

T Level Technical Qualification Agriculture Land Management and Production: Tree and Woodland Management and Maintenance Occupational Specialism (Level 3) Arboriculture Pathway

Practical Assignment

Assessor Pack (Sample)

September 2023 Version 2.1

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Version and date	Change detail	Section
V1.0	Draft version	n/a
V2.0 June 2023	Approved version	n/a
V2.1 September 2023	Document formatting.	All.
	Task 1 photo evidence requirements amended.	Task specific guidance for centres, Marking grids.
	Task 3 assessor observation – bullet point deleted to remove repetition.	Task specific guidance for centres, Marking grids, Assessor observation forms.
	Task 7 assessor observation form – bullet points consolidated and re-ordered for clarity.	Assessor observation forms.

1. Assessment

The assessment for this component consists of a practical assignment that includes an assignment brief and then a number of tasks for the candidate to complete. Tasks are assessed by assessment themes that cover a range of knowledge and skills from the performance outcomes in the qualification specification. They are designed to allow judgement of the candidate to be made across different categories of performance.

Performance outcomes

The weightings for each performance outcome will remain the same for every version of the practical assignment. This ensures the appropriate depth and breadth of knowledge and skills for each specialism can be reliably assessed in every version and meets the needs of industry while keeping comparability between each assessment over time.

Performance outcome	Typical knowledge and skills	Weighting
PO2 Grow trees and woodlands. (common to both pathways)	Knowledge of tree species, types and sources of tree stocks for planting and establishment, factors affecting successful tree establishment and requirements for protecting trees from threats. Skills required to plant trees using suitable techniques.	20%
PO3 Operate and maintain forestry and arboriculture machinery. (common to both pathways)	Knowledge of the health and safety, maintenance and operation requirements of machinery commonly used in industry including chainsaws, winching equipment and wood chippers. Basic skills required to safely operate forestry and arboriculture machinery.	20%
PO7 Manage tree populations to meet objectives (arboriculture pathway)	Introduction to typical tree management objectives and operations relevant to modern arboricultural practice, features of different types of sites, environments and infrastructure. Knowledge of different surveying and monitoring techniques including tree inspection techniques and technology for monitoring tree health. Methods of valuing trees and relevant legislation including TPOs. Skills necessary to survey, inspect and value different aspects of trees and tree populations.	20%
PO8 Maintain trees to meet prescribed objectives (arboriculture pathway)	Knowledge of the requirements and techniques for the maintenance of trees and environments to meet different objectives, and the reasons for their application. Related maintenance including weed and vegetation management, boundary and infrastructure maintenance. Skills necessary to maintain trees including climbing and aerial rescue, pruning using hand tools, maintenance of boundaries, surfaces and structures.	20%
PO9 Undertake complex arboriculture operations (arboriculture pathway)	Knowledge of the health and safety, site management and environmental requirements for complex arboriculture operations. Introduction to different methods of accessing, pruning, dismantling and felling trees and their applications. Knowledge of the different techniques for carrying out ground and aerial operations with chainsaws. Skills necessary to carry out aerial treework with chainsaw, perform assisted felling with winches and assist with rigging operations from the ground.	20%

Performance Outcome Assessment Themes

A set number of marks are allocated against each performance outcome assessment theme, based on the performance outcome weightings recommended by stakeholders of the qualification. This mark allocation remains the same for all versions of the assessments, ensuring consistency across assessment versions and over time.

Candidates will be assessed against these assessment themes. This assessment has a total of 150 marks. The table below shows the mark distribution for this assessment.

Performance outcome (PO)	PO assessment themes	Marks per assessment theme	Marks per PO
PO2 Grow trees and woodlands	plan for establishment	tree stocks (6)	30
		establishment plans (12)	
	establish trees	12	
PO3 Operate and maintain forestry and arboriculture machinery	health and safety	9	30
	maintain machinery	9	
	operate machinery	12	
PO7 Manage tree populations to meet objectives	environment and plant health	9	30
	tree management planning	9	
	tree surveys and inspections	12	
PO8 Maintain trees to meet prescribed objectives	health and safety	6	30
	environment and plant health	6	
	plan for tree and site maintenance	9	
	perform tree and site maintenance	9	
PO9 Undertake complex arboriculture operations	health and safety	6	30
	environment	6	
	prepare for complex arboricultural operations	6	
	perform complex arboricultural operations	12	
Total		150	150

2. Assignment brief

Northwest Park was developed and planted in 1960. The park is located on the edge of a town on a level site with free-draining soil, and the whole site lies within a conservation area. It is popular with local visitors for exercise, recreation and dog walking.

The main park features:

- a large open grassy area containing several mature broadleaved trees of different species
- various smaller trees and shrubs

well-used footpaths which run close to and under some of the mature trees.

Your employer has recently won a contract to carry out work at Northwest Park which includes the following.

Tree work

A survey of the trees must be undertaken to identify any work that is required. The contract includes the following work:

- Survey and inspection of the trees in the main park and production of a tree report with recommendations for any work required.
- Planning for the required tree work must be carried out and documented. This will include planning how the proposed tree work will be done in accordance with current legislation and industry-best practice (including any working at height) and how the site will be safely managed.
- Pruning, dismantling and felling of trees.

New planting and maintenance

The owners of Northwest Park plan to establish a small arboretum on an area of land adjoining the main park, to be enjoyed as a visually appealing public space, and to be used by schools and a college as a resource to educate students about a diverse variety of tree species.

The area is 0.5 hectares in size and features mostly open ground with some mature Ash trees that are showing signs of Ash dieback, some specimen conifers and an old boundary fence in need of repair.

Ongoing maintenance for the proposed arboretum site will also be required to ensure successful establishment of trees and that the site is safe for visitors.

The contract includes the following work:

- Production of a planting plan for the arboretum including selection of species and planting specifications.
- Production of a three-year maintenance specification for the arboretum site.
- Planting and protection of trees in the arboretum.
- Maintenance and repair of the existing damaged boundary fence.

This assignment contains seven tasks and has a time of 35.5 hours.

3. Tasks (guidance for centres)

General task guidance

Please read **all** information carefully before starting the assessment.

Ensure you have read the following guidance before you undertake the assessment of candidates:

- *T level technical qualifications – marking*
- *T level technical qualifications – moderation (updated annually)*
- *T level technical qualifications – teaching, learning and assessment*
- *Technical qualification guides on marking and moderation*
- *Assessor Observation forms*
- *Marking grids following the tasks below*
- *Feedback guidance for assessors.*

All work carried out should be to industry standards, undertaken in a safe manner and compliant with relevant regulations. If a candidate fails to carry out the activities in a safe manner, the assessment should be stopped. Further guidance for assessors can be found in the centre guidance section under health and safety.

Photos and videos must be used to support the qualitative statements captured on the Assessor Observation form and must be taken by the assessor. Details of specific photo/video requirements are outlined in the task information below. Photos/videos must have the date, the candidate's name and their candidate number attached so that they can be differentiated. The candidate does not need to be in the photo/video, the purpose of the photo/video is to demonstrate the quality and standard of work of the specific activities and of the work throughout various stages of the assignment.

Where audio recordings must be made of the candidates' response(s) to questions during the task, the assessor must only ask the questions provided in the task specific guidance below. The recording must start with the date, the candidate's name and their candidate number. Notes about the responses must also be made in the appropriate Assessor Observation form.

All work submitted must be securely saved in an appropriate format as dictated by the evidence requirements. It is important that assessors can access copies of submitted materials to provide to candidates in subsequent tasks as instructed in the task specific guidance.

Time

The time allocated for the completion of the tasks and production of evidence for this assessment is 35.5 hours. Timings for completion of specific tasks are outlined below.

- Task 1 – 8 hours
- Task 2 – 4 hours
- Task 3 – 8 hours
- Task 4 – 6 hours
- Task 5 – 6 hours
- Task 6 – 1.5 hours
- Task 7 – 2 hours

There may be sub tasks within each of the above tasks. Assessors should ensure that the duration for each sub task is adhered to.

There may be additional resources that are required for a task/sub task. These will be provided by the assessor and listed within the task instructions within the candidate pack and task-specific guidance. These resources must only be administered to the candidate as per the task-specific guidance.

Scheduling assessment sessions

It is the centre's responsibility to arrange how time is managed to fit with timetables and meet the times allocated for each task during the assessment window. Assessment windows are specified in the key date schedule.

The tasks/sub tasks must be issued by centres in the order specified in the task specific guidance, one at a time to candidates and within in the scheduled assessment times. Candidates are able refer to the brief and scenario during all of the scheduled assessment time. Candidates are not permitted to return to tasks/sub tasks after the assessment time for the task has ended and the next task/sub task has begun. Candidates must not move on to the next task/sub task within the assessment session until instructed to do so by the assessor. It is the assessor's responsibility to ensure that all evidence for a task/sub task has been submitted before administering the next task/sub task. Candidates are not required to have formal reading time for the scenario and brief, this is included within the duration for Task 1.

When working under supervised conditions for longer sessions, breaks can be facilitated outside of the controlled conditions, ensuring the room is locked and all candidates have vacated once the break begins. All materials must be kept securely during the break.

Centres should aim to schedule tasks in the fewest amount of assessment sessions but ensure that the durations dictated for each task/sub task are covered. However, to aid deliverability and manageability of assessment, sessions can be split where there is a requirement – for example where timetabling of an appropriate location for six hours is not possible eg where centre's access to computer resources is limited, or where candidates are not available for six consecutive hours (eg due to work placement commitments). Where this is necessary, sessions must be timetabled over consecutive days and in as few sessions as possible. All assessment evidence must be stored securely and access to assessment materials and their work only given to candidates during the formal assessment times. All candidates are required to complete a declaration of authenticity along with their evidence submission, and the arrangements must support the assessor in being confident in confirming authenticity.

Where assessments need to be completed in a number of assessment sessions or over consecutive days all practical work areas and any evidence produced must be kept secure and must only be accessed by the assessor. Information and notices should be used to inform other users of the facility that no access will be granted when assessment sessions are in progress. Practical work areas, tools, equipment and systems for the assessment must not be reset until a candidate has completed the full assessment.

Internet access

Where internet access is allowed as part of a task (eg for research purposes) candidates must be advised that this is the case and reminded of the importance of submitting their own work and the seriousness of plagiarism, malpractice and collusion. Candidates should be advised that their

browser history can be monitored and checked. Depending on the type of task candidates may be requested to submit their internet search history to be considered as part of the submission of evidence, in order to confirm the authenticity of submitted evidence.

Where candidates are allowed the use of computer equipment, but not the use of the internet for a task, equipment should be provided with internet capability disabled (Wi-Fi disabled and machine disconnected from network).

Resources

Candidates must have access to a suitable range of resources as outlined in the task specific guidance to carry out the tasks and, where appropriate, to have the opportunity to choose materials, tools and equipment that demonstrate their ability to select from a range of appropriate resources.

Where candidates need access to evidence that has been submitted as part of a previous task, this will be provided as a copy of the original evidence and will be given at the start of the relevant task.

Task specific guidance for centres

Each task should be administered separately, and each task should be completed and submitted by all candidates before moving onto the next. The tasks must be completed in the order given, except tasks 6–7 which can be completed in any order.

Assessors should familiarise themselves with the tasks as well as this guidance for centres.

Templates must be provided in printed and digital format; candidates can choose to complete templates by hand or digitally.

There are no Question and Answer sessions used as an assessment method in this version of the assessment, so no audio recordings are required.

Task 1 – Tree survey and report

Assessor guidance

- Candidates must carry out the task independently, under controlled conditions while being observed.
- Sites: centres/assessors are responsible for selecting a suitable survey site. The survey site can be any site broadly representative of the one described in the assignment brief, containing all of the major features but not necessarily the same tree species.
 - parkland area of approximately 2 hectares in size containing open grown mature trees of different species and other vegetation.
 - site should contain a minimum of six mature trees to be surveyed by the candidate.
- The site should be chosen/set up so that it features mature trees which the candidate will recognise as needing aerial maintenance work.
- Where the chosen site does not feature a real footpath, centres/assessors are responsible for placing/simulating and marking out the simulated footpath location. The location of the footpath should be placed/simulated so that it is in close proximity to the trees requiring aerial work. This is so that candidates will need to consider this when making decisions in tasks 1 and 2.
- Location of the footpath can be simulated on site by marking the ground/trees/stakes/poles with paint/tape/string/rope as appropriate.
- Candidates must be provided a site plan which they can annotate and include in their report.
- Candidates may use plant/tree identification books/keys/apps provided by the assessor.
- Internet access is **not** permitted for this task (except for the use of tree/plant identification apps in part a.)
- The time allocated for this task is **8 hours**
 - a) survey: 4 hours
 - b) report: 4 hours
- Ratio of candidates to assessor:
 - a) Up to 6:1
 - b) group invigilation

Additional evidence

Assessor observations

- detailed, accurate and differentiating notes must be captured on the Assessor Observation Form.
 - Methods and accuracy of identification of tree species
 - Methods and accuracy of measurement of tree heights
 - Methods and accuracy of measurement of stem diameters (dbh)
 - Methods and accuracy of measurement of crown spread

Photo/video evidence

- Photo showing method used to measure height
- Photo showing method used to measure stem diameter

Resources

- Candidates must be provided with a map of the site showing the area to be surveyed and location of the footpath; maps should have a key showing these features and the map scale only
- Equipment to estimate tree height, eg clinometer/vertex/range finder; any suitable method of height estimation is acceptable
- Equipment to measure tree diameter eg girth tapes, callipers
- Equipment to measure linear distances on the ground
- Plant/tree identification books/keys/apps must be available for candidates to use during the survey

Task 2 – Tree work planning

Assessor guidance:

- Candidates must visit the site in order to complete the task
- Candidates must be provided with copies of a map of the site which they can annotate to show the site constraints and locations of signage.
- Candidates must be provided with *Figure 1: Risk Hierarchy for Tree Work at Height (Extract from Industry Code of Practice – Tree Work at Height Second Edition)*
- Candidates must be provided with *Figure 2: Step-wise approach to working through the hierarchy for tree work at height (Extract from Industry Code of Practice – Tree Work at Height Second Edition)*
- Assessors must mark the location of the trees requiring work, on the map.
- Candidates must carry out the task independently, under controlled conditions.
- Sites - The same site as Task 1 will be used for Task 2. Refer to task 1 guidance on the site requirements/set-up.
- The tree work specified by the assessor must include **three** trees including:
 - one tree requiring aerial maintenance
 - one tree requiring dismantling
 - one tree requiring assisted fellingWhere trees on the survey site do not match these requirements, assessors should mark up specific trees and instruct candidates to treat these as the trees requiring the above works.
- the time allocated for this task is **4 hours**
- Ratio of candidates to assessor:
 - group invigilation

Additional evidence

Assessor observations

- N/A

Photo/video evidence

- N/A

Resources

- Map of the site with locations of the trees to be worked on marked
- *Figure 1: Risk Hierarchy for Tree Work at Height*
- *Figure 2: Step-wise approach to working through the hierarchy for tree work at height*
- *Figure 7: Work at height risk assessment template*
- *Figure 8: Method statement template.*

Task 3 – Carry out tree work

Assessor guidance

- The same site as task 2 can be used for task 3 (but does not have to be).
- All relevant health and safety procedures **must** be observed at all times. If a candidate acts in a way that is likely to endanger themselves or others, the assessment **must** be stopped **immediately**. Intervene immediately, record the error in the observation record and using professional judgement, continue the assessment **only if it is safe** to do so.
- Sites and trees should be as free from constraints/surrounding infrastructure as possible.
- Candidates must be provided with *Figure 5: Risk assessment template* and *Figure 6: Emergency plan template*.
- For the pre-use checks and routine maintenance of the chainsaw in part b), the chainsaw supplied to candidates should be in a safe condition to use, but require routine maintenance such as adjustment of chain tension and sharpening (chain should not be severely/excessively worn).
- For the rigging task part f), the climber must be appropriately trained and qualified for the tasks being carried out and must **not** advise the candidate regarding their choices during the task. This may be a technician, member of teaching staff or a more advanced student who is already trained and qualified in aerial rigging, but must **not** be a fellow T Level candidate.
- Candidates must fell and process **one** additional tree/stem using an assisted felling method.
- A winch-based or rope-based system must be used for the assisted fell.
- The stem must be processed according to site requirements.
- The time allocated for this task is **8 hours**.
 - part a) risk assessment and emergency plan – 1 hour
 - part b) prepare machinery and field maintenance of chainsaw – 30 minutes
 - part c) crown raise from the ground – 1 hour
 - part d) aerial crown raise – 2 hours
 - part e) assisted fell and processing of one stem – 1 hour
 - part f) assist with dismantling and rigging – 2 hours
 - part g) chipping arisings – 30 minutes
- Ratio of candidates to assessor:
 - Part a) – group invigilation
 - Parts b) and c) – 4:1
 - Parts d) and f) – 1:1
 - Part g) – 4:1

Additional evidence

Assessor observations:

- detailed, accurate and differentiating notes must be captured on the Assessor Observation form:
- General preparation:
 - ensure health and safety controls are in place
 - select and wear appropriate compliant personal protective equipment (PPE)
 - select appropriate locations to fuel and start chainsaws safely
 - trees to be worked on are checked for signs of ill health or structural weaknesses
 - establish felling directions/drop zones considering tree form and site conditions

- prepare and establish escape routes and identify danger zones
- prepare trees prior to felling/pruning
- b) Pre-use checks of the chainsaw, field maintenance
 - chainsaw checked over before starting work
 - identification of any maintenance required
 - routine maintenance carried out according to industry best practice and manufacturer's instructions – eg sharpening, chain tension adjustment.
- c) Crown raise from the ground using a pole saw or powered pole pruner:
 - correct pruning cuts used to remove material.
 - carry out work to always maintain health and safety and in line with legislation (BS3998) and industry good practice.
- d) Climb and perform a crown raise and dead wooding using a chainsaw and hand saws.
 - the following cutting techniques must be demonstrated during the operation:
 - step cuts (demonstrate both freefall and handheld)
 - sink cuts (demonstrate both freefall and handheld)
 - final pruning cuts
 - tree climbed according to TG1 industry best practice
 - work positioning achieved, and general practice carried out according to TG2 industry best practice
 - correct pruning cuts used accurately to remove material.
 - fluidity / efficiency of work rate and practice.
 - carry out work to always maintain health and safety and in line with legislation (BS3998) and industry good practice.
- e) Assist with dismantling of one tree by supporting rigging operations from the ground.
 - work with the climber to estimate the weight of pieces to be lowered and the amount of friction required in the lowering device.
 - refer to data tables as appropriate.
 - select and wear appropriate compliant personal protective equipment (PPE)
 - good communication with the climber in line with TG1 industry best practice.
 - Refer to data tables as appropriate to work with the climber to estimate the weight of pieces to be lowered and the amount of friction required in the lowering device.
 - general practice and operation of rigging equipment carried out according to TG3 industry best practice
 - management of arisings on site during the dismantling operation
 - carry out work to always maintain health and safety and in line with legislation (BS3998) and industry good practice.
 - on completion of the operation equipment must be checked and cleaned.
 - site is left in a safe and tidy condition.
- f) Perform assisted fell using a winch based or rope based system.
 - select an appropriate hand winch or rope based system and associated compatible equipment.
 - check that all equipment is fit for purpose
 - select a suitable anchor point
 - set the system up considering the load to be moved
 - apply suitable felling cuts and sequence of operations to complete the assisted fell safely.
 - on completion of the operation, winching/pulling system must be dismantled, checked and returned to storage area.
 - Site is left in a safe and tidy condition.

- g) Use a manually-fed wood chipper to deal with the arisings
 - operate the wood chipper in line with FISA 604 industry best practice.
 - carry out work to always maintain health and safety and in line with legislation and industry good practice.
 - carry out work to avoid environmental damage in line with legislation and industry good practice.
 - site is left in a safe and tidy condition.

Photo/video evidence

- Part d): series of photos showing work position achieved in the tree
- Part f): series of photos showing set up of assisted fell including attachment points (tree and anchor), winch position and routing of wire/rope (typically 4–6 photos).

Resources

- *Figure 5: Risk assessment template*
- *Figure 6: Emergency plan template*
- All climbing equipment, safety equipment and PPE necessary for the task
- Suitable chainsaw(s) (petrol or battery-powered)
- Personal first aid kit as per FISA/HSE/industry guidance
- Hand cutting tools (eg saws, pole saws)
- Fuel (if using petrol-driven chainsaw)
- Chain oil
- Batteries and charging equipment (if using battery powered chainsaw)
- Chainsaw maintenance tools
- Felling aids – lever, wedges, hammer, winch/rope based pulling system including all necessary accessories for safe operation eg appropriately rated strops, shackles, pulleys.
- Copies of suitable rigging data tables for reference
- Manually-fed wood chipper

Task 4 – Planting plan

Assessor guidance

- Candidates must carry out the task independently, under controlled conditions.
- Candidates will have access to the internet.
- Candidates must be provided with copies of *Figure 3: Northwest Park arboretum site plan and information* and *Figure 4: Table of standard establishment costs*.
- The total time allocated for this task is **6 hours**.
Indicative timings:
 - Research – 1.5 hours
 - Planting plan – 4.5 hoursThe indicative timings for this task **do not** have to be adhered to – candidates may continue to research as they complete their planting plan.
- Ratio of candidates to assessor:
 - Group invigilation

Additional evidence

Assessor observations

- N/A

Photo/video evidence

- N/A

Resources

- Suitable working area to complete the research and planting plan
- Appropriate ICT equipment and software
- Internet access to enable research during the task
- *Figure 3: Northwest Park arboretum site plan and information*
- *Figure 4: Table of standard establishment costs*

Task 5 – Maintenance specification

Assessor guidance

- Candidates must carry out the task independently, under controlled conditions.
- Internet access is **not** permitted for this task.
- Candidates must be provided with *Figure 3 Northwest Park arboretum site plan and information* and their planting plan and annotated map from Task 4.
- The time allocated for this task is **6 hours**.
- Ratio of candidates to assessor:
 - Group invigilation

Additional evidence

Assessor observations:

- N/A

Photo/video evidence

- N/A

Resources

- Suitable working area to complete the maintenance specification
- Appropriate ICT equipment and software
- *Figure 3: Northwest Park arboretum site plan and information*
- Candidates planting plan and annotated map from Task 4

Task 6 – Planting

Assessor guidance

- Candidates must carry out the task independently, under controlled conditions, while being observed.
- Trees for planting can be of any species but must be root-balled standards. Candidates must be given a planting specification which includes location/spacing. It is expected that planting is carried out in a realistic working environment which reflects industry.
- Candidates should check the condition of the plants (roots, foliage, size and health) and report any defects to the assessor. Assessors must record this on the observation form. The trees provided to the candidate for the task must include a defective tree for the candidate to identify when carrying out their checks (eg incorrect size, incorrect species, damaged/dry/underdeveloped roots, mis-shapen roots, damaged/dry/discoloured foliage, lack of foliage etc).
- For part c), candidates will work **in pairs**.
 - candidates dig planting pits individually.
 - candidates assist each other to place tree into planting pit and support tree while backfilling and firming in. (Candidates swap roles for the second tree so that each candidate is observed leading the task.)
 - candidates assist each other to support the tree while installing the stake/support and protection. (Candidates swap roles for the second tree so that each candidate is observed leading the task.)
 - aftercare: each candidate waters a tree.
- the time allocated for this task is **1.5 hours**.
- ratio of candidates to assessor:
 - 2:1

Additional evidence

Assessor observations:

- Detailed, accurate and differentiating notes must be captured on the Assessor Observation form:
 - select tools, equipment and resources: selection of planting spade suitable for the stock type and size to be planted.
 - check the condition of the plants, **report any defects**: check roots, foliage, size, health
 - prepare planting stock for planting: plants handled with care, prepared for planting
 - plant trees using a suitable technique (assessors should adapt this to suit specific planting conditions/requirements)
 - dig planting pit to suitable shape and depth
 - sides and base of the pit loosened appropriately
 - appropriate number and size of stakes driven into the bottom of the planting pit
 - place irrigation pipe into bottom of hole (if using).
 - backfill hole in stages firming the soil around the rootball
 - final backfill
 - cross spar nailed to the posts
 - tree attached to the spar with an appropriate tree tie
 - tree watered after planting.

Photo/video evidence

- Photo of defective plant
- Photo of planted tree with support installed

Resources

- sufficient quantity of suitable planting stock (root balled standards).
- planting equipment including:
 - PPE
 - a range of planting spades/implements.
 - a range of equipment (eg hammers, post driver) and materials (stakes, tubes/guards, tree ties, nails etc) for installing support and protection.

Task 7 – Boundary maintenance

Assessor guidance

- Fences can be either post and rail or stock fencing, excluding electric fencing.
- This task can be carried out using an existing damaged section of fence or set up in a simulated area. The fence to be repaired **must** meet the following conditions:
 - If post and rail fencing is used: fence of minimum 3.6 metres in length (a standard rail length) and must feature a damaged rail to be identified and replaced **and** a damaged or loose post to be identified and replaced.
 - If stock fencing is used: fence of any length and must feature a damaged or loose post to be identified and replaced **and** damaged or loose/sagging netting to be identified and replaced/re-attached/tightened.

Note: candidates are **not** required to use complex tensioning equipment (eg monkey strainers, clamps etc.) and defects should be set up accordingly – i.e. achievable for a candidate working independently

- Candidates should select appropriate equipment and materials from a range provided by the assessor which includes all necessary equipment and materials and some less relevant equipment and materials.
- All relevant equipment should still be made available to candidates when they begin repairing the fence, regardless of their selections made earlier, to mitigate against any follow through error impacting the task.
- Candidates can have assistance from each other/a technician/Another member of staff, with the post re-installation element of the task (eg to lift the post into the hole and support it while they get it vertical). The candidate being observed must direct the actions of their assistant.
- The time allocated for this task is **2 hours**.
- Ratio of candidates to assessor:
 - Up to 3:1

Additional evidence

Assessor observations

- Detailed, accurate and differentiating notes must be captured on the Assessor Observation Form:
 - Inspect the fence and identify the maintenance or repairs required.
 - Select the equipment needed to carry out the repairs and maintenance.
 - If post and rail fencing is used:
 - removal of damaged rail
 - removal of damaged fence post
 - marking and cutting of rail to size if necessary
 - installation of post
 - fixing of rail
 - carry out the work in a manner that minimises environmental damage
 - ensure the site is left in a safe and tidy condition.
 - If stock fencing is used:
 - removal of damaged netting
 - removal of damaged fence post
 - installation of post

- fixing/tightening of netting
- carry out the work in a manner that minimises environmental damage
- ensure the site is left in a safe and tidy condition.

Photo/video evidence

- If post and rail fencing is used:
 - photo showing post installed (spirit level against post)
 - photo showing fixing of rail (spirit level against rail or showing alignment with other rail/s)
 - photo showing finished fence.
- If stock fencing is used:
 - photo showing post installed (spirit level against post)
 - photo showing fixing of netting
 - photo showing finished fence.

Resources

- Appropriate PPE
- A range of fencing equipment and materials for the candidate to select from
- Suitable length of post and rail or stock fencing

4. Tasks

Task 1 – Tree survey and report

Candidates must carry out the survey and inspection of the trees and produce a report with recommendations for any work required. Annotate a map of the site and include it in the report. The assessor will provide the map of the site to work from.

a) Carry out the tree survey. The survey must include the following information:

- tree species (candidates may use plant/tree identification books/keys/apps provided by the assessor)
- tree heights
- stem diameters (dbh)
- crown spread
- estimated ages
- tree condition.

b) Produce the report. The report must include:

- an annotated map of the site
- recommendations for tree work required
- priorities for the recommended tree work.

Conditions of assessment

- The time allocated for this task is **8 hours**.
 - a) Survey: 4 hours
 - b) Report: 4 hours
- Candidates must carry out the task on their own, under **controlled conditions**.
- Candidates will be supervised by the assessor while carrying out the survey.
- The assessor will provide a site plan for candidates to annotate and include in their report.
- Access to the internet is **not** permitted when writing the report.

Controlled conditions

- candidates must only work on their tasks in the allocated times
- Assessment evidence must be handed in at the end of each session for secure storage.
- Candidates may use plant/tree identification books/keys/apps provided by the assessor.
- Candidates are **not** permitted to bring any additional materials into the assessment session.
- Candidates must **not** share or discuss their work with other candidates.

What must be produced for marking

- Results of the tree survey
- Report (typically 250 words) including annotated map of the site

Additional evidence for this task

- Assessor observation (for part a))
- Photographic evidence as specified in the *Task specific guidance for centres* section

Task 2 – Tree work planning

Candidates must plan tree work for **three** trees specified by the assessor, to be done in accordance with current legislation and industry best practice. The assessor will provide a copy of the map of the site showing the locations of the trees to be worked on, for candidates to annotate when visiting the site.

Candidates will need to consider the most appropriate methods to carry out the required work effectively, including measures to ensure safety during the operations, and that the site is left in a safe and tidy condition.

Candidates must:

- a) visit the site and produce a work at height risk assessment for the aerial tree work, using the template provided. Assessors will provide the following reference documents and templates:
 - *Figure 1: Risk Hierarchy for Tree Work at Height (Extract from Industry Code of Practice – Tree Work at Height Second Edition)*
 - *Figure 2: Step-wise approach to working through the hierarchy for tree work at height*
 - *Figure 7: Work at height risk assessment template*
 - Map of the site with locations of the trees to be worked on marked
- b) using *Figure 8: Method statement template*, produce a method statement for the work to be done and the management of the site during the operation.
- c) accompany the method statement with a Site Constraints Map, by annotating the map of the site provided by the assessor to indicate site constraints, showing locations for signage and/or controls recommended.

Conditions of assessment

- The time allocated for this task is 4 hours.
- Candidates must carry out the task on their own, under **controlled conditions**.
- Access to the internet is **not** permitted.

Controlled conditions

- Candidates must only work on their tasks in the allocated times.
- Assessment evidence must be handed in at the end of each session for secure storage.
- Candidates are not permitted to bring any additional materials into the assessment session.
- Candidates must not share or discuss their work with other candidates.

What must be produced for marking

- Work at height risk assessment
- Method statement and site constraints map

Additional evidence for this task

- N/A

Task 3 – Carry out tree work

Candidates must demonstrate maintenance pruning and complex arboriculture operations.

a) Prepare for the operations by visiting the site and completing:

- a site specific risk assessment.
- an emergency plan document.

The assessor will provide the following templates:

- *Figure 5: Risk assessment template*
- *Figure 6: Emergency plan template*

b) Prepare machinery:

- i. Carry out pre-use checks for all machinery to be used during the task (chainsaw, powered pole pruner, wood chipper)
- ii. Following pre-use check of the chainsaw, conduct any identified field maintenance required.

c) Perform a crown raise of **one** tree from the ground using a pole saw or powered pole pruner in accordance with industry best practice.

d) Climb and perform a crown raise and dead wooding of **one** tree, using a chainsaw and hand saws as appropriate, in accordance with industry best practice.

The following cutting techniques must be demonstrated during the operation:

- step cuts (demonstrate both freefall **and** handheld)
- sink cuts (demonstrate both freefall **and** handheld)
- final pruning cuts

e) Assist with dismantling of **one** tree by supporting rigging operations from the ground.

- Work with the climber to estimate the weight of pieces to be lowered and the amount of friction required in the lowering device.
- Refer to the rigging data tables provided by the assessor as appropriate.

f) Perform an assisted fell of the remaining stem of the dismantled tree using a winch-based or rope-based system. Process the stem according to requirements.

g) Use a manually-fed wood chipper to deal with the arisings from the operation, in accordance with industry best practice.

Conditions of assessment:

- The time allocated for this task is 8 hours:
 - part a) risk assessment and emergency plan – 1 hour
 - part b) prepare machinery and field maintenance of chainsaw – 30 minutes
 - part c) crown raise from the ground – 1 hour
 - part d) aerial crown raise – 2 hours
 - part e) assisted fell and processing of one stem – 1 hour
 - part f) assist with dismantling and rigging – 2 hours

- part g) chipping arisings – 30 minutes
- Candidates must carry out the task on their own, under **controlled conditions**.
- Assessors will provide candidates with rigging data tables for use in part f).
- Access to the internet is **not** permitted.

Controlled conditions:

- Candidates must only work on their tasks in the allocated times.
- Assessment evidence must be handed in at the end of each session for secure storage.
- Candidates are not permitted to bring any additional materials into the assessment session.
- Candidates must not share or discuss their work with other candidates.

What must be produced for marking:

- risk assessment
- emergency plan

Additional evidence of your performance that must be captured for marking:

- assessor observation (for parts b-g)
- photographic evidence as specified in the *Task specific guidance for centres* section

Task 4 – Planting plan

Candidates must produce a planting plan for the arboretum.

Considering the information in the assignment brief and in *Figure 3: Northwest Park arboretum site plan and information*, select a suitable range of tree species and decide how many of each species will be planted and where on the site. You will also need to consider and specify the type and size of tree stock. The soil is a freely draining sandy loam with a pH of 6.

a) Candidates will need to research suppliers and prices to estimate the cost of planting. Candidates must consider:

- suppliers of trees and protection materials
- prices
- the types and sizes of tree stock available
- responsible sources of tree stocks, taking this into account when selecting supplier(s).

b) Produce a planting plan for the arboretum, to include:

- site layout and planting locations (by annotating the map provided)
- list of species selected (scientific and common names) and quantities
- planting specification including tree stock type, size, spacing, plant handling requirements and planting method(s)
- recommended supplier(s)
- identification of factors which could affect successful establishment
- support and protection methods
- justifications for all the above decisions
- estimate of establishment costs including:
 - purchase trees of each species
 - purchase of any support/protection materials
 - planting trees of each species including any individual tree protection required (refer to *Figure 4: Table of standard establishment costs*).

Conditions of assessment

- The total time allocated for this task is 6 hours:
 - part a) – 1.5 hours
 - part b) – 4.5 hours.
- internet access is permitted for this task.
- candidates will be provided with copies of *Figure 3: Northwest Park arboretum site plan and information*, and *Figure 4: Table of standard establishment costs*.
- candidates must carry out the task on their own, under **controlled conditions**.

Controlled conditions

- Candidates must only work on their tasks in the allocated times.
- Assessment evidence must be handed in at the end of each session for secure storage.
- Candidates are not permitted to bring any additional materials into the assessment session.
- Candidates must not share or discuss their work with other candidates.

What must be produced for marking

- Planting plan (typically 1000 words) including annotated map (research does **not** need to be submitted for marking)

Additional evidence for this task

- N/A

Task 5 – Maintenance plan

Candidates must produce a maintenance plan for the arboretum. Candidates should refer to the assignment brief, *Figure 3 Northwest Park arboretum site plan and information* and their planting plan from Task 4.

The maintenance plan will detail recommendations for the maintenance of the arboretum site over a three-year period after it has been planted, to ensure successful establishment of the new trees, maintenance of the existing mature trees and footpaths and the safety of visitors to the site.

Candidates must produce a three-year maintenance plan which includes:

- maintenance requirements and schedule for:
 - the newly planted trees
 - the existing mature trees
 - the footpath and bridleway.
- management recommendations for the existing mature Ash trees
- how arisings from maintenance and management activities will be managed, including consideration of opportunities to generate revenue and potential markets for arisings/by-products
- justifications for the decisions made in the plan.

Conditions of assessment

- The time allocated for this task is 6 hours.
- Candidates must carry out the task on their own, under **controlled conditions**.
- Candidates will have access to their planting plan and annotated map from task 4.
- Access to the internet is **not** permitted.

Controlled conditions:

- Candidates must work on their tasks only in the allocated times.
- Assessment evidence must be handed in at the end of each session for secure storage.
- Candidates are not permitted to bring any additional materials into the assessment session.
- Candidates must not share or discuss their work with other candidates.

What must be produced for marking:

- Three-year maintenance plan

Additional evidence for this task

- N/A

Task 6 – Planting

Candidates must:

plant **two** standards and install appropriate support according to the planting specification provided, using suitable planting and installation techniques.

Planting specification
<ul style="list-style-type: none">• Trees to be planted will be root-balled standards• Planted in suitably sized planting pits, to an appropriate depth• Supported appropriately with stakes• Suitable protection installed• Irrigated appropriately

- a) Select the equipment necessary to carry out the task, from the range provided by the assessor.
- b) Prior to planting each candidate must:
- check the condition of the trees
 - verbally report any defects to the assessor
 - prepare a tree for planting.
- c) Working in a **group of two**, prepare planting pits and plant the two trees, to the appropriate depth using suitable techniques to meet the planting specification.
- Each candidate will prepare a planting pit independently.
 - Each candidate will plant one tree; their partner may assist by supporting the tree when necessary, as directed by the candidate.

Conditions of assessment

- The time allocated for this task is 1.5 hours.
- Candidates must carry out parts a) and b) on their own, under **controlled conditions** while being observed.
- Candidates will carry out part c) in groups of **two**, under **controlled conditions** while being observed.
- Internet access is **not** permitted for this task.

Controlled conditions

- Candidates must work on their tasks only in the allocated times.
- Candidates are not permitted to bring any additional materials into the assessment session.
- Candidates must not share or discuss their work with other candidates.

What must be produced for marking

- N/A

Additional evidence for this task

- assessor observation
- photographic evidence as specified in the *Task-specific guidance for centres* section.

Task 7 – Boundary maintenance

Candidates must undertake the repair and maintenance of a section of post and rail or stock fence. The fence and area where the work is to be undertaken will be set by the assessor.

Candidates must:

- inspect the fence and identify the maintenance or repairs required
- select the equipment needed to carry out the repairs and maintenance. The assessor will provide a range of equipment
- carry out the required repairs and maintenance to the fence, leaving the site in a safe and tidy condition.

Conditions of assessment

- The time allocated for this task is 2 hours.
- Candidates must carry out the task on their own, under **controlled conditions** while being observed.
- Candidates may have assistance from each other/a technician/other member of staff, with the post reinstallation element of the task (to lift the post into the hole and position it). The candidate being observed must direct the actions of their assistant.
- Internet access is **not** permitted for this task.

Controlled conditions

- Candidates must only work on their tasks in the allocated times.
- Candidates are not permitted to bring any additional materials into the assessment session.
- Candidates must not share or discuss their work with other candidates.

What must be produced for marking

- N/A

Additional evidence for this task

- Assessor observation
- Photographic evidence as specified in the *Task-specific guidance for centres* section.

5. Centre guidance

Guidance provided in this document supports the administration of this assessment.

The following documents, available on the City & Guilds website, provide essential generic guidance for centres delivering T Level technical qualifications and **must** be referred to alongside this guidance:

- *T level technical qualifications – marking*
- *T level technical qualifications – moderation (updated annually)*
- *T level technical qualifications – teaching, learning and assessment.*

This assessment is designed to require the candidate to make use of their core knowledge, understanding and the practical skills they have built up over the course of their learning to tackle tasks/problems/challenges.

This approach to assessment emphasises to candidates the importance and applicability of the full range of their learning to practice in their industry area and supports them in learning to take responsibility for transferring their knowledge, understanding and skills to the practical situation, fostering independence, autonomy and confidence.

Candidates are provided with an assignment brief. They then have to draw on their knowledge and skills and independently select the correct processes, tools, equipment, materials and approaches to take, to complete the brief.

During the learning programme, it is expected that tutors will have taken the opportunity to set shorter, formative tasks that allow candidates to be supported to independently use the learning they have so far covered, drawing this together in a similar way, so they are familiar with the format, conditions and expectations of the assessment.

Candidates should be made aware during learning what the assessment themes are and how they are implemented in marking the assignment, so they will understand the level of performance that will achieve them high marks.

Candidates should not be entered for the assessment until the end of the course of learning for the qualification, so they are in a position to complete the assignment successfully.

Health and safety

Candidates must not be entered for assessment without being clear of the importance of working safely and having attended sufficient practical training to be able to work safely. The assessor must immediately stop an assessment if a candidate works unsafely. At the discretion of the assessor, depending on the severity of the incident, the candidate may be given a warning. If they continue to work unsafely, risking the safety of themselves or others, their assessment must be ended for that specific task. Candidates are permitted to progress to the other tasks/sub tasks in the assessment. The candidates will only be awarded marks based on the evidence they produced within the task and any subsequent tasks which link to the assessment theme. If a candidate does not gain enough marks from other tasks then the candidate will have the opportunity to retake another version of the Occupational Specialism (OS) assessment in a future series. Any warnings issued to a candidate must be considered as part of the marking process and recorded on the candidate record form

(CRF). Any actions that have led to that warning must be detailed on the CRF so they can be considered along with the other evidence when applying the descriptors in the mark scheme.

Compliance with timings

Due to the nature of this assessment, the maximum time allowances provided must be adhered to. They refer directly to assessment time, not any additional setting up times the centre needs to create an appropriate assessment environment.

It is the centre's responsibility to plan sufficient assessment sessions as stated in each of the tasks, under the appropriate conditions, within the assignment window, to allow candidates the opportunity to complete the assessment tasks.

Where candidates are required to plan their work, they should have their plans confirmed for appropriateness in relation to the time allocated for each task, to ensure their planning has not left them with too short a time to complete the tasks safely. Any planning that is not appropriate must be recorded on the candidate record form (CRF) as part of the marking process.

Candidates should be allowed sufficient time to fully demonstrate the range of their skills, however this also needs to be reasonable and practicable. Candidates should be allowed to overrun their own planned timings in order for evidence of a range of their skills to be captured. If, however, the time required exceeds the maximum time allowance for the task, the centre must stop the assessment and base the marking on the evidence up to that point.

Any guidance or feedback relating to timings/planning should follow the guidance provided in the section *Guidance and feedback* below.

Word counts

Typical word counts, where indicated, are to be used as approximates for guidance to support the production of sufficient evidence. The marking will relate to the quality of the evidence produced and not whether the word count has been met.

Assessor candidate ratios

The number of candidates an assessor will be able to observe at one time will vary depending on local conditions relating to:

- monitoring and maintaining safety during assessment
 - any specific hazards related to the task that pose a risk of harm in relation to the competence of the learners
 - availability of supervisory staff to support the assessor.
- the practicalities of collecting evidence
 - the complexity of evidence collection for the task
 - whether there are any peak times where there is a lot of evidence to collect that will need additional support or any that are quieter which may be eased through staggered starts etc.
 - local conditions eg
 - layout of the assessment environment and sufficient assessor line of sight to task activity throughout the assessment period

- amount of additional support available (eg to capture image/video evidence)
- availability of suitable workspaces/bays or of shared resources and equipment.

Centres are advised to trial the planned arrangements during formative assessment, reviewing the quality of evidence captured and manageability. It is expected that for straight forward observations, with favourable local conditions and support, (and unless otherwise specified) no more than six candidates will be observed by a single assessor at one time, and the number will usually be fewer than this maximum. The key factors to consider are the logistics of collecting sufficient evidence and remain working safely in the assessment environment. A timetable of assessments and layout of the workspaces, detailing:

- the candidates being assessed at each workstation,
- the assessor(s) and
- support staff present

must be available for the moderator on request.

Observation evidence

Observation notes form part of the candidate's evidence and must capture evidence of candidate performance during the practical tasks describing how well the activity has been carried out, rather than stating the steps/actions, the candidate has taken. The notes must be very descriptive and focus on the quality of the performance in relation to the quality indicators in the marking grid. They must provide sufficient, appropriate evidence that can be used by the assessor (and moderator) to mark the performance using the marking grid. These descriptions will be used, along with eg photo and video evidence to choose the relevant marking band and mark within the band so that candidates can be reliably and validly differentiated based on their performance. Evidence captured in the observation form must give the necessary information to enable the final assessment of the task at a later date. This is to allow a holistic judgement to be carried out after all evidence for the task is available, at which point full consideration of how the candidate has applied both their skills and their knowledge during the practical can be given.

Identifying what it is about the performances that is different between candidates can clarify the qualities that are important to record. Each candidate is likely to carry out the same steps, so a checklist of this information would not help differentiate between them. However, qualitative comments on how well they do it, and quantitative records of accuracy and tolerances would.

The assessor should refer to the marking grid to ensure appropriate aspects of performance are recorded. These notes will be used for marking and moderation purposes and so must be detailed, accurate and differentiating.

Assessors should refer to *The T Level technical qualifications guides on marking and moderation* and the *Guide Standard Exemplification Materials* to support with the collection of evidence through observation.

Assessors should ensure that any required additional supporting evidence including eg photos or video can be easily matched to the correct candidate, are clear, well-lit and show the areas of particular interest in sufficient detail and clarity for assessment (ie taken at appropriate points in production, showing accuracy of measurements where appropriate).

Assessor marking and justification is completed on a separate form (CRF) to differentiate this evidence from the judgement, since in some cases the observation form will provide evidence relating to the judgement for more than one assessment theme.

As far as possible candidates must not be distracted, or their performance affected by the process of observation and evidence collection.

The T Level technical qualifications guides on marking and moderation are essential guidance documents and are available on the City & Guilds website. These provide further information on preparing for assessment, evidence gathering, standardisation, marking and moderation, and must be referred to when planning and carrying out assessment.

Video and photo evidence in T Level Technical qualifications

The assessment materials for each assignment identify the minimum candidate and assessor evidence requirements to support marking and moderation. Where ephemeral evidence (eg areas of candidate performance that may be hard to capture with photos and assessor notes alone) plays a significant part of the practical assessment, City & Guilds will prescribe the type/capture where the use of video is necessary for practical assessment components (eg specifying exactly which elements of the practical must be videoed, or photographed), and any technical specifications for these forms of evidence (eg length of videos, maximum file sizes etc) will also be supplied. Photo and video evidence will be submitted along with the written candidate evidence and assessor evidence (AO forms) as described in the additional evidence section of the task.

If this is the case then the video evidence must meet these minimum requirements, in order to be considered by moderators:

- as per the guidance in section 2.3.2 of the *Marking and Moderation Guide for Centres*, assessors must ensure that this evidence can be easily matched to the correct candidate and task, is clearly shot, well-lit and shows the areas of particular interest in sufficient detail and clarity for assessment (ie filmed at appropriate points in production, showing accuracy of measurements where appropriate)
- the qualitative written evidence provided by assessors must
 - clearly identify the parts of the video that are being referred to, when used as supporting evidence. Using a timecode for this is recommended.
 - include their judgement on the performance being demonstrated.
- Section 6.5 of the *Centre Manual* also contains general information about the requirements for video evidence submission.

Please note that centres must ensure that video evidence is clear and meets the minimum requirements. The ability of the moderators to take this evidence into account may be impaired and delay the moderation process if the requirements are not met.

Minimum evidence requirements for marking and moderation

The sections in the assignment:

- **What must be produced for marking, and**
- **Additional evidence for this task**

These list the minimum requirements of evidence to be submitted for marking and the moderation sample.

Evidence produced during assessment above and beyond this may be submitted, as long as it provides useful information for marking and moderation and has been produced under appropriate conditions.

While technological methods which support the capturing or creating of evidence can be helpful, eg pin board style websites for creating mood boards, the final evidence must be converted to a suitable format for marking and moderation which cannot be lost/deleted or amended after the end of the assessment period (eg screen prints, pdf files). Considerations around tracking authenticity and potential loss of material hosted on such platforms during assessment is the centre's responsibility.

Note: Combining candidates' individual pieces of evidence into single files or zip files may make evidence management during internal marking more efficient and will greatly simplify the uploading of the moderation sample.

Where the minimum requirements have not been submitted for the moderation sample by the final moderation deadline, or the quality of evidence is insufficient to make a judgement, the moderation, and therefore any subsequent adjustment, will be based on the evidence that has been submitted. Where this is insufficient to provide a mark on moderation, a mark of zero must be given.

File names for evidence

All electronic files submitted must be given a clear file name to support the moderation process, that allows the candidate work to be identified.

Evidence must have a file name that clearly indicates the content of the document including: City & Guilds enrolment number/candidate name/qualification number/task/type of evidence.

We strongly recommend the following file name convention style:

- XYZ1234_Firstname_Surname_0123-012_Task_1a_Assessor_observation_form
- XYZ1234_Firstname_Surname_0123-012_Task_1b_Written_report

Centres must include the candidate's name and enrolment number in the filename as above. This helps the moderator reconcile the evidence.

File names should be consistent throughout the cohort, with each candidate's evidence using the same file naming convention.

Preparation of candidates

Candidates should be aware of which aspects of their performance will give them good marks in assessment. This is best carried out through routinely pointing out good or poor performance during the learning period, and through formative assessment. Although candidates will not have access to the marking grids during the assessment, candidates should be made aware of what they need to do to achieve a pass or distinction by referring to and being formatively assessed against grade descriptors as part of their formal learning programme.

During the learning programme, direct tutor instruction in how to approach tasks through modelling, support, guidance and feedback are critical. However, gradual removal of this support is necessary in preparation for summative assessment. This supported approach is not valid for summative assessment.

The purpose of summative assessment is to confirm the standard the candidate has reached as a result of participating in the learning process. Candidates should be encouraged to do the best they can and be made aware of the difference between these summative assessments and any formative assessments they have been subject to. Candidates will not have access to the marking grids. Refer to the *T Level Technical qualifications – teaching, learning and assessment* centre guidance document, available on the City & Guilds website for further information on preparing candidates for Technical qualification assessment.

Guidance on assessment conditions

The assessment conditions that are in place for this assignment are to:

- ensure the rigour of the assessment process
- provide fairness for candidates
- give confidence in the outcome.

They can be thought of as the rules that ensure that all candidates who take an assessment are being treated fairly, equally and in a manner that ensures their result reflects their true ability.

Conditions outlined within the tasks in this assignment do not affect any formative assessment work that takes place, although it is advised that candidates are prepared for the conditions they will need to work under during summative assessment.

The evidence for the tasks that make up this assignment must be completed under the specified conditions. This is to ensure authenticity and prevent malpractice as well as to assess and record candidate performance for assessment in the practical tasks. It is the centre's responsibility to ensure that local administration and oversight gives the assessor sufficient confidence to be able to confirm the authenticity of the candidate's work.

Security and authentication of candidate work

Candidate evidence must be kept secure to prevent unsupervised access by the candidate or others. Where evidence is produced over a number of sessions, the assessor must ensure learners and others cannot access the evidence without supervision. This might include storing written work or artefacts in locked cupboards and collecting memory sticks of evidence produced electronically at the end of each session.

Candidates are required to sign declarations of authenticity, as is the assessor. The relevant form is included in this assignment pack and must be signed after the production of all evidence.

Where the candidate or assessor is unable to or does not confirm authenticity through signing the declaration form, the work will not be accepted at moderation and a mark of zero will be given. If any question of authenticity arises eg at moderation, the centre may be contacted for justification of authentication.

Accessibility and fairness

Where a candidate has special requirements, assessors should refer to the *Access arrangements and reasonable adjustments* section of the City & Guilds website.

Assessors can support access where necessary by providing clarification to any candidate on the requirements or timings of any aspect of this assignment. Assessors should not provide more guidance than the candidate needs as this may impact on the candidate's grade, see the guidance and feedback section below.

All candidates must be provided with an environment, time frame and resources that allows them reasonable access to the full range of marks available.

Where candidates have worked in groups to complete one or more tasks for this assessment, the assessor must ensure that no candidate is disadvantaged as a result of the performance of any other team member. If a team member is distracting or preventing another team member from fully demonstrating their skills or knowledge, the assessor must intervene.

Guidance and feedback

Guidance must only support access to the assignment brief and must not provide feedback for improvement. The level and frequency of clarification and guidance must be

- recorded fully on the candidate record form (CRF)
- taken into account along with the candidate's final evidence during marking
- made available for moderation.

Assessors must not provide feedback on the quality of the performance or how the quality of evidence can be improved. This would be classed as malpractice. However, this does not apply if the assessor asks questions as part of the assessment process. Such requirements will be specifically stated within task centre guidance.

Assessors should however provide general reminders to candidates throughout the assessment period to check their work thoroughly before submitting it, and to be sure that they are happy with their final evidence as it may not be worked on further after submission.

Candidates can rework any evidence that has been produced for each task during the time allowed.

Assessors should check and be aware of the candidates' plans to ensure management of time and resources is appropriate, and so any allowed intervention can take place at an appropriate time.

The information on the guidance given and captured on the CRF is part of the evidence that must be taken into account along with the other evidence for the task when marking. It is up to the assessor to decide if the guidance the candidate has required suggests they are lacking in any performance outcome and consider the severity of the issue when applying the marking criteria. The assessor must record where and how guidance has had an impact on the marks given, so this is available should queries arise at moderation or appeal.

What is, and is not, an appropriate level of guidance

- The assessor should intervene with caution if a candidate has taken a course of action that will result in them not being able to submit the full range of evidence for assessment.

However, this should only take place once the assessor has prompted the candidate to check that they have covered all the requirements. Where the assessor has to be explicit as to what the issue is, this is likely to demonstrate a lack of understanding on the part of the candidate rather than a simple error, and full details should be recorded on the CRF.

- The assessor should not provide guidance if the candidate is thought to be able to correct the issue without it, and a prompt would suffice. In other words, only the minimum support the candidate actually needs should be given, since the more assessor guidance provided, the less of the candidate's own performance is being demonstrated and therefore the larger the impact on the marks awarded.
- The assessor must not provide guidance that the candidate's work is not at the required standard or how to improve their work. In this way, candidates are given the chance to identify and correct any errors on their own, providing valid evidence of knowledge and skills that will be credited during marking.
- The assessor must not produce any templates, pro-formas, work logs etc. If templates are provided by City & Guilds as part of the assignment, these should not be adapted but can be provided to candidates either electronically or on paper. Compliance with this requirement will be checked at moderation.

All specific prompts and details of the nature of any further guidance must be recorded on the relevant form and reviewed during marking and moderation.

6. Marking

Guidance on marking

Please refer to the *T Level Technical qualifications – marking and moderation* centre guidance documents for further information on gathering evidence suitable for marking and moderation, and on using the marking grid and forms.

The Candidate Record Form (CRF) is used to record:

- details of any guidance or the level of prompting the candidate has received during the assessment period
- rough notes bringing together relevant evidence from across tasks during marking
- summary justifications when holistically coming to an overall judgement of the mark for each assessment objective and overall
- if an assessment has to be stopped on the grounds of Health and Safety or if a candidate has been working in an unsafe manner.

The Assessor Observation form is used to record:

- descriptive information and evidence of candidate performance during an observation.

Carrying out marking using assessment themes

The process of marking each assessment theme is iterative and should follow the process below which will become more embedded over time as the descriptors become familiar. It is recommended to refer back to these frequently however, so the standard does not unintentionally drift over the marking period.

The indicative content gives an indication of the expected content parameters the responses are likely to cover, and which aspects of the evidence are relevant. It is not exhaustive, and an acceptable answer may concentrate more on depth rather than fully cover the range indicated or deviate into relevant topics not listed.

The specific task evidence listed within the assessor guide and marking grid must be used to make a judgement on performance in relation the specific assessment theme.

The assessment tasks guide the production of valid evidence under appropriate conditions for assessment. Candidate evidence from a range of tasks may contribute to the marking of a single assessment theme, or from a single task to more than one assessment theme. In this case different aspects of the evidence are being considered for each theme and need to be judged against the marking descriptors specified in the assessment themes independently of each other.

In some cases, the quality indicators looked for in the judgement may naturally be more strongly evidenced in one piece of evidence than another. For instance, more formulaic/prescriptive forms of evidence may not be able to generate evidence of higher levels of performance, so this evidence would need to be looked for in the other forms of evidence. This means that where a range of evidence is to be assessed, it should be treated as a single package of evidence for the purposes of marking even if generated through different tasks.

Timing of marking

As some assessment themes require the triangulation of a number of pieces of evidence, marking cannot take place until after all of these are available. This does not however mean that all marking needs to take place after all candidates have completed the whole assessment. Assessors can start marking against an assessment theme once all contributing evidence has been collected for that assessment theme.

Also, it is possible to begin recording the notes that will justify the marking for some assessment themes as evidence is produced, with the final mark only being decided once the complete array of evidence is available. This is particularly the case if later evidence is more confirmatory, and the earlier evidence is sufficiently informative for the qualities being assessed to make this a useful exercise.

Through planning, it should be possible to identify any evidence that can start being reviewed earlier, and the assessment themes which could be scheduled for earlier completion of marking eg while observation evidence is fresh in the mind should this be helpful. Care must of course be taken to ensure any evidence required by candidates to progress with another task are available for that task to take place. In addition, a sense check must take place across marking for each assessment theme, and across assessors, at the end to ensure marking has not drifted during the period. This may take the form of comparing candidate work to check that the ranking of quality of evidence matches the ranking of marks – where there are discrepancies marking should be checked for accuracy. These checks should be the responsibility of the Internal Quality Assurer and undertaken as part of the centre's Internal Quality Assurance strategy.

Process for each assessment theme:

- Select the range of evidence relevant for making the judgement – this is indicated in the mark scheme for each assessment theme.
- Scan/read the candidate evidence, any notes on the CRF eg regarding level of support/guidance recorded, evidence captured by the assessor and the indicative content and band descriptors in the mark scheme.
 - Note: for any warnings given during the assessment, the actions that have led to that warning must be detailed on the CRF so they can be considered along with the other evidence when applying the descriptors in the mark scheme.
 - Note: the evidence contained on the CRF must be considered and a judgement made on the level of performance the candidate has independently demonstrated – this will vary depending on the level of support detailed on the CRF – ie consider all relevant evidence and then judge the appropriate mark following the process below.
- Make an initial assessment of the required evidence as a whole (acknowledging uneven performance across evidence), considering each band in turn and considering the level of performance described in the context of the knowledge and skills in the indicative content to make a balanced judgement of the best band to use as a starting point.
- Read the evidence and review it against the band descriptor in more detail,
 - deciding if the response is securely sitting within the band, ie all quality characteristics described by the band descriptor are seen, and strongly meets the level of performance described by the descriptor holistically (ie across the range of relevant evidence):
 - check the descriptor for the level above
 - if the evidence clearly shows some of the characteristics of the higher band, select a suitable mark at the bottom of that band

- if *not* showing characteristics of the higher band revert to the original band, select a mark at the higher end of that mark range.
 - If the response is not securely in the band, but *is partially* showing the characteristics of the band,
 - check the descriptor of the level below
 - decide on a suitable mark either at the bottom of the original band as some characteristics shown, or top of the lower band if it better describes the quality of the characteristics being shown.
 - If the response is largely meeting the band, with only a few concerns, and is not showing characteristics aligning with the higher or lower bands, the appropriate mark is likely to be in the middle range.
 - If there is no alignment with the descriptor, reassess the starting band, and begin again.
- Based on the level of alignment with the descriptor, confirm the final mark within the band, bearing in mind that the available marks form an *evenly distributed scale*:
 - if the quality of response fully aligns with the performance described by the descriptor – assign a high mark within the band
 - if the quality of the response partially aligns with the performance described by the descriptor – assign a low to medium mark within the band
 - consider the quality compared to a range of similar responses (eg relevant annotated training material exemplars, responses reviewed during standardisation, and through experience) choose a mark on the point on the scale that would give an appropriate ranking for the assessed piece of evidence in relation to this information and in comparison with that of the rest of the cohort for that assessment theme.

7. Marking grids

There is a marking grid for each assessment theme that must be assessed, within each Performance Outcome as part of this occupational specialism assessment.

Performance Outcome 2 - Grow trees and woodlands

Assessment theme – Plan for establishment

Guidance for markers

Assessment theme – Plan for establishment is split into the following **sub-themes**:

- **Tree stocks**
- **Establishment plans**

The following **evidence** must be used to assess performance against each sub-theme, within the context of the performance outcome:

- Tree stocks
 - **Task 4 Planting plan**
 - **Task 6 Observation**
- Establishment plans
 - **Task 4 Planting plan**

Note: where there is insufficient evidence to award a mark, a zero mark may be given

Indicative content

Sub-theme - Tree stocks

Task 4 - Planting plan

Plans consider a range of factors eg:

- Stock type, size, spacing, and planting method:
 - stock type and size: considering site specification, price of stock, planting method.
 - planting method(s): methods chosen are suitable for the site, number of trees, species, stock types, planting position, plant handling requirements.
- Recommended plant supplier, with justifications which could include:
 - Location and type of supplier – eg UK-based commercial tree nursery
 - Consideration of provenance of stock – eg using UK provenance seed source for native species, as they are better genetically adapted to British conditions.
 - Sustainability – does the supplier have an environmental/sustainability policy? Do they state any specific measures such as reducing use of peat / water / fertilisers / pesticides?
 - Standards and assurance scheme accreditation – eg ISO / Plant Healthy certification
 - Biosecurity - does the supplier have biosecurity policy / stated measures in place?

Task 6 Observation

- Checks the condition of the plants, reports any defects: candidate checks roots, foliage, size, health of trees and report any defects or signs of poor health to the assessor
 - Examples of obvious signs – visible physical damage such as broken shoots, lack of foliage, etc.
 - Examples of comprehensive identification of signs – condition of rootball, proportion of fibrous roots, discoloured foliage, presence of mould etc.

Photo/video evidence

- **Photo** of defective plant

Assessment theme: Plan for establishment	Band 1 descriptor	Band 2 descriptor	Band 3 descriptor	Total marks per sub-theme	Total marks for assessment theme
Marks per band	1-2	3-4	5-6	6	18
Sub-theme: Tree stocks	<p>Basic understanding of tree stock types and characteristics taking into account a limited range of factors resulting in minimally suitable decisions on stock types, sources/suppliers and planting methods/locations/protection.</p> <p>Checks for tree health/condition/damage carried out are limited resulting in only the obvious signs of damage/poor health being identified and reported.</p>	<p>Good understanding of tree stock types and characteristics taking into account a good range of factors resulting in generally suitable decisions on stock types, sources/suppliers and planting methods/locations/protection.</p> <p>Checks for tree health/condition/damage carried out are good resulting in most signs of damage/poor health being identified and reported.</p>	<p>Excellent understanding of tree stock types and characteristics taking into account a comprehensive range of factors resulting in consistently suitable decisions on stock types, sources/suppliers and planting methods/locations/protection.</p> <p>Checks for tree health/condition/damage carried out are comprehensive resulting in comprehensive identification and reporting of signs of damage/poor health.</p>		

Indicative content

Sub-theme – Establishment plans

Task 4 - Planting plan

Plan includes:

- Number of trees of each species and planting locations
- Selection of species suitable for the site conditions and objectives given in the brief – public arboretum – eg species with features of interest such as distinctive form/autumn colour/seasonal flowering/fruit etc.
- Planting specification: Stock type, size, spacing, and planting method:
 - stock type and size: considering site specification, price of stock, planting method.
 - planting method(s): methods chosen are suitable for the site, number of trees, species, stock types, planting position, plant handling requirements.
- Recommendations for protection to ensure successful establishment, with justification.
 - Identification of protection requirements - consideration of the information in the brief, identifying rabbits and potentially dogs as a threat to establishment.
 - Suitable protection methods for the; threats, species, stock type. – eg depending on planting stock type chosen fencing/cages/tubes etc may be appropriate to protect against rabbits.
- Cost for sourcing trees of each species (and protection materials if used):
 - Breakdown of species selected and cost per tree (plus individual tree protection, if using) x number required of each.
- Calculations of the cost for planting trees including any protection:
 - $(\text{Planting cost per tree} + \text{installation cost for protection}) \times \text{number of trees}$
 - For each combination of stock type and protection method used if different types are chosen.

Note – Above is an example of calculation methods. Any accurate method of calculation is acceptable. Candidates must not be penalised for any errors carried forward in calculations.

Assessment theme: Plan for establishment	Band 1 descriptor	Band 2 descriptor	Band 3 descriptor	Total marks per sub-theme	Total marks for assessment theme
Marks per band	1-4	5-8	9-12	12	18
Sub-theme: Establishment plans	<p>Development of a basic planting specification which is minimally suitable based on the information in the brief.</p> <p>Some species selected are minimally suitable and justified with basic consideration of the species and site requirements/ characteristics</p> <p>Establishment choices/recommendations are based on basic relevant knowledge and understanding of environmental/site/soil conditions required for successful establishment and justifications are underdeveloped.</p>	<p>Development of a good planting specification which is reasonably suitable based on the information in the brief.</p> <p>Species selected are generally suitable and justified with good consideration of the species and site requirements/ characteristics</p> <p>Establishment choices/recommendations are based on good relevant knowledge and understanding of environmental/site/soil conditions required for successful establishment and justifications are well-reasoned.</p>	<p>Development of a comprehensive planting specification which is highly suitable based on the information in the brief.</p> <p>Species selected are highly suitable and justified with comprehensive consideration of the species and site requirements/ characteristics</p> <p>Establishment choices/recommendations are based on excellent relevant knowledge and understanding of environmental/site/soil conditions required for successful establishment and justifications are highly detailed and well-reasoned.</p>		

	Limited application of the necessary calculations, with a basic level of accuracy	Good application of the necessary calculations, with good level of accuracy.	Excellent application of the necessary calculations, with high level of accuracy.		
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Assessment theme - Establish trees

Guidance for markers

The following **evidence** must be used to assess performance against this assessment theme, within the context of the performance outcome:

- **Task 4 Planting plan**
- **Task 6 Planting observation**

Note: where there is insufficient evidence to award a mark, a zero mark may be given

Indicative content

Establish trees

Task4 - Planting plan

Plan includes:

- Planting specification with recommendation of a suitable planting method for the site conditions and planting stock chosen.
- Recommendations for protection to ensure successful establishment, with justification.
 - Identification of protection requirements
 - Suitable protection methods for the; threats, species, stock type.

Task 6 Planting

Observation includes:

- Select tools, equipment and resources: selection of planting spade suitable for the stock type and size to be planted.
- Prepare planting stock for planting: plants handled with care prepared for planting
- Plant trees using a suitable technique, **for example:** (markers should adapt this to suit specific planting conditions/requirements)
 - Dig square planting pit at least 75mm larger than the rootball
 - Depth of planting pit no greater than the level of the existing rootball
 - Sides and base of the pit loosened to allow roots to grow out of the planting pit
 - Appropriate number of stakes driven into the bottom of the planting pit either side of the rootball.

- Stakes no more than a third the height of the tree.
- Place irrigation pipe into bottom of hole if using.
- Backfill hole in stages firming the soil around the rootball
- Final backfill not firmed in order to allow for settlement.
- A cross spar nailed to the stakes
- Tree attached to the spar with an appropriate tree tie ensuring that the tree stem is not rubbing against the spar.
- Tree watered after planting.

Photo/video evidence

- **Photo** of planted tree with support installed

Assessment theme: Establish trees	Band 1 descriptor	Band 2 descriptor	Band 3 descriptor	Total marks per sub-theme	Total marks for assessment theme
Marks per band	1-4	5-8	9-12	NA	12
	Selects a basic range of tools, equipment, and resources to complete work to a basic standard Prepares site/ground/resources with limited application of knowledge and skill resulting in adequate	Selects a good range of tools, equipment and resources to complete work to a good standard Prepares site/ground/resources with good application of knowledge and skill resulting in good	Selects a comprehensive range of tools, equipment and resources to complete work to a high standard Prepares site/ground/resources with excellent application of knowledge and skill		

	<p>conditions for planting.</p> <p>Basic knowledge and application of planting techniques, resulting in conditions suitable for adequate establishment and growth, which match the planting specification to a minimal level of accuracy.</p> <p>Basic knowledge and application of support/protection methods, resulting in adequate conditions for establishment and growth.</p>	<p>conditions for planting.</p> <p>Good knowledge and application of planting techniques, resulting in conditions suitable for good establishment and growth, which match the planting specification to a good level of accuracy.</p> <p>Good knowledge and application of support/protection methods, resulting in good conditions for establishment and growth.</p>	<p>resulting in excellent conditions for planting.</p> <p>Excellent knowledge and application of planting techniques, resulting in conditions suitable for optimal establishment and growth, which match the planting specification to a high level of accuracy.</p> <p>Excellent knowledge and application of support/protection methods, resulting in optimal conditions for establishment and growth.</p>		
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Performance Outcome 3 - Operate and maintain forestry and arboriculture machinery

Assessment theme – Health and safety

Guidance for markers

The following **evidence** must be used to assess performance against this assessment theme, within the context of the performance outcome:

- **Task 3 Risk assessment**
- **Task 3 Emergency plan**

Note: where there is insufficient evidence to award a mark, a zero mark may be given

Indicative content

Health and safety

Task 3 Risk assessment

- Candidates must identify all major hazards. Major hazards would include any hazard likely to cause serious injury/fatality (relevant to this performance outcome eg major hazards related to the operation machinery being used, chainsaws, chipper etc.)
- Template completed including all significant findings, specific to the site, machinery and task (relevant to this performance outcome eg risks and mitigations/controls related to the operation machinery being used, chainsaws, chipper etc.)
- Effectiveness, achievability of mitigation/control measures specified.
- Realistic risk ratings given.

Task 3 Emergency plan

Includes:

- Template completed with relevant information (details of location, contact info and work activity), Clearly accurately and logically presented.

Assessment theme: Health and safety	Band 1 descriptor	Band 2 descriptor	Band 3 descriptor	Total marks per sub-theme	Total marks for assessment theme
Marks per band	1-3	4-6	7-9	NA	9
	<p>Risk assessments are complete and cover a limited range of hazards including all major hazards.</p> <p>A limited range of mitigation methods are specified. Risk rating has been attempted but not for all identified hazards, and/or is unrealistic</p> <p>Emergency plan contains a limited quantity of minimally accurate information to enable use in an emergency</p>	<p>Risk assessments are complete and cover a good range of hazards including all major hazards.</p> <p>A good range of mitigation methods are specified. Risk rating has been completed for majority of identified hazards and is generally realistic.</p> <p>Emergency plan contains a good quantity of moderately accurate information to enable reasonably efficient use in an emergency</p>	<p>Risk assessments are detailed and clearly identify a comprehensive range of hazards including all major hazards.</p> <p>A comprehensive range of mitigation methods have been identified. Risk rating has been completed for all identified hazards and is consistently realistic.</p> <p>Emergency plan contains a comprehensive quantity of highly accurate information to enable highly efficient use in an emergency</p>		

Assessment theme – Maintain machinery

Guidance for markers

The following **evidence** must be used to assess performance against this assessment theme, within the context of the performance outcome:

- **Task 3 Observation**

Note: where there is insufficient evidence to award a mark, a zero mark may be given

Indicative content

Maintain machinery

Task 3 Observation

Includes:

- Chainsaw checked over before starting work– eg visual inspection, starter cord tension, chain tension, chain condition, bar condition, presence and condition of safety features.
- Identification of any maintenance required
- Maintenance carried out according to industry best practice and manufacturer’s instructions – eg sharpening, chain tension adjustment.
 - Maintain and sharpen the chain using correct file size, cutters are filed at the correct angle and the depth gauge filed to the correct height for safe and efficient cutting performance
 - Ensure that the chain is tensioned correctly for safe and efficient cutting performance
 - Carry out work to always maintain health and safety and in line with legislation and industry good practice.

Assessment theme: Maintain machinery	Band 1 descriptor	Band 2 descriptor	Band 3 descriptor	Total marks per sub-theme	Total marks for assessment theme
Marks per band	1-3	4-6	7-9	NA	9
	<p>Basic range of pre-use checks and machine/equipment setup/adjustments are carried out in line with manufacturers recommendations.</p> <p>Limited identification of maintenance requirements.</p> <p>Maintenance is carried out to a basic standard that will ensure safe but inefficient operation of the machinery.</p>	<p>Good range of pre-use checks and machine/equipment setup/adjustments are carried out in line with manufacturers recommendations.</p> <p>Good identification of maintenance requirements.</p> <p>Maintenance is carried out to a good standard that will ensure safe and efficient operation of the machinery.</p>	<p>Comprehensive range of pre-use checks and machine/equipment setup/adjustments are carried out in line with manufacturers recommendations.</p> <p>Comprehensive identification of maintenance requirements.</p> <p>Maintenance is carried out to an excellent standard that will ensure safe and highly efficient operation of the machinery.</p>		

Assessment theme – Operate machinery

Guidance for markers

The following **evidence** must be used to assess performance against this assessment theme, within the context of the performance outcome:

- **Task 3 Observation**

Note: where there is insufficient evidence to award a mark, a zero mark may be given

Indicative content

Operate machinery

Task 3 Observation

f) Chainsaws:

- Select and wear appropriate compliant personal protective equipment (PPE)
- Select an appropriate fuelling site and fill the saw with petrol and oil.
- Carry out pre-start checks and settings of the chainsaw
- Select an appropriate location and start the chainsaw safely
- Carry out post start checks.
- Establish felling direction considering tree form and site conditions
- Prepare and establish escape routes and identify danger zones
- Prepare tree prior to felling
- Fell trees using appropriate felling cuts.
- Process the trees using a recognised method of snedding or de-limbing.
- Crosscut the timber safely.
- Carry out work to always maintain health and safety and in line with legislation and industry good practice.

f) Winches:

- Select and wear appropriate compliant personal protective equipment (PPE)

- Select an appropriate hand winch and associated compatible equipment- slings, snatch block, shackles, wire cable.
- Check that all equipment is fit for purpose
- Select a suitable anchor point
- Set the winch system up considering the load to be moved
- On completion of the winching operation equipment must be dismantled checked and stored.

Photo/video evidence

- f) Series of **photos** showing set up of assisted fell: Attachment points (tree, anchor), winch position.

Assessment theme: Operate machinery	Band 1 descriptor	Band 2 descriptor	Band 3 descriptor	Total marks per sub-theme	Total marks for assessment theme
Marks per band	1-4	5-8	9-12	NA	12
	<p>Selects a basic range of equipment, and resources to safely operate machinery to a basic standard.</p> <p>Prepares site/resources for the operation with limited application of knowledge and skill relating to site/machinery setup requirements resulting in safe but</p>	<p>Selects a good range of equipment and resources to safely operate machinery to a good standard.</p> <p>Prepares site/resources for the operation with good application of knowledge and skill relating to site/machinery setup requirements resulting in safe and</p>	<p>Selects a comprehensive range of equipment and resources to safely operate machinery to an excellent standard</p> <p>Prepares site/resources for the operation with excellent application of knowledge and skill relating to site/machinery setup requirements</p>		

	<p>inefficient operating conditions.</p> <p>Safely operates machinery/equipment controls with a basic level of skill and efficiency, according to industry best practice. Some non-safety related errors occur, which go unnoticed by the candidate.</p> <p>Safely utilises machinery/equipment demonstrating a basic skill level to accomplish the set tasks to a basic standard and finish.</p>	<p>reasonably efficient operating conditions.</p> <p>Safely operates machinery/equipment controls with a good level of skill and efficiency, according to industry best practice. Some non-safety related errors occur, which are eventually recognised and corrected by the candidate.</p> <p>Safely utilises machinery/equipment demonstrating a good skill level to accomplish the set tasks to a good standard and finish.</p>	<p>resulting in safe and highly efficient operating conditions.</p> <p>Safely operates machinery/equipment controls with a high level of skill and efficiency, according to industry best practice. Minimal-to-no non-safety related errors occur, which are immediately recognised and corrected by the candidate.</p> <p>Safely utilises machinery/equipment demonstrating a high skill level to accomplish the set tasks to an excellent standard and finish.</p>		
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Performance Outcome 7 - Manage tree populations to meet objectives

Assessment theme - Environment and plant health

Guidance for markers

The following **evidence** must be used to assess performance against this assessment theme, within the context of the performance outcome:

Task 1 survey report

Task 5 maintenance specification

Note: where there is insufficient evidence to award a mark, a zero mark may be given

Indicative content

1. Environment and plant health

Task 1 survey report

- Appraisal of tree health and condition, including identification of pests/diseases/disorders and hazards

Task 5 maintenance specification

Three-year maintenance specification may include:

Maintenance requirements for:

- the newly planted trees
 - Planned management for weeds, pests and diseases
 - Monitoring for pests/diseases.
- the existing trees
 - Inspection requirements/frequency/associated actions – eg monitoring for pests/diseases.
- Management recommendations for the existing mature Ash trees
 - Inspection requirements
 - Prioritisation of work close to the footpaths (eg increased inspection frequency) due to the symptoms/progression of ash dieback.

Assessment theme: Environment and plant health	Band 1 descriptor	Band 2 descriptor	Band 3 descriptor	Total marks per sub-theme	Total marks for assessment theme
Marks per band	1-3	4-6	7-9	NA	9
	<p>Basic application of knowledge of environmental, plant health and ecosystems resulting in inaccuracies when identifying pests/diseases/disorders and hazards</p> <p>Basic management recommendations are made, which may be unsuitable.</p> <p>Limited justifications are provided for management/maintenance recommendations considering a narrow range of factors.</p>	<p>Good application of knowledge of environmental, plant health and ecosystems resulting in mostly accurate identification of pests/diseases/disorders and hazards</p> <p>Good management recommendations are made, which are appropriate.</p> <p>Good justifications are provided for management/maintenance recommendations considering a good range of factors.</p>	<p>Excellent application of knowledge of environmental, plant health and ecosystems resulting in consistently accurate identification of pests/diseases/disorders and hazards</p> <p>Excellent management recommendations made which are highly appropriate.</p> <p>Comprehensive justifications are provided for management/maintenance recommendations considering an extensive range of factors.</p>		

Assessment theme - Tree management planning

Guidance for markers

The following **evidence** must be used to assess performance against this assessment theme, within the context of the performance outcome:

Task 1 survey report

Task 5 maintenance specification

Note: where there is insufficient evidence to award a mark, a zero mark may be given

Indicative content

Tree management planning

Task 1 survey report

Report containing

An annotated site plan showing –

- tree locations, labelled/numbered
- location of site constraints and features including footpath.

a table summarising information in part a) for each tree

- Recommendations for tree work required including aerial maintenance of mature trees – eg dead wooding, crown raising.
- Priorities for the recommended tree work – categorise the priority of tree work, eg red/amber/green with associated timeframes.

Task 5 maintenance specification

Produce a three-year maintenance specification which may include:

Maintenance requirements for:

- the newly planted trees
 - Irrigation requirements
 - Formative pruning where required
 - Support

- Eg adjusting tree ties, maintaining supports etc.
- Planned management for weeds, pests and diseases, eg scheduled mechanical or chemical control methods for weeds.
- Maintenance of tree guards.
- Monitoring for pests/diseases.
- the existing trees
 - Measures to avoid compaction
 - Pruning where required
 - Inspection requirements/frequency/associated actions taking into account health and safety
- management recommendations for the existing mature Ash trees
 - Inspection requirements
 - Suitable recommendations for tree work taking into account site constraints, objectives, tree characteristics and health and safety
 - Prioritisation of work close to the footpaths (eg increased inspection frequency) taking into account health and safety

Assessment theme: Tree management planning	Band 1 descriptor	Band 2 descriptor	Band 3 descriptor	Total marks per sub-theme	Total marks for assessment theme
Marks per band	1-3	4-6	7-9	NA	9
	<p>Site plan/maps created/amended with basic level of detail and accuracy</p> <p>Tree management/maintenance work recommended is suitable and takes into account a basic range of factors resulting in plans/recommendations lacking justification with limited detail.</p> <p>Basic consideration of information from the brief/task(s) are used to prioritise work in an inefficient order, (but with safety-critical work prioritised).</p>	<p>Site plan/maps created/amended with good level of detail and accuracy</p> <p>Tree management/maintenance work recommended is suitable and takes into account a good range of factors resulting in justified plans/recommendations with good detail.</p> <p>Good consideration of information from the brief/task(s) are used to prioritise work in a reasonably efficient order (with safety-critical work prioritised).</p>	<p>Site plan/maps created/amended with excellent level of detail and accuracy</p> <p>Tree management/maintenance work recommended is suitable and takes into account a comprehensive range of factors resulting in highly detailed plans/recommendations with comprehensive justifications.</p> <p>Comprehensive consideration of information from the brief/task(s) are used to prioritise work in highly efficient order (with safety-critical work prioritised).</p>		

Assessment theme – Tree surveys and inspections

Guidance for markers

The following **evidence** must be used to assess performance against this assessment theme, within the context of the performance outcome:

Task 1 observation

Task 1 survey report

Note: where there is insufficient evidence to award a mark, a zero mark may be given

Indicative content

Tree surveys and inspections

Task 1 observation

- Methods and accuracy of identification of tree species
- Methods and accuracy of measurement of tree heights
- Methods and accuracy of measurement of stem diameters (dbh)
- Methods and accuracy of measurement of crown spread

Photo/video evidence

- **Photo** showing method used to measure height
- **Photo** showing method used to measure stem diameter

Task 1 survey report

Typical evidence may include:

Results of the tree survey

- Tree species (Identification of tree species present on the site using appropriate techniques and resources (eg keys, books, apps))
- Tree heights (in m measured using a suitable techniques/equipment eg clinometer, vertex, rangefinder etc.)
- Stem diameters (dbh) (in cm measured using a suitable techniques/equipment eg girth tape, caliper etc.)
- Crown spread
- Estimated ages
- Tree condition (eg form, vigour, damage, pest/disease, roots/stability etc)

Report containing;

- a table summarising information in part a) for each tree (species, heights, diameters (dbh), crown spread, estimated ages, condition)

Assessment theme: Tree surveys and inspections	Band 1 descriptor	Band 2 descriptor	Band 3 descriptor	Total marks per sub-theme	Total marks for assessment theme
Marks per band	1-4	5-8	9-12	NA	12
	<p>Basic application of tree/plant identification methods to identify species present.</p> <p>Species are identified, mostly by common name only.</p> <p>Measurements are taken with a basic level of accuracy, and minimal checks/confirmation of readings are carried out.</p> <p>Inspection of tree condition is basic taking into account a limited range of factors/characteristics, resulting in an incomplete interpretation of overall tree/population condition</p>	<p>Good application of tree/plant identification methods to identify species present.</p> <p>Species are identified, mostly by common name and genus.</p> <p>Measurements are taken with a good level of accuracy, and readings are mostly checked/confirmed where required.</p> <p>Inspection of tree condition is good taking into account a good range of factors/characteristics, resulting in a good interpretation of overall tree/population condition</p>	<p>Excellent application of tree/plant identification methods to identify species present.</p> <p>Species are identified, mostly by full scientific name.</p> <p>Measurements are taken with a high level of accuracy, and readings are consistently checked/confirmed where required.</p> <p>Inspection of tree condition is highly detailed taking into account an extensive range of factors/characteristics, resulting in a comprehensive interpretation of overall tree/population condition</p>		

Performance Outcome 8 - Maintain trees to meet prescribed objectives

Assessment theme – Health and safety

Guidance for markers

The following **evidence** must be used to assess performance against this assessment theme, within the context of the performance outcome:

Task 2 Work at height risk assessment

Task 3 Risk assessment

Note: where there is insufficient evidence to award a mark, a zero mark may be given

Indicative content

Health and safety

Task 2 Work at height risk assessment

- Work at height risk assessment template completed with decisions on working methods/controls – eg if use of a MEWP is recommended, how has this been justified? (eg safety of operators, reference to Step-wise approach to working through the hierarchy for tree work at height)

Task 3 Risk assessment

- Template completed including all significant findings, specific to the site, machinery and task. (Relevant to this performance outcome eg pruning trees using hand tools, pole saws etc)
- Effectiveness, achievability of control measures specified.
- Realistic risk ratings given.

Assessment theme: Health and safety	Band 1 descriptor	Band 2 descriptor	Band 3 descriptor	Total marks per sub-theme	Total marks for assessment theme
Marks per band	1-2	3-4	5-6	NA	6
	<p>Work at height risk assessment completed to a minimum standard with limited justification for chosen method(s) provided.</p> <p>Risk assessments are complete and cover a limited range of hazards and mitigations, including all major hazards. Risk rating has been attempted but not for all identified hazards, and/or is unrealistic.</p>	<p>Work at height risk assessment completed to a good standard with good justification chosen method(s) provided.</p> <p>Risk assessments are complete and cover a good range of hazards and mitigations including all major hazards. Risk rating has been completed for all identified hazards and is generally realistic.</p>	<p>Work at height risk assessment completed to an excellent standard with comprehensive justification chosen method(s) provided.</p> <p>Risk assessments are complete and cover a comprehensive range of hazards and mitigations including all major hazards. Risk rating has been completed for all identified hazards and is consistently realistic.</p>		

Assessment theme – Environment and plant health

Guidance for markers

The following **evidence** must be used to assess performance against this assessment theme, within the context of the performance outcome:

Task 5 Maintenance specification

Note: where there is insufficient evidence to award a mark, a zero mark may be given

Indicative content

2. Environment and plant health

Task 5 Maintenance specification

- Consideration of the environment within the maintenance specification eg Avoiding disturbance to wildlife, environmental impact is considered in planned methods of controlling weeds, pests and diseases.
- Inspections for any wildlife present may be recommended eg checks for nesting birds, bats etc.
- Environmental protection methods may be recommended eg use of ground protection, etc.
- Measures to prevent the spread of pests/diseases to/from the site (Chalara Ash Dieback) eg biosecurity measures, cleaning of tools, PPE, vehicles etc leaving the site.

Assessment theme: Environment and plant health	Band 1 descriptor	Band 2 descriptor	Band 3 descriptor	Total marks per sub-theme	Total marks for assessment theme
Marks per band	1-2	3-4	5-6	NA	6
	<p>Basic consideration of impacts of proposed plans/operations and their potential damage to the environment</p> <p>Limited range of methods/techniques applied to eliminate, prevent, and/or mitigate against environmental damage in plans/operations.</p>	<p>Good consideration of impacts of proposed plans/operations and their potential damage to the environment</p> <p>Good range of methods/techniques applied to eliminate, prevent, and/or mitigate against environmental damage in plans/operations.</p>	<p>Comprehensive consideration of impacts of proposed plans/operations and their potential damage to the environment</p> <p>Comprehensive range of methods/techniques applied to eliminate, prevent, and/or mitigate against environmental damage in plans/operations.</p>		

Assessment theme – Plan for tree and site maintenance

Guidance for markers

The following **evidence** must be used to assess performance against this assessment theme, within the context of the performance outcome:

Task 2 Method statement and site constraints map

Task 5 Maintenance specification

Note: where there is insufficient evidence to award a mark, a zero mark may be given

Indicative content

Plan for tree and site maintenance

Task 2 Method statement and site constraints map

Method statement may include site planning details/set-up of the work site eg: operators (duties and responsibilities), equipment/resources, access, measures to control public/unauthorised access. Constraints map may include site constraints, showing locations for signage and/or controls recommended in the method statement.

Task 5 Maintenance specification

Three-year maintenance specification may include:

Maintenance requirements for:

- the newly planted trees:
 - Irrigation requirements
 - Formative pruning where required
 - Support
 - eg adjusting tree ties, maintaining supports etc.
 - Planned management for weeds, pests and diseases
 - Eg scheduled mechanical or chemical control methods for weeds.

- Maintenance of tree guards. Monitoring for pests/diseases.
- the existing trees:
 - Measures to avoid compaction – eg no driving over rooting area
 - Pruning where required
 - Inspection requirements/frequency/associated actions
- the footpaths:
 - Measures to avoid damage/erosion to surfaces – eg route planning, main vehicle movements use surfaced bridleway
 - Inspection requirements/frequency/associated actions eg surface repairs/maintenance
 - Consideration of managing access to the site during maintenance operations – eg likelihood of public entering the site, potential risks, suitable controls such as signage/barriers/banksperson

Management recommendations for the existing mature Ash trees:

- Inspection requirements, considering condition and proximity to targets eg footpaths.
- Prioritisation of work on trees close to the footpaths (eg increased inspection frequency, removal)

Assessment theme: Plan for tree and site maintenance	Band 1 descriptor	Band 2 descriptor	Band 3 descriptor	Total marks per sub-theme	Total marks for assessment theme
Marks per band	1-3	4-6	7-9	NA	9
	Basic consideration of the need for site and access management resulting in limited effectiveness of recommended/implemented management/controls.	Good consideration of the need for site management and access management resulting in reasonably effective	Comprehensive consideration of the need for site management and access management resulting in highly effective		

	<p>Limited application of knowledge of the maintenance requirements of different types of trees, infrastructure and features resulting in limited effectiveness of maintenance plans in meeting the brief/task requirements.</p> <p>Basic consideration of tree physiology and health within plans resulting in maintenance decisions which are safe, but limited in optimising tree health/longevity as much as is safely possible.</p>	<p>management/controls being recommended/implemented.</p> <p>Good application of knowledge of the maintenance requirements of different types of trees, infrastructure and features resulting in effective maintenance plans, meeting the brief/task requirements.</p> <p>Good consideration of tree physiology and health resulting in maintenance decisions which are safe and mostly optimise tree health/longevity as much as is safely possible.</p>	<p>management/controls being recommended/implemented.</p> <p>Excellent application of knowledge of the maintenance requirements of different types of trees, infrastructure and features resulting in highly effective maintenance plans, meeting the brief/task requirements.</p> <p>Comprehensive consideration of tree physiology and health resulting in maintenance decisions which are safe and consistently optimise tree health/longevity as much as is safely possible.</p>		
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Performance Outcome 9 - Undertake complex arboriculture operations

Assessment theme – Perform tree and site maintenance

Guidance for markers

The following **evidence** must be used to assess performance against this assessment theme, within the context of the performance outcome:

Task 3 Observation

Task 7 Observation

Note: where there is insufficient evidence to award a mark, a zero mark may be given

Indicative content

Perform tree and site maintenance

Task 3 Observation

b) Prepare machinery

- Carry out pre-use checks for all machinery to be used during the task (pole saw/powered pole pruner, wood chipper)
 - Condition
 - Safety features
 - function

c) Crown raise from the ground using a pole saw or powered pole pruner:

- Select and wear appropriate compliant personal protective equipment (PPE)
- Correct pruning cuts used to remove material.
- Carry out work to always maintain health and safety and in line with legislation (BS3998) and industry good practice.

- On completion of the operation equipment must be checked and cleaned.

d) Crown raise and dead wooding **using hand saws as appropriate**, in accordance with industry best practice.

The following cutting techniques must be demonstrated during the operation (using hand saws):

- Step cuts
- Sink cuts
- Final pruning cuts

Evidence may include:

- Select and wear appropriate compliant personal protective equipment (PPE)
- Tree climbed according to TG1 industry best practice
- Good work positioning achieved, and general practice carried out according to TG2 industry best practice
- Correct pruning cuts used accurately to remove material.
- Fluidity / efficiency of work rate and practice.
- Carry out work to always maintain health and safety and in line with legislation (BS3998) and industry good practice.
- On completion of the operation equipment is checked and cleaned.

Photo/video evidence

- d) Series of **photos** showing work position achieved in the tree

Task 7 Observation

Evidence:

Assessor observation

- Organise and set out the worksite.
- Select and prepare tools and equipment for use: selection of necessary equipment
- Repair the fence and leave the site as per specification.
 - If post and rail: posts are upright and properly firmed in to the ground, rails are appropriately spaced and attached securely.
 - If stock fence: posts are upright and properly firmed in to the ground, netting is tensioned appropriately and attached securely.

Photo/video evidence

- If post and rail fencing is used:
 - **Photo** showing post installed (spirit level against post)
 - **Photo** showing fixing of rail (spirit level against rail, or showing alignment with other rail/s)
 - **Photo** showing finished fence
- If stock fencing is used:
 - **Photo** showing post installed (spirit level against post)
 - **Photo** showing fixing of netting
 - **Photo** showing finished fence

Assessment theme: Perform tree and site maintenance	Band 1 descriptor	Band 2 descriptor	Band 3 descriptor	Total marks per sub-theme	Total marks for assessment theme
Marks per band	1-3	4-6	7-9	NA	9
	Prepares machinery/equipment and carries out tree maintenance work to a basic , safe standard with appropriate cuts selected and applied to achieve an acceptable finish. Aerial work is carried out safely with a	Prepares machinery/equipment and carries out tree maintenance work to a good , safe standard with appropriate cuts selected and applied to achieve a good finish. Aerial work is carried out safely with a	Prepares machinery/equipment and carries out tree maintenance work to an excellent , safe standard with appropriate cuts selected and applied to achieve an excellent finish. Aerial work is carried out safely with an		

	<p>basic level of skill and efficiency.</p> <p>Safely carries out basic infrastructure maintenance in line with specifications, achieving an acceptable finish and leaving the surrounding area in a safe and tidy condition.</p>	<p>good level of skill and efficiency.</p> <p>Safely carries out good infrastructure maintenance in line with specifications, achieving a good finish and leaving the surrounding area in a safe and tidy condition.</p>	<p>excellent level of skill and efficiency.</p> <p>Safely carries out excellent infrastructure maintenance in line with specifications, achieving an excellent finish and leaving the surrounding area in a safe and tidy condition.</p>		
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Assessment theme – Health and safety

Guidance for markers

The following **evidence** must be used to assess performance against this assessment theme, within the context of the performance outcome:

Task 2 Method statement and constraints map

Task 2 Work at height risk assessment

Task 3 Risk assessment

Note: where there is insufficient evidence to award a mark, a zero mark may be given

Indicative content

Health and safety

Task 2 Method statement and constraints map

- Health and safety legislation and best practice considered within the method statement, to align with the work at height risk assessment. Constraints identified and marked on annotated map.

Task 2 Work at height risk assessment

- Risk assessment template completed with justified decisions on working methods/controls – eg if use of a MEWP is recommended, how has this been justified? (eg safety of operators, reference to Step-wise approach to working through the hierarchy for tree work at height)

Task 3 Risk assessment

- Template completed in full, including all significant findings, specific to the site, machinery and task (relevant to this performance outcome – eg hazards, risks, controls directly related to the complex operations being carried out (aerial pruning, rigging, assisted fell etc)
- Effectiveness, achievability of control measures specified.
- Realistic risk ratings given.

Assessment theme: Health and safety	Band 1 descriptor	Band 2 descriptor	Band 3 descriptor	Total marks per sub-theme	Total marks for assessment theme
Marks per band	1-2	3-4	5-6	NA	6
	<p>Demonstrates basic knowledge of health and safety legislation and regulations through the completion of adequate, compliant planning documentation.</p> <p>Planning documents contain basic details of proposed working methods, safety measures and controls</p>	<p>Demonstrates good knowledge of health and safety legislation and regulations through the completion of good, compliant planning documentation.</p> <p>Planning documents contain good detail of proposed working methods, safety measures and controls</p>	<p>Demonstrates excellent knowledge of health and safety legislation and regulations through the completion of detailed, compliant planning documentation.</p> <p>Planning documents contain comprehensive details of proposed working methods, safety measures and controls</p>		

Assessment theme – Environment

Guidance for markers

The following **evidence** must be used to assess performance against this assessment theme, within the context of the performance outcome:

Task 2 Method statement and constraints map

Note: where there is insufficient evidence to award a mark, a zero mark may be given

Indicative content

Environment

Task 2 Method statement and constraints map

Method Statement

- Information/context of the task
- Site constraints
- Description of the work
- Environmental protection
 - Environmental protection methods may be recommended eg use of ground protection, provision of spills kits, bunded fuel
 - locations of fuel storage/fuelling areas chosen considering minimising environmental impact/risk (eg spills)
 - electric tools may be recommended to reduce noise and habitat disturbance
 - inspections for any wildlife present may be recommended eg checks for nesting birds etc.
 - Biosecurity measures
- Record keeping

Annotated map may include:

- Additional relevant information/symbols added to the map key as identified in the survey and method statement
- Access routes – eg for vehicles, MEWP, chipper
- Areas for treatment of any arisings – eg stacking/chipping/habitat piles
- Location(s) of fuel storage areas

Assessment theme: Environment	Band 1 descriptor	Band 2 descriptor	Band 3 descriptor	Total marks per sub-theme	Total marks for assessment theme
Marks per band	1-2	3-4	5-6	NA	6
	<p>Basic consideration of impacts of proposed operations and their potential damage to the environment</p> <p>Limited range of methods/techniques applied to eliminate, prevent, or mitigate against environmental damage in plans/operations.</p>	<p>Good consideration of impacts of proposed operations and their potential damage to the environment</p> <p>Good range of methods/techniques applied to eliminate, prevent, or mitigate against environmental damage in plans/operations.</p>	<p>Comprehensive consideration of impacts of proposed operations and their potential damage to the environment</p> <p>Comprehensive range of methods/techniques applied to eliminate, prevent, or mitigate against environmental damage in plans/operations.</p>		

Assessment theme – Prepare for complex arboriculture operations

Guidance for markers

The following **evidence** must be used to assess performance against this assessment theme, within the context of the performance outcome:

Task 2 Work at height risk assessment

Task 2 Method statement

Task 3 Observation

Note: where there is insufficient evidence to award a mark, a zero mark may be given

Indicative content

Prepare for complex arboriculture operations

Typical evidence may include:

Task 2 Work at height risk assessment

- Methods for working at height are selected according to the Risk Hierarchy for Tree Work at Height

Task 2 Method statement

- Information/context of the task
- Site constraints
- Hazards and controls
- Description of the work
- Equipment required
- Ground/property protection methods
- Operator roles and responsibilities, training and qualification requirements
- Processes to be followed including post-work activities (eg machinery checks, storage)
- Record keeping

Annotated map may include:

- Additional relevant information/symbols added to the map key as identified in the survey and method statement
- Access routes – eg for vehicles, MEWP, chipper

- Areas for treatment of any arisings – eg stacking/chipping/habitat piles
- Location(s) of signage
- Location(s) of fuel storage areas
- Site constraints – eg footpath

Task 3 Observation

- Ensure health and safety controls are in place
- Select appropriate locations to fuel and start chainsaws safely
- Trees to be worked on are checked for signs of ill health or structural weaknesses
- Establish felling directions/drop zones considering tree form and site conditions
- Prepare and establish escape routes and identify danger zones
- Prepare trees prior to felling/pruning

Assessment theme: Prepare for complex arboricultural operations	Band 1 descriptor	Band 2 descriptor	Band 3 descriptor	Total marks per sub-theme	Total marks for assessment theme
Marks per band	1-2	3-4	5-6	NA	6
	<p>Basic interpretation of information from plans, surveys and documents considering a limited range of planning factors and site management principles to safely prepare for arboriculture operations.</p> <p>Limited application of knowledge and skills to prepare work sites/trees/areas in line with industry best practice and legislation, resulting in adequate conditions for safe and efficient arboricultural operations.</p>	<p>Good interpretation of information from plans, surveys and documents considering a good range of planning factors and site management principles to safely prepare for arboriculture operations.</p> <p>Good application of methods to prepare work sites/trees/areas in line with industry best practice and legislation, resulting in good conditions for safe and efficient arboricultural operations.</p>	<p>Comprehensive interpretation of information from plans, surveys and documents considering a full range of planning factors and site management principles to safely prepare for arboriculture operations.</p> <p>Excellent application of methods to prepare work sites/trees/areas in line with industry best practice and legislation, resulting in excellent conditions for safe and efficient arboricultural operations.</p>		

Assessment theme – Perform complex arboriculture operations

Guidance for markers

The following **evidence** must be used to assess performance against this assessment theme, within the context of the performance outcome:

Task 3 Observation

Note: where there is insufficient evidence to award a mark, a zero mark may be given

Indicative content

Perform complex arboriculture operations

Task 3 Observation

d) Climb and perform a crown raise and dead wooding of one tree, **using a chainsaw** as appropriate, in accordance with industry best practice.

The following cutting techniques must be demonstrated during the operation:

- Step cuts (demonstrate both freefall and handheld)
- Sink cuts (demonstrate both freefall and handheld)
- Final pruning cuts

Evidence may include:

- Select and wear appropriate compliant personal protective equipment (PPE)
- Tree climbed according to TG1 industry best practice
- Good work positioning achieved, and general practice carried out according to TG2 industry best practice
- Correct pruning cuts used accurately to remove material.
- Fluidity / efficiency of work rate and practice.
- Carry out work to always maintain health and safety and in line with legislation (BS3998) and industry good practice.

- On completion of the operation equipment must be checked and cleaned.

e) Assist with dismantling of one tree by supporting rigging operations from the ground.

- Work with the climber to estimate the weight of pieces to be lowered and the amount of friction required in the lowering device.
- Refer to data tables as appropriate.
- Select and wear appropriate compliant personal protective equipment (PPE)
- Good communication with the climber in line with TG1 industry best practice.
- General practice and operation of rigging equipment carried out according to TG3 industry best practice
- Management of arisings on site during the dismantling operation
- Carry out work to always maintain health and safety and in line with legislation (BS3998) and industry good practice.
- On completion of the operation equipment must be checked and cleaned.
- Site is left in a safe and tidy condition.

f) Perform assisted fell using a winch based or rope based system. Select and wear appropriate compliant personal protective equipment (PPE). Set up and configure the pulling system safely, estimating and achieving the required leverage to successfully complete the felling operation with control in the desired direction.

Eg Winch based system:

- Select and wear appropriate compliant personal protective equipment (PPE)
- Select an appropriate hand winch or rope based system and associated compatible equipment- slings, snatch block, shackles, cable/rope
- Check that all equipment is fit for purpose
- Select a suitable anchor point
- Set the system up considering the load to be moved
- Apply suitable felling cuts and sequence of operations to complete the assisted fell safely.
- On completion of the operation, winching/pulling system must be dismantled, checked and returned to storage area.
- Site is left in a safe and tidy condition.

g) Use a manually-fed wood chipper to deal with the arisings from the operation, in accordance with industry best practice.

- Select and wear appropriate compliant personal protective equipment (PPE)
- Operate the wood chipper in line with FISA 604 industry best practice.

- Carry out work to always maintain health and safety and in line with legislation and industry good practice.
- Carry out work to avoid environmental damage in line with legislation and industry good practice.

Photo/video evidence

- d) Series of **photos** showing work position achieved in the tree
- f) Series of **photos** showing set up of assisted fell: Attachment points (tree, anchor), winch position.

Assessment theme: Perform complex arboriculture operations	Band 1 descriptor	Band 2 descriptor	Band 3 descriptor	Total marks per sub-theme	Total marks for assessment theme
Marks per band	1-4	5-8	9-12	NA	12
	Safely carries out tree pruning, felling and processing with a basic level of skill displaying some inefficiency in their approach/methods. Pruning and felling cuts are accurate with some errors in execution, and basic attention to optimising tree health/condition/recovery.	Safely carries out tree pruning, felling and processing with a good level of skill displaying efficient working methods. Pruning and felling cuts are accurate with some minor errors in execution and good attention to optimising tree health/condition/recovery.	Safely carries out tree pruning, felling and processing with an excellent level of skill displaying highly efficient working methods. Pruning and felling cuts are accurate with negligible/no errors in execution and excellent attention to optimising tree health/condition/recovery.		

	<p>Safely assists with rigging, using data tables to estimate weight with a basic level of accuracy and apply suitable friction with the lowering device, resulting in safe but inefficient lowering of the load.</p> <p>Safely configures pulling system and carries out assisted felling with a basic level of skill with minimal efficiency in their approach/methods.</p> <p>Processes arisings safely using a manually-fed woodchipper with adequate consideration of site safety and tidiness.</p>	<p>Safely assists with rigging, using data tables to estimate weight with a good level of accuracy and apply suitable friction with the lowering device, resulting in safe and efficient lowering of the load.</p> <p>Safely configures pulling system and carries out assisted felling with a good level of skill with moderate efficiency their approach/methods.</p> <p>Processes arisings safely using a manually-fed woodchipper with good consideration of site safety and tidiness.</p>	<p>Safely assists with rigging, using data tables to estimate weight with an excellent level of accuracy and apply suitable friction with the lowering device, resulting in safe and highly efficient lowering of the load.</p> <p>Safely configures pulling system and carries out assisted felling with a high level of skill displaying consistently efficient working methods.</p> <p>Processes arisings safely using a manually-fed woodchipper with excellent consideration of site safety and tidiness.</p>		
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8. Links to Maths, English and Digital Skills

The table below indicates where each of the General Maths, English and Digital Competencies have been integrated into the assignment tasks.

Task	Skills
1	MC1, MC2, MC3, MC4, MC10 EC1, EC2, EC3, EC4, EC5 DC1, DC2
2	MC2, MC8, MC9, MC10 EC1, EC2, EC3, EC4, EC5, EC6 DC1, DC2
3	MC1, MC2, MC3, MC4, MC10 EC3, EC5
4	MC1, MC2 EC1, EC2, EC3, EC4, EC5 DC1, DC2
5	EC3, EC5 DC1, DC2
6	EC3, EC5
7	EC3, EC5

9. Declaration of authenticity

Assessment ID	Qualification number
Candidate name	Candidate number
Centre name	Centre number

Additional Support

Has the candidate received any additional support in the production of this work?

No **Yes** (Please tick appropriate)

If yes, give details below (and on a separate sheet if necessary).

--

Candidate:

I confirm that all work submitted is my own, and that I have acknowledged all sources I have used.

Candidate signature	Date

Assessor:

I confirm that all work was conducted under conditions designed to assure the authenticity of the candidate's work, and am satisfied that, to the best of my knowledge, the work produced is solely that of the candidate.

Assessor signature	Date

Note: Where the candidate and/or assessor is unable to or does not confirm authenticity through signing this declaration form, the work will be returned to the centre, and this will delay the moderation process. If any question of authenticity arises, the assessor may be contacted for justification of authentication.

10. Candidate Record Form (CRF) - Exemplar

T level technical qualifications

(T level Technical Qualification – Tree and Woodland Specialism, Arboriculture Pathway)

Candidate name	Candidate number
Centre name	Centre number

Marker Notes – Please always refer to the relevant marking grid for guidance on allocating marks and make notes which describe the quality of the evidence and justification of marks.

Please record any guidance, intervention (including Health and Safety) or feedback that is given to a candidate.

Expand boxes as required.

PO2 Grow trees and woodlands												
Plan for establishment – tree stocks												
	1	2	3	4	5	6	7	8	9	10	11	12
Mark	Notes and justification											
Plan for establishment – establishment plans												
	1	2	3	4	5	6	7	8	9	10	11	12
Mark	Notes and justification											
Establish trees												
	1	2	3	4	5	6	7	8	9	10	11	12
Mark	Notes and justification											

PO3 Operate and maintain forestry and arboriculture machinery									
Health and safety									
	1	2	3	4	5	6	7	8	9
Mark	Notes and justification								

Maintain machinery									
	1	2	3	4	5	6	7	8	9
Mark	Notes and justification								

Operate machinery												
	1	2	3	4	5	6	7	8	9	10	11	12
Mark	Notes and justification											

PO7 Manage tree populations to meet objectives												
Environment and plant health												
	1	2	3	4	5	6	7	8	9			
Mark	Notes and justification											

Tree management planning									
	1	2	3	4	5	6	7	8	9
Mark	Notes and justification								

Tree surveys and inspections												
	1	2	3	4	5	6	7	8	9	10	11	12
Mark	Notes and justification											

PO8 Maintain trees to meet prescribed objectives						
Health and safety						
	1	2	3	4	5	6
Mark	Notes and justification					

Environment and plant health						
	1	2	3	4	5	6
Mark	Notes and justification					

Plan for tree and site maintenance

	1	2	3	4	5	6	7	8	9
Mark	Notes and justification								
Perform tree and site maintenance									
	1	2	3	4	5	6	7	8	9
Mark	Notes and justification								

PO9 Undertake complex arboriculture operations												
Health and safety												
	1	2	3	4	5	6						
Mark	Notes and justification											
Environment												
	1	2	3	4	5	6						
Mark	Notes and justification											
Prepare for complex arboriculture operations												
	1	2	3	4	5	6						
Mark	Notes and justification											
Perform complex arboriculture operations												
	1	2	3	4	5	6	7	8	9	10	11	12
Mark	Notes and justification											

Internal assessor signature	Date

Total

11. Assessor observation forms

Assessor Observation Form (Task 1 – tree survey)

Task	Qualification number
Task 1	8717-405
Candidate name	Candidate number
Centre name	Assessment themes
	PO7: Tree surveys and inspections

Complete the table below referring to the relevant marking grid, found in the assessment pack. Do not allocate marks at this stage.

Assessor observation	Notes – detailed, accurate and differentiating notes which identify areas of strength and weakness are necessary to distinguish between different qualities of performance and to facilitate accurate allocation of marks once all evidence has been submitted.
<ul style="list-style-type: none"> • Methods and accuracy of identification of tree species • Methods and accuracy of measurement of tree heights • Methods and accuracy of measurement of stem diameters (dbh) • Methods and accuracy of measurement of crown spread 	

Assessor signature	Date

Assessor Observation Form (Task 3 – carry out tree work)

Task	Qualification number
Task 3	8717-405
Candidate name	Candidate number
Centre name	Assessment themes
	PO3: Maintain machinery PO3: Operate machinery PO8: Perform tree and site maintenance PO9: Prepare for complex arboricultural operations PO9: Perform complex arboricultural operations

Complete the table below referring to the relevant marking grid, found in the assessment pack. Do not allocate marks at this stage.

Assessor observation	Notes – detailed, accurate and differentiating notes which identify areas of strength and weakness are necessary to distinguish between different qualities of performance and to facilitate accurate allocation of marks once all evidence has been submitted.
General preparation <ul style="list-style-type: none"> • Ensure health and safety controls are in place. • Select and wear appropriate compliant personal protective equipment (PPE). • Select appropriate locations to fuel and start chainsaws safely. • Trees to be worked on are checked for signs of ill health or structural weaknesses. • Establish felling directions/drop zones considering tree form and site conditions. 	

Assessor observation	Notes – detailed, accurate and differentiating notes which identify areas of strength and weakness are necessary to distinguish between different qualities of performance and to facilitate accurate allocation of marks once all evidence has been submitted.
<ul style="list-style-type: none"> • Prepare and establish escape routes and identify danger zones. • Prepare trees prior to felling/pruning. <p>b) Pre-use checks of the chainsaw, field maintenance</p> <ul style="list-style-type: none"> • Chainsaw checked over before starting work • Identification of any maintenance required • Routine maintenance carried out according to industry best practice and manufacturer’s instructions – eg sharpening, chain tension adjustment. <p>c) crown raise from the ground using a pole saw or powered pole pruner:</p> <ul style="list-style-type: none"> • Correct pruning cuts used to remove material. • Carry out work to always maintain health and safety and in line with legislation (BS3998) and industry good practice. <p>d) climb and perform a crown raise and dead wooding using a chainsaw and hand saws.</p> <ul style="list-style-type: none"> • The following cutting techniques must be demonstrated during the operation: <ul style="list-style-type: none"> ○ Step cuts (freefall and handheld) 	

Assessor observation	Notes – detailed, accurate and differentiating notes which identify areas of strength and weakness are necessary to distinguish between different qualities of performance and to facilitate accurate allocation of marks once all evidence has been submitted.
<ul style="list-style-type: none"> ○ Sink cuts (freefall and handheld) ○ Final pruning cuts • Tree climbed according to TG1 industry best practice • Work positioning achieved, and general practice carried out according to TG2 industry best practice • Correct pruning cuts used accurately to remove material. • Fluidity / efficiency of work rate and practice. • Carry out work to always maintain health and safety and in line with legislation (BS3998) and industry good practice. <p>e) assist with dismantling of one tree by supporting rigging operations from the ground.</p> <ul style="list-style-type: none"> • Work with the climber to estimate the weight of pieces to be lowered and the amount of friction required in the lowering device. • Refer to data tables as appropriate. • Select and wear appropriate compliant personal protective equipment (PPE) • Good communication with the climber in line with TG1 industry best practice. • General practice and operation of rigging 	

Assessor observation	Notes – detailed, accurate and differentiating notes which identify areas of strength and weakness are necessary to distinguish between different qualities of performance and to facilitate accurate allocation of marks once all evidence has been submitted.
<p>equipment carried out according to TG3 industry best practice</p> <ul style="list-style-type: none"> • Management of arisings on site during the dismantling operation • Carry out work to always maintain health and safety and in line with legislation (BS3998) and industry good practice. • On completion of the operation equipment must be checked and cleaned. • Site is left in a safe and tidy condition. <p>f) Perform assisted fell using a winch based or rope based system.</p> <ul style="list-style-type: none"> • Select an appropriate hand winch or rope based system and associated compatible equipment. • Check that all equipment is fit for purpose • Select a suitable anchor point • Set the system up considering the load to be moved • Apply suitable felling cuts and sequence of operations to complete the assisted fell safely. • On completion of the operation, winching/pulling system must be dismantled, checked and returned to storage area. 	

Assessor observation	Notes – detailed, accurate and differentiating notes which identify areas of strength and weakness are necessary to distinguish between different qualities of performance and to facilitate accurate allocation of marks once all evidence has been submitted.
<ul style="list-style-type: none"> • Site is left in a safe and tidy condition. <p>g) Use a manually-fed wood chipper to deal with the arisings</p> <ul style="list-style-type: none"> • Operate the wood chipper in line with FISA 604 industry best practice. • Carry out work to always maintain health and safety and in line with legislation and industry good practice. • Carry out work to avoid environmental damage in line with legislation and industry good practice. • Site is left in a safe and tidy condition. 	

Assessor signature	Date

Assessor Observation Form (Task 6 – planting)

Task	Qualification number
Task 6	8717-405
Candidate name	Candidate number
Centre name	Assessment themes
	PO2: Plan for establishment (tree stocks) PO2: Establish trees

Complete the table below referring to the relevant marking grid, found in the assessment pack. Do not allocate marks at this stage.

Assessor observation	Notes – <i>detailed, accurate and differentiating notes which identify areas of strength and weakness are necessary to distinguish between different qualities of performance and to facilitate accurate allocation of marks once all evidence has been submitted.</i>
<ul style="list-style-type: none"> • Select tools, equipment and resources: selection of planting spade suitable for the stock type and size to be planted. • Check the condition of the plants, report any defects: check roots, foliage, size, health • Prepare planting stock for planting: plants handled with care, prepared for planting • Plant trees using a suitable technique (assessors should adapt this to suit specific planting conditions/requirements) • Dig planting pit to suitable shape and depth • Sides and base of the pit loosened appropriately • Appropriate number and size of stakes driven into the bottom of the planting pit • Place irrigation pipe into bottom of hole if using. 	

Assessor observation	Notes – <i>detailed, accurate and differentiating notes which identify areas of strength and weakness are necessary to distinguish between different qualities of performance and to facilitate accurate allocation of marks once all evidence has been submitted.</i>
<ul style="list-style-type: none"> • Backfill hole in stages firming the soil around the rootball • Final backfill • Cross spar nailed to the posts • Tree attached to the spar with an appropriate tree tie • Tree watered after planting. 	

Assessor signature	Date

Assessor Observation Form (Task 7 – boundary maintenance)

Task	Qualification number
Task 7	8717-405
Candidate name	Candidate number
Centre name	Assessment themes
	PO8: Plan for tree and site maintenance PO8: Perform tree and site maintenance

Complete the table below referring to the relevant marking grid, found in the assessment pack. Do not allocate marks at this stage.

Assessor observation	Notes – detailed, accurate and differentiating notes which identify areas of strength and weakness are necessary to distinguish between different qualities of performance and to facilitate accurate allocation of marks once all evidence has been submitted.
<ul style="list-style-type: none"> • Inspect the fence and identify the maintenance or repairs required. • Select the equipment needed to carry out the repairs and maintenance. • Removal of damaged rail (If post and rail fencing is used). • Removal of damaged netting (If stock fencing is used). • Removal of damaged fence post. • Installation of post. • Marking and cutting of rail to size if necessary (If 	

Assessor observation	Notes – detailed, accurate and differentiating notes which identify areas of strength and weakness are necessary to distinguish between different qualities of performance and to facilitate accurate allocation of marks once all evidence has been submitted.
<p>post and rail fencing is used).</p> <ul style="list-style-type: none"> • Fixing of rail (If post and rail fencing is used). • Fixing/tightening of netting (If stock fencing is used). • Carry out the work in a manner that minimises environmental damage. • Ensure the site is left in a safe and tidy condition. 	

Assessor signature	Date

12. Annex

Contents:

Figure 1: Risk Hierarchy for Tree Work at Height

(Extract from Industry Code of Practice – Tree Work at Height Second Edition)

To be issued to candidates with Task 2

Figure 2: Step-wise approach to working through the hierarchy for tree work at height

(Extract from Industry Code of Practice – Tree Work at Height Second Edition)

To be issued to candidates with Task 2

Figure 3: Northwest Park arboretum site plan and information

To be issued to candidates with Tasks 4 and 5

Figure 4: Table of standard establishment costs:

To be issued to candidates with Task 4

Figure 5: Risk Assessment (template)

To be issued to candidates with Task 3

Figure 6: Emergency plan (template)

To be issued to candidates with Task 3

Figure 7: Work at height risk assessment (template)

To be issued to candidates with Task 2

Figure 8: Method statement (template)

To be issued to candidates with Task 2

Figure 1: Risk Hierarchy for Tree Work at Height

(Extract from *Industry Code of Practice – Tree Work at Height Second Edition*)

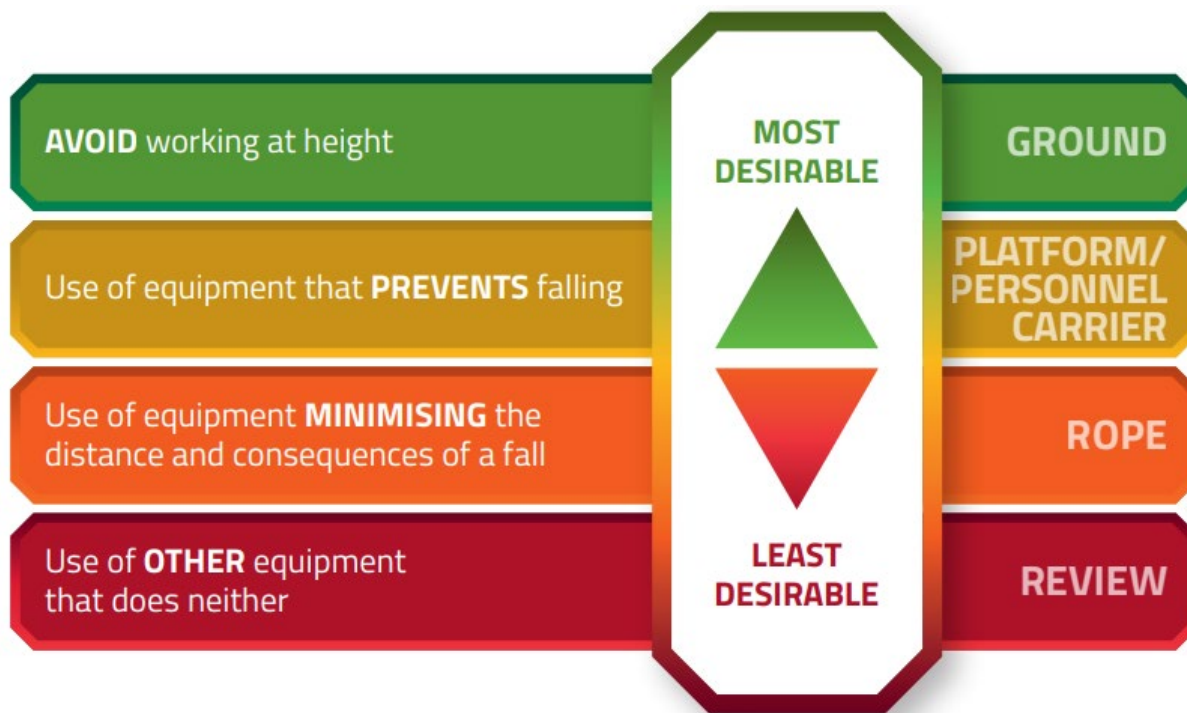


Figure 2: Step-wise approach to working through the hierarchy for tree work at height

(Extract from *Industry Code of Practice – Tree Work at Height Second Edition*)

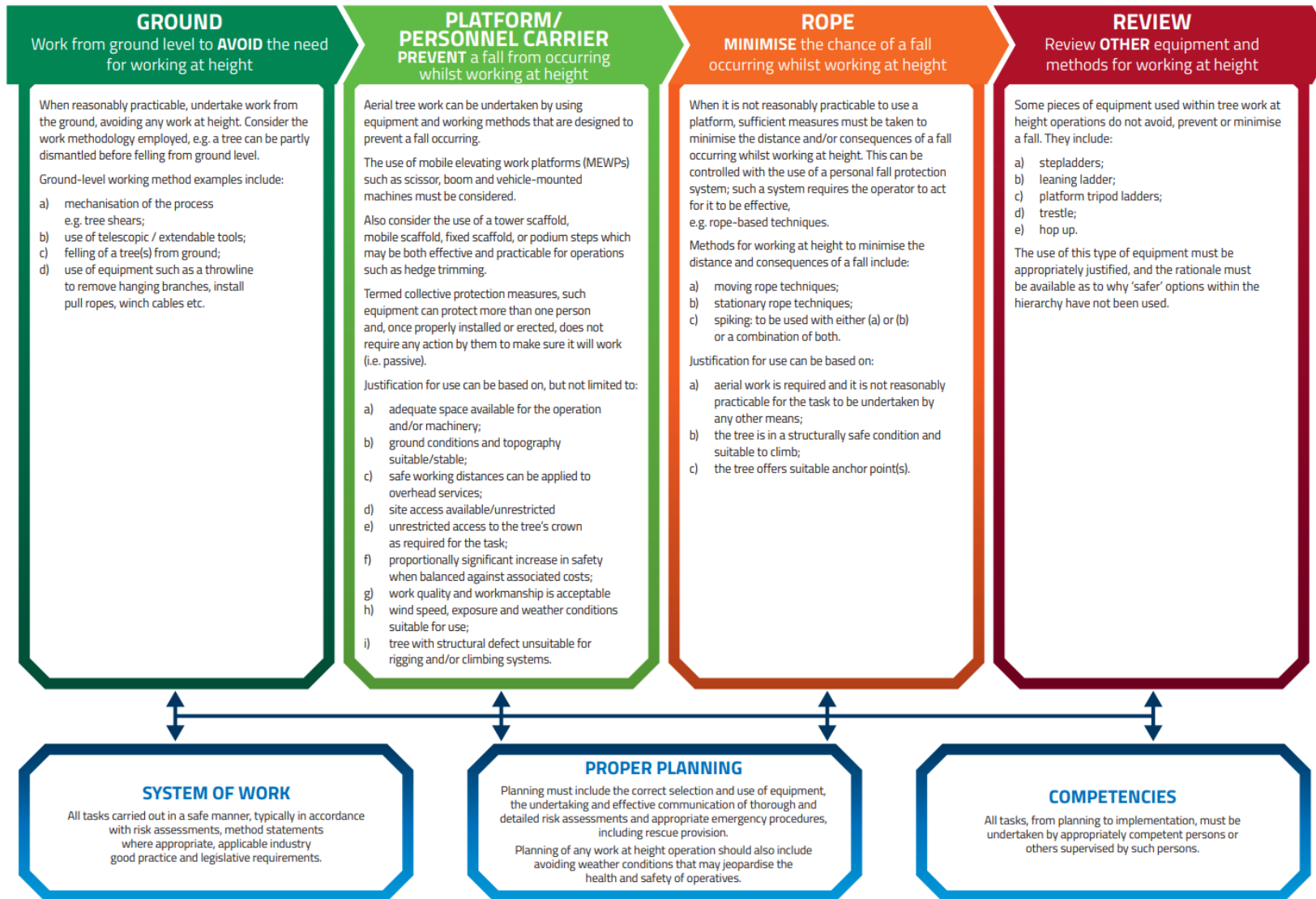
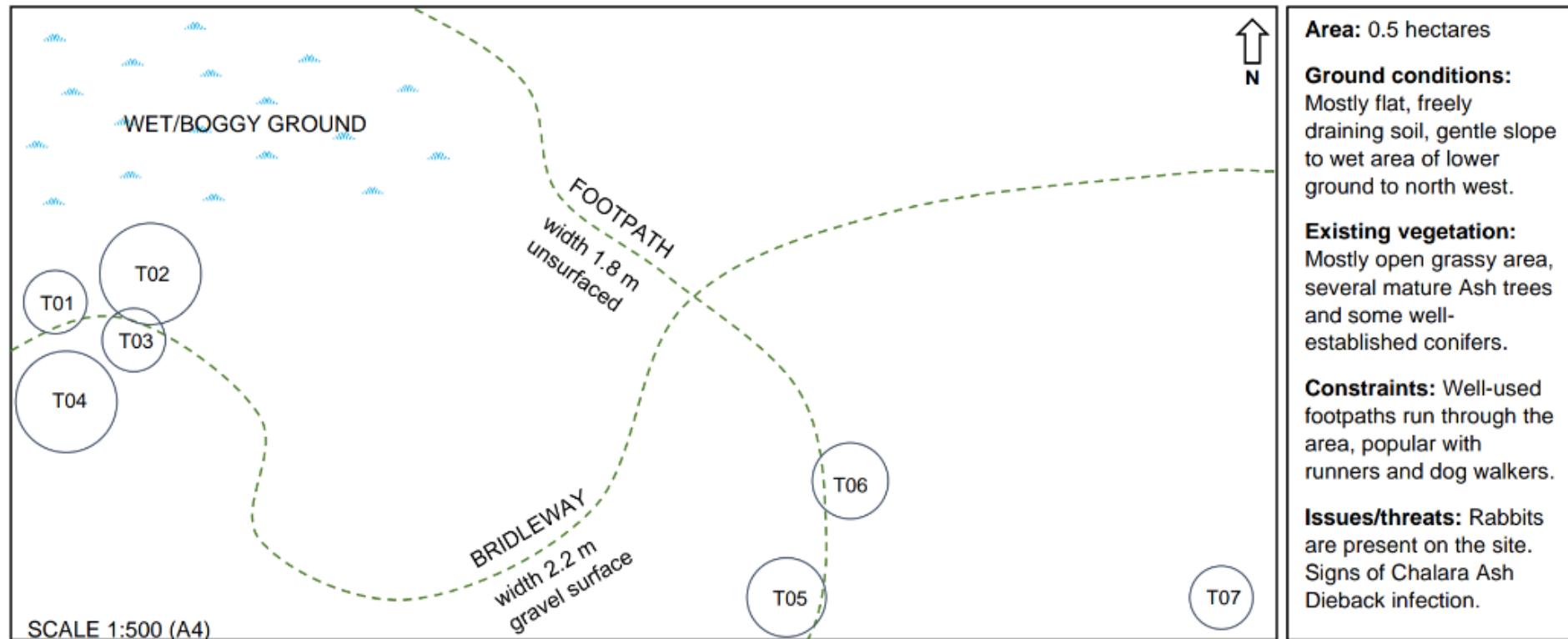


Figure 3: Northwest Park arboretum site plan and information



Tree	Species	dbh cm	Height m	Crown spread m	Condition
T01	<i>Fraxinus excelsior</i>	25	16.5	5.1	Extensive crown dieback indicating infection – Chalara Ash Dieback (<i>Hymenoscyphus fraxineus</i>)
T02	<i>Fraxinus excelsior</i>	34	21.1	8.0	Early signs of crown dieback indicating infection – Chalara Ash Dieback (<i>Hymenoscyphus fraxineus</i>)
T03	<i>Fraxinus excelsior</i>	24	15.0	4.9	Extensive crown dieback, indicating infection – Chalara Ash Dieback (<i>Hymenoscyphus fraxineus</i>)
T04	<i>Fraxinus excelsior</i>	32	26.0	8.1	Early signs of crown dieback indicating infection – Chalara Ash Dieback (<i>Hymenoscyphus fraxineus</i>)
T05	<i>Thuja plicata</i>	50	28.8	6.5	Good condition, no visible signs of decay.
T06	<i>Thuja plicata</i>	46	27.0	6.0	Good condition, no visible signs of decay.
T07	<i>Fraxinus excelsior</i>	24	15.5	4.8	Good condition, no visible signs of decay.

***INDICATIVE ONLY – MUST BE PRINTED IN A4 SIZE FROM ORIGINAL FILE FOR TRUE SCALE BEFORE ISSUING TO CANDIDATES**

Figure 4: Table of standard establishment costs:

To assist you in your research for the planting plan in Task 4, the table below shows some indicative standard costs for establishment activities.

Item	Cost	Description
Plant sapling	£0.25	Labour cost per tree for planting
Plant whip	£0.50	Labour cost per tree for planting
Plant standard	£18.00	Labour cost per tree for planting
Install tree shelter for sapling	£0.50	Labour cost for installation
Install tree support/protection for whip	£0.75	Labour cost for installation
Install tree support/protection for standard	£5.00	Labour cost for installation

Figure 5: Risk Assessment (template)

This template may be modified by adding items/rows **only**.

Candidate's name	_____	Enrolment number	_____
Task / Activity	_____	Location	_____
Assessor's name	_____	Date	_____

Item no.	What are the hazards?	Who might be harmed and how?	What precautions are already in place?	Risk rating (High / Medium / Low)	What further action is necessary?	Action by who and when?	Residual risk rating (High / Medium / Low / Trivial)

Date:	Risk assessment carried out by:
-------	---------------------------------

Figure 6: Emergency plan (template)

Candidate's name	_____	Enrolment number	_____
Task / Activity	_____	Location	_____
Assessor's name	_____	Date	_____

Worksite Location:	_____		
OS Grid Reference:	_____		
What3Words Reference:	_____		
Meeting point for emergency services:	_____		
Type of vehicle access: (eg surfaced road / unsurfaced track / off-road or 4x4 vehicle required)	_____		
Nearest A&E hospital:	_____	Phone:	_____
Location of nearest mobile phone signal / landline:	_____		
Site/landowner contact name:	_____	Phone:	_____
Emergency contact name:	_____	Phone:	_____
Other details / comments:	_____		

Figure 8: Method statement (template)

<u>Method Statement</u>	
<i>This template may be modified by expanding fields only.</i>	
Relevant health and safety legislation:	Relevant environmental legislation:

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