

T Level Technical Qualification in Agriculture Land Management and Production: Tree and Woodland Management and Maintenance Occupational Specialism (Level 3) Forestry 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 4 wording amended for clarity. | Tasks. |
| | Indicative content amended for Assessment theme - Plan for establishment (sub-theme; establishment plans) Task 4 Planting plan. | Marking grids. |
| | Task 1, 2, 3 & 7 Assessor observation forms – bullet points re-ordered for clarity (no content changes). | Assessor observation forms. |
| | Task 6 assessor observation form – bullet points consolidated and re-ordered for clarity. | Assessor observation forms. |
| | Indicative content (PO6, Health and safety) – Emergency plan removed from list of evidence. | Marking grids. |

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) | 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) | 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% |
| PO4 Manage woodlands to meet objectives (Forestry pathway) | Introduction to typical management objectives and silvicultural concepts relevant to modern forestry, timber products, woodland features and infrastructure. Knowledge of different surveying and measurement techniques including basic forest mensuration. Skills necessary to survey and measure different aspects of woodlands including basic mensuration. | 20% |
| PO5 Maintain woodlands to meet prescribed objectives (Forestry pathway) | Knowledge of the maintenance requirements and techniques used in woodlands to meet different objectives, and the reasons for their application including weed and vegetation management, boundary and infrastructure maintenance. Skills necessary to maintain woodlands including operation and maintenance of clearing saws, brushcutters and trimmers, maintenance of boundaries, surfaces and structures. | 20% |
| PO6 Undertake complex felling operations (Forestry pathway) | Knowledge of the health and safety, site management and environmental requirements for complex felling and timber harvesting operations. Introduction to different systems for harvesting and extracting timber and their applications. Knowledge of the different techniques for felling and processing trees with chainsaws including assisted felling. Skills necessary to prepare and safely fell and process trees using chainsaws in a harvesting environment, including assisted felling with winches. | 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 | |
| PO4 Manage woodlands to meet objectives | Environment and plant health | 6 | 30 |
| | Planning and silviculture | 12 | |
| | Surveying and measurement | 12 | |
| PO5 Maintain woodlands to meet prescribed objectives | Health and safety | 6 | 30 |
| | Plan for management/maintenance | 12 | |
| | Perform woodland maintenance | 12 | |
| PO6 Undertake complex felling operations | Health and safety | 6 | 30 |
| | Environment | 6 | |
| | Prepare for complex felling operations | 6 | |
| | Perform complex felling operations | 12 | |
| Total | | 150 | 150 |

2. Assignment brief

Brindle Forest was planted in the 1990s for timber production. A new owner has recently acquired the land and is in the process of bringing the forest back into management. This will involve planning and carrying out thinning, planting and maintenance operations.

Further information about Brindle Forest is shown in *Figure 1: Extracts from Brindle Forest Woodland Management Plan*. You will need to refer to this information when carrying out the tasks in this assignment.

Your employer has recently won a contract to carry out the forestry work at Brindle Forest, which includes:

Thinning

An area of Brindle Forest is due to be thinned. The contract includes the following work:

- surveys of the thinning site to identify and locate site constraints, plan how the operation is going to be safely managed and estimate the volume of timber to be extracted and the timber products that can be produced
- felling of trees in the thinning area.

Planting

The owner of Brindle Forest needs to re-plant a restock site adjacent to the existing plantation. The area was originally a conifer plantation. Attempts by the previous owner to restock the site failed due to heavy grazing by the local deer population. The contract includes the following work:

- production of a planting plan taking into consideration the owner's objectives
- planting and protection of trees on site.

Maintenance

Areas of the forest are in need of maintenance, including damaged fencing, and several areas of overgrown weeds and vegetation. The contract includes the following work:

- repairs to damaged fencing
- clearance of unwanted vegetation.

This assignment contains 7 tasks and has a total time of 37 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 37 hours. Timings for completion of specific tasks are outlined below.

- Task 1 – 9 hours

- Task 2 – 8 hours
- Task 3 – 8 hours
- Task 4 – 6 hours
- Task 5 – 2 hours
- Task 6 – 2 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 5–7**, 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 – Thinning site survey and method statement

Assessor guidance

- Candidates must carry out the task independently, under controlled conditions, while being observed.
- Sites: use any even aged stand of any species, of at least 2 Ha in size, suitable for 1st to 3rd thinning. This can be the same site used for Task 3.
- Candidates can use keys/books/apps to identify tree species on site.
- Internet access is **not** permitted for this task (except for the use of tree/plant identification apps in part a).
- If trees displaying defects/pests/diseases are not present on site, the identification of these can be simulated using high-quality images.
- Where sites do not feature all of the constraints listed in the task (power line, footpath, badger sett), these can be simulated by physically marking on the ground their locations. Centres should avoid placing all of these features in the same location, making the task overly complicated for candidates.
- Simulated location of the power line can be indicated by marking a straight line of trees or stakes with paint, tape or rope.
- When marking the trees in the red zone of the power line, it is not necessary to have the candidate complete the entire length of the line. Assessors should observe the candidate marking a sufficient number of red zone trees to allow a reliable judgement of their method and accuracy to be made on the observation form.
- The time allocated for this task is **9 hours**:
 - part a) survey: 3 hours; part b) report and method statement: 3 hours; part c) mark out: 3 hours.
- Ratio of candidates to assessor:
 - a) Up to 6:1
 - b) Group invigilation
 - c) Up to 2:1

Additional evidence

Assessor observations

- Detailed, accurate and differentiating notes must be captured on the Assessor Observation form:

- marking out site constraints on the ground according to their annotated map
- Power line:
 - Identification of vicinity zone appropriate to OHPL voltage given in the brief (refer to information in FISA 804 provided)
 - measurement of tree height
 - Red Zone clearly marked on site at a distance equal to the vicinity zone plus one tree length, from the power line's location
- Badger sett:
 - Trees immediately surrounding the badger sett location clearly marked using an appropriate method (eg paint, tape, stakes)
- Footpath:
 - Identifies appropriate locations for warning signs

Photo/video evidence

- Photo showing method used to measure tree height
- Photo showing marking of Red Zone trees
- Photo showing marking of exclusion zone around badger sett

Resources

- Candidates must be provided with a map of the site showing:
 - the area to be thinned
 - location of a power line
 - location of the public footpath
 - location of the badger sett.
 - Maps should have a key showing these features and the map scale only.
- A copy of *FISA 804 Electricity at Work: Forestry* for candidates to refer to
- *Figure 2: Method statement template*
- Equipment to estimate tree height eg clinometer/vertex/rangefinder (candidates will need this in order to work out and mark the red zone for the power line). Any suitable method of height estimation is acceptable
- Equipment to measure linear distances on the ground
- Equipment to mark out the constraints on the site. Removable marking methods are recommended

Task 2 – Calculate the timber volume expected from the thinning operation

Assessor guidance

- Candidates must carry out the task independently, under controlled conditions, while being observed.
- Sites: use any even aged stand of any species, of a size suitable for 1st to 3rd thinning. Assessors/centre staff should mark the trees to be thinned. This does **not** have to be the same site as tasks 1/3.
- The thinning should be marked by the centre/assessor. It is recommended that between 31–40 trees are marked. If the stand contains multiple species, only mark one species for thinning. This is to keep the tariff as simple as possible.
- Where assessment of multiple learners is to take place at the same time, centres should ensure they are able to work in defined separate areas of the site so they do not disturb each other's surveys.
- Candidates must be given the sampling fractions for dbh and height by the assessor.
 - For example, if 36 trees are marked for thinning, sampling fractions would be 1:1 for dbh (measure dbh of every tree) and 1:3 for volume/height (measure height of every 3rd tree).
- Candidates should select appropriate equipment from a range provided by the assessor which includes all necessary equipment and some less relevant survey/measurement equipment (eg relascope, compass)
- Candidates must have access to the following reference books for this task:
 - *Timber Measurement Field Guide* – contains guidance on the procedures to be used.
 - *Forest Mensuration: a handbook for practitioners* – contains guidance on the procedures to be used, measurement conventions, and the charts/data tables necessary to work out tariff numbers and timber volumes
- Part b) tariff is to be observed by the assessor under controlled conditions. Candidates will work alone carrying out measurements and recording the information.
- Assessors must ensure that no candidate is disadvantaged as a result of any measurement error.
 - In practice this will mean assessors must pay close attention to the recording of information during the tariff, and if significant errors are being made which go unnoticed by the candidate, this should be corrected to ensure the tariff data will be viable for the candidate to complete the subsequent parts of the task.
 - Any intervention must be recorded on the observation form to be accounted for in the marking of the assessment.
 - Candidates must **not** be penalised for any errors carried through from the data collected in part b) when estimating the timber volume in part c).
- *Figure 3: Tariff data recording form* should be handed in to the assessor on completion of part b). The assessor will hand this back to the candidate for part c).
- Candidates must carry out part c) independently. Each candidate is to be given back their *Figure 3: Tariff data recording form* from part b) to complete the remainder of the form.
- The time allocated for this task is **8 hours**:
 - a) and b) 5 hours
 - c) 2 hours
 - d) 1 hour.
- Ratio of candidates to assessor:
 - a) and b) Up to 4:1
 - c) and d) Group invigilation

Additional evidence

Assessor observations

- Detailed, accurate and differentiating notes must be captured on the Assessor Observation form:
 - Selection of required equipment
 - Carrying out appropriate checks on equipment to ensure accuracy of measurements (eg checking girth tapes for stretch)
 - Compliance with the abbreviated tariff procedures
 - Use of/reference to provided information sources as required (*Timber Measurement Field Guide/Forest Mensuration: a handbook for practitioners*)
 - Application of standard measuring conventions (eg for dbh, height)
 - Recording of data during the tariff

Photo/video evidence

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

Resources

Field work (parts a and b):

- A range of equipment for measurement including for:
 - Linear distances (eg tape measure/rangefinder/vertex)
 - dbh (eg girth tape, tree calipers)
 - Height (eg clinometer/vertex/rangefinder)
 - Some less relevant survey/measurement equipment (eg relascope, compass)
- Tree marking equipment (removable/non-permanent marking methods are recommended)
- Equipment to record tariff data – clipboards, pencils, erasers
- *Figure 3: Tariff data recording form*
- Reference books:
 - *Timber Measurement Field Guide*
 - *Forest Mensuration: a handbook for practitioners*

Classroom work (parts c and d):

- Writing equipment
- Straight ruler (for use with alignment charts in *Forest Mensuration: a handbook for practitioners*)
- Calculators
- Copies of completed *Figure 3: Tariff data recording form* from part b)
- IT facilities

Task 3 – Carry out the thinning operation

Assessor guidance

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 Assessor observation record and using professional judgement, continue the assessment **only if it is safe** to do so.

- 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).
- Thinning sites/areas must be within stands of trees that are as free from constraints/infrastructure as possible. The stand should represent a realistic environment, with trees to be felled of a minimum of 200mm / maximum of 380mm diameter at felling height.
- Candidates must fell and process **four** trees.
- Ensure one of the four trees displays a minor defect such basal decay, for candidate to recognise and fell accordingly. If no suitable trees are present, assessors should ask candidates how they would adapt their felling method to account for this and record it in the Assessor Observation form.
- Where assessment of multiple candidates is carried out at the same time, **all** felling must be directly observed (1:1), and processing of a minimum of **two** out of the four trees must be directly observed (1:1) by the assessor for each candidate.
- Candidates must fell and process **one** additional tree using an assisted felling method. This tree will also be of a minimum of 200mm / maximum of 380mm diameter at felling height.
- A winch-based or rope-based system must be used for the assisted fell.
- This tree must be processed according to the cutting specification provided by the assessor.
- Centres must provide candidates with a cutting specification to include:
 - **two** products, appropriate to the trees being felled.
 - The specification must give the *length* in m and *minimum top diameter* in cm, of each product.
- Candidates will deal with products and arisings in accordance with a site specification provided by the assessor. Site specifications should include the following details:
 - how the timber is to be presented/stacked for extraction
 - how arisings are to be dealt with
 - requirement for biosecurity measures to be carried out (cleaning of tools machinery and ppe on completion of work)
- The time allocated for this task is **8 hours**:
 - part a) risk assessment and emergency plan – 1 hour
 - part b) pre-use check and field maintenance of chainsaw – 30 mins
 - part c) fell and process four trees to product specification – 4 hours
 - part d) assisted fell and processing of one tree – 2 hours
 - part e) biosecurity measures – 30 mins.
- Ratio of candidates to assessor:
 - a) group invigilation
 - b, c, e) up to 4:1 (1:1 while felling trees)
 - d) 1:1

Additional evidence

Assessor observations

- Detailed, accurate and differentiating notes must be captured on the Assessor Observation form.

Parts a) and b):

- Ensure compliance with risk assessment and industry best practice, including use of correct PPE
- Pre-start checks carried out as per operator's handbook and industry best practice
- Field maintenance carried out (eg sharpening, tensioning chain)

Part c) Felling:

- Operation of chainsaw and associated tools/equipment in line with industry best practice
- Felling and processing techniques taking into account the specific worksite conditions and industry best practice (FISA guidance); efficiency of working methods (eg minimising manual handling, minimising distance covered by measuring/marketing product lengths while snedding)
- Correct configuration of an organised felling system (timber and brash zones) (eg bench felling setting up a natural bench using felled trees, timber stacks, strops/slings)
- Products cut to length according to cutting specification and stacked or presented appropriately for extraction (eg appropriately dressing the butt of the first log, removing hinge wood and flares, presenting timber tip/butt first depending on extraction method)

Part d) Assisted fell:

- 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

Part e) Biosecurity:

- Tools, equipment and PPE thoroughly cleaned down, removing debris

Photo/video evidence

- Photo of working area showing brash zone / timber zone and tidiness of work
- Series of photos showing set up of assisted fell: attachment points (tree, anchor), winch position

Resources

- *Figure 4: Risk assessment template*
- *Figure 5: Emergency plan template*
- Centres must provide candidates with all equipment and PPE, including for carrying out biosecurity measures (eg cleaning equipment)

- Chainsaw PPE and personal first aid kit as per FISA guidance
- 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-based pulling system including all necessary accessories for safe operation eg appropriately rated strops, shackles, pulleys
- Logger’s tape and timber rule

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 1: Extracts from Brindle Forest Woodland Management Plan* and *Figure 6: Table of standard establishment costs*.
- The total time allocated for this task is **6 hours**.
Indicative timings:
part a) Research: 1.5 hours;
part b) Planting plan: 4.5 hours.
The 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

- Appropriate ICT equipment and software.
- Internet access to enable research during the task.
- Copies of *Figure 1: Extracts from Brindle Forest Woodland Management Plan* and *Figure 6: Table of standard establishment costs*.

Task 5 – Planting

Assessor guidance

- Candidates must carry out the task independently, under controlled conditions, while being observed.
- Trees for planting can be of any species and may be bare root or cell grown transplants. Candidates must be given a planting specification which includes species, stock type, size and spacing. It is expected that planting is carried out in a realistic working environment.
- The trees provided to the candidate for the tasks must include some defective trees for the candidate to identify when carrying out their checks (eg incorrect size, incorrect species, damaged/dry/underdeveloped roots, mis-shapen roots, damaged/dry/discooured foliage, lack of foliage).
- The time allocated for this task is **2 hours**.
- Ratio of candidates to assessor:
 - Up to 6:1

Additional evidence

Assessor observations

- Detailed, accurate and differentiating notes must be captured on the Assessor Observation form:
 - selection of tools, equipment and resources
 - checks on the condition of the plants; checks roots, foliage, size, health
 - identifies and reports defects
 - preparation of planting stock for planting: plants handled with care and loaded into suitable bags/containers for planting
 - planting technique, spacing, depth, appropriate to ground conditions and stock type
 - stakes and guards installed appropriately and securely avoiding any damage to the tree for **two** trees

Photo/video evidence

- Photo of defective plant
- Photo showing close-up of a planted tree without protection installed
- Photo showing spacing achieved
- Photo showing a planted tree with protection installed

Resources

- Sufficient quantity of suitable planting stock (bare root or cell grown)
- Planting equipment, including:
 - PPE
 - a range of planting spades/implements.
 - a range of planting bags
- A range of equipment (eg hammers, post driver) and materials (stakes, tubes/guards, tree ties) for installing support and protection

Task 6 – 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, 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) and defects should be set up accordingly – ie 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/other 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 fixed 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

Task 7 – Vegetation management

Assessor guidance

Candidates should select appropriate equipment from a range provided by the assessor which includes all necessary equipment and some irrelevant equipment.

- Assessors must provide a job specification for the task, detailing:
 - vegetation to be cleared
 - vegetation to be retained and/or obstacles to be avoided.
- Candidates should select appropriate equipment from a range provided by the assessor which includes all necessary equipment and some less relevant equipment and materials.
- The site must contain 30m² of closely spaced (less than 1.5m x 1.5m spacing) woody vegetation to be cleared. Candidates are expected to **each** clear a 30m² area.
- There must be woody vegetation/obstacles which the candidate must avoid damaging – this could be a re-spacing operation, or clearance of unwanted species among an existing crop. This could be simulated using stakes to represent the non-target woody vegetation/obstacles.
- The time allocated for this task is **2 hours**.
- Ratio of candidates to assessor:
 - Up to 4:1.

Additional evidence

Assessor observations

- Detailed, accurate and differentiating notes must be captured on the Assessor Observation form:

Organisation and setting out the worksite:

- Placement of appropriate warning signage or other measures to manage public access during the operation – eg placing of warning signs at perimeter/access point of working area to warn public)
- Selection of suitable area(s) for re-fuelling and fuel storage – eg away from watercourses and sources of ignition or direct sunlight
- Interpretation of the job specification provided (identify the area to be cleared, the vegetation to be cleared, and any vegetation to be retained or obstacles to be avoided)

Clearing saw maintenance and operation:

- Select and prepare tools, equipment and machinery for use including pre-use checks – as a minimum: condition of blade, presence and condition of correct guards, function of power on/off switch, security and fit of harness and attachment system.
- Remove, sharpen and re-fit the clearing saw blade.
- Clear unwanted vegetation according to the specification.
- Use the machine in a safe and effective manner throughout the operation, which maintains health and safety and is consistent with current legislation and codes of practice.
- Use appropriate cutting techniques to avoid damaging not-target species/obstacles.
- Ensure the site is left in a safe and tidy condition.

Photo/video evidence

- Photo showing example of damage caused to non-target species/obstacles. Where no damage has been caused this should be clearly stated in the observation

Resources

- Appropriate PPE
- Fuel and container
- Clearing saw and harness
- Maintenance and sharpening tools
- Warning signs for the candidate to select and place
- Job specification for the task, detailing the vegetation to be cleared, and any vegetation to be retained or obstacles to be avoided.

4. Tasks

Task 1 – Thinning site survey and method statement

Candidates will be required to carry out a survey of the thinning site and plan how the thinning is going to be managed, deciding on extraction routes, stacking areas and signage.

Candidates will also have to plan and mark out on site (using appropriate methods) how the thinning will be carried out adjacent to the powerline and public footpath and around the badger sett.

Assessors must provide candidates with a map of the area to be thinned. Candidates should also refer to *Figure 1: Extracts from Brindle Forest Woodland Management Plan*, which contains further information about the forest.

a) Carry out a survey of the site and record the results, identifying:

- tree species present on the site (scientific and common names)
- tree health and condition
- any signs/symptoms of tree pests/diseases/disorders
- hazards/constraints present on the site.

b) Using the information gathered during the survey, produce:

- a brief report summarising the key findings of the survey
- a method statement, using the template provided (*Figure 2*) for the thinning operation (including felling and extraction methods). Candidates should ensure they read **all** of the information in the brief and *Figure 1* and take this into consideration when producing their method statement
- an annotated map for the operation showing extraction routes, stacking areas and signage.

c) Use the equipment provided by the assessor to mark out the constraints on the site according to their method statement. Candidates should ensure they read **all** of the information in the brief and *Figure 1* and take this into consideration when marking out the constraints.

- Mark out on site the trees within the 'red zone' of the power line, in line with the guidance in *FISA 804 Electricity at work: Forestry* (provided).
- Mark out on site the exclusion zone around the badger sett.
- Mark out on site the locations of warning signs for the footpath.

Conditions of assessment

- The time allocated for this task is **9 hours**:
 - a) 3 hours
 - b) 3 hours
 - c) 3 hours.
- Candidates must carry out the task on their own, under **controlled conditions**, while being observed.
- Assessors will provide a map of the area to be thinned.
- Assessors will provide a copy of *FISA 804 Electricity at work: Forestry* for reference.
- Internet access is **not** permitted for this task (except for the use of tree/plant identification apps in part a).

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.
- For part a) candidates may use tree/plant 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

- Survey results (part a)
- Site survey report (part b) (typically 500 words)
- A method statement and annotated map for the thinning operation (part b)

Additional evidence for this task

- Assessor observation of a) survey and c) marking out.
- Photographic evidence as specified in the *Task specific guidance for centres* section.

Task 2 – Calculate the timber volume expected from the thinning operation

Candidates must survey the stand and measure the volume of timber expected from the thinning, using an abbreviated tariff method A-4 (for conifers) or A-5 (for broadleaf) as described in *Timber Measurement Field Guide* (Step I: Method A, Step II: Method 4/5).

The trees to be thinned have already been marked, and pre-tariff checks have been carried out.

The assessor will provide the following information:

- sampling fractions to be used for dbh and tree height
- copies of *Timber Measurement Field Guide* and *Forest Mensuration: a handbook for practitioners*, which candidates may use throughout all parts of the task.

Field work

a) Candidates must select and carry out appropriate checks on the equipment necessary to carry out the task, from the range provided by the assessor.

b) Use appropriate methods and conventions to:

- count all marked trees
- measure dbh of a sample of the marked trees (using the girth sampling fraction provided)
- measure total height (conifer) or timber height (broadleaf) of a sample of the marked trees (using the volume sampling fraction provided)
- record the data on *Figure 3: Tariff data recording form* (provided by the assessor).

Classroom work

c) Candidates must use their data from part b) to:

- Estimate the tariff number of each sample tree.
- Calculate the average tariff number.
- Calculate the number of trees in each dbh class.
- Calculate the mean dbh.
- Calculate the mean volume.
- Calculate the total volume.

Using their tariff data and the steps above, candidates will estimate the volume of timber expected from the thinning operation and record this on *Figure 3: Tariff data recording form*.

d) Prepare a list of timber products that could be produced from the thinning, and make recommendations of which products should be produced, with justifications for choices.

Conditions of assessment

- The time allocated for this task is **8 hours**:
 - a) and b) 5 hours
 - c) 2 hours
 - d) 1 hour.
- Candidates must carry out the task on their own, under **controlled conditions**, while being observed.
- Candidates will have access to the following reference materials:
 - *Timber Measurement Field Guide*
 - *Forest Mensuration: a handbook for practitioners*
- For part c) candidates may use a calculator to carry out calculations; all results must be recorded on the *Figure 3: Tariff data recording form* and handed in for marking.
- Internet access is permitted for part d) **only**.

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

- Completed *Figure 3: Tariff data recording form* showing tariff data and estimated timber volume.
- List of recommended timber products including explanations of choices.

Additional evidence for this task

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

Task 3 – Carry out the thinning operation

Candidates will carry out a thinning operation using a chainsaw to fell trees of between 200mm to 380mm diameter. Candidates will fell the trees using appropriate techniques, including an assisted fell of one tree.

Candidates must:

- a) Prepare for the operations by completing a site-specific risk assessment and emergency plan. Assessors will provide the following templates:
 - *Figure 4: Risk assessment template*
 - *Figure 5: Emergency plan template*
- b) Carry out pre-use checks of the chainsaw and conduct any identified routine maintenance required.
- c) Fell and process at least **four** trees in accordance with the risk assessment and emergency plan.
 - Trees will be processed into at least **two** different products, to be specified by the assessor. Products must be stacked/presented appropriately for the extraction method being used.
 - Demonstrate a basic bench felling or other organised felling system to establish a timber zone and a brash zone, and an ergonomic working height for processing felled trees.
- d) Perform an assisted fell of **one** tree using a winch-based system. Process the tree and deal with products and arisings as specified by the assessor.
- e) Carry out appropriate biosecurity measures on completion of parts c) and d) of the task.

Conditions of assessment

- The time allocated for this task is **8 hours**:
 - a) risk assessment and emergency plan – 1 hour
 - b) pre-use check and field maintenance of chainsaw – 30 mins
 - c) fell and process 4 trees to product specification – 4 hours
 - d) assisted fell and processing of one tree – 2 hours
 - e) biosecurity measures – 30 mins.
- Candidates must carry out the task on their own, under **controlled conditions**, while being observed.
- 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

- Risk assessment
- Emergency plan

Additional evidence for this task

- Assessor observations (for parts b)–e))
- Photographic evidence as specified in the *Task-specific guidance for centres* section

Task 4 – Planting plan

Candidates must produce a planting plan for the restock site. The net planting area has been calculated as 50 hectares. The site has been cleared of vegetation in preparation for planting, and the ground will be prepared by continuous mounding. The soil is a freely draining sandy loam with a pH of 6.

Further information about Brindle Forest is detailed in *Figure 1: Extracts from Brindle Forest Woodland Management Plan*.

Using the species mix given in the table below, candidates must produce a planting plan to achieve a **minimum** overall stocking density of 2,500 trees per hectare.

| Species | % of species mix | Stocking density | Net planting area |
|--------------------------------------|------------------|--------------------------------|-------------------|
| <i>Pinus sylvestris</i> (Scots Pine) | 45% | Minimum of 2,500 trees per ha. | 50 ha. |
| <i>Picea abies</i> (Norway Spruce) | 45% | | |
| Native broadleaf | 10% | | |

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

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

b) Produce a planting plan which includes:

- calculation of the required number of trees of each species (including selection of an appropriate native broadleaf species)
- planting specification including: tree stock type, size, spacing, plant handling requirements and planting method(s).
- recommended supplier(s)
- identification of factors/threats which could affect successful establishment and their potential consequences
- recommendations for methods to protect trees from identified threats, to ensure successful establishment
- justifications for all the above decisions
- cost per hectare for:
 - purchase of trees
 - purchase of any support/protection materials
 - labour costs (refer to *Figure 6: Table of standard establishment costs*).

Conditions of assessment

- The total time allocated for this task is **6 hours**:
Indicative timings:
 - a) 1.5 hours
 - b) 4.5 hours.
- Internet access is permitted for this task.

- Candidates will be provided with copies of *Figure 1: Extracts from Brindle Forest Woodland Management Plan* and *Figure 6: Table of standard establishment costs*.
- Candidates must carry out the task on their own, under **controlled conditions**.

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

- Written planting plan **only** (typically 1000 words) (research does **not** need to be submitted for marking)

Additional evidence for this task

- n/a

Task 5 – Planting

Candidates must:

Plant 25 transplants according to the planting specification provided by the assessor, using an appropriate planting technique. Candidates will install stakes and tree guards for two of the trees.

The assessor will provide the candidate with a planting specification for the task, detailing the trees to be planted, location and required spacing.

Candidates must select the equipment necessary to carry out the task, from the range provided by the assessor.

- a) Check the condition of the trees, report any defects to the assessor and prepare the trees for planting.
- b) Plant 25 trees according to the planting specification, to the appropriate depth and using a suitable technique for the ground conditions and stock type.
- c) For two of the planted trees, install a stake and tree guard for support and protection.

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.
- 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 6 – 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 re-installation 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 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 – Vegetation management

Candidates will undertake vegetation management using a clearing saw to remove unwanted woody vegetation from a site, avoiding damage to the existing crop.

The assessor will provide a job specification for the task, detailing the vegetation to be cleared, and any vegetation to be retained or obstacles to be avoided.

- a) Select and prepare tools, equipment and machinery for use, including pre-use checks.
- b) Remove, sharpen and re-fit the clearing saw blade.
- c) Organise and set out the worksite.
 - Interpret the job specification to identify the area to be cleared, the vegetation to be cleared, and any vegetation to be retained or obstacles to be avoided.
 - Place appropriate warning signage or other measures to manage public access.
 - Select suitable area(s) for re-fuelling and fuel storage.
- d) Use the clearing saw to remove unwanted woody vegetation from the area, applying appropriate cutting techniques.
- e) Leave the site in a safe and tidy condition and according to the job specification provided by the assessor.

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.
- Internet access is **not** permitted for this task.

Controlled conditions

- Candidates must work on their tasks only in the allocated times.
- The assessor will provide a job specification for the task.
- 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 5 Observation**
- Establishment plans
 - **Task 4 Planting plan**

Indicative content

Sub-theme: Tree stocks

Task 4 Planting plan

Typical evidence may include:

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 supplier(s), 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 5 Observation

Typical evidence may include:

- 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
 - Examples of comprehensive identification of signs – condition of rootball, proportion of fibrous roots, discoloured foliage, presence of mould

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 suitable 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 suitable 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 suitable planting methods/locations/protection.</p> <p>Checks for tree health/condition/damage carried out are extensive, 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:
50 ha x 2,500 = **minimum** of 125,000 total trees
45% of 125,000 =
minimum of 56,250 Scots Pine
minimum of 56,250 Norway Spruce
10% of 125,000 = **minimum** of 12,500 Native Broadleaf
- Selection of a native broadleaf species suitable for the site conditions given in the brief, with justification based on relevant factors eg preferred growing/soil conditions
- Planting specification: stock type, size, spacing, and planting method:
 - stock type and size: considering site specification, price of stock, planting method
 - spacing: to achieve the **minimum** of stocking density of 2,500 trees per hectare (eg 2m x 2m, or any other spacing which achieves the required **minimum** density)
 - 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 Roe Deer as the threat to establishment
 - Suitable protection methods for the threats, species, stock type – eg culling/fencing for the conifer species, broadleaves may be protected with tubes/shelters
- Cost per hectare for sourcing trees:
 - cost per tree of SP x number of SP required
 - cost per tree of NS x number of NS required
 - cost per tree of NB x number of NB required
 - total / 50ha = cost per ha
- Cost per hectare for support/protection materials

- total cost of support/protection materials / 50 ha = cost per ha
- Cost per hectare for labour:
 - planting costs + support/protection installation costs + any other labour costs
 - Total / 50 ha = cost per ha

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 may be minimally suitable and justified with basic consideration of the species and site requirements/ characteristics.</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>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> | | |

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|--|---|---|---|--|--|
| | <p>Establishment decisions are based on basic relevant knowledge of environmental/site/soil conditions required for successful establishment and justifications are underdeveloped.</p> <p>Limited application of the necessary calculations, with a basic level of accuracy.</p> | <p>Establishment decisions are based on good relevant knowledge of environmental/site/soil conditions required for successful establishment and justifications are well reasoned.</p> <p>Good application of the necessary calculations, with good level of accuracy.</p> | <p>Establishment decisions are based on excellent relevant knowledge of environmental/site/soil conditions required for successful establishment and justifications are highly detailed and well reasoned.</p> <p>Excellent application of the necessary calculations, with high level of accuracy.</p> | | |
|--|---|---|---|--|--|

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 5 Planting observation**

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

Indicative content

Establish trees

Task 4 Planting plan

Plan includes:

- 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 5 Planting observation

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 and loaded into suitable bags/containers for planting
- Plant trees using a suitable technique, to the appropriate depth, according to the ground conditions and stock type
- For two of the planted trees, install support and protection (stake, tree guard) – stakes and guards installed appropriately and securely avoiding any damage to the tree.

Photo/video evidence

- **Photo** showing close-up of a planted tree without protection installed

- **Photo** showing spacing achieved
- **Photo** showing a planted tree with protection 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 | N/A | 12 |
| | <p>Selects a basic range of tools, equipment and resources to complete work to a basic standard.</p> <p>Prepares site/ground/resources with limited application of knowledge and skill, resulting in adequate conditions for planting.</p> <p>Basic knowledge and application of planting techniques, resulting in conditions suitable for adequate establishment and growth, which match</p> | <p>Selects a good range of tools, equipment and resources to complete work to a good standard.</p> <p>Prepares site/ground/resources with good application of knowledge and skill, resulting in good conditions for planting.</p> <p>Good knowledge and application of planting techniques, resulting in conditions suitable for good establishment and growth, which match</p> | <p>Selects a comprehensive range of tools, equipment and resources to complete work to a high standard.</p> <p>Prepares site/ground/resources with excellent application of knowledge and skill, 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</p> | | |

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|--|--|--|--|--|--|
| | <p>the planting specification to a minimal level of accuracy.</p> <p>Basic knowledge and application of support/protection methods, resulting in conditions suitable for adequate establishment and growth.</p> | <p>the planting specification to a good level of accuracy.</p> <p>Good knowledge and application of support/protection methods, resulting in conditions suitable for good establishment and growth.</p> | <p>the planting specification to a high level of accuracy.</p> <p>Excellent knowledge and application of support/protection methods, resulting in conditions suitable for optimal establishment and growth.</p> | | |
|--|--|--|--|--|--|

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

Typical evidence may include:

- Candidates must identify a range of hazards **related to machinery and equipment** that should include major hazards. Major hazards would include any hazard likely to cause serious injury/fatality
- Template completed including all significant findings, **specific to the machinery**
- Effectiveness, achievability of control measures specified.
- Risk ratings given

Task 3 Emergency plan

Typical evidence may include:

- 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 | N/A | 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

Typical evidence may include:

- 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
- Routine 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
 - Ensure that the chain is tensioned correctly
 - 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 | N/A | 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 reasonably 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

Typical evidence may include:

Parts c) and d) 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.

Part d) 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

- 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 | N/A | 12 |
| | <p>Selects a basic range of tools, equipment and resources to safely complete work 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 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</p> | <p>Selects a good range of tools, equipment and resources to safely complete work 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 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</p> | <p>Selects a comprehensive range of tools, equipment and resources to safely complete work 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, 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-</p> | | |

| | | | | | |
|--|--|---|--|--|--|
| | <p>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>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>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> | | |
|--|--|---|--|--|--|

Performance Outcome 4 - Manage woodlands 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 results and report**
- **Task 1 Method statement**
- **Task 4 Planting plan**

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

Indicative content

Environment and plant health

Task 4 Planting plan

Typical evidence may include:

- Recommendations for protection to ensure successful establishment, with justifications, considering a range of factors, eg:
 - Identification of protection requirements – consideration of the information in the brief and Figure 1, eg identifying Roe Deer as a threat to establishment
 - Suitable protection methods for the threats, species, stock type – eg culling/fencing for the conifer species, broadleaves may be protected with tubes/shelters.

Task 1 Survey results and report

Typical evidence may include:

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

Task 1 Method statement

Typical evidence may include:

- Badger sett identified as a constraint of the site which must not be damaged, and methods selected to avoid damage eg directional felling of trees in proximity of the sett away from the badger sett / preventing machine travel over the sett
- Environmental protection measures such as locations for fuel storage/re-fuelling areas considered in the method statement.

| 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 | N/A | 6 |
| | <p>Basic application of knowledge of environment, plant health and ecosystems, taking into account a limited range of factors to make decisions.</p> <p>Basic management/ protection recommendations are made, which may be unsuitable.</p> | <p>Good application of knowledge of environment, plant health and ecosystems, taking into account a good range of factors to make decisions.</p> <p>Good management/ protection recommendations are made, which are appropriate.</p> | <p>Excellent application of knowledge of environment, plant health and ecosystems, taking into account a comprehensive range of factors to make decisions.</p> <p>Excellent management/ protection recommendations made which are highly appropriate.</p> | | |

Assessment theme – Planning and silviculture

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 Method statement**
- **Task 2 List of recommended timber products including justifications for choices**
- **Task 4 Planting plan**

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

Indicative content

Planning and silviculture

Task 1 Method statement

Typical evidence may include:

- Suitable felling and extraction methods are made based on the species, site conditions and the silvicultural systems and objectives stated in the woodland management plan extracts (eg silvicultural systems section of the woodland management plan extracts in Figure 1 states that restocking of the thinning area is intended to be by natural regeneration; therefore, candidates may recommend motor-manual felling and extraction with a winch/skidder to minimise compaction of the soil to promote natural regeneration).

Task 2 List of recommended timber products including justifications for choices

Typical evidence may include:

- Suitable recommendations based on tree species and size
- Justifications for choices referencing eg markets, species properties and quality, form.

Task 4 Planting plan

Plan includes:

- Selection of a native broadleaf species suitable for the site conditions given in the brief/Figure 1 woodland management plan extracts, and the silvicultural systems and objectives stated in the woodland management plan extracts in Figure 1

- Interprets the information in Figure 1 to identify deer as a threat to establishment and recommends suitable protection methods (eg shelters/guards / fencing / deer control (cull)).

Responses to tasks show that candidate has interpreted and used the information from the extracts of the woodland management plan in the brief in their work – eg considering the stated objectives, silvicultural systems and the information given about the woodland.

| Assessment theme: Planning and silviculture | 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 | N/A | 12 |
| | <p>Limited consideration of timber products, quality and quantity within the assigned tasks, resulting in minimally suitable decisions/ recommendations.</p> <p>Limited application of knowledge of silvicultural systems/considerations resulting in only partially informed/justified decisions.</p> | <p>Good consideration of timber products, quality and quantity within the assigned tasks, resulting in generally suitable decisions/ recommendations.</p> <p>Good application of knowledge of silvicultural systems/considerations/ species characteristics, resulting in reasonably informed/justified decisions.</p> | <p>Thorough consideration of timber products, quality and quantity within the assigned tasks, resulting in highly suitable decisions/ recommendations.</p> <p>Excellent application of knowledge of silvicultural systems/considerations/ species characteristics, resulting in fully informed/justified decisions.</p> | | |

| | | | | | |
|--|---|---|--|--|--|
| | <p>Limited application of knowledge of species characteristics resulting in only partially informed/justified decisions.</p> <p>Makes minimal use of available information sources to make choices/complete tasks, only minimally meeting the requirements of the brief/task.</p> | <p>Good application of knowledge of species characteristics, resulting in reasonably informed/justified decisions.</p> <p>Makes good use of available information sources to make choices/complete tasks, meeting the majority of requirements of the brief/task.</p> | <p>Excellent application of knowledge of species characteristics, resulting in fully informed/justified decisions.</p> <p>Makes excellent use of available information sources to make choices/complete tasks, fully meeting the requirements of the brief/task.</p> | | |
|--|---|---|--|--|--|

Assessment theme – Surveying and measurement

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 results, report and observation**
- **Task 2 Observation**
- **Task 2 Completed Tariff data recording form**
- **Task 2 Completed recording form showing estimated timber volume including any calculations**

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

Indicative content

Surveying and measurement

Task 1 Survey results, report and observation

Typical evidence may include:

- Application of appropriate woodland sampling/surveying techniques to:
 - Identify tree species present on the site using appropriate techniques and resources (eg keys, books, apps) using scientific names
 - Appraise tree health and condition, including identification of pests/diseases/disorders and hazards
 - Measure tree heights
 - Mark out constraints.

Photo/video evidence

- **Photo** showing method used to measure tree height
- **Photo** showing marking of red zone trees
- **Photo** showing marking of exclusion zone around badger sett.

Task 2 Observation

Typical evidence may include:

- Selection of required equipment
- Carrying out appropriate checks on equipment to ensure accuracy of measurements (eg checking girth tapes for stretch)
- Accuracy of surveying and measurement techniques (height, dbh, recording forms)
- Compliance with the abbreviated tariff procedures
- Application of standard measuring conventions (eg for dbh, height)
- Candidates use of information sources provided to complete the task – eg refers to guidance in the forest mensuration handbook or timber measurement field guide on mensuration conventions and procedures.

Photo/video evidence

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

Task 2 Completed Tariff data recording form

Typical evidence may include:

- Interpretation of information provided on the abbreviated tariff method
- Recording of information during the survey (number of trees, dbh, heights)
- Presentation and legibility of information recorded

Task 2 Completed recording form showing estimated timber volume including any calculations

Typical evidence may include:

- Calculations and estimated timber volume:
 - Accuracy of calculations/method required to work out mean dbh
 - Accuracy of calculations/method to work out average tariff number
 - Accuracy of calculations/method to work out volume

| Assessment theme: Surveying and measurement | 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 | N/A | 12 |
| | <p>Basic application of tree/plant identification techniques to identify species present. Species are identified, mostly by common name only.</p> <p>Woodland sampling and surveying techniques applied with a basic level of accuracy, resulting in minimally accurate measurements/results.</p> <p>Tree/stand/timber measurement techniques applied with a basic level of accuracy, minimal checks/confirmation of readings/reference to information sources is carried out where required, resulting in</p> | <p>Good application of tree/plant identification techniques to identify species present. Species are identified, mostly by common name and genus.</p> <p>Woodland sampling and surveying techniques applied with a good level of accuracy, resulting in mostly accurate measurements/results.</p> <p>Tree/stand/timber measurement techniques applied with a good level of accuracy, readings are mostly checked/confirmed and information sources are referred to where required, resulting in mostly</p> | <p>Excellent application of tree/plant identification techniques to identify species present. Species are identified, mostly by full scientific name.</p> <p>Woodland sampling and surveying techniques applied with a high level of accuracy, resulting in highly accurate measurements/results.</p> <p>Tree/stand/timber measurement techniques applied with a high level of accuracy, readings are consistently checked/confirmed and information sources are referred to where required,</p> | | |

| | | | | | |
|--|--|---|--|--|--|
| | <p>minimally accurate measurements/results.</p> <p>Timber volume calculations and/or estimation methods are applied with a basic level of accuracy to produce minimally accurate results.</p> | <p>accurate measurements/results.</p> <p>Timber volume calculations and/or estimation methods are applied with a good level of accuracy to produce mostly accurate results.</p> | <p>resulting in highly accurate measurements/results.</p> <p>Timber volume calculations and/or estimation methods are applied with a high level of accuracy to produce highly accurate results.</p> | | |
|--|--|---|--|--|--|

Performance Outcome 5 – Maintain woodlands 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 6 Observation**
- **Task 7 Observation**

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

Indicative content

Health and safety

Task 6 Observation

Typical evidence may include:

- Fence maintenance/repair is carried out in line with current health and safety legislation, regulations and guidance for woodland maintenance.
- Site is kept clear and tidy during the task.

Photo/video evidence

- If post and rail fencing is used:
 - **Photo** showing finished fence
- If stock fencing is used:
 - **Photo** showing finished fence

Task 7 Observation

Typical evidence may include:

- Vegetation management and machinery operation and maintenance are carried out in line with current health and safety legislation, regulations and guidance for woodland maintenance:
 - Site is set up safely with appropriate controls eg signage placed at suitable locations and distances to control public access.
 - Machine is used in a safe and effective manner throughout the operation, which maintains health and safety and is consistent with current legislation and codes of practice.
 - Site is kept clear and tidy during the task eg tools and materials are placed appropriately when not in use, waste is cleared up.

| 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 | N/A | 6 |
| | <p>Demonstrates basic application of industry best practice guidance on health and safety during woodland maintenance activities. Some non-safety-related errors occur, which go unnoticed by the candidate.</p> <p>Carries out woodland maintenance activities with adequate consideration of site safety and tidiness, leaving the worksite in an adequate condition.</p> | <p>Demonstrates good application of industry best practice guidance on health and safety during woodland maintenance activities. Some non-safety-related errors occur, which are eventually recognised and corrected by the candidate.</p> <p>Carries out woodland maintenance activities with good consideration of site safety and tidiness, leaving the worksite in good condition.</p> | <p>Demonstrates excellent application of industry best practice guidance on health and safety during woodland maintenance activities. Minimal-to-no non-safety-related errors occur, which are immediately recognised and corrected by the candidate.</p> <p>Carries out woodland maintenance activities with excellent consideration of site safety and tidiness, leaving the worksite in excellent condition.</p> | | |

Assessment theme – Plan for management/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 6 Observation**
- **Task 7 Observation**

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

Indicative content

Plan for management/maintenance

Task 6 Observation

Typical evidence may include:

- Inspect the fence and identify the maintenance or repairs required – candidate identifies the damage/defects present in the fence (eg loose posts, damaged rail, loose/damaged netting) and identifies materials and actions required to conduct repairs (eg post removal and replacement, replacement of rail, replacement/tightening/re-tensioning and fixing of netting)

Task 7 Observation

Typical evidence may include:

- Placement of appropriate warning signage or other management controls/measures to manage public access during the operation – eg placing of warning signs at perimeter/access point/safe distance of working area to warn public
- Environment: selection of suitable area(s) for re-fuelling and fuel storage – eg away from watercourses and sources of ignition or direct sunlight
- Accuracy of interpretation of the job specification provided by the assessor to identify the area to be cleared, the vegetation to be cleared and any vegetation to be retained or obstacles to be avoided – eg working carefully to not damage non-target plants/trees with consideration of the effects on their physiology and health

| Assessment theme: Plan for management/ maintenance | 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 | N/A | 12 |
| | <p>Basic consideration of the need for site and access management, resulting in limited effectiveness of recommended/implemented management/controls.</p> <p>Limited application of knowledge of the maintenance requirements of different types of infrastructure and features, resulting in minimally efficient planning/preparation for tasks.</p> <p>Basic consideration of tree physiology and health when preparing for work/interpreting instructions/specifications, resulting in maintenance work which is limited in optimising tree</p> | <p>Good consideration of the need for site and access management, resulting in reasonably effective management/controls being recommended/implemented.</p> <p>Good application of knowledge of the maintenance requirements of different types of infrastructure and features, resulting in moderately efficient planning/preparation for tasks.</p> <p>Good consideration of tree physiology and health when preparing for work/interpreting instructions/specifications, resulting in maintenance work which mostly optimises tree</p> | <p>Comprehensive consideration of the need for site and access management, resulting in highly effective management/controls being recommended/ implemented.</p> <p>Excellent application of knowledge of the maintenance requirements of different types of infrastructure and features, resulting in highly efficient planning/preparation for tasks.</p> <p>Comprehensive consideration of tree physiology and health when preparing for work/interpreting instructions/specifications, resulting in maintenance work which consistently optimises tree health/longevity as much as is reasonably practicable.</p> | | |

| | | | | | |
|--|--|---|--|--|--|
| | <p>health/longevity as much as is reasonably practicable.</p> <p>Limited consideration of potential damage to the environment when planning/setting out the worksite.</p> | <p>health/longevity as much as is reasonably practicable.</p> <p>Good consideration of potential damage to the environment when planning/setting out the worksite.</p> | <p>Comprehensive consideration of potential damage to the environment when planning/setting out the worksite.</p> | | |
|--|--|---|--|--|--|

Assessment theme – Perform woodland 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 6 Observation**
- **Task 7 Observation**

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

Indicative content

Perform woodland maintenance

Task 6 Observation

Typical evidence may include:

- 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 into the ground, rails are appropriately spaced and attached securely
 - If stock fence: posts are upright and properly firmed into 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 fixed netting
 - **Photo** showing finished fence

Task 7 Observation

Typical evidence may include:

- Select and prepare tools, equipment and machinery for use including pre-use checks – as a minimum: condition of blade, presence and condition of correct guards, function of power on/off switch, security and fit of harness and attachment system
- Maintenance: remove, sharpen and re-fit the clearing saw blade
- Organise and set out the worksite
- Clear unwanted vegetation according to the specification
 - Use appropriate cutting techniques to avoid errors such as damaging not-target species/obstacles
 - Levels of damage, for example, to plants: minimal – plant is damaged but will recover; negligible – damage is unlikely to affect plant growth/survivability; no damage – plant unaffected
 - Ensure the site is left in a safe and tidy condition

Photo/video evidence

- **Photo** showing example of damage caused to non-target species/obstacles. Where no damage has been caused this should be clearly stated in the observation.

| Assessment theme: Perform woodland maintenance | 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 | N/A | 12 |
| | <p>Selects a basic range of tools, machinery/ equipment and materials, and safely uses them to apply suitable maintenance techniques to a basic standard, resulting in an acceptable finish.</p> <p>Basic range of pre-use checks and machine/equipment setup/adjustments are carried out in line with manufacturers’ recommendations.</p> <p>Maintenance of machinery/equipment is carried out to a basic standard, resulting in tools/machinery/equipment being in acceptable condition for use.</p> | <p>Selects a good range of tools, machinery/ equipment and materials, and safely uses them to apply suitable maintenance techniques to a good standard, resulting in a good finish.</p> <p>Good range of pre-use checks and machine/equipment setup/adjustments are carried out in line with manufacturers’ recommendations.</p> <p>Maintenance of machinery/equipment is carried out to a good standard, resulting in tools/machinery/equipment being in good condition for use.</p> | <p>Selects a comprehensive range of tools, machinery/equipment and materials, and safely uses them to apply suitable maintenance techniques to a high standard, resulting in an excellent finish.</p> <p>Comprehensive range of pre-use checks and machine/equipment setup/adjustments are carried out in line with manufacturers’ recommendations.</p> <p>Maintenance of machinery/equipment is carried out to a high standard, resulting in tools/machinery/equipment being in excellent condition for use.</p> | | |

| | | | | | |
|--|--|---|---|--|--|
| | Safely operates equipment/machinery with a basic level of accuracy and efficiency, resulting in minimal damage to some not-target species/obstacles. | Safely operates equipment/machinery with a good level of accuracy and efficiency, resulting in only negligible damage to some not-target species/obstacles. | Safely operates equipment/machinery with an excellent level of accuracy and efficiency, resulting in no damage to any not-target species/obstacles. | | |
|--|--|---|---|--|--|

Performance Outcome 6 – Undertake complex felling operations

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 Observation**

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

Typical evidence may include:

- Candidates must identify a range of hazards **related to the felling operations being carried out** that should include major hazards. Major hazards would include any hazard likely to cause serious injury/fatality
- Template completed including all significant findings, **specific to the site, and tasks**
- Effectiveness, how achievable/realistic are the control measures/mitigations specified
- Realistic risk ratings given

Task 3 Observation

Typical evidence may include:

- How the candidate sets up the work area for felling and complies with the risk assessment and emergency plan that they have produced – eg adhering to specified control measures/mitigations and actions such as use of PPE (eg visor down when cutting, preparation and use of escape routes, keeping the working area as clear and free from hazards as possible, maintaining safe working distances)

Photo/video evidence

- **Photo** of working area showing brush zone / timber zone and tidiness of work
- Series of **photos** showing set up of assisted fell: attachment points (tree, anchor), winch position

| 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 | N/A | 6 |
| | <p>Risk assessments are complete and cover a limited range of hazards, including all major hazards. 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>Demonstrates adequate application of identified control measures/actions and industry best practice for tree felling activities.</p> | <p>Risk assessments are complete and cover a good range of hazards, including all major hazards. A good range of mitigation methods are specified. Risk rating has been completed for majority of identified hazards and is generally realistic.</p> <p>Demonstrates good application of identified control measures/actions and industry best practice for tree felling activities.</p> | <p>Risk assessments are detailed and clearly identify a comprehensive range of hazards, including all major hazards. A comprehensive range of mitigation methods have been identified. Risk rating has been completed for all identified hazards and is consistently realistic.</p> <p>Demonstrates excellent application of identified control measures/actions and industry best practice for tree felling activities.</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 1 Method statement**
- **Task 3 Observation**

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

Indicative content

Environment

Task 1 Method statement

Typical evidence may include:

- Locations of stacking and fuel storage areas chosen, considering minimising environmental impact/risk (eg spills)
- Environmental protection methods/techniques may be recommended (eg use of brash mats, provision of spills kits, bunded fuel storage)
- Extraction routes chosen to minimise rutting/compaction, and damage to ground, crop, wildlife
- Suitable recommendations for methods/techniques for felling and extracting trees immediately surrounding the badger sett to avoid damage and minimise disturbance

Task 3 Observation

Typical evidence may include:

- Site managed and maintained in a safe and tidy condition with consideration given to minimisation of damage to residual crop and environment
- Work carried out in line with best practice methods/techniques (eg refuelling in a designated area, materials used/available to deal with spillages)

Photo/video evidence

- **Photo** of working area showing brash zone / timber zone and tidiness of work.
- Series of **photos** showing set up of assisted fell: Attachment points (tree, anchor), winch position.

| 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 | N/A | 6 |
| | <p>Basic consideration of 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 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 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 felling 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 1 Method statement and map**
- **Task 1 Observation**

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

Indicative content

Prepare for complex felling operations

Task 1 Method statement and map

Typical evidence may include:

- Method statement may include consideration of planning factors and site management principles eg:
 - Information/context of the task – use of/reference to information in Figure 1, site map and assignment brief/task
 - Site constraints
 - Hazards and controls
 - Description of the work
 - Felling and extraction methods and routes (considering the brief and information in Figure 1 – eg felling and extraction methods chosen suitable for the silvicultural system described in Figure 1, such as motor-manual felling and extraction by skidder to reduce compaction and promote natural regeneration; extraction routes chosen to minimise/avoid crossing under the 11kv power line)
 - Stacking areas
 - Equipment required
 - Operator training and qualification requirements
 - Processes to be followed including post-work activities (eg machinery checks, storage, biosecurity) – eg Figure 1 states there are trees showing symptoms of *Phytophthora ramorum* in the forest and therefore may recommend biosecurity measures such as cleaning and disinfection of tools, machinery, PPE and vehicles before leaving the site
 - Justifications for choices.
- Annotated map may include:
 - Additional relevant information/symbols added to the map key as identified in the survey and method statement

- Extraction routes marked
- Location(s) of stacking areas marked
- Location(s) of signage marked
- Location(s) of fuel storage areas marked
- Exclusion zones around constraints (badger sett, power line) marked.

Task 1 Observation

Typical evidence may include:

- Assessor observation of survey and marking out:
 - Accuracy of marking out site constraints on the ground according to the annotated map
 - Power line:
 - Identification of vicinity zone appropriate to OHPL voltage (11 kV) given in Figure 1 (reference to information in FISA 804 provided for correct vicinity zone distance)
 - Measurement of tree height
 - Red zone trees clearly marked on site at a distance equal to the vicinity zone plus one tree length from the power line
 - Badger sett:
 - Trees immediately surrounding the badger sett location clearly marked using an appropriate method (eg paint, tape, stakes)
 - Footpath:
 - Identifies appropriate locations for warning signs.

| Assessment theme: Prepare for complex felling 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 | N/A | 6 |
| | <p>Basic use of/reference to information from plans, surveys and documents considering a limited range of information, planning factors and site management principles to inform/justify planning decisions.</p> <p>Limited application of methods to prepare work sites/trees/areas with basic accuracy, in line with industry best practice and legislation, resulting in adequate conditions for safe and efficient felling operations.</p> | <p>Good use of/reference to information from plans, surveys and documents considering a good range of information, planning factors and site management principles to inform/justify planning decisions.</p> <p>Good application of methods to prepare work sites/trees/areas with good accuracy, in line with industry best practice and legislation, resulting in good conditions for safe and efficient felling operations.</p> | <p>Comprehensive use of/reference to information from plans, surveys and documents considering an extensive range of information, planning factors and site management principles to inform/justify planning decisions.</p> <p>Excellent application of methods to prepare work sites/trees/areas highly accurately, in line with industry best practice and legislation, resulting in excellent conditions for safe and efficient felling operations.</p> | | |

Assessment theme – Perform complex felling 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 felling operations

Task 3 Observation

Typical evidence may include:

- Ensure compliance with risk assessment and industry best practice, including use of correct PPE.
- Pre-start checks carried out as per operator's handbook and industry best practice.

Part c) Felling (felling and processing four trees):

- Felling and processing techniques taking into account the specific worksite conditions and industry best practice (FISA guidance). Efficiency of working methods (eg minimising manual handling, minimising distance covered by measuring/marketing product lengths while snedding)
- Correct configuration of an organised felling system to achieve good ergonomics and clearly distinguishable timber and brash zones. Organised system suitable for the trees being felled and product spec being cut (eg bench felling setting up a natural bench using felled trees, timber stacks, strops/slings)
- Products cut accurately to length according to product specification and stacked or presented appropriately for extraction. This could include appropriately dressing the butt of the first log, removing hinge wood and flares, presenting timber tip/butt first, depending on extraction method

Part d) Assisted fell of one tree, methods/techniques to include:

- 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

- Site managed and maintained a safe and tidy condition (including stacking of timber) with consideration given to subsequent timber extraction, minimisation of damage to residual crop and environment.

Part e)

- Biosecurity measures carried out including cleaning of chainsaw, winching equipment, clothing and PPE

Photo/video evidence

- **Photo** of working area showing brash zone / timber zone and tidiness of work
- **Series of photos** showing set up of assisted fell: attachment points (tree, anchor), winch position

| Assessment theme: Perform complex felling 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 | N/A | 12 |
| | Safely carries out tree felling and processing with a basic level of skill and accuracy, displaying some inefficiency in their approach/methods, including limited implementation of organised felling system, resulting in | Safely carries out tree felling and processing with a good level of skill and accuracy, displaying efficient approach/methods, including good implementation of organised felling system resulting in good | Safely carries out tree felling and processing with an excellent level of skill and accuracy, displaying a highly efficient approach/methods, including excellent implementation of organised felling system resulting in | | |

| | | | | | |
|--|---|--|---|--|--|
| | <p>minimally improved ergonomics/efficiency/brash management.</p> <p>Safely cuts timber to length according to the specification with a basic level of accuracy in measurement/cutting and limited attention to presentation of products.</p> <p>Safely configures pulling system and carries out assisted felling with a basic level of skill with minimal efficiency in their application of methods/techniques.</p> <p>Limited range/quality of biosecurity measures are carried out during/post operations.</p> | <p>ergonomics/efficiency/brash management.</p> <p>Safely cuts timber to length according to the specification with a good level of accuracy in measurement/cutting and good attention to presentation of products.</p> <p>Safely configures pulling system and carries out assisted felling with a good level of skill with moderate efficiency in their application of methods/techniques.</p> <p>Good range/quality of biosecurity measures are carried out during/post operations.</p> | <p>optimal ergonomics/efficiency/brash management.</p> <p>Safely cuts timber to length according to the specification with a high level of accuracy in measurement/cutting and excellent attention to presentation of products.</p> <p>Safely configures pulling system and carries out assisted felling with a high level of skill displaying consistently efficient application of methods/techniques.</p> <p>Excellent range/quality of biosecurity measures are carried out during/post operations.</p> | | |
|--|---|--|---|--|--|

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 |
| 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)

T Level technical qualifications

(T Level Technical Qualification – Tree and Woodland Specialism, Forestry 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 fields as required.

| | | | | | | | | | | | | |
|---|-------------------------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|
| PO2 Grow trees and woodlands | | | | | | | | | | | | |
| Plan for establishment – tree stocks | | | | | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | |
| 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 | | | | | | | | | | | |

| PO4 Manage woodlands to meet objectives | | | | | | | | | | | | |
|--|-------------------------|---|---|---|---|---|---|---|---|----|----|----|
| Environment and plant health | | | | | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Mark | Notes and justification | | | | | | | | | | | |

| Planning and silviculture | | | | | | | | | | | | |
|----------------------------------|-------------------------|---|---|---|---|---|---|---|---|----|----|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Mark | Notes and justification | | | | | | | | | | | |

| Surveying and measurement | | | | | | | | | | | | |
|----------------------------------|-------------------------|---|---|---|---|---|---|---|---|----|----|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Mark | Notes and justification | | | | | | | | | | | |

| PO5 Maintain woodlands to meet prescribed objectives | | | | | | | | | | | | |
|---|-------------------------|---|---|---|---|---|---|---|---|----|----|----|
| Health and safety | | | | | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Mark | Notes and justification | | | | | | | | | | | |

| Plan for management/maintenance | | | | | | | | | | | | |
|--|-------------------------|---|---|---|---|---|---|---|---|----|----|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Mark | Notes and justification | | | | | | | | | | | |

| Perform woodland maintenance | | | | | | | | | | | | |
|-------------------------------------|-------------------------|---|---|---|---|---|---|---|---|----|----|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Mark | Notes and justification | | | | | | | | | | | |

| PO6 Undertake complex felling 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 felling operations | | | | | | |
|---|-------------------------|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Mark | Notes and justification | | | | | |

| Perform complex felling 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 – thinning site survey)

| Task | Qualification number |
|----------------|---|
| Task 1 | 8717-406 |
| Candidate name | Candidate number |
| | |
| Centre name | Assessment themes |
| | PO4: Surveying and measurement PO6: Prepare for complex felling 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. |
|--|---|
| <ul style="list-style-type: none"> Marking out site constraints on the ground according to candidate's annotated map <p>Footpath:</p> <ul style="list-style-type: none"> Identifies appropriate locations for warning signs. <p>Power line:</p> <ul style="list-style-type: none"> Identification of vicinity zone appropriate to OHPL voltage given in the brief (refer to information in FISA 804 provided) Measurement of tree height Red zone clearly marked on site at a distance equal to the vicinity zone plus one tree length from the power line's location. <p>Badger sett:</p> <ul style="list-style-type: none"> Trees immediately surrounding the badger sett location | |

| | |
|---|--|
| 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. |
| clearly marked using an appropriate method (eg paint, tape, stakes) | |

| | |
|---------------------------|-------------|
| Assessor signature | Date |
| | |

Assessor Observation Form (Task 2 – tariff)

| | |
|-----------------------|--------------------------------|
| Task | Qualification number |
| Task 2 a, b | 8717-406 |
| Candidate name | Candidate number |
| | |
| Centre name | Assessment themes |
| | PO4: Surveying and measurement |

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"> • Selection of required equipment • Carrying out appropriate checks on equipment to ensure accuracy of measurements (eg checking girth tapes for stretch) • Compliance with the abbreviated tariff procedures • Recording of data during the tariff • Application of standard measuring conventions (eg for dbh, height) • Use/reference to provided information sources as required (<i>Timber Measurement Field Guide/Forest Mensuration: a handbook for practitioners</i>) | |

| | |
|---------------------------|-------------|
| Assessor signature | Date |
| | |

Assessor Observation Form (Task 3 – thinning operation)

| Task | Qualification number |
|----------------|---|
| Task 3 | 8717-406 |
| Candidate name | Candidate number |
| | |
| Centre name | Assessment themes |
| | PO3: Maintain machinery. PO3: Operate machinery. PO6: Health and safety. PO6: Environment. PO6: Perform complex felling 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. |
|--|---|
| <ul style="list-style-type: none"> Ensure compliance with risk assessment and industry best practice, including use of correct PPE Field maintenance carried out (eg sharpening, tensioning chain) Pre-start checks carried out as per operator's handbook and industry best practice <p>Felling:</p> <ul style="list-style-type: none"> Operation of chainsaw and associated tools/equipment in line with industry best practice Felling and processing techniques taking into account the specific worksite conditions and industry best practice (FISA | |

| 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>guidance) Efficiency of working methods (eg minimising manual handling, minimising distance covered by measuring/marking product lengths while snedding)</p> <ul style="list-style-type: none"> • Correct configuration of an organised felling system (timber and brash zones) (eg bench felling setting up a natural bench using felled trees, timber stacks, strops/slings) • Products cut to length according to cutting specification and stacked or presented appropriately for extraction (eg appropriately dressing the butt of the first log, removing hinge wood and flares, presenting timber tip/butt first depending on extraction method) <p>Assisted fell:</p> <ul style="list-style-type: none"> • Pulling system set up in accordance with industry best practice, and of sufficient capacity for the tree being felled. Components selected must be compatible (eg strops, shackles, winch, rope/cable), fit for purpose and free from damage • Assisted felling techniques taking into account the specific worksite conditions and industry best | |

| 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>practice (FISA guidance)</p> <p>Biosecurity:</p> <ul style="list-style-type: none"> • Tools, equipment and PPE thoroughly cleaned down, removing debris | |

| Assessor signature | Date |
|---------------------------|-------------|
| | |

Assessor Observation Form (Task 5 – planting)

| | |
|-----------------------|---|
| Task | Qualification number |
| Task 5 | 8717-406 |
| 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 – 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"> • Select tools, equipment and resources • Check the condition of the plants; check roots, foliage, size, health • Identified and reported defects • Prepare planting stock for planting: plants handled with care and loaded into suitable bags/containers for planting • Planting technique, spacing, depth, appropriate to ground conditions and stock type • Stakes and guards installed appropriately and securely avoiding any damage to the tree for two trees | |

| | |
|---------------------------|-------------|
| Assessor signature | Date |
| | |

Assessor Observation Form (Task 6 – boundary maintenance)

| | |
|-----------------------|---|
| Task | Qualification number |
| Task 6 | 8717-406 |
| Candidate name | Candidate number |
| | |
| Centre name | Assessment themes |
| | PO5: Health and safety PO5: Plan for management/ maintenance. PO5: Perform woodland 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 |
| | |

Assessor Observation Form (Task 7 – vegetation management)

| | |
|-----------------------|--|
| Task | Qualification number |
| Task 7 | 8717-406 |
| Candidate name | Candidate number |
| | |
| Centre name | Assessment themes |
| | PO5: Health and safety. PO5: Plan for management / maintenance. PO5: Perform woodland 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. |
|--|--|
| <p>Clearing saw maintenance and operation:</p> <ul style="list-style-type: none"> Select and prepare tools, equipment and machinery for use including pre-use checks – as a minimum: condition of blade, presence and condition of correct guards, function of power on/off switch, security and fit of harness and attachment system. Remove, sharpen and re-fit the clearing saw blade. <p>Organisation and setting out the worksite:</p> <ul style="list-style-type: none"> Placement of appropriate warning signage or other measures to manage public access during the operation – eg placing of warning signs at | |

| 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>perimeter/access point of working area to warn public</p> <ul style="list-style-type: none"> • Selection of suitable area(s) for re-fuelling and fuel storage – eg away from watercourses and sources of ignition or direct sunlight • Interpretation of the job specification provided (identify the area to be cleared, the vegetation to be cleared, and any vegetation to be retained or obstacles to be avoided) <p>Clearing saw operation:</p> <ul style="list-style-type: none"> • Clear unwanted vegetation according to the specification. • Use the machine in a safe and effective manner throughout the operation, which maintains health and safety and is consistent with current legislation and codes of practice. • Use appropriate cutting techniques to avoid damaging not-target species/obstacles. • Ensure the site is left in a safe and tidy condition. | |

| Assessor signature | Date |
|---------------------------|-------------|
| | |

12. Annex

Contents:

Figure 1: Extracts from Brindle Forest Woodland Management Plan

To be issued to candidates with the assignment brief

Figure 2: Method statement template

To be issued to candidates with Task 1

Figure 3: Tariff data recording form template

To be issued to candidates with Task 2

Figure 4: Risk assessment template

To be issued to candidates with Task 3

Figure 5: Emergency plan template

To be issued to candidates with Task 3

Figure 6: Table of standard establishment costs

To be issued to candidates with Task 4

Figure 1: Extracts from Brindle Forest Woodland Management Plan

Below are relevant extracts from Brindle Forest's Woodland Management Plan. You will need to refer to this information when carrying out the tasks in this assignment.

Vision and management objectives:

| |
|---|
| Vision |
| Actively manage the woodland to improve economic return, health and resilience, and landscape value. Improve the forest resource through good forestry practice and silviculture, and increase the area of woodland under active management. Ensure that the site is maintained as a healthy and productive woodland habitat. |
| Management objectives |
| 1. Maintain the current rotation in the mature stand, to produce marketable timber from thinnings. |
| 2. Use income from timber sales to facilitate restoration of unmanaged compartments by controlling vegetation and restocking failed plantation. |
| 3. Manage Roe Deer population to ensure successful establishment. |

Description of the woodland:

| |
|--|
| Brindle forest covers 108 hectares in total. |
| The topography is made up of gentle slopes and a plateau. |
| Soil is freely draining sandy loam with a pH of 6. |
| The forest was planted in the 1990s but has been largely unmanaged for the last 15–20 years. |

Structure:

| Woodland Type | Percentage of management plan area (net) | Age structure (even/uneven) | Notes |
|---------------------------------------|--|------------------------------------|---|
| Single species even-aged mature stand | 54% (58 ha) | Even aged plantation, planted 1990 | Good stocking density, suitable for first thinning, to be carried out in 2023. |
| Mixed conifer restock site | 46% (50 ha) | n/a | Previous planting appears to have failed, likely due to grazing by Roe Deer population. There are a small number of mature <i>Larix x marschlinsii</i> (Hybrid Larch) growing on the site boundaries showing signs of <i>Phytophthora ramorum</i> infection. |

Woodland protection:

| | |
|---|--|
| Threat | <i>Phytophthora ramorum</i> |
| Likelihood of presence (high/medium/low) | High |
| Impact (high/medium/low) | High |
| Response | <i>Larix x marschlinsii</i> (Hybrid Larch) to be removed from the restock site. Biosecurity measures to be in place and followed for <u>all operations in all areas</u> of the forest. |

| | |
|---|---|
| Threat | Deer |
| Likelihood of presence (high/medium/low) | High |
| Impact (high/medium/low) | High |
| Response | Roe Deer are present on site and have caused significant damage to restocking attempted by previous owner. Deer will be monitored, and planned restock site will be suitably protected for establishment. |

Additional hazards and constraints:

| |
|--|
| Management access: Access is generally good, access points and track surfaces are in good condition. Stacking areas are unsurfaced so use may be limited in wet conditions. |
| Wayleaves or easements: There is one wayleave for an 11 kV overhead powerline running inside the woodland boundary in the thinning area in the mature stand. |
| Public rights of way: There is one public footpath running inside the woodland boundary in the thinning area in the mature stand. |
| Ground conditions: The soil is freely draining throughout the site, but care must still be taken in wet conditions. Stacking areas are likely to degrade quickly with use and ground compaction will be a consideration during management operations. |
| Undergrowth: Areas around the boundaries of the forest have become overgrown with weeds in need of control/management. |
| Wildlife/protected species: Badgers are present on the site. A sett has been located in the thinning compartment in the mature stand. |
| Watercourses: No |
| SSSI Designations: No |
| Shooting Interest: No |

Management strategy:

| Management objective | Intention |
|--|---|
| Maintain the current rotation in the mature stand, to produce marketable timber from thinnings. | Carry out first thinning in 2023. Monitor the crop and carry out subsequent thinning to maximise yield and generate timber income. |
| Use income from timber sales to facilitate restoration of unmanaged compartments by controlling vegetation and restocking failed plantation. | Maintenance work planned for all compartments to include: removal of excessive weeds/vegetation to allow access and prepare for planting, repair of boundary fences where necessary, restocking of failed plantation. |
| Manage Roe Deer population to ensure successful establishment. | Put suitable measures in place to protect vulnerable crops as necessary. |

Silvicultural systems:

| Harvesting |
|--|
| Thinning. Thin mature stand to produce timber income; monitor any natural regeneration. Remove infected <i>Larix x marschlinsii</i> (Hybrid Larch) from restock site. |
| Establishment/restocking/regeneration |
| Mature stand. Restock by natural regeneration where possible supplemented by planting/underplanting where regeneration is low. |
| Restock site. To be re-planted with mixture of <i>Pinus sylvestris</i> (Scots Pine), <i>Picea abies</i> (Norway Spruce) and a suitable native broadleaved species. |

Figure 2: Method statement template

| | |
|--|--|
| <u>Method statement</u> | |
| <p style="text-align: right;"><i>This template may be modified by expanding fields only.</i></p> | |
| Relevant health and safety legislation: | Relevant environmental legislation: |

Figure 3: Tariff data recording form template

| | |
|-----------------------|-------------------------|
| Candidate name | Candidate number |
| | |
| Assessor name | Date |
| | |
| Site/Location | |
| | |

| | | |
|----------------|---------------------------------|---|
| Species | Girth sampling fraction: | Volume (height) sampling fraction: |
| | 1: __ | 1: __ |

Sampling fractions to be provided by assessor

DETAILS OF VOLUME SAMPLE TREES MEASURED FOR HEIGHT

| Tree No. | dbh (cm) | Height (m) | Tariff number |
|---|-----------------|-------------------|----------------------|
| | | | |
| | | | |
| | | | |
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| | | | |
| | | | |
| Total of tariff numbers: | | | |
| Average tariff number (rounded down): Total of tariff numbers divided by number of sample trees | | | |

Note for assessors: add/remove rows as required.

| Mean dbh (cm) | Mean volume (m³) From table 46, <i>Forest Mensuration, a handbook for practitioners</i> | Total number of trees | Total volume (m³) Mean volume x total number of trees |
|----------------------|--|------------------------------|--|
| | | | |

TALLY OF TREES MARKED

| | | | | | | | |
|--|--|--|--|--|--|--|--|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Note for assessors: add/remove rows as required.

Total number of trees:

RECORD OF TREES MARKED AND MEASURED FOR GIRTH

| dbh (cm) | Tally of girth sample trees | Total | Total x dbh ² |
|---|-----------------------------|-------|--------------------------|
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |
| 17 | | | |
| 18 | | | |
| 19 | | | |
| 20 | | | |
| 21 | | | |
| 22 | | | |
| 23 | | | |
| 24 | | | |
| 25 | | | |
| 26 | | | |
| 27 | | | |
| 28 | | | |
| 29 | | | |
| 30 | | | |
| 31 | | | |
| 32 | | | |
| 33 | | | |
| 34 | | | |
| 35 | | | |
| 36 | | | |
| 37 | | | |
| 38 | | | |
| 39 | | | |
| 40 | | | |
| Total number of measured trees | | | |
| Total dbh² (add together results for each dbh class) | | | |
| Mean dbh² (Total dbh ² divided by total number of measured trees) | | | |
| Mean dbh (cm) (square root of mean dbh ²) | | | |

Note for assessors: add/remove rows and/or change dbh values to suit dbh range of stand.

Figure 4: 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 5: 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 6: Table of standard establishment costs

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

| Item | Cost | Description |
|----------------------|-------------------|---|
| Plant conifer | £0.25 per tree | Labour cost per tree for planting |
| Plant broadleaf | £0.40 per tree | Labour cost per tree for planting |
| Install tree shelter | £0.50 per shelter | Labour cost per tree shelter for installation |

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