QUALIFICATION HANDBOOK

City & Guilds Level 3 Diploma in Work-based Trees and Timber (0083-81/82/83)

February 2022, Version 2.2

City & Guilds

Qualification at a glance

Subject area	Trees and Timber
City & Guilds number	0083-81, 82, 83
Age group approved	16-18, 18+, 19+
Entry requirements	Level 3
Assessment	Portfolio
Fast track	Available
Support materials	Candidate logbook

Title and level	City & Guilds number	Accreditation number	GLH (Hours)	TQT (Hours)
Level 3 Diploma in Work-based Trees and Timber (Arboriculture)	0083-81	600/6970/3	240	380
Level 3 Diploma in Work-based Trees and Timber (General Woodland and Forestry Treework)	0083-82	600/6970/3	240	380
Level 3 Diploma in Work-based Trees and Timber (Coppicing and Greenwood Trades)	0083-83	600/6970/3	240	380

Version and date	Change detail	Section
1.1 August 2017	Added GLH and TQT details Deleted QCF	Qualification at a glance Structure
2.0 September 2017	Unit 647 added	Structures and Units

2.1 September 2021	Added in the Arboricultural Associations Technical Guide for accessing a tree using a rope	U**nits 421, 520 and 521.**
2.2 February 2022	GLH and TQT clarified and highlighted	Structure

Contents

1 Introduction

This document tells you what you need to do to deliver the qualifications:

Area	Description
Who are the qualifications for?	For candidates who work or want to work as in the trees and timber sector
What do the qualifications cover?	They allow candidates to learn, develop and practise the skills required for employment and/or career progression in the Trees and Timber sector.
Are the qualifications part of a framework or initiative?	They serve as competence qualifications, in the Trees and Timber Apprenticeship framework.
What opportunities for progression are there?	They allow candidates to progress into employment or to the following City & Guilds qualifications: • Level 3 Arboriculture and Forestry (0077)

Relationship to Certificates of Competence

Please note that the achievement of any of the chainsaw units will **not** directly lead to certification of competence in the Level 2 Award in Chainsaw and Related Operations. The achieve of the chainsaw units within these qualifications could be used to contribute towards preparative training for the Level 2 Award in Chainsaw and Related Operations.

Structure

To achieve the **Level 3 Diploma in Trees and Timber (Arboriculture**), learners must achieve **21** credits from the mandatory units and a minimum of **17** credits from the optional units in group 1 and may achieve a minimum of **1** credit from group 2.

Unit accreditation number	City & Guilds unit number	Unit title	Credit value
Mandatory			
A/504/3657	503	Survey and inspect the condition of trees	3
K/504/0317	520	Carry out aerial pruning of a tree	3
T/501/2987	539	Promote, monitor and maintain health, safety and security of the workplace	7
T/504/0322	541	Carry out aerial rescue operations	3
Y/600/9669	547*	Plan, allocate and monitor work of a team	5
F/615/8562	647**	Plan, allocate and monitor work of a team	5
Optional Group 1			
H/504/0316	421	Access a tree using a rope and harness	3
F/504/0565	509	Fell and process trees over 380mm	3
F/504/0663	510	Prepare for and agree emergency tree work operations	5
F/504/3661	511	Lay a hedge	4
F/601/2016	513	Principles of forest and moorland fire management	4
K/504/0561	521	Carry out aerial tree rigging	3
K/504/0592	522	Install and maintain structural supports for trees	4
K/504/3668	523	Survey vegetation adjacent to above ground utilities to identify required management	8
K/601/0258	524	Plan and carry out plant protection by chemical means	2
L/504/0620	525	Sever uprooted or windblown trees using a chainsaw	4
L/504/3663	526	Supervise arboriculture operations in proximity to above ground utilities	8
M/601/0195	531	Carry out site surveys and communicate findings	4
R/504/0604	535	Carry out assisted fell operations	3
R/504/0621	536	Carry out emergency treework operations	5

R/504/0666	537	Carry out aerial cutting of trees with the assistance of a crane	5
R/504/3650	538	Transplant large root-balled plants	4
T/504/0563	542	Carry out aerial cutting of trees with a chainsaw using free-fall techniques	2
D/504/3649	545	Forecast production of forest and woodland products	5
Y/504/3682	546	Process timber with large loader-fed machinery	6
Y/601/2006	548	Develop a woodland management plan	3
Optional Group 2			
A/502/1531	501	Co-ordinate and oversee habitat management work	4
A/502/3232	502	Plan, deliver and evaluate environmental projects	10
F/502/1532	508	Monitor and evaluate the effectiveness of habitat management work	4
H/502/3239	514	Protect the environment through legal enforcement	8
H/502/3242	515	Consult and work with the local community	5
K/502/3243	518	Produce management plans for environmental sites	9
R/501/3922	532	Writing a business plan	1
R/502/1471	533	Plan and manage the control of pests, diseases and disorders	5
R/502/3236	534	Research and plan environmental interpretations	5
T/502/1530	540	Identify the need for, and plan, habitat management work	4
Y/502/3240	544	Communicate with, and care for, the public and others	3
T/601/2580	602	Manage budgets	5
T/601/4717	603	Managing own resources and professional development	6

To achieve the **Level 3 Diploma in Trees and Timber (General Woodland and Forestry Treework)**, learners must achieve **19** credits from the mandatory units and a minimum of **19** credits from the optional units in group 1 and may achieve a minimum of **1** credit from the optional units in group 2.

Unit accreditation number	City & Guilds unit number	Unit title	Credit value
Mandatory			
M/601/0195	531	Carry out site surveys and communicate findings	4
T/501/2987	539	Promote, monitor and maintain health, safety and security of the workplace	7
Y/600/9669	547*	Plan, allocate and monitor work of a team	5
Y/601/2006	548	Develop a woodland management plan	3
F/615/8562	647**	Plan, allocate and monitor work of a team	5
Optional Group 1			
H/504/0316	421	Access a tree using a rope and harness	3
M/504/3672	441	Maintain coppice health and productivity	4
A/504/3657	503	Survey and inspect the condition of trees	3
Y/504/3648	506	Administer environmental legislation	2
D/504/3666	507	Construct a greenwood product to client specification	8
F/504/0565	509	Fell and process trees over 380mm	3
F/504/0663	510	Prepare for and agree emergency tree work operations	5
F/504/3661	511	Lay a hedge	4
F/504/3675	512	Extract timber using a horse	8
F/601/2016	513	Principles of forest and moorland fire management	4
H/504/3653	516	Measure and assess felled timber volume and quality	3
K/504/0317	520	Carry out aerial pruning of a tree	3
K/504/0561	521	Carry out aerial tree rigging	3
K/504/0592	522	Install and maintain structural supports for trees	4
K/504/3668	523	Survey vegetation adjacent to above ground utilities to identify required management	8

K/601/0258	524	Plan and carry out plant protection by chemical means	2
L/504/0620	525	Sever uprooted or windblown trees using a chainsaw	4
L/504/3663	526	Supervise arboriculture operations in proximity to above ground utilities	8
M/504/3655	528	Select, mark and assess volume of standing trees	5
M/504/3686	529	Prepare and operate a cable crane to extract wood products	5
R/504/0604	535	Carry out assisted fell operations	3
R/504/0621	536	Carry out emergency treework operations	5
R/504/0666	537	Carry out aerial cutting of trees with the assistance of a crane	5
R/504/3650	538	Transplant large root-balled plants	4
T/504/0322	541	Carry out aerial rescue operations	3
T/504/0563	542	Carry out aerial cutting of trees with a chainsaw using free-fall techniques	2
T/504/3673	543	Plan and evaluate coppice management	5
D/504/3649	545	Forecast production of forest and woodland products	5
Y/504/3682	546	Process timber with large loader-fed machinery	6
J/504/3659	601	Evaluate markets and trends for the sale of forest and woodland products and services	8
Y/504/3651	604	Compile and maintain a forest and woodland inventory	10
Optional Group 2			
A/502/1531	501	Co-ordinate and oversee habitat management work	4
A/502/3232	502	Plan, deliver and evaluate environmental projects	10
D/502/3286	504	Maintain child welfare and safety during environmental activities and outings	4
L/502/3249	505	Prepare interpretive entertainment and educational activities	4
F/502/1532	508	Monitor and evaluate the effectiveness of habitat management work	4
H/502/3239	514	Protect the environment through legal enforcement	8

H/502/3242	515	Consult and work with the local community	5
J/502/3251	517	Deliver and evaluate interpretive entertainment and educational activities	4
K/502/3243	518	Produce management plans for environmental sites	9
K/502/3971	519	Stalk and cull deer	12
M/502/3244	527	Prepare, produce and evaluate interpretive media	8
R/501/3922	532	Writing a business plan	1
R/502/1471	533	Plan and manage the control of pests, diseases and disorders	5
R/502/3236	534	Research and plan environmental interpretations	5
T/502/1530	540	Identify the need for, and plan, habitat management work	4
Y/502/3240	544	Communicate with, and care for, the public and others	3
T/601/2580	602	Manage budgets	5
T/601/4717	603	Managing own resources and professional development	6

To achieve the **Level 3 Diploma in Trees and Timber (Coppicing and Greenwood Trades)**, learners must achieve **19** credits from the mandatory units and a minimum of **19** credits from the optional units in group 1 and may achieve a minimum of **1** credit from the optional units in group 2.

Unit accreditation number	City & Guilds unit number	Unit title	Credit value
Mandatory			
M/504/3672	441	Maintain coppice health and productivity	4
T/501/2987	539	Promote, monitor and maintain health, safety and security of the workplace	7
T/504/3673	543	Plan and evaluate coppice management	5
Y/601/2006	548	Develop a woodland management plan	3
Optional Group 1			
A/504/3657	503	Survey and inspect the condition of trees	3
Y/504/3648	506	Administer environmental legislation	2
D/504/3666	507	Construct a greenwood product to client specification	8

F/504/0565	509	Fell and process trees over 380mm	3
F/504/3661	511	Lay a hedge	4
F/504/3675	512	Extract timber using a horse	8
F/601/2016	513	Principles of forest and moorland fire management	4
H/504/3653	516	Measure and assess felled timber volume and quality	3
K/504/0561	521	Carry out aerial tree rigging	3
K/504/0592	522	Install and maintain structural supports for trees	4
K/504/3668	523	Survey vegetation adjacent to above ground utilities to identify required management	8
K/601/0258	524	Plan and carry out plant protection by chemical means	2
L/504/0620	525	Sever uprooted or windblown trees using a chainsaw	4
M/504/3655	528	Select, mark and assess volume of standing trees	5
M/601/0195	531	Carry out site surveys and communicate findings	4
R/504/0604	535	Carry out assisted fell operations	3
R/504/0666	537	Carry out aerial cutting of trees with the assistance of a crane	5
D/504/3649	545	Forecast production of forest and woodland products	5
J/504/3659	601	Evaluate markets and trends for the sale of forest and woodland products and services	8
Y/504/3651	604	Compile and maintain a forest and woodland inventory	10
Optional Group 2			
A/502/1531	501	Co-ordinate and oversee habitat management work	4
D/502/3286	504	Maintain child welfare and safety during environmental activities and outings	4
L/502/3249	505	Prepare interpretive entertainment and educational activities	4
F/502/1532	508	Monitor and evaluate the effectiveness of habitat management work	4
H/502/3242	515	Consult and work with the local community	5
J/502/3251	517	Deliver and evaluate interpretive entertainment and educational activities	4

K/502/3971	519	Stalk and cull deer	12
M/502/3244	527	Prepare, produce and evaluate interpretive media	8
R/501/3922	532	Writing a business plan	1
R/502/1471	533	Plan and manage the control of pests, diseases and disorders	5
R/502/3236	534	Research and plan environmental interpretations	5
T/502/1530	540	Identify the need for, and plan, habitat management work	4
Y/502/3240	544	Communicate with, and care for, the public and others	3
Y/600/9669	547*	Plan, allocate and monitor work of a team	5
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T/601/4717	603	Managing own resources and professional development	6
F/615/8562	647**	Plan, allocate and monitor work of a team	5

* Learners registered before 1st July 2017 should use this unit.

** Learners registered after 1st July 2017 should use this unit.

2 Centre requirements

Approval

If your Centre is approved to offer the qualification Level 3 Diploma in Work-based Trees and Timber (0083-31, 32, 33, 34 and 35) you can apply for the new Level 3 Diploma in Work-based Trees and Timber (0083-81, 82 and 83) approval using the **fast track approval form**, available from the City & Guilds website.

Centres should use the fast track form if:

- there have been no changes to the way the qualifications are delivered, and
- they meet all of the approval criteria in the fast track form guidance notes.

Fast track approval is available for 12 months from the launch of the qualification. After 12 months, the Centre will have to go through the standard Qualification Approval Process. The centre is responsible for checking that fast track approval is still current at the time of application.

To offer these qualifications, new centres will need to gain both centre and qualification approval. Please refer to the *Centre Manual - Supporting Customer Excellence* for further information.

Centre staff should familiarise themselves with the structure, content and assessment requirements of the qualification before designing a course programme.

Resource requirements

Physical resources and site agreements

The equipment, systems and machinery must meet industrial standards and be capable of being used under normal working conditions.

Centre staffing

Staff delivering these qualifications must be able to demonstrate that they meet the following occupational expertise requirements. They should:

- be occupationally competent or technically knowledgeable in the areas for which they are delivering training and/or have experience of providing training. This knowledge must be to the same level as the training being delivered
- have recent relevant experience in the specific area they will be assessing
- have credible experience of providing training.

Centre staff may undertake more than one role, eg tutor and assessor or internal verifier, but cannot internally verify their own assessments.

Assessors and internal verifiers

The centre must provide Assessor personnel who must be occupationally competent in the industry either qualified to at least level 3 and/or have current experience of working in the industry at this level.

The centre must provide Internal Quality Assurance personnel who must be occupationally competent in the industry either qualified to at least level 3 and/or have current experience of working in the industry at this level.

Assessors/Internal Quality Assurance personnel may hold relevant qualifications such as D32/33/34 or A1/V1 or TAQA however they are not a mandatory requirement for this qualification. They should have had formal training in assessment/IQA, which may be the qualifications above, or other training that allows the assessor to demonstrate competence in the practice of assessment/IQA. This training may be carried out in-house or with an external agency.

TAQA qualifications are considered very appropriate as Continuing Professional Development (CPD) or as best practice standards for new centre staff to work towards.

Continuing professional development (CPD)

Centres must support their staff to ensure that they have current knowledge of the occupational area, that delivery, mentoring, training, assessment and verification is in line with best practice, and that it takes account of any national or legislative developments.

Candidate entry requirements

City & Guilds does not set entry requirements for these qualifications However, centres must ensure that candidates have the potential and opportunity to gain the qualifications successfully.

Age restrictions

City & Guilds cannot accept any registrations for candidates under 16 as these qualifications are not approved for under 16s.

Candidates under 16 are not allowed to use certain items of machinery, in particular chainsaws.

3 Delivering the qualification

Initial assessment and induction

An initial assessment of each candidate should be made before the start of their programme to identify:

- if the candidate has any specific training needs,
- support and guidance they may need when working towards their qualifications.
- any units they have already completed, or credit they have accumulated which is relevant to the qualifications.
- the appropriate type and level of qualification.

We recommend that centres provide an induction programme so the candidate fully understands the requirements of the qualification, their responsibilities as a candidate, and the responsibilities of the centre. This information can be recorded on a learning contract.

Support materials

The following resources are available for these qualifications:

Description	How to access
Candidate logbook	**www.cityandguilds.com**

Recording documents

Candidates and centres may decide to use a paper-based or electronic method of recording evidence.

City & Guilds endorses several ePortfolio systems, including our own, **Learning Assistant**, an easy-to-use and secure online tool to support and evidence learners' progress towards achieving qualifications. Further details are available at: **www.cityandguilds.com/eportfolios**.

City & Guilds has developed a set of *Recording forms* including examples of completed forms, for new and existing centres to use as appropriate. *Recording forms* are available on the City & Guilds website.

Although new centres are expected to use these forms, centres may devise or customise alternative forms, which must be approved for use by the external verifier, before they are used by candidates and assessors at the centre. Amendable (MS Word) versions of the forms are available on the City & Guilds website.

4 Assessment

Assessment of the qualification

Candidates must:

- have a completed portfolio of evidence for each unit

Recognition of prior learning (RPL)

Recognition of prior learning means using a person's previous experience or qualifications which have already been achieved to contribute to a new qualification.

A maximum of 9 credits from level 3 units achieved within the Level 2 Work-based Diploma in Trees and Timber can be used as Recognition of Prior Learning within the level 3 Work-based Diploma in Trees and Timber structure.

5 Units

Availability of units

These units are also available on The Register of Regulated Qualifications **http://register.ofqual.gov.uk/**

Structure of units

These units each have the following:

- City & Guilds reference number
- unit accreditation number
- title
- level
- credit value
- unit aim
- relationship to NOS, other qualifications and frameworks
- endorsement by a sector or other appropriate body
- information on assessment
- learning outcomes which are comprised of a number of assessment criteria

Unit 421 Access a tree using a rope and harness

UAN:	**H/504/0316**
Level:	Level 2
Credit value:	3
GLH:	22
Relationship to NOS:	This unit is linked to the Trees and Timber NOS.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries
Aim:	The aim and purpose of this unit is to provide the learner with the knowledge and skills to access a tree using a rope and harness

Learning outcome
The learner will: 1. Be able to work safely
Assessment criteria
The learner can: 1.1 identify the **hazards** and risks associated with the working area and the proposed work 1.2 work in a way which maintains health and safety and is consistent with relevant legislation and industry good practice 1.3 use access and tree climbing equipment and personal protective equipment (PPE) 1.4 carry out work to minimise **environmental damage**

Range and Guidance
Hazards 3 hazards and the associated risks with the working area 3 hazards and the associated risks with the proposed work **Environmental damage** Check the working area for potential (negative) environmental damage Report finding(s) as appropriate Carry out any required control measure(s)

Learning outcome
The learner will: 2. Be able to access a tree using a rope and harness
Assessment criteria
The learner can: 2.1 perform a **hazard** evaluation and Work at Height assessment of the tree prior to commencing the work 2.2 inspect access equipment to ensure it is safe and fit for use under manufacturers instructions and relevant legislation 2.3 use access and positioning methods appropriate to the assessed risk 2.4 use appropriate **positioning** techniques within the crown 2.5 communicate appropriately with ground staff 2.6 descend tree in a controlled manner and remove equipment appropriately

Range and Guidance
Hazard 6 hazards of the tree **Positioning** Minimum 2 branch walks 1 branch walk to be 5m from stem Supplementary anchor point to be demonstrated on 1 branch

Learning outcome
The learner will: 3. Know relevant health and safety legislation and industry good practice
Assessment criteria
The learner can: 3.1 outline the key health and safety **legislation** and industry good practice 3.2 describe how to use and maintain tools, equipment and personal protective equipment 3.3 outline the emergency planning procedures relevant to the work area

Range and Guidance
Legislation Lifting Operations and Lifting Equipment Regulations 1998 (LOLER) The Provision and Use of Work Equipment Regulations 1998 (PUWER) Work at Height Regulations 2005 Arboricultural Forestry Advisory Guides (AFAG) The Arboricultural Association Technical Guides

Learning outcome
The learner will: 4. Know how to access a tree using a rope and harness
Assessment criteria
The learner can: 4.1 describe different **methods** used to safely access a tree 4.2 describe different positioning **techniques** used within crowns 4.3 describe how to ensure that access equipment and systems are in safe working order 4.4 outline the basic principles of tree biology and how they impact on the work 4.5 explain how the species, condition of trees and time of year affect the work

Range and Guidance
Methods 3 methods **Techniques** Describe 2 techniques

Unit 421 Access a tree using a rope and harness

Supporting information

Guidance

Simulation will not be acceptable where this unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance

Unit 441 Maintain coppice health and productivity

UAN:	**M/504/3672**
Level:	Level 2
Credit value:	4
GLH:	30
Relationship to NOS:	This unit is linked to the Trees and Timber NOS.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries
Aim:	This unit provides the learner with the knowledge and skills required to maintain coppice health and productivity

Learning outcome
The learner will: 1. Be able to work safely
Assessment criteria
The learner can: 1.1 identify the hazards and **risk**s associated with the working area and the proposed work 1.2 use appropriate tools, equipment and personal protective equipment safely 1.3 carry out work in accordance with relevant legislation, industry good practice, any additional requirements and maintains health and safety 1.4 carry out work to minimise environmental damage

Range and Guidance
Risk Complete an appropriate risk assessment

Learning outcome
The learner will: 2. Be able to achieve optimum coppice density and health
Assessment criteria
The learner can: 2.1 identify areas where stock density can be improved 2.2 increase **coppice density** 2.3 improve site conditions to encourage natural regeneration 2.4 control **vertebrate pest damage** using appropriate method 2.5 control **unwanted weed vegetation** using appropriate methods

Range and Guidance
Coppice density by planting with appropriate stock and tree species increase coppice density by 'layering' **Vertebrate pest damage** Using two methods **Unwanted weed vegetation** Identify methods of controlling unwanted vegetation

Learning outcome
The learner will: 3. Know relevant health and safety legislation and industry good practice
Assessment criteria
The learner can: 3.1 outline the current health and safety legislation, industry good practice and any additional requirements 3.2 describe how to use and maintain tools, equipment and personal protective equipment 3.3 describe how environmental damage can be minimised

Learning outcome
The learner will: 4. Know how to maintain coppice health and productivity
Assessment criteria
The learner can: 4.1 describe the effects of growing conditions and biodiversity on coppice health 4.2 describe the optimum **coppice density** appropriate to species, rotation and location 4.3 describe **methods for improving coppice density** 4.4 describe the main **woodland sources** of damage and their methods of control 4.5 describe the **main plant species** which cause damage and how these can be manipulated to optimise coppice growth 4.6 describe the **conditions** which affect the choice of appropriate management methods

Range and Guidance
Coppice density the effect of coppice density on productivity reasons for poor coppice density **Methods for improving coppice density** their benefits and appropriate use **Woodland sources** covering: • Vertebrates • Invertebrates • Biotic • Abiotic (one of each) **Main plant species** three of each **Conditions** eg economic, site designations, environmental etc

Unit 441 Maintain coppice health and productivity

Supporting information

Guidance

Simulation will not be acceptable where this unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance

Unit 501 Co-ordinate and oversee habitat management work

UAN:	**A/502/1531**
Level:	Level 3
Credit value:	4
GLH:	26
Relationship to NOS:	This unit is linked to the Trees and Timber NOS.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries

Learning outcome

The learner will:

1. Be able to co-ordinate and oversee habitat management work

Assessment criteria

The learner can:

1.1 make available the necessary resources to allow habitat management work to be carried out in a safe and effective way. Resources to include:
- natural
- physical
- human
- financial

1.2 inform the appropriate person where these resources are not available

1.3 brief those who will be carrying out the work with regard to:
- work specification
- environmental value of the site and its implications for the planned work

1.4 oversee habitat management work for four of the following objectives
- to create or maintain suitable conditions for particular species
- to create or maintain a desired mix of habitats for access and recreation
- to conserve desirable physical or archaeological features
- to reduce the pressures of human activity on habitats
- to promote site safety

1.5 communicate with the work team and other interested parties in a way which promotes understanding and goodwill

1.6 provide clear and accurate information for recording purposes

Learning outcome
The learner will: 2. Be able to promote health and safety and environmental good practice
Assessment criteria
The learner can: 2.1 work in a way which promotes health and safety, is consistent with legislation, codes of practice and any additional requirements 2.2 ensure work is carried out in a manner which minimises environmental damage 2.3 manage and dispose of waste in accordance with legislative requirements and codes of practice

Learning outcome
The learner will: 3. Understand how to co-ordinate and oversee habitat management work
Assessment criteria
The learner can: 3.1 explain the required type and quantity of resources needed for habitat management work 3.2 describe the appropriate action to take in the case of inadequate resources 3.3 describe relevant aspects of work specifications, and individual responsibilities 3.4 describe how to select a workforce which is appropriate for the planned work 3.5 describe methods of briefing the workforce on the activities required 3.6 describe how to effectively oversee habitat management work which is being carried out • to create or maintain suitable conditions for particular species • to create or maintain a desired mix of habitats for access and recreation • to conserve desirable physical or archaeological features • to reduce the pressures of human activity on habitats • to promote site safety 3.7 explain how to identify and minimise the effect of disruptions and how to select corrective actions 3.8 explain how to establish, maintain and improve systems to monitor work 3.9 describe methods of communication likely to promote understanding and goodwill 3.10 identify the types of records required and the importance of accurate record keeping

Learning outcome
The learner will: 4. Understand relevant health and safety legislation and environmental good practice
Assessment criteria
The learner can: 4.1 summarise current health and safety legislation, codes of practice and any additional requirements 4.2 describe the possible environmental damage that could occur and how to respond appropriately 4.3 explain the correct and appropriate methods for disposing of waste

Unit 501 Co-ordinate and oversee habitat management work

Supporting information

Guidance

Simulation will not be acceptable where this unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 502 Plan, deliver and evaluate environmental projects

UAN:	**A/502/3232**
Level:	Level 3
Credit value:	10
GLH:	65
Relationship to NOS:	This unit is linked to the Environmental Conservation NOS.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries

Learning outcome
The learner will: 1. Be able to plan environmental projects
Assessment criteria
The learner can: 1.1 negotiate project specifications that: • meet agreed organisational requirements • meet appropriate management plans • conform to current statutory and legal requirements • conform to principles of environmental good practice • take into account the views and opinions of those with relevant technical expertise • take into account risks: o Health and safety o Financial o Reputation o Environmental impact 1.2 include systems and criteria for project evaluation within the project specifications 1.3 present final project specifications in a format which is accurate, complete and suitable for the user covering: • schedule • location • methods and procedures • physical resources • human resources • relevant legal requirements • standard of outcome required

- financial requirements

1.4 give clear and accurate briefings to those people involved with the project specifications including those:

- internal to the organisation
- external to the organisation

1.5 ensure that, where relevant, contracts for project work are issued

Learning outcome
The learner will: 2. Be able to deliver environmental projects
Assessment criteria
The learner can: 2.1 make resources available to allow project activities to be carried out in a safe, and effective way including: • natural • physical • human • financial and inform the appropriate person without delay where these resources are not available 2.2 consistently meet project specifications within your area of responsibility, noting any factors which may cause disruption to project activities, and taking the appropriate action to minimise their effects 2.3 take corrective action without delay, and inform the relevant people of any changes which may affect them 2.4 establish and maintain systems to monitor the quality, quantity and time specifications for service delivery 2.5 make any recommendations for improving project activities and working conditions promptly to the appropriate people 2.6 ensure that the use and maintenance of equipment conforms to recommended schedules and procedures 2.7 promptly report all accidents and incidents to the appropriate people, and record them accurately and fully 2.8 conduct communications with the project team and other interested parties in a way which promotes understanding and goodwill 2.9 make sure that records of project activities are complete, accurate and comply with organisational procedures

Learning outcome
The learner will: 3. Be able to evaluate environmental projects
Assessment criteria
The learner can: 3.1 carry out evaluation efficiently and effectively against criteria set out in the project specification, ensuring that evaluation is thorough, complete and objective covering: • environmental impact • quality • use of resources 3.2 produce evaluation reports that are clear, accurate and in a form suitable for the intended recipients 3.3 justify your conclusions and recommendations on the basis of: • the information available • the methods of evaluation including: o qualitative o quantitative • clearly stated assumptions

Learning outcome
The learner will: 4. Understand how to plan environmental projects
Assessment criteria
The learner can: 4.1 summarise relevant aspects of organisational requirements and management plans 4.2 summarise current principles of environmental good practice, and statutory and legal requirements, and their impact on project specifications 4.3 summarise health and safety and risks 4.4 identify those who should be consulted with and describe the ways in which their views and opinions may be sought 4.5 explain actual and potential pressures on the environment, of any conflict between these pressures, and the effect these may have on the project specification 4.6 describe the process of identifying and selecting appropriate evaluation systems and criteria 4.7 explain the importance of accurate and complete specification, and reason for choice of presentation format covering: • schedule • location • methods and procedures • physical resources • human resources • relevant legal requirements • standard of outcome required

4.8	explain the importance of giving clear and accurate briefings to those involved with the project specification, and reasons for the choice of briefing method
4.9	outline the process of agreeing and issuing contracts for project work

Learning outcome
The learner will: 5. Understand how to deliver environmental projects
Assessment criteria
The learner can: 5.1 outline the required type and quantity of resources needed for project activities and the appropriate action in the case of inadequate resources covering all the following: • natural • physical • human • financial 5.2 outline individual responsibilities within project specifications including health and safety 5.3 explain how to identify and minimise the effect of disruptions and the reasons for selecting corrective actions 5.4 explain how to establish and maintain systems to monitor service delivery and how to identify improvements to project activities and working conditions 5.5 outline methods of communication likely to promote understanding and goodwill 5.6 explain the importance of complete and accurate records which comply with organisational procedures

Learning outcome
The learner will: 6. Understand how to evaluate environmental projects
Assessment criteria
The learner can: 6.1 explain the importance of evaluating project outcomes covering the following criteria: • environmental impact • quality • use of resources 6.2 describe techniques of evaluation and requirements of the original project specification 6.3 explain the process of evaluation and the importance of thorough, complete and impartial evaluation 6.4 explain the importance of clear and accurate reports and reasons for style of report 6.5 describe means of drawing conclusions and making recommendations

Unit 502 Plan, deliver and evaluate environmental projects

Supporting information

Guidance

Simulation will not be acceptable where the unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 503 Survey and inspect the condition of trees

UAN:	**A/504/3657**
Level:	Level 3
Credit value:	3
GLH:	20
Relationship to NOS:	This unit is linked to the Trees and Timber NOS.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries
Aim:	The aim and purpose of this unit is to provide the learner with the knowledge, skills and understanding to survey and inspect the condition of trees

Learning outcome
The learner will: 1. Be able to promote health and safety and industry good practice
Assessment criteria
The learner can: 1.1 work in a way which promotes health and safety, is consistent with relevant legislation, codes of practice and any additional requirements 1.2 work in a way which promotes plant health and biosecurity and is consistent with relevant legislation and codes of practice 1.3 carry out work to minimise environmental damage

Learning outcome
The learner will: 2. Be able to survey trees
Assessment criteria
The learner can: 2.1 agree access arrangements for surveying with relevant people 2.2 identify trees to be surveyed 2.3 plot trees in relation to fixed features of the site 2.4 collect data relating to the tree appropriate to the **survey** specifications 2.5 record data and information in a manner appropriate to the client requirements and data retrieval systems 2.6 present information to the client

Range and Guidance
Survey 1 single tree 2 groups of trees

Learning outcome
The learner will: 3. Be able to inspect trees
Assessment criteria
The learner can: 3.1 confirm the species and position of trees to be inspected 3.2 assess trees condition and age of trees using **appropriate techniques** to in line with the specification 3.3 make recommendations on the priorities for action based upon the inspection 3.4 minimise the impact of your inspection on the health of the tree and the environment 3.5 maintain suitable records of your inspection and recommendations

Range and Guidance
Appropriate techniques collect data relating to: • tree dimensions • physical condition of tree • physiological condition of tree

Learning outcome
The learner will: 4. Understand how to survey and inspect the condition of trees
Assessment criteria
The learner can: 4.1 summarise current health and safety legislation and industry good practice 4.2 summarise plant health and biosecurity consistent with relevant legislation and industry good practice 4.3 describe the potential environmental damage that could occur and how to respond appropriately 4.4 explain the records required for management and legislative purposes and the importance of maintaining them

Learning outcome
The learner will: 5. Understand relevant health and safety legislation and industry good practice
Assessment criteria
The learner can: 5.1 explain how to agree access arrangements and why this is essential 5.2 explain the use of maps, plans, GPS systems and fixed features to locate and plot trees 5.3 explain how to identify tree genera and species and the implications of age classes 5.4 state how to identify pests and pathogens that affect trees and their implications 5.5 explain how to interpret survey and **inspection specifications** 5.6 explain **techniques** and equipment used in surveying and inspecting trees 5.7 explain how to analyse data generated by tree inspection and survey equipment 5.8 explain how to ensure that your work does not adversely affect the health of the tree

Range and Guidance
Inspection specifications Describe the process of “visual tree assessment” to inspect trees and recording or pertinent data and the limitations of this methods **Techniques** Invasive and non-invasive

Unit 503 Survey and inspect the condition of trees

Supporting information

Guidance

Simulation will not be acceptable where this unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 504 Maintain child welfare and safety during environmental activities and outings

UAN:	**D/502/3286**
Level:	Level 3
Credit value:	4
GLH:	26
Relationship to NOS:	n/a
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries

Learning outcome
The learner will: 1. Be able to prepare and maintain a safe environment for children and young people during activities and outings
Assessment criteria
The learner can: 1.1 plan activities that are consistent with the age, level of development and safety for two of the following age ranges • 3 to 8 years • 8 to 11 years • 11 to 18 years 1.2 assess the site to be visited for potential hazards and adjust the planned activities appropriately 1.3 ensure that the ratio of adults to children and young people in the group is suitable for the activity and complies with statutory and organisational procedures for maintaining safety in two of the following situations: • individuals • small groups (2-10 individuals) • large groups (10+ individuals) 1.4 ensure that the necessary permission from parents and guardians is obtained in advance of the activity and maintain accurate contact details 1.5 ensure that children and young person's clothing is appropriate for the activity 1.6 take the appropriate supplies and equipment according to the needs of the children and young people and length of activity 1.7 ensure that suitable transport is arranged in accordance with parent and guardian's wishes and organisational guidelines

1.8 encourage parents and adults to participate in supervision of activities, as appropriate, and keep them fully informed of timings and organisation including emergency procedures
1.9 maintain agreed levels of supervision at all times appropriate for the activity or outing
1.10 ensure helpers are selected against agreed criteria and are given clear roles and responsibilities
1.11 ensure levels of supervision are sufficient to cope with any potentially dangerous situations or hazards
1.12 explain safety rules to children and young people clearly and in a manner appropriate to their level of understanding
1.13 supervise children and young people in a calm and relaxed manner to promote their self-confidence
1.14 take the appropriate prompt action in cases where abuse is suspected or has been disclosed to you by a child in your care
1.15 agree procedures for collecting children and young people and ensure that they are not handed over without authorisation

Learning outcome

The learner will:

2. Understand how to prepare and maintain a safe environment for children and young people during activities and outings

Assessment criteria

The learner can:

2.1 explain the relevant sector, organisational and statutory codes of practice
2.2 outline the suitability of various activities for children of differing age ranges and needs covering:
- 3 to 8 years
- 8 to 11 years
- 11 to 18 years

2.3 explain the principles of planning and preparing activities with regard to safety, welfare and contingencies
2.4 explain how to identify potentially dangerous situations and hazards and how to minimise their possible effects
2.5 outline the health and safety hazards posed by differing internal and external environments and the actions to take
2.6 explain how to determine the appropriate adult: child ratios for various activities covering the following groups:
- individuals
- small groups (2-10 individuals)
- large groups (10+ individuals)

2.7 explain the contribution parents can make to activities and the importance of keeping them fully informed of plans
2.8 explain how to determine the supplies, equipment and appropriate clothing required for different activities
2.9 explain how to identify and arrange suitable and safe transport for children covering:
- walking in a group
- private cars or minibuses
- public or hired transport

2.10	describe principles for the recruitment and selection of helpers against agreed criteria; their responsibilities in ensuring that appropriate recruitment and selection procedures have been followed eg police checks, vetting procedures, acquiring references
2.11	explain how to promote self confidence and control in children through calm and relaxed supervision
2.12	outline the necessary safety rules and procedures, and how to explain them to children in a manner appropriate to their level of understanding
2.13	describe the action required in cases where abuse is suspected or has been disclosed by a child in their care
2.14	explain the importance of procedures for the collection of children

Unit 504 Maintain child welfare and safety during environmental activities and outings

Supporting information

Guidance

Simulation will not be acceptable where this unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 505 Prepare interpretive entertainment and educational activities

UAN:	**L/502/3249**
Level:	Level 3
Credit value:	4
GLH:	26
Relationship to NOS:	n/a.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries

Learning outcome
The learner will: 1. Be able to prepare interpretive, entertainment and educational activities
Assessment criteria
The learner can: 1.1 select and match subject matter to the site, the target audience and type of activity to ensure wider participation 1.2 work closely with those who are responsible for the audience to maximise the value of planned activities 1.3 prepare opportunities for the audience to maximise the use of their senses 1.4 plan appropriate styles and structures of activities which are appropriate to a range of audience profiles 1.5 develop and put in place contingency plans for all of the following: • the audience is different from that anticipated • ill-health (staff or animal) • bad weather 1.6 ensure that the selected techniques are sufficient and are consistent with the objectives within the constraints of site, event and budget

Learning outcome
The learner will: 2. Be able to promote health and safety and environmental good practice
Assessment criteria
The learner can: 2.1 work in a way which promotes health and safety, is consistent with relevant legislation, codes of practice and any additional requirements

Learning outcome
The learner will: 3. Understand how to prepare interpretive entertainment and educational activities
Assessment criteria
The learner can: 3.1 explain how to select and agree relevant subject matter to match the site, audience and the activity to ensure wider participation 3.2 explain how to link activities to the curriculum 3.3 explain the range of potential audiences covering all of: • organised parties • individual members of the public • people with particular requirements or interests 3.4 explain techniques for interpretation that make use of audience senses

Learning outcome
The learner will: 4. Understand relevant health and safety legislation and environmental good practice
Assessment criteria
The learner can: 4.1 summarise current health and safety legislation, codes of practice and any additional requirements including the safety of visitors

Unit 505 Prepare interpretive entertainment and educational activities

Supporting information

Guidance

Simulation will not be acceptable where the unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 506 Administer environmental legislation

UAN:	**Y/504/3648**
Level:	Level 3
Credit value:	2
GLH:	13
Relationship to NOS:	This unit is linked to the Trees and Timber NOS: LANTw73.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries
Aim:	The aim and purpose of this unit is provide the learner with the knowledge skills and understanding to administer environmental legislation

Learning outcome
The learner will: 1. Be able to administer environmental legislation
Assessment criteria
The learner can: 1.1 develop **procedures** to deal with applications, enquiries, objections and representations 1.2 **keep records** to identify and record the stages in the process 1.3 seek appropriate permissions where inspections need to be carried out 1.4 liaise with **others** as necessary 1.5 seek advice and support where necessary

Range and Guidance
Procedures Tree protection documentation processes: Tree Preservation Orders, Conservation Area Orders, Felling Licences, environmental protection, amenity protection, habitat protection etc. Ensure correct procedures follow the required timescales for implementation Deal with applications to carry out work within the necessary timescales **Keep records** ensure documentation meets the necessary statutory requirements

Others
Departments, colleagues, authorities, stakeholders

Learning outcome
The learner will: 2. Know how to administer environmental legislation
Assessment criteria
The learner can: 2.1 explain the need for **effective systems** for documenting processes 2.2 outline the timescales regarding the application and administration of legislation and regulations 2.3 explain the need to involve the **relevant authorities** by whom consent or permission should be granted 2.4 explain the **appeal procedures** 2.5 evaluate sources of information and advice when clarification is needed 2.6 summarise the implications and importance of data protection legislation

Range and Guidance
Effective systems State why it is important to keep records accurately, legibly and complete the importance of completing documentation to meet the requirements of the legislation and regulations **Relevant authorities** Relevant authorities: Planning Officers, Forestry Commission and Government Departments as appropriate to the legislation, as well as non-government organisations such as the Nature Conservancy Council and the Countryside Agency and appropriate organisations in Wales, Scotland and Northern Ireland **Appeal procedures** how to deal with objections and representations

Unit 506 Administer environmental legislation

Supporting information

Guidance

Simulation will not be acceptable where this unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 507 Construct a greenwood product to client specification

UAN:	**D/504/3666**
Level:	Level 3
Credit value:	8
GLH:	52
Relationship to NOS:	This unit is linked to the Trees and Timber NOS.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries

Learning outcome
The learner will: 1. Be able to promote health and safety and industry good practice
Assessment criteria
The learner can: 1.1 identify the hazards and **risks** associated with the working area and the proposed work 1.2 carry out work in accordance with relevant legislation, industry best practice 1.3 use **tools**, equipment and personal protective equipment (PPE)

Range and Guidance
Risks Complete an appropriate risk assessment **Tools** Maintain tools, equipment and personal protective equipment (PPE)

Learning outcome
The learner will: 2. Be able to construct a greenwood product to client specification
Assessment criteria
The learner can: 2.1 obtain an accurate specification of the green wood product 2.2 prepare a quotation for constructing the greenwood product 2.3 check **materials** are suitable and appropriate to meet product specification 2.4 construct a **greenwood** product to a design specification

2.5 provide advice to minimise degradation of products in use, storage and transit

Range and Guidance
Materials Using SMART Objectives **Greenwood** finish the greenwood product in a suitable way that will enhance and/or preserve it

Learning outcome
The learner will: 3. Understand relevant health and safety legislation and industry good practice
Assessment criteria
The learner can: 3.1 explain the importance of risk assessment 3.2 summarise current health and safety legislation and industry good practice 3.3 explain the importance of maintaining tools, equipment and personal protective equipment (PPE)

Learning outcome
The learner will: 4. Understand the principles of constructing greenwood products
Assessment criteria
The learner can: 4.1 explain the **costing out of product** including time and costs 4.2 explain commonly used methods for specifying greenwood products 4.3 explain **different products** used to finish and preserve a completed greenwood product and their application 4.4 compare different types of joints and their uses 4.5 outline the need for product liability and when it is appropriate

Range and Guidance
Costing out of product how to organise batch production **Different products** product life expectancy and maintenance how to protect products against damage and degradation

Unit 507 Construct a greenwood product to client specification

Supporting information

Guidance

Simulation will not be acceptable where this unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 508 Monitor and evaluate the effectiveness of habitat management work

UAN:	**F/502/1532**
Level:	Level 3
Credit value:	4
GLH:	26
Relationship to NOS:	This unit is linked to the Environmental Conservation NOS.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries

Learning outcome
The learner will: 1. Be able to monitor and evaluate the effectiveness of habitat management work
Assessment criteria
The learner can: 1.1 set in place systems to monitor the effectiveness of habitat management work in creating desired conditions within appropriate timescales with regard both: • the habitat being managed • the work which was carried out 1.2 use the outcomes of your monitoring to inform the planning of future habitat management work to include: • planning of your own future work • planning by other people 1.3 plan and implement additional work to rectify any problems or failures to achieve original management objectives

Learning outcome
The learner will: 2. Understand how to monitor and evaluate the effectiveness of habitat management work
Assessment criteria
The learner can: 2.1 explain the criteria used to evaluate the habitat management work at completion of practical activities 2.2 outline the requirements of the original work plan and specification 2.3 explain the importance of longer-term monitoring to determine whether habitat management has been effective 2.4 identify the factors that determine the length of time over which monitoring should take place 2.5 explain how to use the outcomes of monitoring to improve future plans and where necessary how to plan additional work

Unit 508 Monitor and evaluate the effectiveness of habitat management work

Supporting information

Guidance

Simulation will not be acceptable where the unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 509 Fell and process trees over 380mm

UAN:	**F/504/0565**
Level:	Level 3
Credit value:	3
GLH:	19
Relationship to NOS:	This unit is linked to the Trees and Timber NOS.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries
Aim:	The aim and purpose of this unit is to provide the learner with the knowledge and skills to fell and process trees over 380mm (15") diameter using a chainsaw

Learning outcome
The learner will: 1. Be able to promote health and safety and industry good practice
Assessment criteria
The learner can: 1.1 identify the **hazards** and risks associated with the working area and the proposed work 1.2 use appropriate tools, equipment and **personal protective equipment (PPE)** 1.3 work in a way which maintains health and safety and is consistent with relevant legislation and industry good practice 1.4 carry out work to minimise **environmental damage** 1.5 dispose of waste safely in line with legislation

Range and Guidance
Hazards 3 hazards and the associated risks with the working area 3 hazards and the associated risks with the proposed work **Personal protective equipment (PPE)** INDG317; AFAG301 **Environmental damage** Check the working area for potential (negative) environmental damage Report finding(s) as appropriate Carry out any required control measure(s)

Learning outcome
The learner will: 2. Be able to fell trees and process trees over 380mm
Assessment criteria
The learner can: 2.1 prepare site and establish escape route(s) as appropriate 2.2 assess the condition of the tree 2.3 **prepare trees appropriately** to the tree condition and the specification for the site 2.4 carry out **pre-start checks** and setting of the chainsaw 2.5 demonstrate safe starting of the chainsaw 2.6 fell trees using recognised **felling methods** and felling aids 2.7 remove branches from felled trees using a **recognised method** 2.8 turn tree and remove under branches using appropriate aid tools and method where appropriate 2.9 select take down method which is relevant to the hung up tree size, form and condition 2.10 take down hung up tree(s) using tools or equipment appropriate to the tree size, condition and take down methods 2.11 **cross-cut** timber to length in accordance with the specification 2.12 **stack produce** for subsequent operations using appropriate aids and tools 2.13 check timber is in an appropriate and safe position 2.14 clean and tidy working area

Range and Guidance
Prepare trees appropriately May include: brashing lower branches, removing climbing vegetation, buttresses and other obstructions **Pre-start checks** Oil and fuel mix **Felling methods** As appropriate to the tree form, condition and selected felling technique **Recognised method** As appropriate to tree branch pattern, size, form and condition and to leave stem as appropriate to specification AFAG303 and AFAG307 as appropriate. **Cross-cut** Reduction cut must be demonstrated **Stack produce** Stacking must be tidy. AFAG304. INDG145.

Learning outcome
The learner will: 3. Understand relevant health and safety legislation and industry good practice
Assessment criteria
The learner can: 3.1 explain the **importance of risk assessment** 3.2 outline the **emergency planning and procedures** relevant to the working area 3.3 summarise current **health and safety legislation and industry good practice** 3.4 explain the **importance of maintaining tools**, equipment and personal protective equipment 3.5 describe the **potential environmental damage** that could occur and how to respond appropriately 3.6 explain the correct and **appropriate methods** for disposing waste 3.7 explain the **legal requirements and constraints** for felling trees in different circumstances

Range and Guidance
Importance of risk assessment 2 reasons. **Emergency planning and procedures** AFAG 802. 5 emergency procedures. **Health and safety legislation and industry good practice** 2 points from each: • Health and Safety at Work Act 1974; • Provision and Use of Work Equipment Regulations 1998 (PUWER 98), Regulation 9. State where industry good practice is found. • Arboriculture Forestry Advisory Group (AFAG). **Importance of maintaining tools** 3 reasons **3.5 potential environmental damage** 1 cause; 1 prevention **3.6 potential environmental damage** 2 methods **3.7 legal requirements and constraints** 2 legal factors • Felling licence • Tree Preservation Orders 2 constraints

Learning outcome
The learner will: 4. Understand how to fell and process trees over 380mm
Assessment criteria
The learner can: 4.1 explain **how to identify** which trees need to be felled 4.2 describe **recognised felling methods** for the following: • Upright trees • Backward leaning trees • Trees heavily leaning/weighted in the intended felling direction 4.3 describe **how to recognise signs of disease and decay** in trees and modify felling methods accordingly 4.4 explain how felling methods are modified for: • Double stems • Hanging branches • Long limbs • Large cavities • Foreign bodies 4.5 explain the **advantages** of setting up or using a natural felling bench, brash mat or similar support prior to felling 4.6 explain **how and when to use additional equipment**, to assist with the felling of trees and the additional safeguards required 4.7 explain how to **fell standing stems** and additional safeguards required 4.8 state how to recognise when a tree is difficult to fell 4.9 describe the **additional safeguards** to implement when felling: • In proximity to paths • Roads or areas with public access • Underground/overground wayleaves

Range and Guidance
How to identify 2 examples eg use photos, species, map, tree marked **Recognised felling methods** State 2 reasons why would you bore the centre of the sink (heartwood cuts). Suitable for trees that are upright; backward leaning; heavily leaning/weighted in the intended felling direction. Including the use of boring cuts and felling aids **How to recognise signs of disease and decay** Disease and decay - knowledge of two of the following: • Missing bark. • Fungus.

- Discolouration of timber/bark.
- Cavities.
- Leaves and needles missing.

Modified felling methods knowledge of two of the following:

- Thicker hinge.
- Higher felling cuts.
- Do not remove the buttresses.
- Winch assisted fell.

Advantages

Provide 2 examples

How and when to use additional equipment

Provide 1 example of when and how to use additional equipment and the additional safeguards required

Fell standing stems

State 1 technique and 1 additional safeguard for felling standing stems

Additional safeguards

Recognise when its not appropriate to fell trees

Provide 1 safeguard for each

Learning outcome
The learner will: 5. Understand how to remove branches from felled trees using a chainsaw
Assessment criteria
The learner can: 5.1 describe how the **method** of removing branches will vary with tree species, form and condition 5.2 describe how to identify tension and compression in branches 5.3 outline the **implications** on choice of severing method 5.4 state how and when to use equipment to assist with the snedding/de-limbing of trees 5.5 describe process for removing branches above shoulder height 5.6 explain the **advantages** of leaving a clean stem after snedding/de-limbing 5.7 state how and when to deal with severed branches 5.8 state **how to deal with brash and branches** after snedding/de-limbing

Range and Guidance
Method Provide 1 example of broadleaved and 1 example of conifer. **Implications**

State 2 implications.

Advantages
3 advantages.

How to deal with brash and branches
State 3 options.

Learning outcome
The learner will: 6. Understand how to take down hung up trees
Assessment criteria
The learner can: 6.1 Describe **take down methods** for a range of tree sizes using appropriate hand tools 6.2 Describe **take down methods for trees using winches and other manual or mechanical means** 6.3 Describe how to set up a winch for the take down of hung up trees. 6.4 Explain the factors to consider and additional safety precautions when using winches 6.5 Explain where the danger areas are in relation to the trees being taken down 6.6 Describe the appropriate actions to take if a tree cannot be taken down

Range and Guidance
Take down methods State 2 methods **Take down methods for trees using winches and other manual or mechanical means** 1 method for each.

Unit 509 Fell and process trees over 380mm

Supporting information

Guidance

All assessment is to be carried out according to the size of the trees. Trees may be either conifer or broadleaved.

Maximum recommended guide bar length 18″.

Learner must prove operator competence using appropriate felling methods for two of the following tree types:

- Upright - Minimum 1, maximum 2.
- Backward leaning - Minimum 1, maximum 2.
- Heavily leaning/weighted in the intended felling direction - Minimum 1, maximum 2.

1 tree must be at least 560mm/22.5″ plus in diameter.

Branch removal - All felled trees must have all branches removed flush with the stem.

Cross-cut - 1 hung up tree must be taken down using a winch.

Refer to Lantra SSC's Assessment Strategy for further detail

Unit 510 Prepare for and agree emergency tree work operations

UAN:	**F/504/0663**
Level:	Level 3
Credit value:	5
GLH:	33
Relationship to NOS:	This unit is linked to the Trees and Timber NOS: LANTw17.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries
Aim:	The aim and purpose of this unit is to provide the learner with the knowledge skills and understanding to prepare for and agree emergency treework operations

Learning outcome
The learner will: 1. Be able to promote health and safety and industry good practice
Assessment criteria
The learner can: 1.1 identify the **hazards** and risks associated with the working area and the proposed work 1.2 use appropriate tools, equipment and personal protective equipment (PPE) 1.3 work in a way which promotes health and safety and is consistent with relevant legislation and industry good practice 1.4 carry out work to minimise environmental damage 1.5 dispose of waste in line with legislation

Range and Guidance
Hazards 3 hazards and the associated risks with the working area. 3 hazards and the associated risks with the proposed work

Learning outcome
The learner will: 2. Be able to prepare for and agree emergency treework operations
Assessment criteria
The learner can: 2.1 prepare vehicle(s) and kit in anticipation of an emergency 2.2 install suitable controls 2.3 agree and establish an efficient and effective communication system with all the other services on sit 2.4 agree and establish an emergency plan and a method of work that is appropriate to the safety of those involved, the working area and the complexity of the situation 2.5 check appropriate traffic management systems are in place to protect the workforce 2.6 check that the emergency services have taken all necessary actions prior to undertaking treework operations 2.7 match the skills and experience of personnel to the treework operations and the complexity of the situation

Learning outcome
The learner will: 3. Understand relevant health and safety legislation and industry good practice
Assessment criteria
The learner can: 3.1 explain the **process of risk assessment** 3.2 outline the **emergency planning procedures** relevant to the work area 3.3 summarise current health and safety **legislation and industry good practice** 3.4 explain the **importance** of maintaining tools, equipment and personal protective equipment 3.5 describe the **potential environmental** damage that could occur and how to respond appropriately 3.6 explain the **correct methods** for disposing of waste 3.7 explain the **records required** for management and legislative purposes and the importance of maintaining them

Range and Guidance
Process of risk assessment Five steps to risk assessment **Emergency planning procedures** State 5 emergency procedures **Legislation and industry good practice** 2 points Health and Safety at Work Act 1974 The Provision and Use of Work Equipment Regulations 1998 (PUWER)

State where to find Industry Good Practice information
Aboricultural Forestry Advisory Guides (AFAG)

State the safe working distances between operators during:

- Cross-cutting
- Felling

4 requirements
Lifting Operations and Lifting Equipment Regulations 1998 (LOLER)
3 requirements
Work at Height Regulations 2005

Importance
3 reasons

Potential environmental
2 occurrences
2 responses

Correct methods
2 methods

Records required
3 records
1 reason

Learning outcome
The learner will: 4. Understand how to prepare for and agree emergency treework operations
Assessment criteria
The learner can: 4.1 explain the **importance of responding appropriately** to the urgency of the emergency 4.2 explain **why it is important to have vehicles and kit prepared** in anticipation of any emergency 4.3 investigate **where to research** advance warning of emergencies, such as weather 4.4 explain how to deploy the **workforce** efficiently and effectively 4.5 explain how to **identify** the presence and **significance** of utilities 4.6 explain **contingency planning for different emergencies** 4.7 explain **how to secure sites** for safe and effective working including the correct location and positioning of warning signs and access controls 4.8 explain how the **complexity** of the situation can impact on the treework operations 4.9 explain how to **prioritise emergencies**

Range and Guidance
Importance of responding appropriately 2 reasons **Why it is important to have vehicles and kit prepared** 3 reasons **Where to research** 2 where **Workforce** 3 reasons **Identify** 2 identify **Significance** 2 significance **Contingency planning for different emergencies** 3 explained **How to secure sites** 2 reasons **Complexity** 3 complexities **Prioritise emergencies** 2 reasons

Unit 510 Prepare for and agree emergency tree work operations

Supporting information

Guidance

Simulation will not be acceptable where this unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 511 Lay a hedge

UAN:	**F/504/3661**
Level:	Level 3
Credit value:	4
GLH:	26
Relationship to NOS:	This unit is linked to the Trees and Timber NOS: LANTW61.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries
Aim:	The aim and purpose of this unit is to provide the learner with the knowledge and skills to lay a hedge

Learning outcome
The learner will: 1. Be able to promote health and safety and industry good practice
Assessment criteria
The learner can: 1.1 identify the hazards and **risks** associated with the working area and the proposed work 1.2 carry out work in accordance with relevant legislation, industry good practice, any additional requirements and maintains health and safety 1.3 use **tools**, equipment and personal protective equipment (PPE) 1.4 carry out work to minimise environmental damage

Range and Guidance
Risks Complete an appropriate risk assessment **Tools** maintain tools, equipment and personal protective equipment (PPE) safely

Learning outcome
The learner will: 2. Be able to plan to lay a hedge
Assessment criteria
The learner can: 2.1 identify the main purpose and species of the hedge 2.2 determine the **style** in which the hedge laying will take place taking account of regional variances 2.3 identify which hedgerow trees are to be retained and if any special protection measures exist 2.4 estimate the **number of plants required** to restock the gaps

Range and Guidance
Style check for the presence of utility cables and fencing **Number of plants required** measure the length of the hedged to be laid and estimate materials required

Learning outcome
The learner will: 3. Be able to lay a hedge
Assessment criteria
The learner can: 3.1 identify the direction in which the hedge will be laid and where laying will commence 3.2 select pleachers to meet specification 3.3 cut pleachers at the correct angle, maintaining viable hinges and **reduce stumps appropriately** 3.4 lay pleachers to meet specification 3.5 sharpen stakes as required 3.6 **install stakes** at determined spacing in accordance with the style of hedging

Range and Guidance
Reduce stumps appropriately remove dead wood and other unwanted materials fill gaps as appropriate **Install stakes** Bind hedge, trim off stakes

Learning outcome
The learner will: 4. Understand relevant health and safety legislation and industry good practice
Assessment criteria
The learner can: 4.1 explain the importance of risk assessment 4.2 summarise current health and safety legislation and industry good practice 4.3 explain the importance of maintaining tools, equipment and personal protective equipment (PPE) 4.4 describe the potential environmental damage that could occur and how to respond appropriately

Learning outcome
The learner will: 5. Know how to lay a hedge
Assessment criteria
The learner can: 5.1 explain the **reasons** for laying hedges 5.2 state the most **appropriate time of year** to lay hedges 5.3 explain the **effect of your work** on wildlife habitat 5.4 describe different hedgerow species and their characteristics 5.5 explain the **different styles** of hedge laying and regional variances

Range and Guidance
Reasons Reasons for hedge laying to include: biodiversity, stock proof, maintain landscape, etc. **Appropriate time of year** Depending on local climate and the effect of frost on the pleachers **Effect of your work** eg bird nesting season **Different styles** The appropriate length and diameter of stems to use as pleachers types and sources of binders and stakes available

Unit 511 Lay a hedge

Supporting information

Guidance

Simulation will not be acceptable where this unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 512 Extract timber using a horse

UAN:	**F/504/3675**
Level:	Level 3
Credit value:	8
GLH:	52
Relationship to NOS:	This unit is linked to the Trees and Timber NOS, LANTW49.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries
Aim:	The aim and purpose of this unit is to provide the learner with the knowledge and skills required to extract wood and wood products using a horse

Learning outcome
The learner will: 1. Be able to promote health and safety and industry good practice
Assessment criteria
The learner can: 1.1 identify the hazards and **risks** associated with the working area and the proposed work 1.2 carry out work in **accordance with relevant legislation**, industry good practice and promotes health and safety 1.3 use tools, equipment and personal protective equipment safely 1.4 carry out work to minimise environmental damage

Range and Guidance
Risks Complete an appropriate risk assessment **Accordance with relevant legislation** Including animal health and welfare

Learning outcome
The learner will: 2. Be able to extract timber using a horse
Assessment criteria
The learner can: 2.1 maintain access and extraction routes in a serviceable condition 2.2 **extract wood products effectively** and efficiently using agreed extraction routes 2.3 unload products 2.4 **grade products** according to the specification 2.5 accumulate products in agreed area to facilitate uplift and onward dispatch 2.6 maintain the health and welfare of the horse throughout the activity

Range and Guidance
Extract wood products effectively position load and unload machinery effectively **Grade products** Separate products in accordance with job specification

Learning outcome
The learner will: 3. Understand relevant health and safety legislation and industry good practice
Assessment criteria
The learner can: 3.1 explain the importance of risk assessment 3.2 outline the emergency planning procedures relevant to the work area 3.3 summarise current health and safety legislation and industry good practice 3.4 explain the importance of maintaining tools, equipment and personal protective equipment (PPE) 3.5 describe the potential environmental damage that could occur and how to respond appropriately

Learning outcome
The learner will: 4. Understand the extraction of timber using a horse
Assessment criteria
The learner can: 4.1 explain how to interpret product specifications and select produce into product categories during loading 4.2 explain how the slope limitations and maximum safe working load **impact** on the capabilities and limitations of the horse 4.3 explain the implications of terrain, ground conditions, season, weather, load and timber type/condition on **planning access routes** and driving the horse 4.4 state the effect of unbalanced loads on extraction 4.5 explain methods of grading, stacking and handling products to meet specification/customer requirements 4.6 explain the importance of monitoring and maintaining the health and welfare of the horse throughout

Range and Guidance
Impact the need to regularly check the welfare of the horse **Planning access routes** how to select suitable extraction route

Unit 512 Extract timber using a horse

Supporting information

Guidance

Simulation will not be acceptable where this unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 513 Principles of forest and moorland fire management

UAN:	**F/601/2016**
Level:	Level 3
Credit value:	4
GLH:	26
Relationship to NOS:	This unit is linked to the Trees and Timber NOS.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries

Learning outcome
The learner will: 1. Be able to prepare a forest and moorland fire management plan
Assessment criteria
The learner can: 1.1 assess vegetation fire hazards and fire risks to inform fire management planning 1.2 contribute to the development of forest fire plan, maps and resources 1.3 liaise with relevant people to confirm proposed fire plan 1.4 contribute to the preparation of checklists of resources available

Learning outcome
The learner will: 2. Understand the principles of forest and moorland fire management planning
Assessment criteria
The learner can: 2.1 explain fire risk and hazard assessment techniques and systems 2.2 describe the fire suppression resources available within the organisation. 2.3 explain the role of the fire fighting personnel, land managers and fire groups and how to identify the incident commander 2.4 describe the information required by the fire fighting personnel on arrival at fireground 2.5 explain how weather, fuels and topography conditions affect the spread, intensity and nature of fires 2.6 explain the three main fire suppression strategies and operations that will occur for each strategy

2.7	describe the potential impact of wildfires and fire suppression activities on the environment
2.8	explain how to make appropriate adjustments to your plans based on initial assessments of incidents
2.9	explain how to respond to changing priorities of incidents
2.10	explain how to evaluate and report on the effectiveness of firefighting operations plan

Learning outcome
The learner will: 3. Understand relevant health and safety legislation
Assessment criteria
The learner can:
3.1 summarise current health and safety legislation, codes of practice and any additional requirements
3.2 explain the records required for management and legislative purposes and the importance of maintaining them

Unit 513 Principles of forest and moorland fire management

Supporting information

Guidance

Simulation will not be acceptable where this unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 514 Protect the environment through legal enforcement

UAN:	**H/502/3239**
Level:	Level 3
Credit value:	8
GLH:	52
Relationship to NOS:	This unit is linked to the Trees and Timber NOS.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries

Learning outcome
The learner will: 1. Be able to identify and confirm the need for enforcement
Assessment criteria
The learner can: 1.1 identify accurately cases of non-compliance with regulations or legislation 1.2 investigate two cases of alleged non-compliance with regulations or legislation from the list below, in a professional and correct manner: • obstructions and encroachments • interferences and nuisances • inadequate access • illegal activities on sites 1.3 time investigations correctly in accordance with the potential risk to the environment covering: • review of information received • site visit and observation • other investigations, including consultations 1.4 record cases of non-compliance accurately, legibly and comprehensively in appropriate formats covering all of the following: • written • graphic • photographic 1.5 identify those responsible for the breach of regulations or legislation 1.6 evaluate the feasibility of solutions other than enforcement, and implement alternative action where possible

1.7	seek advice on the enforcement process and its implications from the appropriate source, where necessary
1.8	establish the need for enforcement where other action has failed or is inappropriate
1.9	promptly identify circumstances constituting a hazard or risk to the environment, and take appropriate action

Learning outcome
The learner will: 2. Be able to provide evidence of non-compliance
Assessment criteria
The learner can: 2.1 collect evidence of non-compliance from the appropriate sources, record it accurately, legibly and comprehensively, and store it securely 2.2 gather evidence from witnesses without prejudice in accordance with legal requirements

Learning outcome
The learner will: 3. Be able to initiate and monitor enforcement procedures to protect the environment
Assessment criteria
The learner can: 3.1 prepare for and initiate legal action accurately and in consultation with the relevant legal advisers 3.2 monitor compliance with legal action at the appropriate time, and review the need for further action 3.3 identify and arrange default action to resolve problems where appropriate carrying out remedial work arranging for the charging of costs to those responsible 3.4 arrange appropriate support where action might involve contact with aggressive or abusive people 3.5 suspend activities where the safety of yourself or others is threatened, and review further action seeking advice where necessary 3.6 review the need for enforcement where the appropriate remedial action has been taken by any party

Learning outcome
The learner will: 4. Be able to promote health and safety and environmental good practice
Assessment criteria
The learner can: 4.1 work in a way which promotes health and safety, is consistent with relevant legislation, codes of practice, strategy and policy and any additional requirements which apply to protecting the environment through legal enforcement

Learning outcome
The learner will: 5. Know how to identify and confirm the need for enforcement
Assessment criteria
The learner can: 5.1 explain the reliance to be attributed to the different forms of information or evidence about alleged non-compliance: • review of information received • site visit and observation • other investigations, including consultations 5.2 explain the methods of recording cases of non-compliance, and the reasons why records should be accurate, legible and comprehensive covering: • obstructions and encroachments • interferences and nuisances • inadequate access • illegal activities on sites

Learning outcome
The learner will: 6. Understand how to initiate enforcement procedures to protect the environment
Assessment criteria
The learner can: 6.1 explain potential alternative solutions, other than enforcement, and judgement of their effectiveness • carrying out remedial work • arranging for the charging of costs to those responsible 6.2 explain circumstances which would require the advice of a specialist 6.3 explain circumstances which would require reinforcement where other action has failed or is inappropriate 6.4 explain reasons for judging that other action has failed or is inappropriate 6.5 give examples and explain the relevance of evidence for different circumstances

6.6	explain the legal action processes for different circumstances
6.7	explain how to make the judgement based on comprehensive evidence for different circumstances
6.8	explain how to monitor compliance and the importance of correct and timely monitoring
6.9	identify permissible default action for different circumstances, and reasons for choice, where appropriate
6.10	identify appropriate support in circumstances involving aggression or abuse
6.11	identify circumstances in which it would be sensible to withdraw

Learning outcome
The learner will:
7. Know and understand relevant legislation, including health and safety, codes of practice and environmental good practice
Assessment criteria
The learner can:
7.1 explain the relevant legal requirements, current health and safety legislation, codes of practice and any additional requirements which apply to this area of work
7.2 explain the records required for management and legislative purposes and the importance of maintaining them

Unit 514 Protect the environment through legal enforcement

Supporting information

Guidance

Simulation will not be acceptable where the unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 515 Consult and work with the local community

UAN:	**H/502/3242**
Level:	Level 3
Credit value:	5
GLH:	33
Relationship to NOS:	This unit is linked to the Environmental Conservation NOS.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries

Learning outcome
The learner will: 1. Be able to consult and work with the local community
Assessment criteria
The learner can: 1.1 establish and maintain contacts with relevant sections of the local community, both individuals and groups, in accordance with organisational policy 1.2 work with the local community to encourage understanding and awareness of environmental issues through two of the following: • working directly with the local community • providing information and interpretation prior to consultation • mediation of conflicts 1.3 use both formal and informal opportunities for consultation and interaction with the local community in accordance with organisational policy 1.4 use appropriate methods to actively seek reactions and opinions where the work of the organisation is likely to affect individuals and groups from the local community 1.5 gather and evaluate all relevant information where conflicts of interest arise: • between the needs of the organisation and the needs of the local community • between the needs of different individuals and groups within the local community and develop recommendations for action 1.6 obtain organisational agreement before any action to resolve at least one of the following conflicts of interest: • between the needs of the organisation and the needs of the local community

- between the needs of different individuals and groups within the local community

1.7 keep relevant people within the organisation informed of the outcomes of work and consultation with the local community

Learning outcome
The learner will: 2. Understand how to consult and work with the local community
Assessment criteria
The learner can: 2.1 explain the reasons for and importance of contact with the local community 2.2 describe the likely impact of the work of the organisation on the local community 2.3 describe ways in which interaction and consultation with the local community can be instigated and maintained: • working directly with the local community • providing information and interpretation prior to consultation • mediation of conflicts 2.4 explain the importance of encouraging understanding and awareness as part of the consultation and collaborative working 2.5 propose methods of gauging community opinion 2.6 outline potential and actual conflicting interests: between different community groups, and/or between the organisation and community groups 2.7 propose methods for resolving conflicts of interest 2.8 explain the importance of only acting within ones own agreed authority, keeping others within the organisation informed, and knowing when to ask for intervention from others

Unit 515 Consult and work with the local community

Supporting information

Guidance

Simulation will not be acceptable where this unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 516 Measure and assess felled timber volume and quality

UAN:	**H/504/3653**
Level:	Level 3
Credit value:	3
GLH:	20
Relationship to NOS:	This unit is linked to the Trees and Timber NOS.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries

Learning outcome
The learner will: 1. Be able to measure and record volume and make quality assessment of felled timber
Assessment criteria
The learner can: 1.1 measure the timber in line with the given specification 1.2 calculate the volume of timber 1.3 record the volume of timber in line with the given specification 1.4 assess the quality of a given quantity of felled timber

Learning outcome
The learner will: 2. Be able to promote health and safety and industry good practice
Assessment criteria
The learner can: 2.1 work in a way which promotes health and safety, is consistent with relevant legislation, codes of practice and any additional requirements 2.2 work in a way which promotes plant health and biosecurity and is consistent with relevant legislation and codes of practice 2.3 use equipment and Personal Protective Equipment safely

Learning outcome
The learner will: 3. Understand how to measure, record and forecast volume of timber
Assessment criteria
The learner can: 3.1 explain how to identify hazards and comply with the control measures of risk assessments 3.2 explain how to use sawlog rulers, calipers and metric volume tables 3.3 explain how to use the Hoppus system when measuring timber volumes for large broadleaved trees 3.4 explain how to measured calculate and record the volume of felled timber 3.5 explain how to identify species from felled material 3.6 explain relationships between over bark, under bark, measurements, in relation to: • species • size • age of timber • time of year • length of time felled 3.7 explain the classification and presentation of softwood sawlogs 3.8 describe the principles of visual softwood sawlog grading 3.9 explain the features in different species and grades of hardwood timber that affect quality and potential value

Learning outcome
The learner will: 4. Understand relevant health and safety legislation and industry good practice
Assessment criteria
The learner can: 4.1 summarise current health and safety legislation, codes of practice and any additional requirements 4.2 summarise plant health and biosecurity legislation and relevant industry good practice 4.3 describe the possible environmental damage that could occur and how to respond appropriately

Unit 516 Measure and assess felled timber volume and quality

Supporting information

Guidance

Simulation will not be acceptable where this unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 517 Deliver and evaluate interpretive entertainment and educational activities

UAN:	**J/502/3251**
Level:	Level 3
Credit value:	4
GLH:	26
Relationship to NOS:	This relates to Environmental Conservation NOS.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries

Learning outcome
The learner will: 1. Be able to deliver interpretive and educational activities
Assessment criteria
The learner can: 1.1 ensure that the pace, style and structure of activities are appropriate to the circumstances, interests and ability of the audience throughout 1.2 deliver all main messages in ways which maximise understanding, and attempt to ensure these are understood 1.3 take into account varying expectations among the audience as far as is practicable 1.4 complete the activity to time 1.5 use at least two types of interpretive techniques appropriately and effectively including: • use of multi media equipment • use of props • audience involvement and participation 1.6 monitor the safety and comfort of the audience according to the nature of the activity 1.7 follow agreed contingency procedures as necessary

Learning outcome
The learner will: 2. Be able to evaluate the activities
Assessment criteria
The learner can: 2.1 evaluate the effectiveness of the interpretation against the set objectives 2.2 report any conclusions or recommendations arising from the evaluation to the appropriate people

Learning outcome
The learner will: 3. Understand how to deliver interpretive entertainment and educational activities
Assessment criteria
The learner can: 3.1 explain the importance of planning activities to meet time constraints. 3.2 analyse the range of techniques and delivery styles that can be used and explain the reasons for selecting a particular technique or style which maximises audience use of their senses 3.3 explain the potential range of visitor interests and abilities 3.4 explain the range of tools and techniques available and principles of their use in different circumstances to meet a variety of needs 3.5 explain how, and the reasons why, pace, style and structure of activities could be varied to meet visitor needs and varying expectations 3.6 explain how audience safety can be monitored and how this may vary according to the nature of the activity 3.7 explain what action should be taken in response to equipment failure, accidents or other contingencies that may be encountered

Learning outcome
The learner will: 4. Understand how to evaluate the activities
Assessment criteria
The learner can: 4.1 explain how visitor reaction and understanding can be identified, evaluated and improved 4.2 explain the different sources of feedback on activities 4.3 explain the importance of evaluation to future planning and decision-making

Unit 517 Deliver and evaluate interpretive entertainment and educational activities

Supporting information

Guidance

Simulation will not be acceptable where the unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 518 Produce management plans for environmental sites

UAN:	**K/502/3243**
Level:	Level 3
Credit value:	9
GLH:	59
Relationship to NOS:	This unit is linked to the Environmental conservation NOS.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries

Learning outcome
The learner will: 1. Be able to assess site resources
Assessment criteria
The learner can: 1.1 assess and record actual and potential site resources from available data 1.2 identify existing site use and management 1.3 establish the intended purposes and uses of the site 1.4 identify and evaluate opportunities and constraints in managing the site

Learning outcome
The learner will: 2. Be able to produce site management plans
Assessment criteria
The learner can: 2.1 present plans in a way which is suitable for those who are to implement and monitor them 2.2 ensure that plans achieve the best balance between the present use of the site and opportunities and constraints covering: • legal • environmental • requirements of site users and wider community • economic/financial • physical • organisational • timing or seasonality

- site history

2.3 identify the resources required to achieve the plan and establish their availability including:
- natural
- physical
- human
- financial

2.4 ensure that plans contain the necessary information for their effective implementation covering:
- site preparation
- work methods and procedures
- sequence of operations
- disposal of waste or surplus products
- final intended appearance and condition of the site
- health and safety requirements
- monitoring systems and timescales

Learning outcome
The learner will: 3. Understand how to assess site resources
Assessment criteria
The learner can: 3.1 explain the techniques for assessing site resources and their use for the following: • flora • fauna • landscape features • archaeological and historical features • visitor facilities • educational facilities • recreation facilities 3.2 explain the types of conflicts which may exist in relation to the use of the site and how this has been tackled in the past 3.3 describe the types of potential site uses and their associated requirements 3.4 outline requirements for public access and recreational use of the site

Learning outcome
The learner will: 4. Understand the factors which influence the production of plans
Assessment criteria
The learner can: 4.1 explain the impact which different management methods may have on surrounding people, flora and fauna 4.2 explain the ways in which conflicts may be tackled and resolved in management plans

4.3 explain the inter-relationship between opportunities and constraints in the management of sites:
- legal
- environmental
- social
- cultural and aesthetic
- economic or financial
- physical
- organisational
- timing or seasonality

4.4 explain the different kinds of resources which are necessary to achieve plans, and their inter-relationship:
- human
- financial
- material and capital

Learning outcome
The learner will: 5. Understand how to present the site management plans
Assessment criteria
The learner can: 5.1 explain the structure, content and presentation of site plans for particular uses and audiences 5.2 explain the methods of presenting plans to meet the needs of the full range of people who are to implement them

Learning outcome
The learner will: 6. Understand the relevant legislation and policies
Assessment criteria
The learner can: 6.1 summarise current health and safety legislation, codes of practice and any additional requirements

Unit 518 Produce management plans for environmental sites

Supporting information

Guidance

Simulation will not be acceptable where the unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 519 Stalk and cull deer

UAN:	**K/502/3971**
Level:	Level 3
Credit value:	12
GLH:	78
Relationship to NOS:	This unit is linked to Environmental Conservation NOS.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries

Learning outcome

The learner will:

1. Be able to stalk deer

Assessment criteria

The learner can:

1.1 identify the cull required

1.2 select firearm and ammunition to meet requirements of planned cull

1.3 prepare tools, equipment and firearms into a safe condition suitable for culling activities

1.4 zero a firearm for accuracy

1.5 demonstrate accuracy in the use of the firearm from appropriate firing positions

1.6 locate and approach deer to a distance where a safe, effective and hygienic shot can be taken, taking account of natural features of the location

1.7 select individual deer to meet cull requirements according to:

- species
- sex
- age class
- behaviour

1.8 shoot deer safely, effectively and hygienically according to the features of the location and legal requirements

1.9 observe reaction of deer to the shot to determine its condition

1.10 locate and confirm condition of shot deer

1.11 approach shot deer safely according to its condition

1.12 despatch wounded deer humanely

1.13 confirm the status of deer against cull requirements

1.14 clean and store firearms and ammunition after use in accordance with relevant legislation

Learning outcome
The learner will: 2. Understand how to stalk deer
Assessment criteria
The learner can: 2.1 explain the reasons for culling deer as part of deer management 2.2 outline the legal restrictions controlling the use of firearms 2.3 outline the legal requirements controlling the culling of different deer species 2.4 outline the approved industry codes of practice for stalking 2.5 describe deer species identification and classification for age, sex and condition 2.6 describe normal anatomy and physiology of deer 2.7 describe normal behaviour of deer including signs that indicate ill health 2.8 outline potential causes of environmental contamination that can impact on the quality of game meat including the factors that can affect human health after consumption 2.9 explain how weather conditions can effect the stalk 2.10 describe the different firearms which can be used on a cull 2.11 explain how and why it is important to zero rifles 2.12 specify the required range that will ensure a safe and humane kill 2.13 explain the methods used to approach deer in the following locations: • wooded • open • flat • undulating • hilly • mountainous 2.14 explain how to select the individual deer to be culled by: • species • sex • age class • behaviour 2.15 explain the use of high seats as an alternative form of stalking including how to climb quietly and safely

Learning outcome
The learner will: 3. Be able to promote health and safety and environmental good practice
Assessment criteria
The learner can: 3.1 work in a way which promotes health and safety, is consistent with relevant legislation, codes of practice and any additional requirements 3.2 ensure work is carried out in a manner which minimises environmental damage 3.3 manage and dispose of waste in accordance with legislative requirements and codes of practice

Learning outcome
The learner will: 4. Be able to maintain accurate records
Assessment criteria
The learner can: 4.1 maintain accurate cull records

Learning outcome
The learner will: 5. Understand how to humanely cull deer
Assessment criteria
The learner can: 5.1 specify the required range and bullet placement that will ensure a safe, humane and hygienic kill 5.2 explain how to make a safe shot on flat, undulating, hilly, mountainous, wooded and open land 5.3 explain how the time of day can influence the cull 5.4 explain how supports can be used to assist the accuracy of shooting 5.5 explain how to approach a shot deer 5.6 explain how to confirm the following conditions in deer: • wounded • dead 5.7 describe the reaction of deer to being shot in different parts of the body 5.8 describe the signs which indicate strike 5.9 explain how to locate shot deer including the use of dogs 5.10 explain the methods used to humanely despatch wounded deer 5.11 explain how weather conditions can affect deer culling 5.12 outline common deer diseases including those which are notifiable

Learning outcome
The learner will: 6. Understand relevant health and safety legislation and environmental good practice
Assessment criteria
The learner can: 6.1 summarise current health and safety legislation, codes of practice and any additional requirements 6.2 describe the possible environmental damage that could occur and how to respond appropriately 6.3 explain the correct and appropriate methods for disposing of waste

Learning outcome
The learner will: 7. Know how to maintain accurate records
Assessment criteria
The learner can: 7.1 explain the reason for keeping accurate, up-to-date cull records

Unit 519 Stalk and cull deer

Supporting information

Guidance

Simulation will not be acceptable where the unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 520 Carry out aerial pruning of a tree

UAN:	**K/504/0317**
Level:	Level 3
Credit value:	3
GLH:	19
Relationship to NOS:	This unit is linked to the Trees and Timber NOS, LANTw29.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries
Aim:	The aim and purpose of this unit is to provide the learner with the knowledge, skills and understanding to carry out aerial pruning of a tree

Learning outcome
The learner will: 1. Be able to promote health and safety and industry good practice
Assessment criteria
The learner can: 1.1 identify the **hazards and risks** associated with the working area and the proposed work 1.2 work in a way which promotes health and safety, is consistent with relevant legislation and industry good practice 1.3 use and maintain tools, equipment and personal protective equipment (PPE) 1.4 carry out work to minimise **environmental damage** 1.5 dispose of waste safely in line with legislation

Range and Guidance
Hazards and risks 3 hazards and the associated risks with the working area 3 hazards and the associated risks with the proposed work **Environmental damage** Inspect the working area for potential (negative) environmental damage Record finding(s) and report as appropriate Implement any required control measure(s)

Learning outcome
The learner will: 2. Be able to carry out aerial pruning of a tree
Assessment criteria
The learner can: 2.1 perform a **hazard** evaluation and Work At Height assessment prior to carrying out the work 2.2 use access and positioning methods appropriate to the assessed risk(s) 2.3 inspect all access equipment to ensure it is safe and fit for use under manufacturers instructions and relevant legislation 2.4 select an appropriate anchor point if climbing or appropriate position of Mobile Elevated Work Platform (MEWP) according to the work situation 2.5 reassess the anchor point for climbing or positioning of Mobile Elevated Work Platform throughout the work 2.6 apply pruning specification 2.7 carry out **pruning operations** in accordance with industry good practice 2.8 check all arisings are dropped/thrown into planned drop zone without compromising the access equipment or damage to the infrastructure

Range and Guidance
Hazard 6 hazards of the tree **Pruning operations** 1 x Crown reduction 1 x Crown thinning

Learning outcome
The learner will: 3. Understand relevant health and safety legislation and industry good practice
Assessment criteria
The learner can: 3.1 explain the importance of **risk assessment** 3.2 outline the **emergency planning procedures** relevant to the work area 3.3 summarise current health and safety **legislation** and industry good practice 3.4 explain the importance of maintaining tools, equipment and personal protective equipment 3.5 describe the potential **environmental damage** that could occur and how to respond appropriately 3.6 explain the correct and appropriate **methods for disposing of waste**

Range and Guidance
Risk assessment 5 steps of risk assessment **Emergency planning procedures** 5 emergency procedures **Legislation** Lifting Operations and Lifting Equipment Regulations 1998 (LOLER) The Provision and Use of Work Equipment Regulations 1998 (PUWER) Work at Height Regulations 2005 Arboricultural Forestry Advisory Guides (AFAG) **The Arboricultural Association Technical Guides** **Environmental damage** 2 occurrences **Methods for disposing of waste** 2 methods

Learning outcome
The learner will: 4. Understand how to carry out aerial pruning of a tree
Assessment criteria
The learner can: 4.1 explain **control measures** to be implemented relevant to the working area and proposed works 4.2 explain how to evaluate the tree for hazards and the implications of the hazards when identified 4.3 explain the **importance of accurate and appropriate cuts** when removing branch material 4.4 explain how **tree species, their condition and the time of year** affect the work 4.5 evaluate the **advantages and disadvantages of pruning tools** to the selected pruning operations 4.6 explain the additional **precautions** that may be taken during re-pollarding of trees 4.7 define pruning prescriptive terms and measurements 4.8 explain measurement terms and how to apply them 4.9 explain the basic principles of target pruning and the effect on tree pruning operations

Range and Guidance
Control measures 2 control measures **Importance of accurate and appropriate cuts** 2 reasons **Tree species, their condition and the time of year** 1 reason for each **Advantages and disadvantages of pruning tools** 1 advantage and 1 disadvantage of each tool Minimum of 2 tools to be selected **Precautions** 2 precautions

Unit 520 Carry out aerial pruning of a tree

Supporting information

Guidance

The learner will undertake both crown reduction and crown thinning on a tree above 380mmRefer to Lantra SSC's Assessment Strategy for full details.

Unit 521 Carry out aerial tree rigging

UAN:	**K/504/0561**
Level:	Level 3
Credit value:	3
GLH:	19
Relationship to NOS:	This unit is linked to the Trees and Timber NOS.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries
Aim:	The aim and purpose of this unit is to provide the learner with the knowledge, skills and understanding to carry out aerial tree rigging

Learning outcome
The learner will: 1. Be able to promote health and safety and industry good practice
Assessment criteria
The learner can: 1.1 identify the **hazards and risks** associated with the working area and the proposed work 1.2 work in a way which promotes health and safety and is consistent with relevant legislation and industry good practice 1.3 use and maintain tools, equipment and **personal protective equipment (PPE)** 1.4 carry out work to minimise **environmental damage**

Range and Guidance
Hazards and risks 3 hazards and the associated risks with the working area. 3 hazards and the associated risks with the proposed work. **Personal Protective Equipment (PPE)** INDG317; AFAG301 **Environmental damage** Check the working area for potential (negative) environmental damage Report finding(s) as appropriate Carry out any required control measure(s)

Learning outcome
The learner will: 2. Be able to carry out aerial tree rigging
Assessment criteria
The learner can: 2.1 perform a **hazard evaluation and a Work At Height assessment** prior to commencing the work 2.2 use access and positioning methods appropriate to the assessed risks 2.3 inspect access equipment to ensure it is safe and fit for use under manufacturer's instructions and relevant legislation 2.4 estimate the **anticipated loads** 2.5 select **compatible components** to make up the rigging system 2.6 assess the position and selection of anchor points for rigging components in relation to: • anticipated load • ground crew • other anchor points • access equipment position • planned drop zone • processing area • communication 2.7 remove tree sections using **suitable rigging and appropriate cuts**

Range and Guidance
Hazard evaluation and a Work At Height assessment 6 hazards of the tree **Anticipated loads** For rigging point: • Above load • Below load **Compatible components** For rigging point: • Above load • Below load Use of 2 of the following knots in any part of the rigging system: • Timber hitch • Cow hitch • Running Bowline • Clove hitch **Suitable rigging and appropriate cuts** 1 of each Tip tie

Butt tie
Cradle
2 Vertical free fall
2 Lowered vertical sections

Learning outcome

The learner will:

3. Understand relevant health and safety legislation and industry good practice

Assessment criteria

The learner can:

3.1 explain the **risk assessment process**

3.2 outline the **emergency planning procedures** relevant to the work area

3.3 summarise current health and safety **legislation and industry good practice**

3.4 explain the **importance** of maintaining tools, equipment and personal protective equipment

3.5 describe the **potential environmental damage** that could occur and how to respond appropriately

Range and Guidance

Risk assessment process

Five steps to risk assessment

Emergency planning procedures

State 5 emergency procedures

Legislation and industry good practice

1 purpose of each:

- Arboriculture and Forestry Advisory Group (AFAG) Guides.
- AA/HSE Guide to Good climbing practice.
- HSE RR668 Evaluation of current rigging and dismantling practices used in arboriculture.
- The Arboriculture Associations Technical Guides

2 key points from each:

- Health and Safety at Work etc Act 1974 (HASAW).
- Provision and Use of Work Equipment Regulations 1998 (PUWER), Regulation 9.

3 key points from each:

- Work at Height Regulations 2005.

4 key points from:

- Lifting Operations and Lifting Equipment Regulations 1998 (LOLER).

Importance

2 reasons

Potential environmental damage
2 examples

Learning outcome
The learner will: 4. Understand how to carry out aerial tree rigging
Assessment criteria
The learner can: 4.1 explain the **control measures** to be implemented relevant to the working area and proposed work 4.2 explain how to **evaluate** the tree for hazards and the **implications** of the hazards 4.3 explain how to calculate anticipated loads 4.4 describe how to select compatible components to make up a rigging system appropriate for the anticipated load 4.5 describe how to select suitable anchor points for the anticipated load without compromising the workers access position 4.6 describe how to select suitable access positions and planned drop zones 4.7 describe how to layout a work site to safeguard the ground crew, aid workflow, and deal with arisings during rigging operations 4.8 describe how to **minimise shock loading** in the rigging system 4.9 describe when tree rigging may be required and its **limitations** 4.10 describe how, when and where to use: • drift/load transfer line • balance/cradle • spider leg • speedline • false anchor points • craning and lifting techniques • crane removal • pull/ tag line 4.11 explain how remove tree sections by: • Tip tie technique • Butt tie technique • Balance/cradle • Snatching • Speed line • Lifting techniques

Range and Guidance
Control measures 2 control measures for hazards provided in AC 1.1 **Evaluate** 1 evaluation of the hazards **Implications** 3 implications **Minimise shock loading** 3 ways to minimise **Limitations** 3 reasons and 3 limitations

Unit 521 Carry out aerial tree rigging

Supporting information

Guidance

Simulation will not be acceptable where this unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 522 Install and maintain structural supports for trees

UAN:	**K/504/0592**
Level:	Level 3
Credit value:	4
GLH:	26
Relationship to NOS:	This unit is linked to the Trees and Timber NOS .
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries
Aim:	The aim and purpose of this unit is to provide the knowledge skills and understanding to install and maintain structural supports for trees

Learning outcome
The learner will: 1. Be able to promote health and safety and industry good practice
Assessment criteria
The learner can: 1.1 identify the **hazards and risks** associated with the working area and the proposed work 1.2 work in a way which promotes health and safety is consistent with relevant legislation and industry good practice 1.3 use and maintain tools, equipment and personal protective equipment (PPE) 1.4 carry out work to minimise environmental damage

Range and Guidance
Hazards and risks 3 hazards and the associated risks with the working area. 3 hazards and the associated risks with the proposed work.

Learning outcome
The learner will: 2. Be able to install and maintain structural supports for trees
Assessment criteria
The learner can: 2.1 perform a **hazard** evaluation and a Work At Height assessment prior to commencing the work 2.2 select the most **suitable structural support system** for the situation and the well-being of the tree 2.3 select components for installation 2.4 determine the appropriate position of installation for the situation 2.5 use access and positioning methods appropriate to the assessed risks and the method statement 2.6 communicate work plan to ground crew 2.7 install **selected structural support system** into the tree 2.8 report on structural support system used and implement an inspection regime

Range and Guidance
Hazard 6 hazards of the tree **Suitable structural support system** 1 system for each **Selected structural support system** 2 of the following: • Invasive • Non-invasive propping

Learning outcome
The learner will: 3. Understand relevant health and safety legislation and industry good practice
Assessment criteria
The learner can: 3.1 explain the importance of risk assessment 3.2 outline the **emergency planning procedures** relevant to the work area 3.3 summarise current health and safety **legislation** and industry good practice 3.4 explain the importance of maintaining tools, equipment and personal protective equipment 3.5 describe the potential **environmental damage** that could occur and how to respond appropriately

Range and Guidance
Emergency planning procedures State 5 emergency procedures **Legislation** Health and Safety at Work Act 1974 Lifting Operations and Lifting Equipment Regulations 1998 (LOLER) The Provision and Use of Work Equipment Regulations 1998 (PUWER) Work at Height Regulations 2005 Aboricultural Forestry Advisory Guides (AFAG) **Environmental damage** 2 occurrences

Learning outcome
The learner will: 4. Understand how to install and maintain structural supports for trees
Assessment criteria
The learner can: 4.1 describe when a **structural support system is appropriate** 4.2 describe **different types** of structural support system and their application, installation and maintenance covering • Rod brace – rod to stabilise a weak fork OR bridge a cavity OR stabilise two rubbing branches • Invasive flexible brace – cable into the tree crown • Non-invasive flexible brace incorporating belt attachments into the tree crown prop to restrain downward movement of a heavy or long branch within a few metres of the ground • Propping 4.3 explain how to identify the **correct position for installation** of a structural support system 4.4 evaluate the **materials** to be used to meet anticipated loads 4.5 describe any **pruning requirements** that can supplement the structural support system 4.6 explain how species, condition of tree and the time of year can affect the work 4.7 outline the basic principles of tree biology and how they impact on the work 4.8 state the **implications and liabilities** of installing a support system into a dynamic structure

Range and Guidance
Structural support system is appropriate 3 instances **Different types** 1 of each for all

Correct position for installation
3 instances

Materials
3 materials

Pruning requirements
2 pruning requirements

Implications and liabilities
3 implications
3 liabilities

Unit 522 Install and maintain structural supports for trees

Supporting information

Guidance

Simulation will not be acceptable where this unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 523 Survey vegetation adjacent to above ground utilities to identify required management

UAN:	**K/504/3668**
Level:	Level 3
Credit value:	8
GLH:	52
Relationship to NOS:	This unit is linked to the Trees and Timber NOS, LANTW36.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries
Aim:	The aim and purpose of this unit is to provide the learner with the knowledge skills and understanding to survey vegetation adjacent to above ground utilities. Utilities include electricity, railways, waterways and highways

Learning outcome
The learner will: 1. Be able to promote health and safety and industry good practice
Assessment criteria
The learner can: 1.1 identify the hazards and risks associated with the working area and the proposed work 1.2 carry out work in accordance with **relevant legislation, industry good practice** and promotes health and safety 1.3 use tools, equipment and personal protective equipment (PPE)

Range and Guidance
Relevant legislation, industry good practice • ensure that required signage and controls are in place • ensure any procedures for lone working are in place • clearly identify where specialised workers engaged by the utility must be used.

Learning outcome
The learner will: 2. Be able to survey vegetation
Assessment criteria
The learner can: 2.1 Identify landowner requirements 2.2 agree specification with the landowner 2.3 conduct a **survey** of the site 2.4 specify the specialist equipment and resources required for **operations** identified 2.5 record survey details as appropriate to the utility and intended use of the data

Range and Guidance
Survey • identifying the vegetation management necessary for continued safe and effective use of the utility • identify types of utility specific apparatus and associated safety zones likely to interfere with operations. **Operations** Vegetation management operations adjacent to overhead utilities and structures

Learning outcome
The learner will: 3. Understand relevant health and safety legislation and industry good practice
Assessment criteria
The learner can: 3.1 explain the importance of risk assessment 3.2 outline the emergency planning procedures relevant to the work area 3.3 summarise current health and safety legislation and industry good practice 3.4 explain the importance of maintaining tools, equipment and personal protective equipment 3.5 describe the potential environmental damage that could occur and how to respond appropriately

Learning outcome
The learner will: 4. Understand how to survey vegetation
Assessment criteria
The learner can: 4.1 explain how the species, condition and stage of growth of the tree/s and their proximity to the utility affect the work 4.2 explain how to manage landowners expectations 4.3 explain how to carry out a survey of vegetation around utilities and the information that should be recorded 4.4 explain the conflicts between retaining aesthetics and the requirements of the utility owner or licence holders 4.5 describe the basic principles of tree biology 4.6 evaluate the implications of crown reduction and thinning intensity to efferent tree species 4.7 describe utility specific apparatus and associated safety zones and how they can affect the work

Unit 523 Survey vegetation adjacent to above ground utilities to identify required management

Supporting information

Guidance

Simulation will not be acceptable where this unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 524 Plan and carry out plant protection by chemical means

UAN:	**K/601/0258**
Level:	Level 3
Credit value:	2
GLH:	13
Relationship to NOS:	This unit is linked to Horticulture NOS.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries

Learning outcome
The learner will: 1. Be able to carry out plant protection by chemical means
Assessment criteria
The learner can: 1.1 identify vegetation which requires control 1.2 carry out a risk assessment and prepare a plan 1.3 control unwanted vegetation in line with current industry recognised guidelines on best practice and with job specification 1.4 record chemical use and user details for every site 1.5 carry out protection and maintenance in line with the job specification avoiding damage to the planted trees and to the environment

Learning outcome
The learner will: 2. Be able to work safely and minimise environmental damage
Assessment criteria
The learner can: 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 transport and store materials in a manner which minimises damage and ensures safety and security 2.3 dispose of waste safely and correctly

Learning outcome
The learner will: 3. Be able to select, use and maintain relevant equipment
Assessment criteria
The learner can: 3.1 select and use appropriate equipment for this area of work according to relevant legislation and manufacturer's instructions 3.2 prepare maintain and store equipment in a safe and effective working condition

Learning outcome
The learner will: 4. Understand how to carry out plant protection by chemical means
Assessment criteria
The learner can: 4.1 describe how to safely and securely transport and store materials 4.2 explain the implications of terrain, ground conditions, vegetation, season and weather on the use of chemicals 4.3 describe how to plan control work 4.4 explain the types of damage that are acceptable and under what circumstances 4.5 explain how to identify unwanted vegetation 4.6 explain the reasons for placing unwanted materials clear of trees

Learning outcome
The learner will: 5. Understand relevant health and safety legislation and environmental good practice
Assessment criteria
The learner can: 5.1 summarise the current health and safety legislation, codes of practice and any additional requirements 5.2 describe the correct methods for disposing of waste 5.3 explain the impact of using chemicals on the environment and how to environmental damage can be minimised 5.4 explain how to identify hazards and comply with the control measures of risk assessments

Learning outcome
The learner will: 6. Understand the reasons for maintaining equipment
Assessment criteria
The learner can: 6.1 explain the importance and methods of maintaining equipment used for this activity 6.2 explain the limitations of equipment to be used in relation to the work

Unit 524 Plan and carry out plant protection by chemical means

Supporting information

Guidance

Simulation will not be acceptable where this unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 525 Sever uprooted or windblown trees using a chainsaw

UAN:	**L/504/0620**
Level:	Level 3
Credit value:	4
GLH:	26
Relationship to NOS:	This unit is linked to Trees and Timber NOS, LANTw24.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries
Aim:	The aim and purpose of this unit is to provide the learner with the knowledge and skills to sever uprooted or windblown trees using a chainsaw

Learning outcome
The learner will: 1. Be able to promote health and safety and industry good practice
Assessment criteria
The learner can: 1.1 identify the **hazards and risks** associated with the working area and the proposed work 1.2 use appropriate tools, equipment and personal protective equipment (PPE) 1.3 work in a way which promotes health and safety and is consistent with **relevant legislation and industry good practice** 1.4 carry out work to **minimise environmental damage** 1.5 dispose of waste in line with legislation

Range and Guidance
Hazards and risks 3 hazards and the associated risks with the working area. 3 hazards and the associated risks with the proposed work. **Relevant legislation and industry good practice** Refer to INDG145; INDG317; AFAG301; AFAG306; AFAG307 **Minimise environmental damage** • Inspect working area for potential (negative) environmental damage. • Record findings, and report as appropriate. • Implement required control measures.

Learning outcome
The learner will: 2. Be able to sever uprooted and windblown trees using a chainsaw
Assessment criteria
The learner can: 2.1 carry out **pre-start checks** and setting of the machine for use 2.2 plan and agree a **system of work** 2.3 prepare site and establish escape route 2.4 Demonstrate **safe starting** of the chainsaw 2.5 **prepare stems** 2.6 **sever stems** under significant tension and compression 2.7 **secure** the root plate with a winch 2.8 **sever the root** plates using a recognised severing method appropriate to the tree size and condition 2.9 **prepare broken and partially windblown trees** using appropriate methods and aid tools for felling 2.10 **fell broken trees** using appropriate methods and aid tools 2.11 **fell partially windblown trees** using appropriate methods and aid tools 2.12 **turn tree and remove under branches** using appropriate method and aid tools 2.13 cross-cut timber to length in accordance with the specification 2.14 **stack produce** for subsequent operations using appropriate aids and tools 2.15 check that trees, timber and root plates are in a safe, appropriate position and condition 2.16 clean and tidy working area

Range and Guidance
Pre-start checks operator's handbook; INDG317 **System of work** Include: • Relevant briefings to all operators on site. • AFAG306. • AFAG802. **Safe starting** • Include operational checks. • INDG317. • AFAG301. **Prepare stems** Appropriate to tree position, size, condition and species.

May include removing:

- Branches.
- Climbing vegetation and scrub.
- Soil and gravel.
- Other obstructions.

Sever stems

Minimum 2, maximum 4 stems under top/bottom tension/compression.
Minimum 1, maximum 2 stem under side tension/compression.

Secure

Learner to demonstrate on a root plate overhanging work position (where not available simulation is acceptable).

Sever the root

Minimum 3, maximum 6
1 root plate must be secured with a winch
1 tree must include reduction cuts on a stem above guide bar length.
AFAG306

Prepare broken and partially windblown trees

Appropriate to the tree condition and the specification for the site.

May include:

- Brashing lower branches.
- Removing climbing vegetation.
- Removing buttresses.
- Other obstructions.

Broken trees as referred to in AFAG306. Other scenarios and techniques are likely to be encountered.

Fell broken trees

Minimum 2; maximum 4

Appropriate to the tree form, condition and selected felling technique.

Broken trees as referred to in AFAG306. Other scenarios and techniques are likely to be encountered.

Fell partially windblown trees

It is acceptable for the assessor to prepare trees for assessment.
Minimum 2; maximum 4

Appropriate to the tree form, condition and selected felling technique.

Turn tree and remove under branches

A learner must not put themselves at risk when standing on a partially uprooted plate.

Refer to INDG145; AFAG303 and AFAG307

Stack produce
Stacking must be tidy.
INDG145.
AFAG304.

Learning outcome
The learner will: 3. Understand relevant health and safety legislation and industry good practice
Assessment criteria
The learner can: 3.1 explain the **risk assessment process** 3.2 outline the **emergency planning procedures** relevant to the work area 3.3 summarise current health and safety **legislation and industry good practice** 3.4 explain the **importance** of maintaining tools, equipment and personal protective equipment 3.5 describe the potential **environmental damage** that could occur and how to respond appropriately 3.6 explain **methods for disposing of waste**

Range and Guidance
Risk assessment process Five steps to risk assessment. Provide an example of 3 control measures from the hazards/risks identified. **Emergency planning procedures** AFAG802 – paragraph 16: 5 emergency planning procedures **Legislation and industry good practice** State 2 points from each: Health and Safety at Work Act 1974; Provision and Use of Work Equipment Regulations 1998 (PUWER 98) Manual Handling Operations Regulations 1992 Lifting Operations and Lifting Equipment Regulations 1998 (LOLER) 1 reason: Arboriculture Forestry Advisory Group (AFAG) Use of warning signs to be included. State the safe working distances between operators during felling, cross-cutting and using machinery.

Importance
3 reasons.

Environmental damage
4 examples of environmental damage and appropriate response.

Methods for disposing of waste
State 3 methods.

Learning outcome
The learner will: 4. Understand how to sever uprooted or windblown trees using a chainsaw
Assessment criteria
The learner can: 4.1 explain top, bottom and side tension and compression in timber 4.2 explain the **risks involved and precautions** to be taken by the chainsaw operator when cutting timber under high tension 4.3 state when winch restraint of a root plate or stem is necessary 4.4 describe how to set up winch for restraint of side tension or to prevent uncontrolled movement of timber 4.5 explain why **severing buts** may be made a distance of a 'long log' from the root plate and the associated hazards 4.6 describe the **alternative methods** that can be used to sever timber under very severe tension and compression 4.7 describe how to make root plates safe after severing 4.8 explain the **factors to consider** and additional safety precautions when using winches 4.9 describe how to **maintain safety on site** when machinery is present 4.10 describe the **situations** where a banksman would be used and the means of communication with the operator 4.11 describe the **methods of severing uprooted trees**, under and over guide bar length in diameter 4.12 describe how to sever **partly uprooted** or windblown trees 4.13 describe **how to fell broken trees** with: • hanging tops • partially broken tops which are in contact with the ground 4.14 explain the **advantages and methods** of removing a broken top prior to felling

Range and Guidance
Risks involved and precautions 2 risks and their precautionary measures. **Severing buts** 2 benefits 2 hazards

Alternative methods
State 2 methods

Factors to consider

- Capacity of the winch.
- Security of anchor points consideration of multiplication of forces on anchor points with eg double rigging or offset (diverted) pulling.
- Compatibility of components.
- Awareness of danger zones.
- Clear communication established.
- Roles and responsibilities understood

Maintain safety on site
Maintain specified risk zone(s).
Clear communication with operator

Situations
Describe 2 situations and 2 means of communication.

Methods of severing uprooted trees
1 method for under and 1 method for over guide bar length

Partly uprooted
Learner to state 2 risks associated with standing on a partially uprooted plate

How to fell broken trees
Techniques safe and appropriate to the tree/site.
AFAG306.

Advantages and methods
2 advantages.
2 methods.

Unit 525 Sever uprooted or windblown trees using a chainsaw

Supporting information

Guidance

Minimum of 6 interwoven windblown trees with a diameter between 300mm-560mm one of which must be at least 380mm.

Minimum 4 broken trees plus 4 partially windblown trees with a diameter between 380mm-560mm.

The trees must have been windblown within the last 12 months (if not available simulation is acceptable).

- Leaning forward - root plate
- Leaning backward - root plate

Refer to Lantra SSCs assessment strategy for further details.

Unit 526 Supervise arboriculture operations in proximity to above ground utilities

UAN:	**L/504/3663**
Level:	Level 3
Credit value:	8
GLH:	52
Relationship to NOS:	This unit is linked to the Trees and Timber NOS, LANTw35.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries
Aim:	The aim and purpose of this unit is to provide the learner with the knowledge skills and understanding to supervise utility arboriculture operations in proximity to above ground utilities. Utilities include electricity, railways, waterways and highways.

Learning outcome
The learner will: 1. Be able to promote health and safety and industry good practice
Assessment criteria
The learner can: 1.1 identify the hazards and risks associated with the working area and the proposed work 1.2 carry out work in accordance with relevant legislation, industry good practice and promotes health and safety 1.3 use tools, equipment and Personal Protective Equipment (PPE) 1.4 carry out work to minimise environmental damage

Learning outcome
The learner will: 2. Be able to supervise utility arboriculture operations
Assessment criteria
The learner can: 2.1 implement appropriate control measures according to current legislative, industry and utility specific standards 2.2 monitor that the required signage and guarding controls are in place

2.3	monitor the use of specialist equipment for vegetation management operations adjacent to overhead utilities and structures
2.4	plan work to reduce the impact of vegetation on overhead utilities
2.5	**supervise the operations** to minimise the impact of vegetation on overhead utilities

Range and Guidance
Supervise the operations Ensure work instructions are being followed

Learning outcome
The learner will: 3. Understand relevant health and safety legislation and industry good practice
Assessment criteria
The learner can: 3.1 explain the importance of risk assessment 3.2 outline the emergency planning procedures relevant to the work area 3.3 summarise current health and safety legislation and industry good practice 3.4 explain the importance of maintaining tools, equipment and personal protective equipment 3.5 describe the potential environmental damage that could occur and how to respond appropriately 3.6 explain the correct and appropriate methods for disposing of waste 3.7 explain the records required for management and legislative purposes and the importance of maintaining them

Learning outcome
The learner will: 4. Know how to supervise utility arboriculture operations
Assessment criteria
The learner can: 4.1 explain why it is important to regularly review work and why it may need to be suspended or stopped 4.2 explain how the species, condition and stage of growth of the tree(s) and their proximity to the utility affect the work 4.3 evaluate the implications of crown reduction and thinning intensity to different tree species 4.4 explain the potential hazards and risks associated with working in close proximity to the utility 4.5 explain the conflicts between retaining aesthetics and the requirements of the utility owner or licence holder

Unit 526 Supervise arboriculture operations in proximity to above ground utilities

Supporting information

Guidance

Simulation will not be acceptable where this unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 527 Prepare, produce and evaluate interpretive media

UAN:	**M/502/3244**
Level:	Level 3
Credit value:	8
GLH:	52
Relationship to NOS:	This unit links to the Environmental Conservation NOS.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries

Learning outcome
The learner will: 1. Be able to prepare briefs for producing interpretive media
Assessment criteria
The learner can: 1.1 prepare briefs for interpretive media which meet resource, budget, legal and site requirements 1.2 identify interpretive media that are appropriate for the intended audience and the interpretation objectives 1.3 accurately identify resource requirements for realising the briefs and where appropriate identify suitable alternatives 1.4 seek any necessary information and advice from appropriate sources 1.5 present briefs within agreed timescales in a form and level of detail suitable for further specialist design work to be carried out if required

Learning outcome
The learner will: 2. Be able to monitor the production of interpretative media
Assessment criteria
The learner can: 2.1 monitor production progress regularly against agreed resource allocations and timescales 2.2 agree any proposed changes to the production plan with the appropriate people 2.3 ensure the interpretive media are produced within planned budget and timescales 2.4 ensure the interpretive media produced match the design brief

2.5 ensure that site-based interpretive media are located in accordance with the original brief

2.6 ensure that printed materials are distributed in accordance with the original brief

Learning outcome

The learner will:

3. Be able to evaluate the effectiveness of interpretative media

Assessment criteria

The learner can:

3.1 ensure that all evaluation criteria are clearly established and agreed with the appropriate people

3.2 use at least two different evaluation methods that are appropriate to the situation and the customers:

- response to questionnaires
- observation
- customer feedback
- feedback from colleagues
- feedback from employer

3.3 carry out and record the evaluation in a manner which yields accurate and impartial data

3.4 ensure that evaluation results are related to the evaluation criteria and based on accurate analysis of the available data

3.5 draw conclusions on the effectiveness of interpretive media based on evaluation criteria and supported by the results of the evaluation

3.6 present results and conclusions to the appropriate people in an agreed format and within agreed timescales

Learning outcome

The learner will:

4. Understand how to prepare briefs for producing interpretative

Assessment criteria

The learner can:

4.1 explain the types of interpretive media and how appropriate each is to particular circumstances:

- leaflets
- signs
- displays
- trails
- audio/audio visual
- events

4.2 explain the resources that will be required for producing media:

- time
- money
- people
- skills

4.3	explain the sources of relevant information and how reliable these are
4.4	explain how to establish the purpose of the brief, the format and level of detail required in the brief, and timescales for submitting the brief
4.5	explain how to establish who the intended audience are and the learning objectives required
4.6	explain the consequences of failing to establish the relevant background before beginning to prepare the brief

Learning outcome

The learner will:

5. Understand how to produce and monitor interpretive media

Assessment criteria

The learner can:

5.1 explain how to measure suitability of product against design brief

5.2 explain the factors that could affect production/location and how these should be handled

5.3 explain their limits of authority and from where to seek confirmation of changes covering:

- schedule
- methods
- suppliers
- siting

5.4 explain the individuals/organisations that are involved in the production of media, the nature of their involvement and responsibilities

5.5 explain why it is important to regularly monitor production/siting/distribution

Learning outcome

The learner will:

6. Understand how to evaluate the effectiveness of interpretive media

Assessment criteria

The learner can:

6.1 explain how and with whom valid evaluation criteria should be established

6.2 explain the different methods of evaluation and the suitability of each for different situations

- response to questionnaires
- observation
- customer feedback
- feedback from colleagues
- feedback from employer

6.3 explain the factors which can cause data to be skewed

6.4 explain the methods of recording data and the suitability of each

6.5 explain how to analyse data and draw conclusions related to the evaluation criteria that are supported by the results of the analysis

6.6 explain why it is important to use methods which are likely to produce accurate and impartial data

Unit 527 Prepare, produce and evaluate interpretive media

Supporting information

Guidance

Simulation will not be acceptable where the unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 528 Select, mark and assess volume of standing trees

UAN:	**M/504/3655**
Level:	Level 3
Credit value:	5
GLH:	33
Relationship to NOS:	This unit is linked to Trees and Timber NOS, LANTW66.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries
Aim:	The aim of this unit is to provide the learner with the knowledge and skills required to select, mark and assess trees.

Learning outcome
The learner will: 1. Be able to promote health and safety and industry good practice
Assessment criteria
The learner can: 1.1 work in a way which promotes health and safety, is consistent with relevant legislation, codes of practice and any additional requirements 1.2 work in a way which promotes plant health and biosecurity and is consistent with relevant legislation and codes of practice 1.3 use tools, equipment and Personal Protective Equipment 1.4 ensure work is carried out in a manner which minimises environmental damage

Learning outcome
The learner will: 2. Be able to select and mark trees
Assessment criteria
The learner can: 2.1 establish basal area of trees as an aid to selection 2.2 select trees according to the given specification and appropriate tariff method 2.3 mark trees in line with the given specification and appropriate tariff method 2.4 measure trees in line with the specification and appropriate tariff method

2.5	complete appropriate tariffing field checks to minimise error
2.6	check thinning intensity using sample plots

Learning outcome

The learner will:

3. Understand how to select, mark and assess volume of standing trees

Assessment criteria

The learner can:

3.1 evaluate the implications when selecting **trees** in relation to:

- thinning intensity
- thinning yield
- rack spacing
- rack width
- brash mat
- wind throw hazard
- species

3.2 explain the tariff procedure and how to use full and abbreviated tariffing systems

3.3 explain how to calculate thinning yield, thinning intensity and basal area

3.4 describe the criteria for deciding between selective and systematic methods of selection

3.5 explain when it is appropriate to fell volume sample trees

3.6 evaluate the following thinning types on selection and marking:

- Low
- Intermediate
- Crown
- Line

3.7 evaluate different marking **tools** and equipment when selecting and marking

3.8 describe how to identify species of standing trees

3.9 explain the factors which may affect selecting and marking trees including terrain, season, weather and species

3.10 explain how the **harvesting method** may affect the way a crop is marked

3.11 describe **product specifications**

Range and Guidance

Trees

broadleaf or conifer

Tools

- hand tools
- paint
- tape

Harvesting method

covering:

- Area
- Cost
- Mean tree volume

Product specifications

including quality, minimum and maximum lengths, and minimum and maximum diameters eg fencing posts, telegraph poles

Learning outcome
The learner will: 4. Understand relevant health and safety legislation and industry good practice
Assessment criteria
The learner can: 4.1 summarise current health and safety legislation, codes of practice and any additional requirements 4.2 summarise plant health and biosecurity legislation and relevant industry good practice 4.3 describe the possible environmental damage that could occur and how to respond appropriately

Unit 528 Select, mark and assess volume of standing trees

Supporting information

Guidance

Simulation will not be acceptable where this unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 529 Prepare and operate a cable crane to extract wood products

UAN:	**M/504/3686**
Level:	Level 3
Credit value:	5
GLH:	33
Relationship to NOS:	This unit is linked to the Trees and Timber NOS, TW45.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries
Aim:	The aim of this unit is to provide the learner with the knowledge, skills and understand required to prepare and operate a cable crane for timber extraction

Learning outcome
The learner will: 1. Be able to work safely
Assessment criteria
The learner can: 1.1 identify the **hazards and risks** associated with the working area and the proposed work 1.2 **use** appropriate tools, equipment and Personal Protective Equipment 1.3 carry out work in accordance with relevant legislation, industry good practice and maintain health and safety 1.4 carry out work to minimise environmental damage

Range and Guidance
Hazards and risks Carry out a site risk assessment Identify route Assess the Operational and environmental requirements for the site Plan safe and efficient felling **Use** Store machinery, fuels and equipment securely on site

Learning outcome
The learner will: 2. Be able to prepare and operate cable crane
Assessment criteria
The learner can: 2.1 carry out **pre-start checks** to test all operating functions of the equipment as appropriate 2.2 **set up and rig the cable crane** in line with manufacturer's and industry guidance 2.3 undertake **routine splicing** of wire ropes 2.4 operate the cable crane to extract timber in keeping with site constraints

Range and Guidance
Pre-start checks For task, site and machine **Set up and rig the cable crane** Erect and anchor the tower where appropriate Rig and anchor tail spar identifying suitable anchor points Install carriage **Routine splicing** Ensure the stability of the cable crane is maintained throughout Keep amount of extracted timber at landing to an acceptable volume

Learning outcome
The learner will: 3. Understand how to prepare cable crane
Assessment criteria
The learner can: 3.1 summarise the **procedures** for loading and unloading equipment 3.2 explain **how to rig** a cable crane 3.3 describe when it would be appropriate to use offset winching 3.4 explain how and where to rig an intermediate support and when it would be appropriate to use intermediate support 3.5 explain how to establish ground anchors and maintain their effectiveness 3.6 discuss the characteristics and advantages of different carriages 3.7 explain how to repair main skyline and maintain wire ropes

Range and Guidance
Procedures Including the principles of safe manual handling techniques **How to rig** Describe how to set up and rig artificial spar and support

Learning outcome
The learner will: 4. Understand how to operate a cable crane
Assessment criteria
The learner can: 4.1 describe the **techniques** for extracting timber by cable crane 4.2 evaluate the capabilities and limitations of cable crane systems 4.3 identify the additional safeguards required when working on hi-lead systems 4.4 explain the implications of terrain, ground conditions, season, weather conditions, on extracting timber by cable crane 4.5 explain the implications of load and product type/weight/length on extracting timber by cable crane

Range and Guidance
Techniques Discuss the advantages and disadvantages of quick release chokers and chokering aids and equipment

Learning outcome
The learner will: 5. Understand relevant health and safety legislation and industry good practice
Assessment criteria
The learner can: 5.1 summarise **current health and safety legislation, codes of practice and any additional requirements** 5.2 describe the types of **records** that may be required for management and legislative requirements

Range and Guidance
Current health and safety legislation, codes of practice and any additional requirements Discuss current guidelines on machinery operation, risk zones and safety clearances from overhead electricity conductors and what to do in the event of contact with power lines Explain the importance of offset working when the landing area is restricted Describe the possible environmental damage that could occur and how to respond appropriately **Records** LOLER PUWER and the importance of accurate record keeping

Unit 529 Prepare and operate a cable crane to extract wood products

Supporting information

Guidance

Simulation will not be acceptable where this unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 531 Carry out site surveys and communicate findings

UAN:	**M/601/0195**
Level:	Level 3
Credit value:	4
GLH:	26
Relationship to NOS:	This unit is linked to the Trees and Timber NOS, O29NTW.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries
Aim:	The aim of this unit is to provide the learner with the knowledge, skills and understanding required to carry out site surveys and communicate findings

Learning outcome
The learner will: 1. Be able to carry out site surveys
Assessment criteria
The learner can: 1.1 establish the purpose of the site survey 1.2 collect data using suitable survey technical that meets the requirements of the survey specification 1.3 analyse data or forward to others for analysis in line with specifications 1.4 record all data fully and in the format specified

Learning outcome
The learner will: 2. Be able to communicate findings
Assessment criteria
The learner can: 2.1 produce accurate and complete information which contains the necessary supporting data 2.2 communicate findings in accordance with the survey specification and respond to requests for further clarification

Learning outcome
The learner will: 3. Be able to promote health and safety and environmental good practice
Assessment criteria
The learner can: 3.1 work in a way which promotes health and safety, is consistent with relevant legislation, codes of practice and any additional requirements 3.2 ensure work is carried out in a manner which minimises environmental damage

Learning outcome
The learner will: 4. Understand how to carry out site surveys
Assessment criteria
The learner can: 4.1 explain how to **identify hazards** and comply with the control measures of risk assessments 4.2 explain the **roles and responsibilities** when carrying out site surveys 4.3 discuss a range of survey techniques available and explain how and when these would be used 4.4 explain how to analyse the range of data collected and its significance including types and sources 4.5 explain the **actions** to take if there is difficulty in obtaining data 4.6 explain the difference between quantitative and qualitative information and how to collect this data 4.7 explain the difference between primary and secondary data

Range and Guidance
Identify hazards Distinguish between levels **Roles and responsibilities** UKFS standard requirements **Actions** Understand the importance of gathering accurate data

Learning outcome
The learner will: 5. Understand how to communicate survey findings
Assessment criteria
The learner can: 5.1 explain the information required and the timescale within which reporting must take place

5.2 compare ways of presenting information clearly to the intended user

Learning outcome
The learner will: 6. Understand relevant health and safety legislation and environmental good practice
Assessment criteria
The learner can: 6.1 summarise current health and safety legislation, codes of practice and any additional requirements

Unit 531 Carry out site surveys and communicate findings

Supporting information

Guidance

Simulation will not be acceptable where this unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 532 Writing a business plan

UAN:	**R/501/3922**
Level:	Level 3
Credit value:	1
GLH:	3
Relationship to NOS:	n/a
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries

Learning outcome
The learner will: 1. Be able to write a business plan
Assessment criteria
The learner can: 1.1 collect and examine information about the business 1.2 select the most relevant material for a given purpose/audience 1.3 write a clear and concise business plan/case using accurate facts and figures in an acceptable business format

Unit 532 Writing a business plan

Supporting information

Guidance

Simulation will not be acceptable where this unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 533 Plan and manage the control of pests, diseases and disorders

UAN:	**R/502/1471**
Level:	Level 3
Credit value:	5
GLH:	33
Relationship to NOS:	This unit is linked to the trees and timber NOS.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries

Learning outcome
The learner will: 1. Plan the control of pests, diseases and disorders
Assessment criteria
The learner can: 1.1 develop suitable plans for the control of pests, diseases and disorders. The plans should specify the following: • control method to be used (chemical, biological and/or cultural) • timing • individuals involved • health and safety requirements • environmental protection measures To take account of the following criteria • crop • cropping area • problem • market requirements 1.2 present plans clearly to the appropriate people

Learning outcome
The learner will: 2. Be able to monitor the control of pests, diseases and disorders
Assessment criteria
The learner can: 2.1 establish methods, timing and frequency of monitoring to determine the presence of pests, diseases and disorders 2.2 gather accurate monitoring information relating to the presence of pests, diseases and disorders at appropriate intervals 2.3 accurately interpret all available information to identify the extent of the pest population, disease, disorders and biological controls

Learning outcome
The learner will: 3. Be able to manage the control of pests, diseases and disorders
Assessment criteria
The learner can: 3.1 confirm that the selected control methods are in accordance with legislative requirements 3.2 implement at least two control methods in ways which minimise the risks to non-target species and the environment: • chemical • biological • cultural 3.3 take appropriate actions without delay should problems arise during pest, disease and disorder control 3.4 evaluate accurately the use of control method and amend activities if necessary

Learning outcome
The learner will: 4. Be able to keep appropriate records
Assessment criteria
The learner can: 4.1 keep all relevant records up to date, accurate, legible and complete

Learning outcome
The learner will: 5. Be able to promote health and safety and environmental good practice
Assessment criteria
The learner can: 5.1 work in a way which promotes health and safety, is consistent with relevant legislation, codes of practice and any additional requirements 5.2 ensure work is carried out in a manner which minimises environmental damage 5.3 manage and dispose of waste in accordance with legislative requirements and codes of practice

Learning outcome
The learner will: 6. Be able to maintain and use relevant equipment
Assessment criteria
The learner can: 6.1 ensure equipment is prepared, used and maintained in a safe and effective condition throughout

Learning outcome
The learner will: 7. Understand how to plan for the control of pests, diseases and disorders
Assessment criteria
The learner can: 7.1 explain the importance of developing plans for the control of pests, diseases and disorders and why they should cover the following: • control method to be used (chemical, biological and/or cultural) • timing • individuals involved • health and safety requirements • environmental protection measures 7.2 explain the ways in which the plans should be communicated covering both written and spoken 7.3 explain all the planning criteria to be considered when developing plans: • crop • cropping area • problem • market requirements

Learning outcome
The learner will: 8. Understand how to monitor the control of pests, diseases and disorders
Assessment criteria
The learner can: 8.1 explain how to assess the risks associated with monitoring and controlling pests, diseases and disorders 8.2 explain how to identify pests, diseases and disorders, the significance of their presence on crop and the problems they cause 8.3 explain integrated pest management and its advantages and disadvantages 8.4 explain the effects of season and weather conditions on monitoring pest populations and how monitoring methods can be adjusted to take account of these changes 8.5 explain the reasons for monitoring pest populations and the importance of developing suitable plans for their control

Learning outcome
The learner will: 9. Understand the records required for managing the control of pests, diseases and disorders
Assessment criteria
The learner can: 9.1 explain the records required and their importance

Learning outcome
The learner will: 10. Understand the control of pests, diseases and disorders
Assessment criteria
The learner can: 10.1 explain how to assess the health and safety risks related to controlling pests, diseases and disorders 10.2 explain different methods for controlling pests, diseases and disorders and the problems which may occur and the action to be taken covering: • chemical • biological • cultural 10.3 explain the safe and effective handling of chemicals and the dangers and emergency treatments 10.4 explain how to prolong the effective life of chemicals

Learning outcome
The learner will: 11. Understand the reasons for maintaining equipment
Assessment criteria
The learner can: 11.1 explain the importance and methods of maintaining equipment for use

Learning outcome
The learner will: 12. Understand relevant health and safety legislation and environmental good practice
Assessment criteria
The learner can: 12.1 summarise current health and safety legislation, codes of practice and any additional requirements 12.2 describe the possible environmental damage that could occur and how to respond appropriately 12.3 explain the correct and appropriate methods for disposing of waste 12.4 explain the records required for management and legislative purposes and the importance of maintaining them

Unit 533 Plan and manage the control of pests, diseases and disorders

Supporting information

Guidance

Simulation will not be acceptable where the unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance

Unit 534 Research and plan environmental interpretations

UAN:	**R/502/3236**
Level:	Level 3
Credit value:	5
GLH:	33
Relationship to NOS:	This unit is linked to the Environmental Conservation NOS.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries

Learning outcome
The learner will: 1. Be able to research information for interpretations
Assessment criteria
The learner can: 1.1 establish the nature, requirements and expectations of the intended audience 1.2 formulate clear research objectives linked to the nature and requirements of the audience, the sites to be visited and the focus of interpretation 1.3 use appropriate information sources effectively and economically 1.4 assess all information obtained for accuracy and appropriateness to the intended audience 1.5 identify and access additional sources of information where necessary 1.6 ensure that throughout the work account is taken of the environmental and social impact of proposed interpretations 1.7 ensure the information compiled is reliable, accurate and optimises the goodwill of those providing the information

Learning outcome
The learner will: 2. Be able to plan information for interpretation
Assessment criteria
The learner can: 2.1 ensure that plans take account of potential site hazards and minimise their effects on the audience 2.2 relate the planned interpretations to the nature and requirements of the audience, the sites to be visited and the focus of interpretation 2.3 ensure that plans allow for the use of a range of appropriate interpretive methods 2.4 ensure that plans take account of the potential environmental and social impact of the proposed interpretation and aim to sustain the special character of the site 2.5 negotiate and agree site access arrangements prior to planned visits 2.6 identify the required resources and confirm their availability 2.7 maintain the confidentiality of information

Learning outcome
The learner will: 3. Understand how to research information for interpretations
Assessment criteria
The learner can: 3.1 explain why it is important to formulate clear research objectives 3.2 explain how to establish the nature, requirements and expectations of the intended audience covering the following groups: • general interest • special interest 3.3 explain the ways in which the needs of different audiences may vary, and how this impacts on research covering the following groups: • general interest • special interest 3.4 explain how to link to needs of the audience with the sites to be visited and the focus of interpretation 3.5 explain relevant information sources, and how to access and use them effectively 3.6 explain how to check information for reliability, accuracy and relevance; and the reasons why this is important 3.7 explain the ways in which the goodwill of information providers can be optimised 3.8 explain how to take account of potential environmental and social impact of interpretations and the reasons why this is important

Learning outcome
The learner will: 4. Understand how to plan for interpretations
Assessment criteria
The learner can: 4.1 explain how to plan interpretations and select methods best suited to the needs of the audience, the sites to be visited and the focus of interpretation. Interpretations cover: • geographical areas or sites • specific environmental topics • environmental themes 4.2 explain the specific site hazards, how they are recognised and their impact on visitors minimised and the consequences of failing to identify and plan accordingly 4.3 explain the resources and approaches available for the plan and their suitability covering: • time • human • physical • financial information 4.4 explain how to identify, negotiate and agree appropriate site access arrangements and the consequences of failing to make appropriate access arrangements prior to visits 4.5 explain the importance of confirming availability of resources and the consequences of failing to ensure required resources are available 4.6 explain the need for appropriate levels of confidentiality

Unit 534 Research and plan environmental interpretations

Supporting information

Guidance

Simulation will not be acceptable where the unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 535 Carry out assisted fell operations

UAN:	**R/504/0604**
Level:	Level 3
Credit value:	3
GLH:	19
Relationship to NOS:	This unit is linked to the Trees and Timber NOS, LANTw26.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries
Aim:	The aim and purpose of this unit is to provide the learner with the knowledge skills and understanding to carry out assisted fell operations

Learning outcome
The learner will: 1. Be able to promote health and safety and industry good practice
Assessment criteria
The learner can: 1.1 identify the **hazards** and risks associated with the working area and the proposed work 1.2 use appropriate tools, equipment and personal protective equipment (PPE) 1.3 work in a way which promotes health and safety is consistent with relevant **legislation and industry good practice** 1.4 carry out work to **minimise environmental damage** 1.5 **dispose of waste** in line with legislation

Range and Guidance
Hazards 3 hazards and the associated risks with the working area. 3 hazards and the associated risks with the proposed work. **Legislation and industry good practice** INDG317; AFAG301 **Minimise environmental damage** Check the working area for potential (negative) environmental damage Report finding(s) as appropriate

Dispose of waste
Carry out any required control measure(s)

Learning outcome
The learner will: 2. Be able to carry out assisted fell operations
Assessment criteria
The learner can: 2.1 select appropriate equipment for the felling operation 2.2 carry out **pre-start checks** and setting of the machine for use 2.3 demonstrate safe starting of the chainsaw 2.4 select a felling direction appropriate to tree form and site conditions 2.5 position pulling equipment in accordance with specific risk assessment 2.6 use suitable anchor points for anticipated load as necessary 2.7 install adequate attachment point within the tree to be felled to give sufficient security and adequate leverage for the pulling system 2.8 set up safe pull system 2.9 pre-tension the pull system to ensure all components are correctly configured and functional 2.10 make felling cuts 2.11 retreat to a safe area and initiate the pull 2.12 clean and tidy working area

Range and Guidance
Pre-start checks Refer to INDG317; Operator's handbook

Learning outcome
The learner will: 3. Understand relevant health and safety legislation and industry good practice
Assessment criteria
The learner can: 3.1 explain the importance of risk assessment 3.2 outline the emergency planning procedures relevant to the work area 3.3 summarise current **health and safety legislation and industry good practice** 3.4 explain the importance of maintaining tools, equipment and personal protective equipment 3.5 describe the potential **environmental damage** that could occur and how to respond appropriately 3.6 explain appropriate **methods** for disposing of waste 3.7 explain the **records** required for management and legislative purposes and the importance of maintaining them

Range and Guidance
Health and safety legislation and industry good practice 2 points: Health and Safety at Work Act 1974 Provision and Use of Work Equipment Regulations 1998 (PUWER 98). 1 reason: Arboriculture Forestry Advisory Group (AFAG) **Environmental Damage** 2 examples **Methods** State 2 methods **Records** 2 records and the importance

Learning outcome
The learner will: 4. Understand how to carry out assisted fell operations
Assessment criteria
The learner can: 4.1 explain how to **estimate the load** 4.2 explain how to determine the appropriate pulling equipment for the assisted fell of a range of tree types/ weights 4.3 state the application and limitations of different types of pulling equipment 4.4 describe how to inspect equipment and recognise **defects** in any of the pull system components 4.5 explain the importance of clear communication during assisted fell operations 4.6 explain how to set-up an assisted fell pulling system which is adequate for the anticipated load of the tree 4.7 explain the necessity for offset pulling 4.8 explain the need for accurate felling direction and the importance of employing appropriate felling techniques/cuts 4.9 explain the reason for incorporating a 'back-hold' into the felling cut for assisted fell operations 4.10 describe the use of **felling aids** as an alternative to assisted fell 4.11 describe the consequences of not carrying out an assisted fell operation in an organised and appropriate manner

Range and Guidance
Estimate the load When using: Rope Winch or machine **Defects** 3 defects in each component 2 reasons **Felling aids** 2 felling aids 2 consequences

Unit 535 Carry out assisted fell operations

Supporting information

Guidance

Minimum of 2, maximum of 4 assisted fell operations need to be carried out:

- 1 rope
- 1 winch/machine

Refer to Lantra SSCs Assessment Strategy for further details

Unit 536 Carry out emergency treework operations

UAN:	**R/504/0621**
Level:	Level 3
Credit value:	5
GLH:	33
Relationship to NOS:	This unit is linked to the Trees and Timber NOS, LANTw18.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries
Aim:	The aim and purpose of this unit is to provide the knowledge, skills and understanding to carry out emergency treework operations

Learning outcome
The learner will: 1. Be able to promote health and safety and industry good practice
Assessment criteria
The learner can: 1.1 identify the **hazards and risks** associated with the working area and the proposed work 1.2 work in a way which promotes health and safety, is consistent with **relevant legislation and industry good practice** 1.3 use appropriate tools, equipment and personal protective equipment (PPE) 1.4 carry out work to **minimise environmental damage** 1.5 dispose of waste safely in line with legislation

Range and Guidance
Hazards and risks 3 hazards and the associated risks with the working area. 3 hazards and the associated risks with the proposed work. **Relevant legislation and industry good practice** INDG317; AFAG301 **Minimise environmental damage** Check the working area for potential (negative) environmental damage Report finding(s) as appropriate Carry out any required control measure(s)

Learning outcome
The learner will: 2. Be able to carry out emergency treework operations
Assessment criteria
The learner can: 2.1 deploy the emergency response kit 2.2 carry out **pre-start checks** and setting of machinery for use 2.3 demonstrate safe starting of the chainsaw 2.4 **breakdown** tree crowns 2.5 **secure the tree root plate** with appropriate equipment 2.6 **sever the root plates** using a recognised severing method appropriate to the tree size and condition 2.7 carry out **assisted fell operations** appropriate to tree form and site conditions 2.8 make working area safe with suitable access routes as required 2.9 dispose of arisings in line with site specification, safety and environmental requirements 2.10 restore and secure the site prior to departure 2.11 clean and tidy working area

Range and Guidance
Pre-start checks Refer to INDG317, Operators handbook Include post start / operational checks INDG317; AFAG301 **Breakdown** Work within the crowns of damaged trees to remove branches/limbs which present a hazard **Secure the tree root plate** 1 to be secured **Sever the root plates** Min 2 fully up rooted trees less than 18” diameter at severing point **Assisted fell operations** 1 with rope 1 with winch

Learning outcome
The learner will: 3. Understand relevant health and safety legislation and industry good practice
Assessment criteria
The learner can: 3.1 Explain the importance of risk assessment 3.2 Outline the **emergency planning procedures** relevant to the work area 3.3 Summarise current **health and safety legislation and industry good practice** 3.4 Explain the importance of maintaining tools, equipment and personal protective equipment 3.5 Describe the **potential environmental damage** that could occur and how to respond appropriately 3.6 Explain appropriate **methods** for disposing of waste 3.7 Explain the records required for management and legislative purposes and the importance of maintaining them

Range and Guidance and guidance
Emergency planning procedures State 5 emergency procedures **Health and safety legislation and industry good practice** 2 points from each: Health and Safety at Work Act 1974 Lifting Operations and Lifting Equipment Regulations 1998 (LOLER) The Provision and Use of Work Equipment Regulations 1998 (PUWER) Work at Height Regulations 2005 1 reason: Aboricultural Forestry Advisory Guides (AFAG) **Potential environmental damage** 2 causes 2 occurrences **Methods** 2 methods

Learning outcome
The learner will: 4. Understand how to carry out emergency treework operations
Assessment criteria
The learner can: 4.1 explain how to **secure** the tree root-plate or other unstable structures with appropriate equipment 4.2 explain the factors to consider and additional safety precautions when using winches 4.3 describe the **reasons and circumstances** where it is necessary to move trees to a safer working area 4.4 explain the **principles** of tree crown breakdown with particular emphasis on supporting branches and tension and compression 4.5 explain how to determine the **appropriate pulling equipment** for the assisted fell of a range of tree types/ weights 4.6 explain the **importance of initiating and maintaining communication** and team working when carrying out emergency treework operations 4.7 explain **planning requirements** for any subsequent work and clear up to take place 4.8 describe the **procedures** for dealing with emergencies and emergency services 4.9 explain why some **activities** need to be carried out at the time of the emergency and why some can be left until a later time 4.10 explain the **hazards** of working in different types of sites and situations covering: • In close proximity to buildings • In close proximity to the highway • In close proximity to water • Fallen trees • Damaged buildings • Appalling weather • Damaged overhead power lines which may be live • Damaged underground utilities • Burst drains • Environmental disasters – raw sewage etc. • Under artificial lights

Range and Guidance
Secure 2 root-plates 2 other **Reasons and circumstances** 2 reasons 2 circumstances **Principles** 5 principles **Appropriate pulling equipment** 5 factors which may include: Length, SWH, Weight of item, availability, method of installation **Importance of initiating and maintaining communication** 3 reasons Locating the emergency co-ordinator **Planning requirements** 3 requirements **Procedures** 4 procedures **Activities** 2 at the time 2 carried out later **Hazards** 1 hazard from each

Unit 536 Carry out emergency treework operations

Supporting information

Guidance

Minimum 2, maximum 4 fully uprooted trees within the last 12 months. Stems between 18″ and 30″.

A hand winch must be used to secure 1 root plate.

Open spreading crowns with branches and/or stem under tension and compression.

Crown may be conifer or broadleaved.

Removal of branches/limbs (over approximately 100mm (4″) in diameter): Min 20, max 30.

Sections of stem (length/diameter in accordance with site specification): Min 4, max 12.

Minimum 1 maximum 2 standing tree for assisted felling up to 380mm diameter.

Refer to Lantra SSCs assessment strategy

Unit 537 Carry out aerial cutting of trees with the assistance of a crane

UAN:	**R/504/0666**
Level:	Level 3
Credit value:	5
GLH:	33
Relationship to NOS:	This unit is linked to Trees and timber LANTw32.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries
Aim:	The aim and purpose of this unit provides the learner with the knowledge skills and understanding to carry out aerial cutting of trees with the assistance of a crane

Learning outcome
The learner will: 1. Be able to promote health and safety and industry good practice
Assessment criteria
The learner can: 1.1 identify the **hazards and risks** associated with the working area and the proposed work 1.2 work in a way which promotes health and safety and is consistent with **relevant legislation and industry good practice** 1.3 use and maintain tools, equipment and personal protective equipment (PPE) 1.4 carry out work to minimise environmental damage 1.5 dispose of waste in line with legislation

Range and Guidance
Hazards and risks 3 hazards and the associated risks with the working area. 3 hazards and the associated risks with the proposed work. **Relevant legislation and industry good practice** INDG317; AFAG301

Learning outcome
The learner will: 2. Be able to carry out aerial cutting of trees with the assistance of a crane
Assessment criteria
The learner can: 2.1 perform a **hazard evaluation** and a Work At Height assessment prior to carrying out the work 2.2 use access and positioning methods appropriate to the assessed risks 2.3 inspect access equipment to ensure it is safe and fit for use under manufacturers instructions and relevant legislation 2.4 select an appropriate **anchor point according to work situation** 2.5 calculate the anticipated loads the rigging needs to take, and select compatible components to make up the rigging system 2.6 assess the position of the crane to facilitate removal of tree sections 2.7 agree with crane operator the position of the crane for work to be carried out 2.8 assess the likely directions of pivot and attach slings accordingly 2.9 assess the weight of the pieces to be removed and identify desired drop zone 2.10 select appropriate work position and execute appropriate cut 2.11 communicate with crane operator and ground staff in relation to the progress of operations 2.12 use a **pull/tag line to aid removal of sections**

Range and Guidance
Hazard evaluation 6 hazards of the tree **Anchor point according to work situation** To access/ position for the access equipment so that the anchor point/position will not be compromised by the tree or any part of the work being carried out **Pull/tag line to aid removal of sections** To protect self, infrastructure and other targets

Learning outcome
The learner will: 3. Understand relevant health and safety legislation and industry good practice
Assessment criteria
The learner can: 3.1 explain the importance of risk assessment 3.2 outline the **emergency planning procedures** relevant to the work area

3.3	summarise current **health and safety legislation and industry good practice**
3.4	explain the importance of maintaining tools, equipment and personal protective equipment
3.5	describe the **potential environmental damage** that could occur and how to respond appropriately
3.6	explain the correct **methods for disposing of waste**

Range and Guidance

Emergency planning procedures
State 5 emergency procedures

Health and safety legislation and industry good practice
2 points
Health and Safety at Work Act 1974;
Provision and Use of Work Equipment Regulations 1998 (PUWER 98);

1 reason
Arboriculture Forestry Advisory Group (AFAG)

4 requirements
Lifting Operations and Lifting Equipment Regulations 1998 (LOLER)

3 requirements
Work at Height Regulations 2005

Potential environmental damage
2 occurrences

Methods for disposing of waste
2 methods

Learning outcome
The learner will: 4. Understand how to carry out aerial cutting of trees with the assistance of a crane
Assessment criteria
The learner can: 4.1 evaluate the tree for hazards and the implications of the hazards when identified 4.2 explain how to select appropriate anchor points/position of access equipment so the anchor point will not be compromised by the work being carried out 4.3 explain the importance of accurate and appropriate cuts when removing tree sections and their effect on the section being removed 4.4 evaluate the advantages and disadvantages of tools and equipment to perform cutting operations 4.5 explain how species, condition of trees and the time of year can affect the work 4.6 describe how to install and use pull/tag line to aid removal of sections 4.7 evaluate the advantages and disadvantages of removing tree sections using a crane 4.8 calculate anticipated loads when removing tree sections using a crane 4.9 assess likely direction of pivot

Unit 537 Carry out aerial cutting of trees with the assistance of a crane

Supporting information

Guidance

Simulation will not be acceptable where the unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance

Unit 538 Transplant large root-balled plants

UAN:	**R/504/3650**
Level:	Level 3
Credit value:	4
GLH:	26
Relationship to NOS:	This unit is linked to the Trees and timber NOS LANTW9.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries
Aim:	The aim of this unit it to provide the learner with the knowledge and skills required to transport and plant large root-balled plants. This covers both trees and large plants.

Learning outcome
The learner will: 1. Be able to promote health and safety and industry good practice
Assessment criteria
The learner can: 1.1 identify the hazards and risks associated with the working area and the proposed work 1.2 carry out work specification in accordance with relevant legislation, codes of practice, any additional requirements and promotes health and safety 1.3 use tools, equipment and Personal Protective Equipment safely 1.4 carry out work to minimise environmental damage

Learning outcome
The learner will: 2. Be able to prepare large root-balled plants for transplanting
Assessment criteria
The learner can: 2.1 identify a species that meets site requirements and specification 2.2 ensure the bio-security and the condition of the plant before transporting and establishment 2.3 **prepare and transport** the plant in a way that is safe and secure 2.4 Maintain the health, vitality and physical condition of the plant throughout

Range and Guidance
Prepare and transport prepare the plant for transportation in accordance with highway and traffic regulations if appropriate

Learning outcome
The learner will: 3. Be able to plant large root-balled plants
Assessment criteria
The learner can: 3.1 identify the planting site 3.2 mark out the planting site 3.3 carry out **planting** using methods that maintain the health, vigour and condition of the plant in line with specification 3.4 specify the **aftercare** appropriate to the plant and the environment

Range and Guidance
Planting provide support if necessary for planting conditions **Aftercare** cultivate and restore the site as specified remove all waste and surplus materials and dispose of them as specified

Learning outcome
The learner will: 4. Understand relevant health and safety legislation and environmental good practice
Assessment criteria
The learner can: 4.1 explain the importance of risk assessment 4.2 summarise current health and safety legislation and industry good practice 4.3 explain the importance of maintaining tools, equipment and Personal Protective Equipment 4.4 describe the potential environmental damage that could occur and how to respond appropriately 4.5 explain the records required for management and legislative purposes and the importance of maintaining them

Learning outcome
The learner will: 5. Know how to prepare and plant large root-balled plants
Assessment criteria
The learner can: 5.1 state **how to check the condition and bio-security of plants** to ensure they are fit for transportation and establishment 5.2 describe the effects of transportation on plants and how to prepare them for transportation to maintain their condition throughout 5.3 state the **causes of damage** which may occur to plants during transplanting and how these can be prevented covering handling 5.4 explain the factors affecting the timing, method and site of planting 5.5 explain support systems that will benefit the plant during establishment 5.6 explain the types of damage and the aftercare requirements of large root-balled plants

Range and Guidance
How to check the condition and bio-security of plants how to identify suitable plant stock to meet the needs of the customer and the site conditions **Causes of damage** • transport • timing • site conditions • soil type • exposure/ aspect • drying out

Unit 538 Transplant large root-balled plants

Supporting information

Guidance

Simulation will not be acceptable where this unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 539 Promote, monitor and maintain health, safety and security of the workplace

UAN:	**T/501/2987**
Level:	Level 3
Credit value:	7
GLH:	53
Relationship to NOS:	This unit is linked to the trees and timber NOS.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries

Learning outcome
The learner will: 1. Understand how to monitor and maintain the health, safety and security of the workplace
Assessment criteria
The learner can: 1.1 evaluate your legal and organisational responsibility in relation to health, safety and security 1.2 describe the difference between 'hazard' and 'risk' and how to assess risk 1.3 assess the hierarchy of measures to control risks (including elimination, substitution, relevant engineering controls, safe systems of work, training/instruction and personal protective equipment) 1.4 assess the risks which arise from routine work activities and the measures to control them 1.5 evaluate the importance of assessing risks from new and non-routine work activities 1.6 assess the need to communicate health and safety precautions to others entering the area 1.7 assess safe methods of using and storing equipment and materials 1.8 investigate how hazardous and non-hazardous waste should be managed 1.9 assess security issues associated with the workplace and what actions to take 1.10 research the relationship of extinguisher to fire type (electrical, chemical, combustible material) 1.11 evaluate procedures for different types of emergencies relevant to the industry in which you are working 1.12 evaluate any specific risks relevant to child safety from your work

1.13	assess your responsibility for maintaining health and safety records
1.14	research the ways in which environmental damage must be minimised during work activities

Learning outcome
The learner will: 2. Understand how to promote good standards of health and safety
Assessment criteria
The learner can: 2.1 justify the contribution that good standards of health and safety make to the management and efficiency of the business or organisation 2.2 assess the effect that your actions have on the attitudes of other workers towards health and safety 2.3 propose the importance of discussing and agreeing how individuals are to work for safe co-ordination of their activities 2.4 evaluate safe lifting and handling techniques 2.5 assess safe methods of working with potentially hazardous equipment and the relevant legislation and guidelines related to this 2.6 assess safe methods and systems of working with hazardous materials and the relevant legislation related to this 2.7 assess methods for minimising environmental damage during work 2.8 propose effective methods of promoting good health and safety practice to others 2.9 investigate the types of accidents or injury which may occur and the correct actions to take 2.10 propose the reasons for providing information on whereabouts 2.11 assess the records which it is necessary to keep under relevant legislation and your personal responsibility for maintaining these

Learning outcome
The learner will: 3. Understand how to respond to health emergencies within the workplace
Assessment criteria
The learner can: 3.1 assess the required action to take for the health emergency concerned 3.2 assess your own competence in dealing with the health emergency 3.3 evaluate the reasons for calling for assistance immediately 3.4 describe the importance of not carrying out actions beyond your own capabilities 3.5 assess the reasons why actions beyond your level of competence may further endanger life 3.6 investigate effective ways of providing support to those suffering a health emergency and of keeping them in the best possible condition 3.7 analyse the effects of shock on individual's with a health emergency and ways of dealing with this effectively

3.8	assess the type of verbal support which can be provided to the individual suffering the health emergency
3.9	assess potential health risks to others from an emergency
3.10	assess reasons for offering support and help to others involved in the incident and how this should be achieved
3.11	investigate relevant legislative requirements for completing records of accidents and emergencies
3.12	assess location and use of accident book and first aid equipment

Learning outcome
The learner will: 4. Monitor and maintain the health, safety and security of the workplace
Assessment criteria
The learner can:
4.1 maintain the safety and security of the working environment in accordance with relevant legal and organisational requirements
4.2 assess existing risk assessments for routine work activities
4.3 assess the risks involved prior to undertaking new or non-routine work activities, recommend control measures and ensure agreed measures are applied
4.4 select and apply the correct measures to control risk from routine work activities
4.5 communicate any health and safety precautions that are being applied in the workplace to others entering the area
4.6 use equipment and materials correctly according to relevant legislation and organisational requirements
4.7 manage waste correctly in accordance with relevant legal and organisational requirements
4.8 follow standard procedures for personal hygiene at all times
4.9 implement safety procedures safely, correctly and without delay in an emergency situation
4.10 keep health, safety and security records which are accurate, legible and complete
4.11 perform work activities in a manner which minimises environmental damage

Learning outcome
The learner will: 5. Promote good standards of health and safety
Assessment criteria
The learner can:
5.1 assess the risk to yourself and others when carrying out work and take the necessary actions to minimise any potential dangers
5.2 wear clothing which is consistent with recognised good health and safety practice
5.3 use approved safe methods and systems when carrying out work
5.4 encourage and support others with whom you are working to maintain their own health and safety during work
5.5 perform your work in a manner which minimises environmental damage

5.6	stop work immediately if there is a danger of accidents or injury, and take the correct action
5.7	maintain accurate information regarding your whereabouts so that contact can be made should this be necessary
5.8	keep health and safety records which are accurate, legible and complete

Learning outcome
The learner will: 6. Respond to health emergencies within the workplace
Assessment criteria
The learner can:
6.1 summon assistance immediately for any health emergency and initiate action appropriate to the condition and situation
6.2 give assistance with ongoing care as required
6.3 provide the individual with the health emergency with suitable verbal support
6.4 make the immediate vicinity as private and safe as possible once the intervention has been taken over by an appropriate person
6.5 offer support to any others involved in the incident once any initial danger is passed
6.6 keep records which are accurate, legible and complete

Unit 539 Promote, monitor and maintain health, safety and security of the workplace

Supporting information

Guidance

Simulation will not be acceptable where the unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance

Unit 540 Identify the need for, and plan, habitat management work

UAN:	**T/502/1530**
Level:	Level 3
Credit value:	4
GLH:	26
Relationship to NOS:	This unit is linked to the Environmental Conservation NOS.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries

Learning outcome
The learner will: 1. Be able to identify habitat management work
Assessment criteria
The learner can: 1.1 identify the need for habitat management through use of all of the following: • site monitoring • management plan • reports from others

Learning outcome
The learner will: 2. Be able to plan for habitat management work
Assessment criteria
The learner can: 2.1 plan habitat management for at least four of the following objectives: • to create or maintain suitable conditions for particular species • to create or maintain a desired mix of habitats for access and recreation • to conserve desirable physical or archaeological features • to reduce the pressures of human activity on habitats • to promote site safety

2.2 take account of the environmental value of at least two of the following types of sites in planning:
- ecological
- archaeological
- recreational

2.3 select appropriate habitat management methods to achieve objectives

2.4 produce work plans and specifications for the identified work to include the following:
- schedule
- location
- methods and procedures
- physical resources
- human resources
- legal requirements
- standard of outcome required

2.5 carry out risk assessments and identify safe working procedures

2.6 seek agreement from all relevant interested parties and ensure that all necessary permissions are in place

2.7 Identify the most appropriate workforce for the planned habitat management work

2.8 identify and access the resources required to carry out the planned work

2.9 schedule habitat management work based on the following:
- identified priorities
- effects of season and timing

2.10 record plans in a suitable format

Learning outcome

The learner will:

3. Understand how to identify the need for habitat management work

Assessment criteria

The learner can:

3.1 explain how to identify the need for habitat management through use of:
- site monitoring
- management plan
- reports from others

3.2 explain how to identify the objectives of habitat management for the following objectives:
- to create or maintain suitable conditions for particular species
- to create or maintain a desired mix of habitats for access and recreation
- to conserve desirable physical or archaeological features
- to reduce the pressures of human activity on habitats
- to promote site safety

3.3 describe how to recognise the environmental value of sites

Learning outcome
The learner will: 4. Understand the need to plan habitat management work
Assessment criteria
The learner can: 4.1 explain how the environmental value of sites affects the planning of work 4.2 explain how to assess risks and develop safe working procedures 4.3 explain the process of producing work plans and specifications to organisational requirements including: • agreement of objectives • agreement of plans • when permissions is required • the suitable workforce • the resources required (tools and equipment, people) • schedule of work • legal requirements • standard of outcome 4.4 explain how planned work fits into organisational objectives, local and UK biodiversity action plans

Unit 540 Identify the need for, and plan, habitat management work

Supporting information

Guidance

Simulation will not be acceptable where the unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance

Unit 541 Carry out aerial rescue operations

UAN:	**T/504/0322**
Level:	Level 3
Credit value:	3
GLH:	20
Relationship to NOS:	This unit is linked to the Trees and Timber NOs, LANTw28.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries
Aim:	The aim and purpose of this unit is to provide the learner with the knowledge, skills and understanding to carry out an aerial rescue from a tree

Learning outcome
The learner will: 1. Be able to promote health and safety and industry good practice
Assessment criteria
The learner can: 1.1 identify the **hazards and risks** associated with the working area and the proposed work 1.2 work in a way which promotes health and safety, is consistent with relevant legislation and industry good practice 1.3 use access and tree climbing equipment and personal protective equipment (PPE)

Range and Guidance
Hazards and risks 3 hazards and the associated risks with the working area. 3 hazards and the associated risks with the proposed work

Learning outcome
The learner will: 2. Be able to carry out aerial rescue operations
Assessment criteria
The learner can: 2.1 perform a **hazard evaluation** of the tree and Work at Height assessment prior to commencing the work 2.2 inspect access equipment to ensure it is safe and fit for use under manufacturer's instructions and relevant legislation 2.3 use access and positioning methods appropriate to the assessed risks 2.4 identify the rescue technique appropriate to the nature of the incident 2.5 prepare a rescue plan 2.6 implement the **rescue plan** 2.7 use appropriate positioning techniques in the tree 2.8 communicate appropriately throughout

Range and Guidance
Hazard evaluation 6 hazards of the tree **Rescue plan** Must do both: • Rope not long enough to descend • Pole/spike rescue The casualty must be at least 5 metres from the ground

Learning outcome
The learner will: 3. Understand relevant health and safety legislation and industry good practice
Assessment criteria
The learner can: 3.1 explain the **risk assessment process** 3.2 outline the **emergency planning procedures** relevant to the work area 3.3 summarise current **health and safety legislation and industry good practice** 3.4 explain the **importance of inspecting equipment** following an aerial rescue

Range and Guidance
Risk assessment process Five steps to risk assessment

Emergency planning procedures
State 5 emergency procedures

Health and safety legislation and industry good practice
Lifting Operations and Lifting Equipment Regulations 1998 (LOLER)
The Provision and Use of Work Equipment Regulations 1998 (PUWER)
Work at Height Regulations 2005
Aboricultural Forestry Advisory Guides (AFAG)

Importance of inspecting equipment
2 reasons

Learning outcome
The learner will: 4. Understand how to carry out aerial rescue operations
Assessment criteria
The learner can: 4.1 explain when it would be appropriate to contact the emergency services 4.2 explain how to report the incident in line with organisational requirements 4.3 explain the key elements of a rescue plan prior to starting work 4.4 describe different **rescue methods** 4.5 describe when **aerial rescue by climbing would not be appropriate** 4.6 explain how to carry out a mobile elevated work platform rescue 4.7 explain the implications on a MEWP's safe working load limit during aerial rescue 4.8 explain how species, condition of trees and time of year affect rescues

Range and Guidance
Rescue methods 2 additional rescue methods to those demonstrated: • rope long enough, • rope too short/damaged, • belayed, • pole/spike rescue • Mobile Elevated Work Platforms MEWP. **Aerial rescue by climbing would not be appropriate** 2 reasons

Unit 541 Carry out aerial rescue operations

Supporting information

Guidance

Simulation will not be acceptable where the unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance

Unit 542 Carry out aerial cutting of trees with a chainsaw using free-fall techniques

UAN:	**T/504/0563**
Level:	Level 3
Credit value:	2
GLH:	13
Relationship to NOS:	This unit is linked to the Trees and Timber NOS, LANTw30.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries
Aim:	The aim and purpose of this unit is to provide the learner with the knowledge, skills and understanding to carry out aerial cutting of trees with a chainsaw using free-fall techniques. This unit is for learners using tree climbing equipment.

Learning outcome
The learner will: 1. Be able to promote health and safety and industry good practice
Assessment criteria
The learner can: 1.1 identify the **hazards and risks** associated with the working area and the proposed work 1.2 work in a way which promotes health and safety, is consistent with relevant **legislation and industry good practice** 1.3 use and maintain tools, equipment and personal protective equipment (PPE) 1.4 carry out **work to minimise environmental damage** 1.5 dispose of waste in line with work specification

Range and Guidance
Hazards and risks 3 hazards and the associated risks with the working area. 3 hazards and the associated risks with the proposed work. **Legislation and industry good practice** INDG317; AFAG301

Work to minimise environmental damage

Check the working area for potential (negative) environmental damage

Report finding(s) as appropriate

Carry out any required control measure(s)

Learning outcome

The learner will:

2. Be able to carry out aerial cutting of trees with a chainsaw using free-fall techniques

Assessment criteria

The learner can:

2.1 perform a **hazard evaluation and a Work At Height assessment** prior to commencing the work

2.2 use **access and positioning methods** appropriate to the assessed risks and the method statement

2.3 **inspect access equipment** to ensure it is safe and fit for use under manufacturers instructions and relevant legislation

2.4 select an appropriate main anchor point according to the work situation

2.5 assess the **timber diameter length and weight to be removed**

2.6 identify desired drop zone

2.7 use appropriate **cuts** based on assessment

2.8 use associated equipment to aid removal of sections into desired drop zone to protect infrastructure and targets

Range and Guidance

Hazard evaluation and a Work At Height assessment

6 hazards of the tree

Access and positioning methods

AFAG401; AA/HSE Guide to Good Climbing Practice

Inspect access equipment

Demonstrate 3 checks on all their equipment

Timber diameter length and weight to be removed

2 methods

Cuts

Each of the following cuts to be demonstrated min 2, max 6:

- Step cut free fall.
- Step cut hand held.
- Sink cut free fall.
- Sink cut hand held.
- Pruning cut.

Learning outcome
The learner will: 3. Understand relevant health and safety legislation and industry good practice
Assessment criteria
The learner can: 3.1 explain the importance of risk assessment 3.2 outline the **emergency planning procedures** relevant to the work area 3.3 summarise **current health and safety legislation and industry good practice** 3.4 explain the importance of maintaining tools, equipment and personal protective equipment 3.5 describe the potential environmental damage that could occur and how to respond appropriately 3.6 explain the correct and appropriate **methods for disposing of waste**

Range and Guidance
Emergency planning procedures AFAG802 – paragraph 16: 5 emergency procedures **Current health and safety legislation and industry good practice** 1 purpose of each: • Arboriculture and Forestry Advisory Group (AFAG) Guides. • BS3998:2010 Recommendation for tree work. 2 key points from each: • Health and Safety at Work etc Act 1974 (HASAW). • Provision and Use of Work Equipment Regulations 1998 (PUWER), Regulation 9. 3 key points from: • Work at Height Regulations 2005. **Methods for disposing of waste** 2 methods

Learning outcome
The learner will: 4. Understand how to carry out aerial cutting of trees with a chainsaw using free-fall techniques
Assessment criteria
The learner can: 4.1 explain how to evaluate the tree for hazards and the implications of the hazards when identified 4.2 explain how to select appropriate anchor points/position of access equipment so the anchor point will not be compromised by the work being carried out 4.3 explain different **cuts** and when they may be used: • Step cut • Sink cut • Inboard • Out board • Vertical • Horizontal • V cut • Holding cut 4.4 explain the **importance of accurate and appropriate cuts** when removing tree sections and their effect on the section being removed 4.5 state the **potential effects** of tree section removal on the retained parts of the tree 4.6 explain how species, condition of trees and the time of year can affect the work 4.7 describe the **use** of associated equipment to aid removal of sections

Range and Guidance
Cuts 1 of each **Importance of accurate and appropriate cuts** Provide 5 reasons **Potential effects** State 4 problems **Use** State 3 types

Unit 542 Carry out aerial cutting of trees with a chainsaw using free-fall techniques

Supporting information

Guidance

Simulation will not be acceptable where the unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance

Unit 543 Plan and evaluate coppice management

UAN:	**T/504/3673**
Level:	Level 3
Credit value:	5
GLH:	33
Relationship to NOS:	This unit is linked to the Trees and Timber NOS, LANTW51.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries
Aim:	The aim and purpose of this unit is to provide the learner with the knowledge skills and understand to plan and evaluate coppice management

Learning outcome
The learner will: 1. Be able to promote health and safety and industry good practice
Assessment criteria
The learner can: 1.1 identify the **hazards and risks** associated with the working area and the proposed work 1.2 carry out work in accordance with relevant legislation, industry good practice, any additional requirements and promotes health and safety

Range and Guidance
Hazards and risks Complete an appropriate risk assessment

Learning outcome
The learner will: 2. Be able to plan and evaluate coppice management
Assessment criteria
The learner can: 2.1 plan an effective **work schedule** 2.2 identify the **species mix and estimated age of coppice** 2.3 identify markets and/or uses for coppiced materials 2.4 identify and record the sustainable yield to meet objectives

2.5	formulate production plans and forecasts against available data
2.6	assess the risks associated with the site and the proposed works

Range and Guidance
Work schedule arrange permissions and paperwork with land owner/coppice community identify site features, constraints and parameters select appropriate terms and conditions for coppice management agreements **Species mix and estimated age of coppice** identify and evaluate characteristics of coppice

Learning outcome
The learner will: 3. explain the importance of risk assessment
Assessment criteria
The learner can: 3.1 explain the importance of risk assessment 3.2 summarise current health and safety legislation and industry good practice 3.3 describe the potential environmental damage that could occur and how to respond appropriately 3.4 describe habitats directives governing woodland operations

Learning outcome
The learner will: 4. Understand coppice management
Assessment criteria
The learner can: 4.1 explain the **factors** that affect coppice silviculture 4.2 describe means that can aid/speed up the production of coppice product 4.3 explain protection methods that can be used to reduce damage by animals 4.4 evaluate the methods for measuring coppice volume when crop is standing and felled 4.5 explain the **factors that affect yields** 4.6 describe the effects of retaining standard canopy trees and the impact on the coppice 4.7 explain the importance of coppice management for biodiversity

Range and Guidance
Factors • covering: • Economic • Environmental • Technical • Social **Factors that affect yields** the effects on yields of species mixtures

Unit 543 Plan and evaluate coppice management

Supporting information

Guidance

Simulation will not be acceptable where the unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 544 Communicate with, and care for, the public and others

UAN:	**Y/502/3240**
Level:	Level 3
Credit value:	3
GLH:	19
Relationship to NOS:	This unit is linked to the Environmental Conservation NOS.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries

Learning outcome
The learner will: 1. Be able to communicate with the public and others
Assessment criteria
The learner can: 1.1 communicate with members of the public and others politely and in a way which promotes the values of the organisation 1.2 communicate in a way which is suitable to the needs of members of the public and others, including individuals and groups 1.3 respond to requests for information clearly and accurately within the area of responsibility 1.4 refer members of the public and others to other appropriate sources of information

Learning outcome
The learner will: 2. Be able to work with, and care for, the public and others
Assessment criteria
The learner can: 2.1 care for members of the public and others in accordance with relevant legislation, codes of practice, organisational requirements and their needs 2.2 encourage members of the public and others to use the site in a way which is consistent with its purpose and condition 2.3 encourage members of the public and others to maintain their own safety during visits to the site 2.4 deal with members of the public and others who may cause a threat and take the appropriate action to minimise any damage or risk. At least two of the following threats must be covered:

- to the site and its contents
- to flora and fauna
- to themselves
- to other people

Learning outcome
The learner will: 3. Understand legislation and organisational policies and procedures
Assessment criteria
The learner can: 3.1 outline the responsibilities of self, members of the public and others in relation to relevant health and safety legislation 3.2 outline the values of the organisation eg policies and practices for customer care, promotion of environmental good practice or equality of opportunity 3.3 outline the organisational requirements for the care of members of the public and others

Learning outcome
The learner will: 4. Understand how to communicate with the public and others
Assessment criteria
The learner can: 4.1 explain how communication methods differ to meet the needs of the public and others 4.2 describe the correct procedures for handling and communicating confidential information 4.3 outline the different sources of information - internal and external to the organisation; written and verbal

Learning outcome
The learner will: 5. Understand how to work with, and care for, the public and others
Assessment criteria
The learner can: 5.1 explain the importance of balancing the needs of the site and the effects which the public may have on it 5.2 describe ways in which the needs of the site are most effectively met whilst allowing for appropriate public access 5.3 outline where the organisation has certain access policies or areas for specific public access 5.4 explain when and how to intercept the use of the site by the public and others to offer advice or help 5.5 describe how to handle people who cause a threat to sites in an effective, safe and courteous way: • to the site and its contents • to flora and fauna • to themselves • to other people

Unit 544 Communicate with, and care for, the public and others

Supporting information

Guidance

Simulation will not be acceptable where the unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance

Unit 545 Forecast production of forest and woodland products

UAN:	**D/504/3649**
Level:	Level 3
Credit value:	5
GLH:	33
Relationship to NOS:	This unit is linked to the Trees and Timber NOS .
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries
Aim:	The aim and purpose of this unit is to provide the learner with the knowledge and understanding to forecast the production of forest and woodland products to make recommendations

Learning outcome
The learner will: 1. Be able to forecast production of forest and woodland products
Assessment criteria
The learner can: 1.1 calculate the sustainable yield based on the woodland or forest inventory 1.2 formulate **production plans and forecasts** to achieve a sustainable yield

Range and Guidance
Production plans and forecasts set the thinning cycle and intensity in both a practical silvicultural and cost effective way

Learning outcome
The learner will: 2. Understand how to forecast production of forest and woodland products
Assessment criteria
The learner can: 2.1 explain the methods of identification of forest and woodland tree species 2.2 explain how to assess the silvicultural requirements of the crop and Windthrow Hazard Classification (WHC) 2.3 evaluate **ways of achieving sustainable yields** 2.4 explain the **effects on crops** of: • under/over-thinning • thinning and non-thinning • late or early thinning 2.5 explain the **methods and models** of identifying sustainable yields

Range and Guidance
Ways of achieving sustainable yields the effects on yields of species mixtures how to smooth peaks and troughs in production factors affecting rotation length **Effects on crops** factors affecting the decision to thin or not to thin **Methods and models** selection of yield model

Unit 545 Forecast production of forest and woodland products

Supporting information

Guidance

Simulation will not be acceptable where the unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance

Unit 546 Process timber with large loader-fed machinery

UAN:	**Y/504/3682**
Level:	Level 3
Credit value:	6
GLH:	39
Relationship to NOS:	This unit is linked to TW41.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries
Aim:	The aim of this unit is to provide the learner with the knowledge and skills required to process timber using large loader-fed machinery

Learning outcome
The learner will: 1. Be able to work safely
Assessment criteria
The learner can: 1.1 identify the hazards and risks associated with the working area and the proposed work 1.2 use appropriate tools, equipment and Personal Protective Equipment 1.3 carry out work specification in accordance with relevant legislation, industry good practice and maintains health and safety 1.4 carry out work to minimise environmental damage

Range and Guidance
1.1 Carry out a site risk assessment Identify route Assess the Operational and environmental requirements for the site Plan safe and efficient felling **1.2** Store machinery, fuels and equipment securely on site

Learning outcome
The learner will: 2. Be able to process timber using large loader-fed machinery

Assessment criteria
The learner can: 2.1 carry out **checks on all operating functions** of the equipment 2.2 plan work and the worksite and maintain safe working areas to **operate the timber processor** safely and efficiently 2.3 operate machinery to **process timber** according to job specification and site requirements 2.4 **contain processed timber** safely and efficiently 2.5 carry out **shut-down procedure** 2.6 prepare **machine for transportation**

Range and Guidance
Checks on all operating functions Check and inspect fire control equipment Maintain the security of machinery and equipment on site Start machine and carry out a practical check on all operating functions of the equipment including safety devices, prior to operating processor and check run-down and stopping systems function as appropriate Refuel processor in designated area Check rotors and bearings, blades/knives/hammers/grinding wheels or any other form of timber comminution and screening devices for security and integrity Including settings and control systems and implement any safety lockout / tag-out / permit to work procedures **Operate the timber processor** With minimal damage to the worksite, standing trees, tracks, roads, drains and the wider environment in accordance with the site and job specification. Manoeuvre or direct manoeuvring of machine into working position and set in - feed and discharge equipment. Utilise additional safeguards such as barriers, banksman and/or additional signs when operating machine and comply with safety distances from eg adjacent roads and tracks or where others are working **Process timber** or similar forms of timber processing mechanism, according to relevant legislation and industry guidelines Monitor in - feed and discharge equipment and devices for debris, blockages and free flow of materials **Contain processed timber** eg woodchips, minimising contamination to the environment during operations **Shut-down procedure** including switching off control systems and any safety lockout / tag-out / permit to work procedures as appropriate to the machine

Machine for transportation
Inspect and clean machine and report any defects or damage

Learning outcome
The learner will: 3. Understand how to monitor machine operations
Assessment criteria
The learner can: 3.1 Explain the safety requirements, routine and functional checks required for machine and operator protection 3.2 describe how to use **recovery and de-bogging techniques** in a variety of situations 3.3 explain the implications of processing long logs, poles or tree length timber on operation of the machine 3.4 describe how to unblock in-feed and discharge equipment and machinery and safeguards necessary when dealing with raised equipment 3.5 describe the different types of **machines** available and their operation

Range and Guidance
Functional checks including 'ROPS, FOPS and OPS' Explain the need for carrying out routine operator checks and basic maintenance & the benefits of an operator maintenance/inspection checklist for visual machinery inspection/checks Describe the principles of safe access and pre - start procedures including safety lockout / tag-out / permit to work systems as appropriate Explain the way machine control systems work and the reasons for checking their functions at start -up and shut-down of the machine Describe what to watch for and listen out for when operating machine, or any other indication of normal or abnormal function **Recovery and de-bogging techniques** State the implications of terrain, ground conditions, season, weather and tree condition on planning access routes and driving the machine Describe how to prepare for crossing poor terrain with the use of ramps etc. to allow safe access off tracks and roads **Machines** Chipper Shredder Grinder Bailer

Learning outcome
The learner will: 4. Understand relevant health and safety legislation and industry good practice
Assessment criteria
The learner can: 4.1 summarise current **health and safety legislation and industry good practice** 4.2 explain the **records** required for management and legislative purposes

Range and Guidance
Health and safety legislation and industry good practice Outline the safety and environmental considerations of stock-piling large quantities of eg woodchip Describe the implications of terrain, ground conditions, season, weather, load and timber type/condition on positioning and using the timber processing machinery Describe the safeguards necessary to reduce damage to the ground, any standing trees or the wider environment such as drains and roads Outline current guidelines on machinery operation, risk zones and safety clearances from overhead electricity conductors and what to do in the event of contact with power lines State how to carry out the emergency stop procedure for the machine Explain the implications of working at height in relation to routine operator checks and basic maintenance Describe causes of, and how to prevent potential pollution and environmental damage when preparing and using loader - fed processor Describe how to minimise any pollution incident including the pollution control equipment that should be available on site and to whom any incidents should be reported **Records** LOLER PUWER and the importance of maintaining them

Unit 546 Process timber with large loader-fed machinery

Supporting information

Guidance

Simulation will not be acceptable where the unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 547* Plan, allocate and monitor work of a team

This unit has been replaced by unit 647. Learners registered before 1st July 2017 should use this unit. Learners registered after 1st July 2017 should use unit 647.

UAN:	**Y/600/9669**
Level:	Level 3
Credit value:	5
GLH:	25
Relationship to NOS:	This unit is linked to the Trees and Timber NOS.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries

Learning outcome
The learner will: 1. Be able to plan work for a team
Assessment criteria
The learner can: 1.1 agree team objectives with own manager 1.2 develop a plan for a team to meet agreed objectives, taking into account capacity and capabilities of the team

Learning outcome
The learner will: 2. Be able to allocate work across a team.
Assessment criteria
The learner can: 2.1 discuss team plans with a team 2.2 agree work allocation and SMART (Specific, Measurable, Achievable, Realistic and Time-bound) objectives with team members 2.3 agree standard of work required by team

Learning outcome
The learner will: 3. Be able to manage team members to achieve team objectives
Assessment criteria
The learner can: 3.1 support all team members in order to achieve team objectives

Learning outcome
The learner will: 4. Be able to monitor and evaluate the performance of team members
Assessment criteria
The learner can: 4.1 assess team members' work against agreed standards and objectives 4.2 identify and monitor conflict within a team 4.3 identify causes for team members not meeting team objectives

Learning outcome
The learner will: 5. Be able to improve the performance of a team
Assessment criteria
The learner can: 5.1 identify ways of improving team performance 5.2 provide constructive feedback to team members to improve their performance 5.3 implement identified ways of improving team performance

Unit 547 Plan, allocate and monitor work of a team

Supporting information

Guidance

Simulation will not be acceptable where the unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Unit 548 Develop a woodland management plan

UAN:	**Y/601/2006**
Level:	Level 3
Credit value:	3
GLH:	19
Relationship to NOS:	This unit is linked to Trees and Timber NOS, O29NGWT14.1.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries
Aim:	The aim of this unit is to provide the learner with the knowledge, skills and understanding to develop a woodland management plan. It covers identifying and recording woodland management objectives, preparing a work programme and a monitoring plan.

Learning outcome
The learner will: 1. Be able to develop a woodland management plan
Assessment criteria
The learner can: 1.1 provide grid reference size for the woodland under management 1.2 define and subdivide the area into sections to identify suitable blocks for management 1.3 identify and record significant, hazards and threats 1.4 identify and record the woodland management objectives and proposals as appropriate to the site 1.5 complete an appropriate work programme for the management prescription for the long and short term 1.6 complete an appropriate monitoring plan for the management prescription

Learning outcome
The learner will: 2. Understand how to develop a management plan
Assessment criteria
The learner can: 2.1 identify sources to gather information and support relating to woodlands 2.2 identify the legal responsibilities relating to protected woodland species, woodland management and woodland access

Learning outcome
The learner will: 3. Understand how to develop an woodland management plan
Assessment criteria
The learner can: 3.1 explain techniques for assessing the site 3.2 explain the impact which different management methods may have on the woodland and how to resolve any conflicts 3.3 describe the possible environmental damage that could occur and how to respond appropriately

Unit 548 Develop a woodland management plan

Supporting information

Guidance

Simulation will not be acceptable where the unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance

Unit 601 Evaluate markets and trends for the sale of forest and woodland products and services

UAN:	**J/504/3659**
Level:	Level 4
Credit value:	8
GLH:	50
Relationship to NOS:	This unit is linked to the Trees and timber NOS.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries

Learning outcome
The learner will: 1. Be able to evaluate markets and trends for the sale of forest and woodland products and services
Assessment criteria
The learner can: 1.1 identify suitable markets, market trends and products for sale 1.2 determine the specification and quantities of each product to be marketed and method of sale 1.3 value the products to be marketed 1.4 evaluate the return for each available product and service 1.5 maintain records according to legislation and organisational requirements

Learning outcome
The learner will: 2. Understand how to evaluate markets and trends for the sale of forest and woodland products and services
Assessment criteria
The learner can: 2.1 assess the importance of evaluating markets for different products 2.2 explain research strategies when considering market requirements 2.3 describe how to produce estimates of expenditure required to obtain income 2.4 investigate the implications of timing and grouping of sales 2.5 explain the strategies for evaluating contracts 2.6 explain the development of trends based on: • Government policies • Directives • Local and regional initiatives

Unit 601 Evaluate markets and trends for the sale of forest and woodland products and services

Supporting information

Guidance

Simulation will not be acceptable where the unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance

Unit 602 Manage budgets

UAN:	**T/601/2580**
Level:	Level 4
Credit value:	5
GLH:	29
Relationship to NOS:	n/a.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries

Learning outcome
The learner will: 1. Understand the purpose of budgets
Assessment criteria
The learner can: 1.1 explain the purpose and benefits of managing financial resources effectively and efficiently 1.2 identify legal, regulatory and organisational requirements for managing a budget 1.3 describe different types of budgetary systems and their features

Learning outcome
The learner will: 2. Understand how to manage budgets
Assessment criteria
The learner can: 2.1 describe methods for monitoring, controlling and recording income and expenditure 2.2 describe ways in which costs may be minimised in own area of responsibility 2.3 identify situations in which corrective action may be needed 2.4 describe the scope of own authority for managing a budget and authorising expenditure

Learning outcome
The learner will: 3. Understand how to report performance against budgets
Assessment criteria
The learner can: 3.1 explain the purpose and benefits of reporting information on performance against budget 3.2 explain how to check the accuracy of budget calculations 3.3 explain the purpose and benefits of recording information that will help with the future preparation of budgets

Learning outcome
The learner will: 4. Be able to manage budgets
Assessment criteria
The learner can: 4.1 control budget performance within limits and deadlines 4.2 analyse and take action to minimise costs where possible 4.3 take corrective action to make sure of best value for money 4.4 authorise expenditure within the scope of own authority

Learning outcome
The learner will: 5. Be able to monitor budgets
Assessment criteria
The learner can: 5.1 record transactions, as required 5.2 produce information on performance against budget, when required 5.3 make sure all calculations are accurate 5.4 record information that will help with the preparation of future budgets

Unit 602 Manage budgets

Supporting information

Guidance

Simulation will not be acceptable where the unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance

Unit 603 Managing own resources and professional development

UAN:	**T/601/4717**
Level:	Level 4
Credit value:	6
GLH:	15
Relationship to NOS:	n/a
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries

Learning outcome
The learner will: 1. Understand key issues relating to managing own resources and professional development
Assessment criteria
The learner can: 1.1 summarise sector requirements for the development or maintenance of knowledge, skills and understanding and continuing professional development, identifying routes to professional qualifications and appropriate professional bodies 1.2 summarise key principles which underpin professional development

Learning outcome
The learner will: 2. Understand key contextual information relating to managing own resources and professional development
Assessment criteria
The learner can: 2.1 summarise the vision and objectives of own organisation 2.2 summarise own organisation's policy and procedures relating to personal development 2.3 identify available development opportunities and resources in own organisation

Learning outcome
The learner will: 3. Understand own work role and future aspirations
Assessment criteria
The learner can: 3.1 analyse the current and future requirements of own work role identifying and taking account of the vision and objectives of own organisation 3.2 analyse own values and career and personal goals to identify information which is relevant to own work role and professional development

Learning outcome
The learner will: 4. Be able to plan own professional development
Assessment criteria
The learner can: 4.1 agree personal, specific, measurable, achievable, realistic and timed work objectives with those to whom you report 4.2 agree how progress in achieving own personal, specific, measurable, achievable, realistic and timed work objectives will be measured 4.3 devise a personal, specific, measurable, achievable, realistic and timed development plan to address any identified gaps in own current knowledge and skills and support own career and personal goals taking account of own learning preferences 4.4 agree the personal, specific, measurable, achievable, realistic and timed development plan with the relevant parties 4.5 undertake the activities identified in own development plan taking account of own learning preferences

Learning outcome
The learner will: 5. Be able to evaluate own professional development and performance
Assessment criteria
The learner can: 5.1 undertake the activities identified in own development plan taking account of own learning preferences 5.2 evaluate the contribution of the activities undertaken to own performance 5.3 review own personal work objectives and development plan in the light of performance, any development activities undertaken and any wider changes making appropriate revisions 5.4 obtain constructive feedback on own performance from appropriate parties 5.5 check that own performance consistently meets or goes beyond agreed requirements

Unit 603 Managing own resources and professional development

Supporting information

Guidance

Simulation will not be acceptable where the unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance

Unit 604 Compile and maintain a forest and woodland inventory

UAN:	**Y/504/3651**
Level:	Level 4
Credit value:	10
GLH:	60
Relationship to NOS:	This unit is linked to the Trees and Timber NOS, LANTW68.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries
Aim:	The aim and purpose of this unit is to provide the learner with the knowledge, understanding and skills to compile and maintain a woodland or forest inventory

Learning outcome
The learner will: 1. Be able to promote health and safety and industry good practice
Assessment criteria
The learner can: 1.1 work in a way which promotes health and safety, is consistent with relevant legislation and industry good practice including bio security and plant health 1.2 carry out work to minimise environmental damage

Learning outcome
The learner will: 2. Be able to compile and maintain a forest or woodland inventory
Assessment criteria
The learner can: 2.1 define the area to be managed 2.2 subdivide the area to identify the logical units of management 2.3 identify the value of existing records in relation to the actual crop 2.4 analyse available information to determine the **requirements of the inventory** 2.5 **compile and maintain the inventory** to meet the given specification

Range and Guidance
Requirements of the inventory • Timing • Frequency • Sample size **Compile and maintain the inventory** Compile and maintain an inventory that describes: • land use type and designation (if any) • the species distribution by area • age class • stocking and yield class • silvicultural system (if any) • wind throw hazard class Compile and maintain an inventory that meets the following specification: • the crops to be recorded • the format of the inventory • the accuracy and clarity required of the inventory • the updating of stock maps • legislative and organisational environmental and conservation requirements • records items of special interest

Learning outcome
The learner will: 3. Understand relevant health and safety legislation and industry good practice
Assessment criteria
The learner can: 3.1 summarise current health and safety legislation and industry good practice 3.2 summarise plant health and biosecurity legislation and relevant industry good practice 3.3 describe the potential environmental damage that could occur and how to respond appropriately

Learning outcome
The learner will: 4. Understand how to compile and maintain a forest or woodland inventory
Assessment criteria
The learner can: 4.1 explain the reasons for a forest or woodland inventory and the information to be compiled 4.2 explain how to assess Windthrow Hazard Classification (WHC)

4.3	explain the methods of identifying forest and woodland tree species
4.4	explain how to identify items of specific interest

Unit 604 Compile and maintain a forest and woodland inventory

Supporting information

Guidance

Simulation will not be acceptable where the unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance

Unit 647** Plan, allocate and monitor work of a team

This unit has replaced unit 547. Learners registered before 1st July 2017 should use unit 547. Learners registered after 1st July 2017 should use this unit.

UAN:	**F/615/8562**
Level:	Level 3
Credit value:	5
GLH:	25
Relationship to NOS:	This unit is linked to the Trees and Timber NOS.
Endorsement by a sector or regulatory body:	This unit is endorsed by Lantra – The Sector Skills Council for Environmental and Land-based Industries

Learning outcome
The learner will: 1. Be able to plan work for a team
Assessment criteria
The learner can: 1.1 agree team objectives with own manager 1.2 develop a plan for a team to meet agreed objectives, taking into account capacity and capabilities of the team

Learning outcome
The learner will: 2. Be able to allocate work across a team.
Assessment criteria
The learner can: 2.1 discuss team plans with a team 2.2 agree work allocation and SMART (Specific, Measurable, Achievable, Realistic and Time-bound) objectives with team members 2.3 agree standard of work required by team

Learning outcome
The learner will: 3. Be able to manage team members to achieve team objectives
Assessment criteria
The learner can: 3.1 support all team members in order to achieve team objectives

Learning outcome
The learner will: 4. Be able to monitor and evaluate the performance of team members
Assessment criteria
The learner can: 4.1 assess team members' work against agreed standards and objectives 4.2 identify and monitor conflict within a team 4.3 identify causes for team members not meeting team objectives

Learning outcome
The learner will: 5. Be able to improve the performance of a team
Assessment criteria
The learner can: 5.1 identify ways of improving team performance 5.2 provide constructive feedback to team members to improve their performance 5.3 implement identified ways of improving team performance.

Unit 647** Plan, allocate and monitor work of a team

Supporting information

Guidance

Simulation will not be acceptable where the unit is included in qualifications which verify competent performance. Please refer to Lantra's Assessment Strategy for further guidance.

Appendix 1 Relationships to other qualifications

Literacy, language, numeracy and ICT skills development

This qualification can develop skills that can be used in the following qualifications:

- Functional Skills (England) – see **www.cityandguilds.com/functionalskills**
- Essential Skills (Northern Ireland) – see **www.cityandguilds.com/essentialskillsni**
- Essential Skills Wales – see **www.cityandguilds.com/esw**

Appendix 2 Sources of general information

The following documents contain essential information for centres delivering City & Guilds qualifications. They should be referred to in conjunction with this handbook. To download the documents and to find other useful documents, go to the **Centres and Training Providers homepage** on **www.cityandguilds.com**.

Centre Manual - Supporting Customer Excellence contains detailed information about the processes which must be followed and requirements which must be met for a centre to achieve 'approved centre' status, or to offer a particular qualification, as well as updates and good practice exemplars for City & Guilds assessment and policy issues. Specifically, the document includes sections on:

- The centre and qualification approval process
- Assessment, internal quality assurance and examination roles at the centre
- Registration and certification of candidates
- Non-compliance
- Complaints and appeals
- Equal opportunities
- Data protection
- Management systems
- Maintaining records
- Assessment
- Internal quality assurance
- External quality assurance.

Our Quality Assurance Requirements encompasses all of the relevant requirements of key regulatory documents such as:

- SQA Awarding Body Criteria (2007)
- NVQ Code of Practice (2006)

and sets out the criteria that centres should adhere to pre and post centre and qualification approval.

Access to Assessment & Qualifications provides full details of the arrangements that may be made to facilitate access to assessments and qualifications for candidates who are eligible for adjustments in assessment.

The **centre homepage** section of the City & Guilds website also contains useful information such on such things as:

- **Walled Garden**: how to register and certificate candidates on line
- **Events**: dates and information on the latest Centre events

- **Online assessment**: how to register for GOLA/e-volve assessments.

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Useful contacts

UK learners **General qualification information**	**T: +44 (0)844 543 0033** **E: learnersupport@cityandguilds.com**
Centres Exam entries, Certificates, Registrations/enrolment, Invoices, Missing or late exam materials, Nominal roll reports, Results	T: +44 (0)844 543 0000 F: +44 (0)20 7294 2413 E: **centresupport@cityandguilds.com**
Single subject qualifications Exam entries, Results, Certification, Missing or late exam materials, Incorrect exam papers, Forms request (BB, results entry), Exam date and time change	T: +44 (0)844 543 0000 F: +44 (0)20 7294 2413 F: +44 (0)20 7294 2404 (BB forms) E: **singlesubjects@cityandguilds.com**
International awards Results, Entries, Enrolments, Invoices, Missing or late exam materials, Nominal roll reports	T: +44 (0)844 543 0000 F: +44 (0)20 7294 2413 E: **intops@cityandguilds.com**
Walled Garden Re-issue of password or username, Technical problems, Entries, Results, e-assessment, Navigation, User/menu option, Problems	T: +44 (0)844 543 0000 F: +44 (0)20 7294 2413 E: **walledgarden@cityandguilds.com**
Employer Employer solutions, Mapping, Accreditation, Development Skills, Consultancy	T: +44 (0)121 503 8993 E: **business@cityandguilds.com**
Publications Logbooks, Centre documents, Forms, Free literature	T: +44 (0)844 543 0000 F: +44 (0)20 7294 2413

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