Qualification Guidance Document

SEG Awards Level 4 Award, Certificate and Diploma in Arboriculture

Level 4 Award – 610/7225/4
Level 4 Certificate – 610/7226/6
Level 4 Diploma – 610/7227/8

About Us

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

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

The system is accessed via a web browser by connecting to our secure website using a username and password: Skills and Education Group Awards Secure Login

Sources of Additional Information

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

Copyright

Specification Code

The specification code is **A9271-04, C9249-04, D9269-04.**

Issue	Date	Details of change
1.0	March 2026	A new suite of L4 qualifications have been developed

This guide should be read in conjunction with the Indicative Content document **V1.0** which is available on our secure website using the link above.

Contents

This is a live document and as such will be updated when required. It is the responsibility of the approved centre to ensure the most up-to-date version of the Qualification Specification is in use. Any amendments will be published on our website and centres are encouraged to check this site regularly.

Qualification Summary

SEG Awards Level 4 Award in Arboriculture – 610/7225/4 SEG Awards Level 4 Certificate in Arboriculture – 610/7226/6 SEG Awards Level 4 Diploma in Arboriculture – 610/7227/8								
Qualification Purpose	The SEG Awards Level 4 Award, Certificate and Diploma in Arboriculture are designed for those people working in arboriculture, in both the public and private sectors, to complement their training and experience, and to provide evidence of their knowledge of arboriculture. The Arboriculture industry is highly specialised and can involve working with a vast array of machines, materials and equipment, from planting stock and chemicals through to chainsaws, tree inspection and computer software. A wide range of skills and knowledge is therefore required as there is a significant variety of jobs and tasks involved. SEG Awards Arboriculture qualifications cover the industry requirements, which allow learners to progress into such a specialist career. These qualifications have been developed in collaboration with industry experts and approved providers and are recognised by the Arboriculture **Arboricultural Association - Home** as providing the skills required for this industry.							
Age Range	Pre 16		16-18	✓	18+	✓	19+	✓
Regulation	The above qualification(s) is/are regulated by Ofqual							
Assessment	> Portfolio of Evidence > Internal and external moderation							
Type of Funding Available	See FaLA (Find a Learning Aim)							
Grading	Pass/Fail To achieve a Pass grade, learners **must** achieve all the Learning Outcomes and Assessment Criteria in all the units completed							
Operational Start Date	L4 Award - 01/09/2026 L4 Certificate - 01/09/2026 L4 Diploma - 01/09/2026							

Review Date	L4 Award - 01/09/2029 L4 Certificate - 01/09/2029 L4 Diploma - 01/09/2029
Operational End Date	
Certification End Date	
Guided Learning (GL)	L4 Award – 65 hours L4 Certificate – 170 hours L4 Diploma – 260 hours
Total Qualification Time (TQT)	L4 Award – 120 hours L4 Certificate – 310 hours L4 Diploma – 490 hours
Credit Value	L4 Award – 12 credits L4 Certificate – 31 credits L4 Diploma – 49 credits
Skills and Education Group Awards Sector	Agriculture, Environment and Animal Care
Regulator Sector	3.2 Horticulture and Forestry
Support from Trade Associations	Recognised by Arboricultural Association as providing the skills required for this industry

Introduction

These qualifications have been developed in collaboration with industry experts, and approved providers for those learners working in arboriculture, in both the private and public sectors. They encourage learners to follow a programme of structured continuing professional development, facilitating access to higher-level management qualifications, and improved job prospects by formalising professional skills and training. They provide a stimulating and supportive learning environment to develop learner's potential contribution to arboriculture and associated industries. Learners can complete these qualifications whether an Award, Certificate or Diploma with a concrete understanding of the following:

- Tree Physiology
- Tree Biomechanics and Design
- Tree Management Principles and Practice
- Statute and Common Law applicable to Tree Management
- Tree Inventory, Tree Data Collection and Risk Assessment
- Tree Pests, Diseases and Abiotic Disorders
- Values and Benefits of Trees
- Tree Establishment from the Nursery to the Landscape
- Health and Safety
- Damage Caused to Bulit Structures by Woody Vegetation
- Principles of Woodland Management

SEG Awards is regulated to deliver this qualification by Ofqual in England. The qualification has a unique Qualification Number (QN) which is shown below. Each unit within the qualification will also have a regulatory Unit Reference Number (URN).

The QN code will be displayed on the final certificate for the qualification.

Qualification Title	Qualification Number (QN)
SEG Awards Level 4 Award in Arboriculture	610/7225/4
SEG Awards Level 4 Certificate in Arboriculture	610/7226/6
SEG Awards Level 4 Diploma in Arboriculture	610/7227/8

Pre-requisites

There are no formal entry requirements, but Skills and Education Group Awards expects approved centres to recruit with integrity on the basis of a learner's

ability to contribute to and successfully complete all the requirements of a unit/s or the full qualification.

Qualification Structure and Rules of Combination

Rules of Combination: SEG Awards Level 4 Award in Arboriculture

Learners **must** achieve a **minimum** of **12 credits** from the available units below.

Unit Title	Unit Number	Level	Credit Value	GL
Tree Physiology	A/652/0167	4	7	40
Tree Biomechanics and Design	F/652/0169	4	5	25
Tree Management Principles and Practice	K/652/0170	4	7	40
Statute and Common Law Applicable to Tree Management	M/652/0172	4	6	30
Tree Inventory, Tree Data Collection and Risk Assessment	R/652/0173	4	6	30
Tree Pests, Diseases and Abiotic Disorders	Y/652/0175	4	6	30
Values and Benefits of Trees	D/652/0177	4	6	30
Tree Establishment from the Nursery to the Landscape	H/652/0179	4	6	30
Health and Safety	M/652/0181	4	6	30
Damage Caused to Built Structures by Woody Vegetation	R/652/0182	4	6	30
Principles of Woodland Management	A/652/0185	4	8	45

Rules of Combination: SEG Awards Level 4 Certificate in Arboriculture

Learners **must** achieve a **minimum** of **31 credits**. This **must** include **25 credits** from the **mandatory** units in **group A**. The remaining **6 credits must** be achieved from the **optional** units in **group B**.

Unit Title	Unit Number	Level	Credit Value	GL
Mandatory Group A Minimum Credit Target – 25				
Tree Physiology	A/652/0167	4	7	40
Tree Biomechanics and Design	F/652/0169	4	5	25
Tree Management Principles and Practice	K/652/0170	4	7	40
Tree Inventory, Tree Data Collection and Risk Assessment	R/652/0173	4	6	30
Optional Group B Credit Target – 6				
Statute and Common Law Applicable to Tree Management	M/652/0172	4	6	30
Tree Pests, Diseases and Abiotic Disorders	Y/652/0175	4	6	30
Values and Benefits of Trees	D/652/0177	4	6	30
Tree Establishment from the Nursery to the Landscape	H/652/0179	4	6	30
Health and Safety	M/652/0181	4	6	30
Damage Caused to Built Structures Woody Vegetation	R/652/0182	4	6	30
Principles of Woodland Management	A/652/0185	4	8	45

Rules of Combination: SEG Awards Level 4 Diploma in Arboriculture

Learners **must** achieve **49 credits**. This **must** include **37 credits** from the **mandatory** units in **group A**. The remaining **12 credits must** be achieved from the **optional** units in **group B**.

Unit Title	Unit Number	Level	Credit Value	GL
Mandatory Group A Minimum Credit Target – 37				
Tree Physiology	A/652/0167	4	7	40
Tree Biomechanics and Design	F/652/0169	4	5	25
Tree Management Principles and Practice	K/652/0170	4	7	40
Statute and Common Law Applicable to Tree Management	M/652/0172	4	6	30
Tree Inventory, Tree Data Collection and Risk Assessment	R/652/0173	4	6	30
Tree Pests, Diseases and Abiotic Disorders	Y/652/0175	4	6	30
Optional Group B Credit Target – 12				
Values and Benefits of Trees	D/652/0177	4	6	30
Tree Establishment from the Nursery to the Landscape	H/652/0179	4	6	30
Health and Safety	M/652/0181	4	6	30
Damage Caused to Built Structures by Woody Vegetation	R/652/0182	4	6	30
Principles of Woodland Management	A/652/0185	4	8	45

Aim

The SEG Awards Level 4 Award, Certificate and Diploma in Arboriculture aim to:

- Improve job prospects
- Encourage knowledge and application of current arboricultural industry best practice
- Encourage learners to follow a programme of structured continuing professional development (CPD)
- Facilitate access to higher level management qualifications

Target Group

These qualifications are designed for those learners who:

- Have been involved in the practical side of the industry and wish to progress into a more managerial role
- Work in related disciplines such as horticulture, forestry, countryside management, landscape architecture and planning and wish to increase their knowledge of arboriculture
- Are currently working as tree officers, technicians and those involved in tree survey works who wish to achieve a recognised vocational qualification

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

These qualifications are appropriate for use in the following age ranges:

- 16-18
- 18+
- 19+

Assessment

This qualification is internally assessed and requires internal and external moderation. Specific requirements and restrictions may apply to individual units within qualifications. Please check unit and qualification details for specific information.

Centres **must** take all reasonable steps to avoid any part of the assessment of a learner (including any internal quality assurance and invigilation) being

undertaken by any person who has a personal interest in the result of the assessment.

Resources

Skills and Education Group Awards provides the following additional resources for this qualification:

- Purpose Statement
- Learner Unit Achievement Checklist
- Indicative Content

Practice Assessment Material

Skills and Education Group Awards confirm that there is no practice assessment material for this qualification.

Teaching Strategies and Learning Activities

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

Progression Opportunities

These qualifications provide suitable skills and experience to progress to other higher-level qualifications. In addition, achievement of these qualifications should provide a solid foundation of skills supporting progression to higher levels of responsibility and opening up the possibility of entrepreneurial activities such as starting one's own business.

These qualifications also provide access to continued Further Education, enhanced employability and / or an opportunity for employed learners to up-date existing skills.

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

Tutor / Assessor Requirements

Skills and Education Group Awards require those involved in the teaching and assessment process to be suitably experienced and / or qualified. Assessors should also be trained and qualified to assess or be working towards appropriate qualifications.

Those responsible for Internal Quality Assurance (IQA) **must** be knowledgeable of the subject/occupational area to a suitable level to carry out accurate quality assurance practices and processes.

Language

This specification and associated assessment materials are in English only.

Unit Details

Tree Physiology		
Unit Reference	A/652/0167	
Level	4	
Credit Value	7	
Guided Learning (GL)	40	
Unit Summary	This unit will cover what a tree is, how trees grow and develop, it aims to give learners an understanding of how trees live, function, grow and defend themselves. Learners will understand how the vegetative structures function and their needs for water, nutrients and gaseous exchange, and what the causes and effects are of stress in trees. Learners will examine interactions with environmental factors and symbiotic relationships.	
Learning Outcomes (1 to 8)	**Assessment Criteria (1.1 to 8.2)**	
The learner will	**The learner can**	
1. Understand tree design as a compromise between growth and mechanical stability	1.1	Describe the following in relation to how a tree grows: > apical dominance > secondary growth > the vascular cambium > typical cell structure (layers) > sapwood > heartwood > living cells in the wood > non-living cells in the wood > formation of bark > extent and depth of a typical root system
	1.2	Analyse how a tree is designed to cope with the trade-off between being competitive, yet resistant to wind loading

	1.3	Explain how a tree anchors itself in the ground
	1.4	Describe the **four** basic types of root architecture found in mature temperate trees
	1.5	List principal factors of a soil that can restrict root development and explain how root development is restricted
2. Understand the difference between gymnosperm and dicotyledonous wood, ring porous and diffuse porous xylem anatomy	2.1	Explain the differences in structure of each of the following types of trees > one named conifer > one named ring porous broad-leaved tree > one named diffuse porous broad-leaved tree
	2.2	Compare the benefits and limitations of ring porous and diffuse porous xylem anatomy
	2.3	Compare the structure of a typical angiosperm broadleaf to that of a typical gymnosperm needle-like leaf
3. Understand how water enters a tree, its importance and how it is moved around the tree	3.1	Explain the potential processes by which water enters a tree
	3.2	Explain why water is fundamental to tree development
	3.3	Outline how the hydraulic network of cells may move water around a tree
4. Understand the production and use of soluble sugars (mainly sucrose) and starch (non-structural carbohydrates)	4.1	Describe the process of photosynthesis and explain how the factors involved affect the rate of photosynthesis
	4.2	Describe the storage and use of structural and non-structural carbohydrates
	4.3	Analyse how the pruning of a tree crown may influence photosynthesis and the

		storage and use of non-structural carbohydrates
	4.4	Identify **six** cultural or tree management operations that promote photosynthesis or promote maintenance of stored non-structural carbohydrates
5. Understand the range of environmental stresses that a tree may encounter and ways in which to reduce stress	5.1	Define environmental stress and list **six** types of environmental stress that a tree may encounter
	5.2	Describe how each of the **six** types listed in **AC5.1** may negatively affect tree performance
	5.3	Describe the various mechanisms that trees have evolved to counter environmental stresses
	5.4	Describe ways an arboriculturist can assist to reduce the impacts on tree performance of the **six** types listed in **AC5.1**
6. Understand the benefits of trees forming symbiotic relationships	6.1	Describe the benefits of a symbiotic relationship as formed between single trees and in woodlands for: > fungi > bacteria
	6.2	Describe how the above relationships can be encouraged to develop by cultural practices
7. Understand how a tree defends itself and how it responds to wounding	7.1	Describe the mechanisms that trees have developed to gain inherent resilience to the following: > pests, diseases and fungi > browsers
	7.2	Describe and evaluate the process called Compartmentalisation that a tree goes through following wounding

	7.3 7.4	Explain, with at least **two** examples, why some species are better than others at compartmentalising wounds Describe and justify the use of **three** practices that can be adopted at the time of carrying out tree surgery operations that may assist a tree to form effective barriers as represented in the compartmentalisation model
8. Understand how trees relate to their environment	8.1 8.2	Identify **five** of the known tree senses Explain how a tree utilises two of those senses identified an **AC8.1**

Tree Biomechanics and Design		
Unit Reference	F/652/0169	
Level	4	
Credit Value	5	
Guided Learning (GL)	25	
Unit Summary	This unit will cover the developments in the understanding of tree biomechanics and how trees respond to mechanical loading and resist structural failure. Also, how form and morphology therefore the design of a tree is influenced by the dynamic responses to wind. The learner will also gain knowledge of the features of trees, be able to recognise potential weaknesses, and how to mitigate against a failure.	
Learning Outcomes (1 to 3)	**Assessment Criteria (1.1 to 3.1)**	
The learner will	**The learner can**	
1. Understand the term biomechanics, tree architecture and morphology	1.1	Define the term tree biomechanics and outline how this can be applied to a tree
	1.2	Describe the biomechanical design of a tree crown that aims to avoid failure
	1.3	Analyse the biomechanical differences between a woodland tree grown in competition with other trees and an open grown urban tree
	1.4	Define the term tree architecture and outline how this has application to a tree crown
	1.5	Define the terms tree and root morphology and outline how they are applied to a tree
2. Understand how a tree responds to mechanical loading	2.1	Explain how a tree adapts its growth in response to wind forces

	2.2	Summarise the concept that is the foundation of the principle 'The Axiom of Uniform Stress'
	2.3	Outline the reasoning for the school of thought that the axiom of uniform stress is an incomplete concept
	2.4	Explain why a perfectly sound and defect free tree may fail
	2.5	Identify **eight** mechanical defects or features found in trees and explain how each can lead to failure
3. Understand the development of a tree as an architectural model	3.1	Analyse the growth and development of a named model of tree

Tree Management Principles and Practice		
Unit Reference	K/652/0170	
Level	4	
Credit Value	7	
Guided Learning (GL)	40	
Unit Summary	This unit will cover the reasons for carrying out tree work. Also, the principles and practice of tree work from the rooting environment, pruning, restraint and support, felling and stump treatment. The learner will understand the potential consequences for the tree of tree work operations. Learners will also understand that a tree population requires to be managed pro-actively and how tree work can impact on how trees are managed.	
Learning Outcomes (1 to 9)	**Assessment Criteria (1.1 to 9.2)**	
The learner will	**The learner can**	
1. Understand when it is or not appropriate to prune trees	1.1	Describe the aims and principles of the following types of pruning operations: > formative pruning > crown thinning > crown reduction and reshaping > selective branch pruning
	1.2	Identify **six** distinct reasons that trees may need to be pruned and explain why
	1.3	Identify **four** distinct reasons when it may be inappropriate to prune trees (excluding deadwood removal) and explain why
	1.4	Describe the balance required when considering the removal of deadwood from a tree.
2. Understand the potential consequences of tree pruning	2.1	Evaluate the potential consequences in relation to tree physiology and biomechanics of carrying out the following pruning operations:

		> crown reduction > crown thinning > crown lifting
	2.2	Describe ways of minimising the undesirable effects of the pruning operations listed in **AC2.1**
3. Understand why pruning should be controlled according to the how a species may respond or react defensively	3.1	Identify, with explanation, examples of tree species that require specific consideration related to susceptibility to disease, weak or strong defences, shade tolerance, production of dense new growth and the presence of adventitious buds
4. Understand the processes of pollarding, knuckle formation and cyclic pruning	4.1	Describe the process of maintaining a pollard tree from soon after establishment through knuckle formation and regular pollarding in maturity
	4.2	Describe the treatment required for a lapsed pollard that is to be retained as a pollard
	4.3	Identify the physiological threats to its continued survival as a result of the treatment described in **AC4.2**
5. Understand how to manage trees with cavities and water pockets	5.1	Identify the avoids and describe appropriate actions that could be taken to manage (retain) a potentially unsafe tree in the following circumstances: > dry cavity > wet cavity > water pocket
6. Understand how trees with a weak structure can be managed by using a physical restraint or support system	6.1	Identify **ten** factors to be taken into account when determining and selecting a physical restraint or support system
	6.2	Describe the main principles of installing each of the following restraint or support systems:

		> non-invasive flexible restraint system > invasive flexible restraint system > rigid bracing > propping
	6.3	Explain the type of inspection and at what intervals installed restraint and support systems should be inspected and what elements should be assessed
7. Understand the options for stump treatment post felling	7.1	Identify and evaluate the following stump management options post tree felling: > no treatment > chemical treatment > grinding out
8. Understand the application of recognised tree work operations in relation to managing amenity trees	8.1	Describe the principles of each operation / treatment available in relation to managing the following conditions associated with established trees. > mulching > aeration/decompaction > nutrient deficiency > the control of climbing plants
9. Understand that a tree population requires to be managed pro-actively	9.1	Analyse the differences between pro-active and re-active management of a population of trees and form a conclusion
	9.2	Identify the values of preparing a tree renewal programme for over-mature trees in a street

Statute and Common Law Applicable to Tree Management		
Unit Reference	M/652/0172	
Level	4	
Credit Value	6	
Guided Learning (GL)	30	
Unit Summary	This unit covers legal responsibilities and protections related to tree management under statute and common law. It includes duty of care, Tree Preservation Orders (TPOs), Conservation Area regulations, Forestry Commission felling controls, high hedge complaints, and wildlife/habitat protection. Learners will understand how legal frameworks apply to tree work and management scenarios. The learner will also understand how common law precedent is applied to various tree and law scenarios.	
Learning Outcomes (1 to 6)	**Assessment Criteria (1.1 to 6.2)**	
The learner will	**The learner can**	
1. Understand the application of common law in relation to trees	1.1	Explain common law as applied to the following situations: > a dangerous tree belonging to a private owner > overhanging branches on to neighbouring land and with fruit attached > encroaching roots on to neighbouring land disrupting a paved surface > poisonous tree species > issues of potential nuisance to a neighbour from leaves, aphids and bird droppings
2. Understand the way in which trees are protected by a Tree Preservation Order (TPO)	2.1	Describe the process used by Local Planning Authorities (LPA) to make a TPO for a single tree and a group of trees and when it is expedient to do so

	2.2	Describe the contents of a regulation 5 notice
	2.3	Explain the principal effects of a TPO for an owner of a protected tree
	2.4	Explain the possible penalties of a breach of a TPO
	2.5	Name **six** exceptions to requiring permission to prune or fell a protected tree
	2.6	Complete an application to fell or prune a given protected tree
	2.7	Outline the processes of the appeal system for an applicant following refusal of work by an LPA
3. Understand the way in which trees are protected by a Conservation Area Designation as is in Part II of the Planning (Listed Buildings and Conservation Areas) Act	3.1	Identify what a Conservation Area is
	3.2	Describe the requirements for felling or pruning a tree by a member of public in a Conservation Area
	3.3	Describe how a Local Planning Authority are advised and required to respond to a section 211 notice
	3.4	Identify **two** exceptions for the need to submit a section 211 notice that are specific to a Conservation Area
	3.5	Identify the possible penalties for anyone carrying out works without submitting a section 211 notice
4. Understand how the Forestry Commission (FC) controls tree felling	4.1	Identify when a licence is required for felling trees and list **five** exemptions to the requirement
	4.2	List the information required when submitting a felling licence online to the Forestry Commission

5. Understand how complaints about high hedges can be dealt with	5.1 5.2 5.3	Describe when a high hedge is potentially causing a problem between neighbours Describe the complaint procedure for when a high hedge is potentially causing a problem between neighbours Outline how a council will decide if a high hedge requires a height reduction
6. Understand the legal protection that is given to protecting wildlife and habitats	6.1 6.2	Identify and explain the principal protection effects, offences and penalties of the following legislation > the Wildlife & Countryside Act > the Conservation of Habitats and Species Regulations > the Countryside & Rights of Way Act > hedgerow and management of hedgerow Regulations > biodiversity Gain Requirements (Irreplaceable Habitat) Regulations Describe the implications for a company carrying out tree work in the following situations: > a client requesting tree pruning in bird nesting season > removal of an unsafe tree with a potential bat roost > dismantling a tree with a known bat roost

Tree Inventory, Tree Data Collection and Risk Assessment		
Unit Reference	R/652/0173	
Level	4	
Credit Value	6	
Guided Learning (GL)	30	
Unit Summary	This unit covers methods for collecting tree inventory data, using technology for management, and conducting risk assessments based on likelihood of failure, severity, and target value. It also addresses decay detection techniques and the impact of construction activities on trees.	
Learning Outcomes (1 to 5)	**Assessment Criteria (1.1 to 5.3)**	
The learner will	**The learner can**	
1. Understand the purpose of and how to undertake a tree inventory	1.1	Identify typical information that would be collected in a tree inventory for the purposes of managing a tree population (exclude risk)
	1.2	Identify the values of using software to map and manage trees
2. Be able to recognise warning signs or symptoms of impending mechanical failure in trees	2.1	Carry out a formal systematic inspection of **five** trees with features that require tree work or further investigation and record the features found
	2.2	Provide a realistic recommendation with an appropriate timescale for work to be completed for each tree
	2.3	Present the information in an appropriate format for a client's use
3. Understand the difference between risk assessment and risk management in trees	3.1	Define risk assessment and identify the factors that contribute to determining the significance of risk

	3.2 3.3	Define risk management and give **two** examples to illustrate the definition Describe how each of the following may reduce or prevent risk to a target posed by trees: > formative pruning > crown reduction > selective branch removal > monolithing > treatment of significant decay / cavities > treatment of weak structures
4. Understand the application of specialist decay detection and measuring equipment	4.1 4.2 4.3	Evaluate the use of **one** item of specialist equipment listed in **one** of the following categories identifying **five** strengths and **five** weaknesses excluding cost: > computerised tomography > electrical impedance > micro-drill Evaluate the use of invasive decay detection devices and draw conclusions in relation to values versus the: > wounding of woody tissues > provision of a pathway for colonisation by fungi > risk decision making Demonstrate practical knowledge of how to use **one** specialist item of equipment to undertake an investigation of a given tree condition from the following categories: > computerised tomography > a micro-drill
5. Understand the impacts on trees of construction activities and how this may be reduced or mitigated	5.1	Explain how the value and quality of trees are determined on and around a tree site to be developed

	5.2	Identify: > potential design considerations to be taken account of on a new housing site with existing trees > potential negative impacts on trees of construction activities and trees on proposed new structures > the benefits of retaining trees on development sites
	5.3	Describe **ten** measures that can reduce the negative impacts on retained trees of construction activities

Tree Pests, Diseases and Abiotic Disorders		
Unit Reference	Y/652/0175	
Level	4	
Credit Value	6	
Guided Learning (GL)	30	
Unit Summary	This unit will cover the identification and study of specific common and important tree pests, diseases and abiotic conditions that cause a deviation to the normal functioning of trees in the UK. This will include specific tree bacteria, fungi, pests, mammals and abiotic conditions. The learner will also study fungi in relation to their biology, type of decay and colonisation strategy.	
Learning Outcomes (1 to 4)	**Assessment Criteria (1.1 to 4.3)**	
The learner will	**The learner can**	
1. Study specific common and important tree pathogens and abiotic conditions	1.1	For each of the list below, identify and state how each can cause a deviation to the normal functioning of trees > **six** insects > **six** diseases > **two** mammals > **two** abiotic conditions
	1.2	Describe the different rot types produced by fungi
	1.3	Describe the **four** principal colonisation strategies employed by fungi to colonise trees
	1.4	Apply an appropriate host, rot type, colonisation strategy and significance to a tree for each of the fungi listed in **appendix 1**
2. Be able to devise treatment or prevention methods	2.1	Prescribe a treatment or prevention method for a **minimum** of **twenty**

		insects, diseases, mammals and abiotic disorders identified in **Appendix 1**
3. Understand the practices of good biosecurity to safe-guard trees	3.1 3.2	Define biosecurity and state why it is important Describe at least **eight** pathways that contribute to spreading pests and diseases
4. Be able to plan for biosecurity measures when working with reportable pests or diseases	4.1 4.2 4.3	Describe how to incorporate biosecurity measures in to work planning and operations on site for a named reportable pest or disease. Describe when and to whom to report instances of notifiable ill health in trees when found Describe the information required to be present on a report of a notifiable disease

Values and Benefits of Trees		
Unit Reference	D/652/0177	
Level	4	
Credit Value	6	
Guided Learning (GL)	30	
Unit Summary	This unit will cover the environmental, biodiversity / ecological, social / economic and amenity / landscape values and benefits of urban trees and how these can be maximised. Also, an understanding of how an assessment of tree benefits and values and a monetary valuation of trees may be undertaken is covered. Learners will understand the disbenefits of trees in an urban landscape and how these may be mitigated.	
Learning Outcomes (1 to 5)	**Assessment Criteria (1.1 to 5.5)**	
The learner will	**The learner can**	
1. Understand the values of trees	1.1	Describe **six** values of trees under each of the following headings: > environmental > biodiversity / ecological > social / economic > amenity / landscape
2. Understand how the amenity value of a tree may be determined	2.1	Value a **single** tree for amenity purposes using a recognised methodology
	2.2	Analyse the findings and draw reasoned conclusions
3. Understand how the wider values of trees may be recognised	3.1	Outline how trees may be valued as public assets rather than liabilities
	3.2	Describe the categories of special trees known as: > champion > notable > heritage

	3.3	Provide **twelve** explanations why some trees are recognised as problematic when associated with people
	3.4	Describe approaches in tree management that can limit the problems caused by trees as provided in **AC3.3**
4. Understand the values of ancient and veteran trees and the principles of their management	4.1	Identify **twelve** reasons why ancient and veteran trees are recognised as being 'special'
	4.2	Outline **five** principles of management for ancient and veteran trees
5. Understand that a tree is not an individual but a community of organisms	5.1	Define the following terms used in relation to trees > ecology > ecosystem > biodiversity
	5.2	Explain why biodiversity in trees is important
	5.3	Identify at least **four** examples of wildlife that depend on trees from each of the following categories: > saproxylic insects > invertebrates > birds > mammals > lichens
	5.4	Explain how **one** example listed in each category in **AC5.3** depends on trees
	5.5	Explain the energy transfer within a tree ecosystem from photosynthesis through to the top of a food chain

Tree Establishment from the Nursery to the Landscape		
Unit Reference	H/652/0179	
Level	4	
Credit Value	6	
Guided Learning (GL)	30	
Unit Summary	This until will cover how new trees can be successfully selected, planted and established in the landscape. The learners will understand that successful new tree planting relies on site evaluation, species selection, careful lifting and transportation, planting site management, good planting technique and post-planting maintenance.	
Learning Outcomes (1 to 6)	**Assessment Criteria (1.1 to 6.1)**	
The learner will	**The learner can**	
1. Understand the site assessment processes necessary to achieve a sufficiently good understanding of the site conditions and to ensure that the planting proposals are properly informed and effective	1.1	Identify the site and soil characteristics to be included in a constraints assessment
	1.2	Conduct a preliminary site survey and undertake a basic soil analysis drawing conclusion regarding suitableness and if improvements are required
	1.3	Identify appropriate measures that would assist tree establishment in the following circumstances: > low pH level > presence of contaminated material > poor soil structure > high clay content > low moisture retention > low nutrient availability > site exposed to wind > the presence of rabbits
2. Understand the characteristics of tree performance under different	2.1	Identify **50** trees, including: > **10** broadleaves > **10** conifers

environmental and climatic conditions		> **10** evergreens > **10** woody shrubs > **10** species made up of any category Once identified by scientific name highlight the main attributes, use and limitations of each
	2.2	Identify species characteristics that should be taken into account when making a choice for three distinct given sites
	2.3	Provide **two** tree species (full scientific names) examples for each of the following: > restricted space around an office block > winter flowering > attractive foliage colour > attractive bark > attractive fruits or seeds > fastigiate > tolerance to drought > tolerance of pollution > tolerance to wind exposure > autumn colour
	2.4	Define tree stock sizes that are commonly available from a nursery
	2.5	Describe the following types of tree stock > field grown bare root > cell grown > root balled > container grown white bag > container grown air pot
	2.6	For each stock size identified in **AC2.4** and for each stock type listed in **AC2.5** identify an appropriate planting situation for their use and explain the choice

3. Understand the processes for lifting, handling and temporary storage of trees	3.1 3.2	Describe the processes for handling tree stock from lifting, movement on the nursery prior to dispatch, labelling, bundling, loading, transportation, unloading and temporary storage Undertake a quality control check on a standard tree sample in order to determine if it should be returned to a supplier
4. Understand the planting process and that it is based on the analysis of site and soil constraints	4.1 4.2	Describe a planting method including support and protection for each of the following: > a whip with rabbit guard in rough grass land > standard 8-10 cm tree in a private garden lawn > extra heavy standard in a paved pedestrian town centre > semi-mature tree in a prestigious development Identify and evaluate **five** types of mulch material organic or inorganic that may be used to benefit newly planted trees
5. Understand the importance of good post-planting management and maintenance processes	5.1 5.2	Compile a **three-year** post planting maintenance programme for the following situation: > multiple standard 8-10cm sized trees planted in a public park within regularly mown grass Compile a **ten-year** post planting maintenance programme for the following situation: > multiple extra heavy standard 14-16 cm sized trees planted as street trees in tree pits in a new subdivision development

6. Understand the implications of procurement, transport, planting and after-care practices and how to remedy them	6.1	Critically evaluate post-planting conditions on a recently planted site (**up to 5 years**) where trees are failing, draw conclusions and make management recommendations preparing advice for a client

Health and Safety		
Unit Reference	M/652/0181	
Level	4	
Credit Value	6	
Guided Learning (GL)	30	
Unit Summary	This unit will cover the legislation and industry best practice when carrying out tree work operations. The learner will also cover the production of risk assessments and method statements related to tree work health and safety. The learner will have knowledge of how to implement biosecurity measures that can prevent the spread and establishment of tree pests and diseases related to tree work.	
Learning Outcomes (1 to 1)	**Assessment Criteria (1.1 to 1.4)**	
The learner will	**The learner can**	
1. Understand the implications of Health and Safety legislation and best practice related to tree work	1.1	Interpret statute law and / or best practice as applied to each of the following scenarios: > the manual lifting of wood > the use of work equipment > the use of noisy machinery > the use of a hazardous substance > working at height > the use of equipment used for lifting purposes > the requirement to have first aid assistance > an accident at work carrying out tree work > the use of machinery that can vibrate > carrying out tree work alongside a highway > working near electric utility lines
	1.2	Identify the duties, rights, or responsibilities under the

		Management of Health and Safety at Work Regulations for: > employer > employee > self-employed
	1.3	Prepare site-specific risk assessment information for a given tree surgery operation
	1.4	Prepare a method statement for dismantling a large tree on a construction site

Damage Caused to Built Structures by Woody Vegetation		
Unit Reference	R/6520182	
Level	4	
Credit Value	6	
Guided Learning (GL)	30	
Unit Summary	This unit will cover the ways in which a built structure can be damaged by the growth of woody vegetation to include direct damage (by contact) and indirect damage (subsidence). This unit also provide an understanding of how and where to obtain information when determining if woody vegetation is the cause or contributary to damage. Learners will understand the level of information required for a case of direct damage and a case of indirect damage.	
Learning Outcomes (1 to 2)	**Assessment Criteria (1.1 to 2.6)**	
The learner will	**The learner can**	
1. Understand how direct damage is caused to a built structure and how this may be mitigated	1.1	Explain how woody vegetation causes the following types of damage to built structures by contact: > blockage of drainage pipes > tarmac driveway > brick built wall > building roof tiles
	1.2	Describe the information required and how to obtain it for damage caused to each of the following: > blockage of drainage pipes > tarmac driveway > brick built wall
	1.3	Evaluate the following treatments used as solutions to mitigate direct damage: > tree removal > root pruning

		> installation of a root barrier
	1.4	Describe one engineering solution for each of the following damaged by tree roots: > pavement damage > a pushed-up brick built wall > an underground blocked drainage pipe
2. Understand how indirect damage is caused to a domestic property and how this may be identified and a solution sought	2.1	Describe the following: > a shrinkable clay soil > modified plasticity index > plastic limit > liquid limit > a desiccated clay soil
	2.2	Explain how woody vegetation can cause subsidence damage to a domestic property
	2.3	Explain how the removal of woody vegetation can cause heave to occur to a domestic property
	2.4	Identify the information required and the sources of that information in order to carry out an investigation into subsidence damage
	2.5	Based on the following values of trees determine the level of information required to decide if woody vegetation is contributory to damage: > high value tree > low value tree
	2.6	Evaluate the following treatments as used to mitigate subsidence damage: > tree removal > crown reduction > root pruning combined with a root barrier

Principles of Woodland Management		
Unit Reference	A/652/0185	
Level	4	
Credit Value	8	
Guided Learning (GL)	45	
Unit Summary	This unit covers the maintenance and management of existing woodland which are open to public access and where the main aims of management include public enjoyment, amenity, conservation of wildlife and landscape value. It also includes aspects of examining ecology and biodiversity and the importance within a woodland ecosystem.	
Learning Outcomes (1 to 10)	**Assessment Criteria (1.1 to 10.5)**	
The learner will	**The learner can**	
1. Understand the basic principles of Continuous Cover Forestry (CCF) as an approach to managing a woodland	1.1	Describe what is meant by the term Continuous Cover Forestry (CCF) in relation to woodland management
	1.2	Identify **three** benefits of CCF as a management approach under each of the following headings excluding timber production: > resilience > ecosystem Services > biodiversity > community access
	1.3	Explain the silvicultural principles of the following systems: > selection – single and group > irregular shelter wood
2. Know the different types of woodland present in Great Britain	2.1	Describe each of the following and identify the key characteristics of each: > ancient woodland > ancient semi-natural woodland

		> plantation on an ancient woodland site > semi-natural woodland > recent semi-natural woodland > new native woodland > pasture woodland > coppice (including coppice selection and coppice with standards)
	2.2	Identify the purpose of the National Vegetation Classification (NVC)
	2.3	From identification of the major species present interpret the National Vegetation Classification and apply a classification to a woodland site
	2.4	Identify the **four** widely accepted layers that form the vertical structure of a woodland and provide a description for each
3. Understand the processes of forming a woodland management plan for a ten-year period	3.1	Identify **four** benefits of producing a woodland management plan
	3.2	Identify the key purposes and functions of the UK Forestry Standard (UKFS)
	3.3	Define what is meant by sustainable woodland management and where the term sustainable originates from
	3.4	Carryout a woodland site assessment and survey
	3.5	Form conclusions that assist the formation of a management plan to include the following: > importance of the woodland > threats to the woodland > long-term vision
	3.6	Describe the implications of the following when a woodland site includes any of the following:

		> site of special scientific interest (SSSI) > a scheduled monument > tree preservation order (TPO) > is a conservation area
	3.7	Identify a range of local stakeholders who may wish to discuss management proposals
4. Understand the structure of a woodland management plan	4.1	Identify **four** aims of management that fit into the vision as presented in **AC3.5**
	4.2	Provide examples of management objectives that demonstrate how each of the aims will be achieved
	4.3	Outline examples of work plan operations that demonstrate how the objectives will be achieved
	4.4	List **six** key features that would need to be mapped to demonstrate management intentions
5. Understand the legal process when there is a need to fell trees in a woodland	5.1	Explain reasons why it may be necessary to fell trees in an amenity woodland
	5.2	Identify when a felling licence is required to fell trees in a woodland
	5.3	Provide information on what is required to apply online for a felling licence
	5.4	Identify the penalties and consequences for felling trees without a licence
6. Understand the principles of restocking within a woodland	6.1	Explain considerations that should be taken into account when selecting species to restock a woodland
	6.2	Describe **ten** factors to be considered when purchasing tree stock
	6.3	Identify tree and shrub species suitable for the following:

		> high Canopy > midstory > understory > shrub layer > woodland edge
	6.4	Describe **six** values of not restocking all open space
7. Understand why regular monitoring of work and analysis of results is essential to knowing if objectives are being met	7.1	Describe **six** values of undertaking regular monitoring of ongoing work
	7.2	Identify **six** indicators of success that could be used in regular monitoring and the method of how these would be applied
8. Understand grants that may be available for managing existing woodland	8.1	Explain what the countryside stewardship scheme is
	8.2	Identify the key types of countryside grants and briefly describe what each is offered for
	8.3	Identify and describe appropriate grants available for assisting with specific aspects of developing an existing woodland
9. Understand the concept of woodland ecology	9.1	Describe a basic four trophic level food chain related to a woodland that includes examples of woodland flora and fauna plus a decomposer level
	9.2	Define the terms: > ecosystem > ecotone > ecosystem degradation and collapse
	9.3	Define each of the following and explain their importance to woodland ecology: > saproxylic invertebrate > red data book species > wood decay fungi > deadwood > phoenix regeneration

10. Understand plant survival for ecological strategies	10.1	Define the term woodland biodiversity and explain why it is important to the success and survival of a woodland community
	10.2	Define the following plant survival strategies in relation to life-strategies within plant communities and their impact on diversity: > competition > disturbance / ruderality
	10.3	Describe the evolutionary adaptations of one named woodland species as life-strategies for survival in mature climax-woodland
	10.4	Describe **six** areas of conflict that may arise between managing a woodland for conservation of wildlife and public access.
	10.5	Describe how each conflict identified in **AC10.4** can be mitigated

Appendix 1

Diseases:

- Acute oak decline
- Anthracnose of plane trees (*Apiognomonia veneta*)
- Ash dieback / Chalara ash dieback (*Hymenoscyphus fraxineus*)
- Bleeding canker of horse chestnut (*Pseudomonas syringae* pv. *aesculi*)
- Canker stain of plane (*Ceratocystis platani*)
- Chronic oak decline
- Dothistroma / red-band needle blight of pine (*Dothistroma septosporum*)
- Elbow-patch crust disease of plane (*Fomitiporia punctata*)
- Massaria disease of plane (*Splanchnonema platani*)
- Oak wilt (*Ceratocystis fagacearum / Bretziella fagacearum*)
- Phytophthoras (*P. alni, P. ramorum, P. kernoviae, P. lateralis, P. pluvialis*)
- Sirococcus blight of cedar and hemlock (*Sirococcus tsugae*)
- Sweet chestnut blight (*Cryphonectria parasitica*)
- Xylella (*Xylella fastidiosa*)

Insects:

- Asian longhorn beetle (*Anoplophora glabripennis*)
- Emerald ash borer (*Agrilus planipennis*)
- Great spruce bark beetle (*Dendroctonus micans*)
- Green spruce aphid (*Elatobium abietinum*)
- Horse chestnut leaf miner (*Cameraria ohridella*)
- Larger eight-toothed European spruce bark beetle (*Ips typographus*)
- Oak pinhole borer (*Platypus cylindrus*)
- Oak processionary moth (*Thaumetopoea processionea*)
- Oriental chestnut gall wasp (*Dryocosmus kuriphilus*)
- Pine processionary moth (*Thaumetopoea pityocampa*)

Mammals:

- Grey squirrels (*Sciurus carolinensis*)
- Deer (*Capreolus capreolus, Cervus elaphus, C. nippon, Dama dama, Muntiacus reevesi* and *Hydropotes inermis*)
- Rabbits (*Oryctolagus cuniculus*)

Decay Fungi:

- Honey Fungus (Armillaria mellea)
- Dryad's Saddle (Cerioporus squamosus, syn. Polyporus squamosus)

- Hoof Fungus (Fomes fomentarius)
- Birch Polypore (Fomitopsis betulina, syn. Piptoporus betulinus)
- Ganoderma spp. (e.g. G. australe syn. adspersum, G. applanatum, G. pfeifferi or G. lucidum)
- Hen of the Woods (Grifola frondosa)
- Shaggy Bracket or Ash Polypore (Inonotus hispidus)
- Brittle Cinder (Kretzschmaria deusta, syn. Ustulina deusta)
- Chicken of the Woods or Sulphur Polypore (Laetiporus sulphureus)
- Giant Polypore (Meripilus giganteus)
- Giant Ash Bracket (Perenniporia fraxinea, syn. Fomitopsis cytisina, syn. Vanderbylia fraxinea)
- Dyer's Maze gill (Phaeolus schweinitzii)
- Willow Bracket (Phellinus igniarius)
- Shaggy Pholiota (Pholiota squarrosa)
- Red Ring Rot (Porodaelalea pini, syn. Phellinus pini)
- Eiffel Tower Bracket or Oak Bracket (Pseudoinonotus dryadeus, syn. Inonotus dryadeus)
- Giant Elm Bracket (Rigidoporus ulmarius)
- Cauliflower Fungus (Sparassis crispa)

Abiotic conditions:

- Soil compaction within a root environment
- Mechanical injury from grass cutting equipment
- Localised road de-icing salt pollution
- Drought on newly planted trees

Recognition of Prior Learning (RPL), Exemptions, Credit Transfers and Equivalencies

Skills and Education Group Awards policy enables learners to avoid duplication of learning and assessment in a number of ways:

- **Recognition of Prior Learning (RPL)** – A method of assessment that considers whether a learner can demonstrate that they can meet the assessment requirements for a unit through knowledge, understanding or skills they already possess and do not need to develop through a course of learning.
- **Exemption** - Exemption applies to any certificated achievement which is deemed to be of equivalent value to a unit within Skills and Education Group Awards qualification, but which does not necessarily share the exact learning outcomes and assessment criteria. It is the assessor's responsibility, in conjunction with the Internal Moderator, to map this previous achievement against the assessment requirements of the Skills and Education Group Awards qualification to be achieved in order to determine its equivalence.
  - Any queries about the relevance of any certificated evidence should be referred in the first instance to your centre's internal moderator and then to Skills and Education Group Awards.
  - It is important to note that there may be restrictions upon a learner's ability to claim exemption or credit transfer which will be dependent upon the currency of the unit/qualification and a learner's existing levels of skill or knowledge.
  - Where past certification only provides evidence that could be considered for exemption of part of a unit, learners **must** be able to offer additional evidence of previous or recent learning to supplement their evidence of achievement.
- **Credit Transfer** – Skills and Education Group Awards may attach credit to a qualification, a unit or a component. Credit transfer is the process of using certificated credits achieved in one qualification and transferring that achievement as a valid contribution to the award of another qualification. Units/Components transferred **must** share the same learning outcomes and assessment criteria along with the same unit number. Assessors **must** ensure that they review and verify the evidence through sight of:
  - Original certificates OR
  - Copies of certificates that have been signed and dated by the internal moderator confirming the photocopy is a real copy and make these available for scrutiny by the External Moderator.
- **Equivalencies** – Opportunities to count credits from the unit(s) from other qualifications or from unit(s) submitted by other recognised organisations towards the place of mandatory or optional unit(s) specified in the rule of combination. The unit **must** have the same credit value or greater than the unit(s) in question and be at the same level or higher.

Skills and Education Group Awards encourages its centres to recognise the previous achievements of learners through Recognition of Prior Learning (RPL), Exemption, Credit Transfer and Equivalencies. Prior achievements may have resulted from past or present employment, previous study or voluntary activities. Centres should provide advice and guidance to the learner on what is appropriate evidence and present that evidence to the external moderator in the usual way.

Further guidance can be found in 'Delivering and Assessing Skills and Education Group Awards Qualifications' which can be downloaded from skillsandeducationgroupawards.co.uk/for-centres

Certification

Learners will be certificated for all units and qualifications that are achieved and claimed.

Skills and Education Group Awards' policies and procedures are available on the website.

Exemptions

This qualification contains no exemptions. For further details see Recognition of Prior Learning (RPL), Exemptions, Credit Transfers and Equivalencies.

Glossary of Terms

GL (Guided Learning)

GL is where the learner participates in education or training under the immediate guidance or supervision of a tutor (or other appropriate provider of education or training). It may be helpful to think – 'Would I need to plan for a member of staff to be present to give guidance or supervision?'

GL is calculated at qualification level and not unit/component level.

Examples of Guided Learning include:

- Face-to-face meeting with a tutor
- Telephone conversation with a tutor
- Instant messaging with a tutor
- Taking part in a live webinar
- Classroom-based instruction
- Supervised work
- Taking part in a supervised or invigilated formative assessment
- The learner is being observed as part of a formative assessment.

TQT (Total Qualification Time)

The number of notional hours which represents an estimate of the total amount of time that could reasonably be expected to be required, in order for a learner to achieve and demonstrate the achievement of the level of attainment necessary for the award of a qualification.' The size of a qualification is determined by the TQT.

TQT is made up of the Guided Learning (GL) plus all other time taken in preparation, study or any other form of participation in education or training but not under the direct supervision of a lecturer, supervisor or tutor.

TQT is calculated at qualification level and not unit/component level.

Examples of unsupervised activities that could contribute to TQT include:

- Researching a topic and writing a report
- Watching an instructional online video at home/e-learning
- Watching a recorded webinar
- Compiling a portfolio in preparation for assessment
- Completing an unsupervised practical activity or work
- Rehearsing a presentation away from the classroom
- Practising skills unsupervised
- Requesting guidance via email – will not guarantee an immediate response.