various tasks and then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

Learning Outcomes (LO) 3
Delivery of this learning outcome is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of operational work and witness testimony, answering oral or written questions, assignments or internet research cross referenced to the knowledge evidence.

It is important that practical assessment activities are supervised appropriately.

Methods Of Assessment

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

The assessment of some knowledge and understanding may take place in a non-work based environment e.g. training centre, however it must link directly to workplace performance and include performance evidence.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Minimum requirements when assessing this unit

Skills and Education Group Awards expects that staff will be appropriately qualified to assess learners against the outcomes and criteria within the units. Generally teaching staff should be qualified and/or vocationally experienced to at least a level above that which they are teaching.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Reports/notes
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Pictorial identifications
- Letters / emails seeking clarification / confirmation of understanding
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards web site).

Additional Information

Useful sources of reference

www.recyclenow.co.uk
www.uk.freecycle.org
www.lovefoodhatewaste.com
www.communitywaste.org.uk
www.wrap.org.uk

See Skills and Education Group Awards website for further information

Implement Environmental Good Practice at Work

Unit Reference	**Y/502/3285**
Level	**3**
Credit Value	**4**
Guided Learning Hours	**26**
Unit Summary	The aim of this unit is to provide the learner with the knowledge, skills and understanding required to implement and improve environmental good practice at work
Learning Outcomes (1 to 4) ***The learner will***	**Assessment Criteria (1.1 to 4.8)** ***The learner can***
1. Be able to encourage environmental good practice at work	**1.1** Ensure work is carried out efficiently, effectively and in a manner which minimises environmental damage **1.2** Ensure work is carried out in accordance with relevant legislation and organisational requirements with respect to environmental good practice **1.3** Take effective and prompt action in response to damage or to prevent damage to the environment **1.4** Provide clear and accurate information on environmental problems to others within the organisation

	1.5 Carry out monitoring activities in accordance with organisational requirements and environmental good practice
2. Be able to improve work activities to enhance environmental performance	**2.1** Identify ways of changing work activities for which they have responsibility in order to improve environmental performance **2.2** Evaluate the advantages and disadvantages of changes to work activities and make a decision on how best to proceed **2.3** Make changes to work activities in accordance with organisational and legislative requirements **2.4** Encourage interested parties to improve their environmental performance **2.5** Publicise the environmental benefits of changes in work activities **2.6** Monitor and evaluate the effectiveness of changes to work activities and use the findings to inform future practice
3. Understand how to encourage environmental good practice at work	**3.1** Explain ways of working which minimise environmental damage **3.2** Outline relevant legislation, regulatory and organisational requirements with respect to environmental good practice **3.3** Explain the action to take in response to environmental damage **3.4** Describe the correct methods for minimising waste and disposing of waste **3.5** Explain the information which should be provided regarding environmental good practice and the procedures involved

4. Understand how to improve work activities to enhance environmental performance	**4.1** Explain ways of working which maintain and improve environmental performance covering • identifying and optimising the environmental implications of resource • identifying and optimising the environmental impact of an organisation's work • identifying and optimising the environmental implications of an organisation's products or services • maintaining or increasing levels of recycling and re-use • meeting the environmental requirements of legislation • meeting the environmental requirements of interested parties **4.2** Describe the factors which may limit improvements to environmental performance **4.3** Describe benefits to an organisation and the environment of improved environmental good practice and performance **4.4** Outline the situations which may need preventative or remedial action as a consequence of work by an organisation **4.5** Explain the consequences of failing to maintain and improve environmental good practice **4.6** Explain ways of influencing and motivating others (internal and external) to improve environmental performance **4.7** Explain ways of monitoring and evaluating the effectiveness of improvements in environmental performance **4.8** Describe reasons for, and ways of publicising the benefits and results of improved environmental performance

Supporting Unit Information

Y/502/3285 Implement environmental good practice at work - Level 3

Indicative Content

To successfully achieve this unit, learners need to provide evidence that they have met the learning outcomes and assessment criteria for the unit.

Indicative content is offered as guidance to aid delivery of the unit and to set the learning outcomes and assessment criteria in context.

Note 1: Cross references are first to the Learning Outcome (LO) e.g. LO1 and then to the Assessment Criteria number listed e.g. LO1.3

Note 2: Examples are indicative of the range of considerations for assessment criteria but are by no means exclusive

LO1 and LO2 are the key areas of competence for this unit.

Learning Outcome 1. Be able to encourage environmental good practice at work

1.1 Ensure work is carried out efficiently, effectively and in a manner which minimises environmental damage.
Minimise environmental damage by e.g. working only in appropriate conditions, avoiding sensitive sites, habitats and wildlife, limiting access to site, reducing use of vehicles on site, selecting appropriate mechanisation
Efficiently and effectively e.g. at appropriate rate and according to time scale (e.g. according to contractual needs, to avoid nesting season), to meet specifications, by using mechanisation where possible, without wasting resource material
Ensure by e.g. setting effective plans in place, checking plans against specifications, communicating clearly to colleagues and other people involved in work, monitoring work in progress, changing plans in response to changing circumstances

1.2 Ensure work is carried out in accordance with relevant legislation and organisational requirements with respect to environmental good practice e.g. health and safety legislations (HSW74, RIDDOR), waste and pollution legislation, highways acts, access and ownership issues, planning and development consents,

conservation and protection status (Listed buildings, Conservation areas, National Parks, AONBs, Environmentally Sensitive Areas, SSSIs, Covenants, Tree Protection Orders, Scheduled Ancient Monuments, policies and protocols (e.g. recruitment, equal opportunities, purchasing and use of resources, reporting), local and national BAPs, management plans. **Ensure by** refer to LO1.1.

1.3 Take effective and prompt action in response to damage or to prevent damage to the environment

Damage e.g. harm to vegetation, erosion or compaction of soil, disturbance of nesting or feeding sites, harm to features (e.g. access routes and fixtures, buildings, earthworks, ponds, lakes, streams and other waterways), pollution (e.g. of roads and access routes by soiling, spillages, litter, run-off to waterways, waste materials), wastage of finite resource.

Prevention e.g. surveying and review of potential problems, planning and scheduling of work, training and instructions to staff and volunteers, monitoring and reacting to change (e.g. weather, ground conditions, presence of wildlife).

Actions after occurrence e.g. stop work to prevent further damage, take local action to contain damage (e.g. diverting or blocking water flow, use of absorbent material to mop up pollution), report to appropriate persons (e.g. Environment Agency, police, landowners, clients, managers, colleagues and volunteers), repair (e.g. rebuilding features, cleaning up roadways), restrict access to the area (e.g. by taping off, signage, personal intervention).

1.4 Provide clear and accurate information on environmental problems to others within the organisation

Information on environmental problems e.g. objectives and detail of planned operation (refer to LO1.1), policy and legislative requirements (refer to LO1.2), potential for harm, sites or features to be protected, damage occurring (e.g. presence of invasive species, soil damage and erosion, pollution of waterways, damage to vegetation, access routes or features, excessive use of non-renewable materials, waste generated from site), extent of damage, actions taken or to be taken in event of damage, (refer to LO1.3).

Others within the organisation e.g. line manager, project manager, field workers, volunteers, administrative and health and safety personnel.

1.5 Carry out monitoring activities in accordance with organisational requirements and environmental good practice

Organisational requirements refer to LO1.2

Environmental good practice e.g. activities to increase biodiversity,

protect important species and habitats (refer to LBAP) and meet requirements of specific designations (e.g. Nature Reserves, Nitrate Sensitive Zones, National Parks), avoiding potential harm (refer to LO1.3).

Monitoring recording of e.g. work carried out (including photographs), deliveries, use or wastage of materials, labour input, briefings, training and CPD, unscheduled events and occurrences, actions taken (refer to LO1.3)

Learning Outcome 2. Be able to improve work activities to enhance environmental performance

2.1 Identify ways of changing work activities for which they have responsibility in order to improve environmental performance

They = the candidate.

Responsibilities e.g. work to be carried out, reporting procedures, safeguarding of habitats and personnel,

Changes e.g. techniques (e.g. use of local methods, reducing numbers of workers on site, use of hand tools), materials to be used (e.g. on-site material, renewable, local or sustainably sourced), use of machinery and equipment (e.g. excavators to reduce time on site, tracked vehicles to reduce soil damage, electric or non-powered to reduce noise disturbance), timing of operations (e.g. avoiding unfavourable weather or ground conditions, seasons to avoid damage to vegetation, disturbance of breeding), additional training required, use of alternative personnel (e.g. trained staff, volunteers, contractors).

2.2 Evaluate the advantages and disadvantages of changes to work activities and make a decision on how best to proceed

Evaluate by e.g. review of records, tracking of progress against plans and schedules, site visits, team meetings, discussion with e.g. managers, clients, land-owners.

Advantages e.g. avoidance of environmental damage (refer to LO1.3), reduced hazard, reduced use of labour or materials, use of recycled or re-used materials, reduced cost, better compliance with objectives of project or requirements, avoidance of penalties (refer to LO1.2), improved skill-set within organisation,

Disadvantages e.g. increased costs, delays, need for additional training or finding alternative personnel, need to revise objectives, plans or schedules, contractual problems (e.g. non-delivery, penalties) loss of future opportunities to bid for work.

2.3 Make changes to work activities in accordance with organisational and legislative requirements

Requirements refer to LO1.2
Changes refer to LO2.1

2.4 Encourage interested parties to improve their environmental performance
Interested parties e.g. staff, volunteers, contractors, manager, clients
Improve environmental performance e.g. to prevent environmental damage (refer to LO1.3) or comply with legislation or organisational requirements,
Improve by e.g. changing working practice (refer to LO2.1)
Encourage by e.g. briefings, discussion, guidance, training, instruction, demonstration,

2.5 Publicise the environmental benefits of changes in work activities
Publicise to e.g. colleagues and volunteers, clients and potential clients, visitors and site users, community groups and individuals, funding providers and supporters,
Publicise by e.g. site visits, meetings and briefings, public notice boards (e.g. on-site or at other locations), exhibitions, audio visual displays, talks (illustrated) and public meetings, leaflets, posters, newsletters, use of media (e.g. radio, television, newspapers, internet),
Benefits e.g. improved biodiversity, protection of species, better access, educational; opportunities, compliance with statutory requirements, response to local action groups or public consultation.

2.6 Monitor and evaluate the effectiveness of changes to work activities and use the findings to inform future practice
Monitor and evaluate e.g. refer to LO1.5 and LO2.2
Work activities e.g. improvements to access routes and ancillaries (e.g. bridges, revetments, gates, stiles, signage), site clearance and replanting or natural regeneration, planting, improvements to waterways, providing information and educational material,
Future practice e.g. similar work on adjacent sites, further improvements of same site, better use of resources, better protection of habitats and wildlife, opportunities for community involvement,

LO3 and LO4 are the key areas of knowledge for this unit.

Learning Outcome 3. Understand how to encourage environmental good practice at work

3.1 Explain ways of working which minimise environmental damage refer to LO1.1

3.2 Outline relevant legislation, regulatory and organisational requirements with respect to environmental good practice refer to LO1.

3.3 Explain the action to take in response to environmental damage refer to LO1.3

3.4 Describe the correct methods for minimising waste and disposing of waste

Minimise by e.g. planning of ordering, storage and use of materials, using materials already on site, re-using and recycling

Disposal e.g. organic waste – unwanted plant material composted (unless the material poses a threat to habitats e.g. diseased material or invasive species).n Inorganic waste – wastes from servicing and maintenance of equipment disposed of in appropriate container; packing material and containers recycled or disposed of in appropriate container; inorganic waste is carefully controlled until disposed of through licensed contractor or local authority.

3.5 Explain the information which should be provided regarding environmental good practice and the procedures involved refer to LO1.1, LO1.4 and LO1.5.

Learning Outcome 4. Understand how to improve work activities to enhance environmental performance

4.1 Explain ways of working which maintain and improve environmental performance covering

- **Identifying and optimising the environmental implications of resource.** Refer to LO3.4.
- **Identifying and optimising the environmental impact of an organisation's work.** e.g. policies and strategies, use of environmental impact studies, planning of activities to minimise environmental damage - refer to LO1.1 and LO1.3
- **Identifying and optimising the environmental implications of an organisation's products or services** e.g. LO1.1, LO1.3, LO3.4, LO2.5 & LO2.6.
- **Maintaining or increasing levels of recycling and re-use** refer to LO3.4
- **Meeting the environmental requirements of legislation** refer to LO1.2 for range of legislation and policies. Refer to LO1.1 for range of work.
- **Meeting the environmental requirements of interested parties. Interested parties** e.g. clients, local authority, funding providers, land-owners.

4.2 Describe the factors which may limit improvements to environmental performance

Limits e.g. range and scale of work, effectiveness of work, ability to complete on time

Factors e.g. impact of weather or ground conditions, availability of appropriate resources (e.g. trained personnel, materials, equipment), access to sites (e.g. ownership, ground conditions, presence of sensitive habitats), funding for projects, permissions (e.g. felling, development, handling species), public opinion, lack of public support.

4.3 Describe benefits to an organisation and the environment of improved environmental good practice and performance

Environmental good practice refer to LO1.1 and LO2.5.

Benefits e.g. reputation, cost savings, better public image, opportunities to bid for other work,

4.4 Outline the situations which may need preventative or remedial action as a consequence of work by an organisation

Situations e.g. where actions have caused or might cause environmental damage (refer to LO1.3), changes on a site as a consequences of changes (e.g. ownership, use, access, invasive species, grazing, weather)

4.5 Explain the consequences of failing to maintain and improve environmental good practice refer to LO1.2 and LO2.2.

4.6 Explain ways of influencing and motivating others (internal and external) to improve environmental performance refer to LO2.4

4.7 Explain ways of monitoring and evaluating the effectiveness of improvements in environmental performance refer to LO1.1, LO1.5 and LO2.6.

4.8 Describe reasons for, and ways of publicising the benefits and results of improved environmental performance refer to LO2.5 and LO2.6.

Teaching Strategies And Learning Activities

Centres should adopt a delivery approach which supports the development of their particular learners. The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

Learning Outcomes (LO) 1 and 2

Delivery of these learning outcomes is by supervised practical operational work giving learners the opportunity, first to practice the various tasks and

then to be observed correctly doing each task to demonstrate achievement of the assessment criteria.

Prior to, during and after completion of practical operational work photographs or video could be taken to provide evidence of progress.

Learning Outcomes (LO) 3 and 4
Delivery of this learning outcomes is by generation of knowledge evidence which could be linked to the practical work e.g. by observation of operational work and witness testimony, answering oral or written questions, assignments or internet research cross referenced to the knowledge evidence.

Methods Of Assessment

Centres should adopt a delivery approach which supports the development of their particular learners.

The aims and aspirations of all learners, including those with identified special needs, including learning difficulties/disabilities, should be considered and appropriate support mechanisms put in place.

This unit will be internally assessed, internally and externally moderated via a learner's portfolio and other related evidence, against the unit outcomes and assessment criteria.

All learners must complete a portfolio of evidence that shows achievement of all the relevant learning outcomes and assessment criteria

Centres will need to devise assessment tasks which should be practical where possible e.g. Learning Outcomes 1 and 2 can be assessed practically by observation or by generation of diverse evidence and link to Learning Outcomes 3 and 4 to allow knowledge evidence to be gathered during the practical activities

It is important that practical assessment activities are supervised appropriately.

Evidence Of Achievement

Evidence presented to support achievement is not prescribed for each learning outcome. It **could** typically include

- Product evidence
- Observation reports
- Oral/written questions and answers
- Survey notes, data and reports
- Meeting reports, memos of meetings and telephone conversations
- Presentations and audio-visuals
- Worksheets/job sheets/workbooks
- Witness statements
- Taped evidence (video or audio)
- Photographic evidence
- Case studies/assignments/projects
- Interview/professional discussion
- Site risk assessment
- Tool / equipment inventory lists / maintenance schedules
- Minutes. Reports or feedback from meetings with groups or individuals
- Letters / emails with community groups or individuals
- Internet research / copies of items with relevant knowledge highlighted

This is not an exhaustive list and learners should be encouraged to develop the most appropriate evidence to demonstrate their achievement of the learning outcomes and assessment criteria.

All evidence must be clearly signposted and made available for the external moderator upon request.

All internal assessments must be accompanied by a signed Declaration of Authenticity (this document is available on the Skills and Education Group Awards website).

Additional Information

Useful sources of reference

- The Health and Safety Executive website http://www.hse.gov.uk/ has useful information about identifying what health and safety legislation applies to areas of work and lists of Acts, Statutory instruments and legal publications

- National Federation of Biological Recording website http://www.nbn-nfbr.org.uk/nfbr.php lists all Local / Biological Recording Centres - Useful to find local Biodiversity Action Plans
- The Natural England website http://www.naturalengland.org.uk/ and Countryside Council for Wales www.ccw.gov.uk/ have information about countryside protection schemes and land management for the benefit of wildlife, landscape. Also licences and enforcement
- Local Authority websites for Local Planning Authority permissions and LBAP's
- Visit Department for Environment, Food and Rural Affairs website www.defra.gov.uk or Welsh Assembly Government countryside website www.countryside.wales.gov.uk/ *for* up to date information about legislation, codes of practice and consultations in the horticultural / agricultural sectors
- The Environment Agency website http://www.environment-agency.gov.uk provides guidance about environmental permitting, pollution and emissions, hazardous waste, water etc
- The Forestry Commission www.forestry.gov.uk application for licences
- Horticultural Code of Practice - Helping to prevent the spread of invasive non-native species
- The Code of Practice - Protecting our Water, Soil and Air has a useful list of references in Section 9
- Managing Habitats for Conservation by William J Sutherland and David A Hill
- BTCV Books on-line http://handbooks.btcv.org.uk/handbooks/index
- BTCV practical handbooks

  Woodlands - ISBN 0946752338

  Hedging - ISBN 0946752176

  Tree Planting and Aftercare - ISBN 0946752257

See Skills and Education Group Awards website for further information

Recognition of Prior Learning (RPL), Exemption and Credit Transfer

Skills and Education Group Awards policy enables learners to avoid duplication of learning and assessment in a number of ways:

- Recognition of Prior Learning (RPL) – a method of assessment that considers whether a learner can demonstrate that they can meet the assessment requirements for a unit through knowledge, understanding or skills they already possess and do not need to develop through a course of learning.
- Exemption - Exemption applies to any certificated achievement which is deemed to be of equivalent value to a unit within Skills and Education Group Awards qualification but which does not necessarily share the exact learning outcomes and assessment criteria. It is the assessor's responsibility, in conjunction with the Internal Moderator, to map this previous achievement against the assessment requirements of the Skills and Education Group Awards qualification to be achieved in order to determine its equivalence.
  Any queries about the relevance of any certificated evidence, should be referred in the first instance to your centre's internal moderator and then to Skills and Education Group Awards.
  It is important to note that there may be restrictions upon a learner's ability to claim exemption or credit transfer which will be dependent upon the currency of the unit/qualification and a learner's existing levels of skill or knowledge.
  Where past certification only provides evidence that could be considered for exemption of part of a unit, learners must be able to offer additional evidence of previous or recent learning to supplement their evidence of achievement.
- Credit Transfer – Skills and Education Group Awards may attach credit to a qualification, a unit or a component. Credit transfer is the process of using certificated credits achieved in one qualification and transferring that achievement as a valid contribution to the award of another qualification. Units/Components transferred must share the same learning outcomes and assessment criteria along with the same unit number. Assessors must ensure that they review and verify the evidence through sight of:
  - Original certificates OR
  - Copies of certificates that have been signed and dated by the internal moderator confirming the photocopy is a real copy and make these available for scrutiny by the External Moderator.
- Equivalencies – opportunities to count credits from the unit(s) from other qualifications or from unit(s) submitted by other recognised organisations towards the place of mandatory or optional unit(s) specified in the rule of combination. The unit must have the same credit value or greater than the unit(s) in question and be at the same level or higher.

Skills and Education Group Awards encourages its centres to recognise the previous achievements of learners through Recognition of Prior Learning (RPL), Exemption, Credit Transfer and Equivalencies. Prior achievements may have resulted from past or present employment, previous study or voluntary activities. Centres should provide advice and guidance to the learner on what is appropriate evidence and present that evidence to the external moderator in the usual way.

Further guidance can be found in 'Delivering and Assessing Skills and Education Group Awards Qualifications' which can be downloaded from
https://skillsandeducationgroupawards.co.uk/for-centres/

Certification

Learners will be certificated for all units and qualifications that are achieved and claimed.

Skills and Education Group Awards' policies and procedures are available on the Skills and Education Group Awards web site.

Glossary of Terms

GL (Guided Learning)

GL is where the learner participates in education or training under the immediate guidance or supervision of a tutor (or other appropriate provider of education or training). It may be helpful to think – 'Would I need to plan for a member of staff to be present to give guidance or supervision?'
GL is calculated at qualification level and not unit/component level.

Examples of Guided Learning include:

- Face-to-face meeting with a tutor
- Telephone conversation with a tutor
- Instant messaging with a tutor
- Taking part in a live webinar
- Classroom-based instruction
- Supervised work
- Taking part in a supervised or invigilated formative assessment
- The learner is being observed as part of a formative assessment.

TQT (Total Qualification Time)

'The number of notional hours which represents an estimate of the total amount of time that could reasonably be expected to be required, in order for a learner to achieve and demonstrate the achievement of the level of attainment necessary for the award of a qualification.' The size of a qualification is determined by the TQT.

TQT is made up of the Guided Learning (GL) plus all other time taken in preparation, study or any other form of participation in education or training but not under the direct supervision of a lecturer, supervisor or tutor.

TQT is calculated at qualification level and not unit/component level.

Examples of unsupervised activities that could contribute to TQT include:

- Researching a topic and writing a report
- Watching an instructional online video at home/e-learning
- Watching a recorded webinar
- Compiling a portfolio in preparation for assessment
- Completing an unsupervised practical activity or work
- Rehearsing a presentation away from the classroom
- Practising skills unsupervised
- Requesting guidance via email – will not guarantee an immediate response.