

City & Guilds Level 3 Certificate of Competence in Utility Arboriculture Use of a Chainsaw from a Mobile Elevating Work Platform (MEWP) (0038-35)

August 2022 Version 1.2

Assessment Pack – Centre and Candidate Version

Version and date	Change detail	Section
1.0 December 2021	First version	
1.1 March 2022	Corrected formatting and typographical errors	Throughout
	Added 'In areas where different voltages are used to the ones listed within this guidance, regional variation may be applied.'	Page 4
	Added pre-requisites	
	Activity 8 Added 'to MEWP' to description	Practical observation descriptor table
	Activity 20 Amended 'a dedicated electrical observer/ lookout' in 'Procedure for category B trees' Amended third measure in 'Procedure for category C trees'	
	Activity 22 Amended 'dedicated electrical observer/ lookout'	
	Amended activity description 8	Practical table
1.2 August 2022	Updated pre-requisite information	Page 3
	Updated City & Guilds logo	Front cover
	Updated Sources of general information	Appendix 1

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Pre-requisites

Candidates must have achieved:

Level 3 Certificate of Competence in Utility Arboriculture Basic Electrical Knowledge (0038-30) Level 3 Certificate of Competence in Utility Arboriculture Tree Species Recognition, Growth Characteristics and Associated Hazards (0038-31)

Level 3 Certificate of Competence in Utility Arboriculture Ground-based Pruning (0038-32) Level 2 Award in the Safe Use of a Mobile Elevated Work-Platform (0017-01 or 0017-02) or relevant IPAF training certificate or card

Level 2 Certificate of competence chainsaw maintenance and cross-cutting (0039-20) Level 2 Certificate of Competence in Felling Small Trees up-to 380mm (0039-21) or equivalent qualifications.

Centres must ensure that any pre-requisites stated are met.

Introduction

This assessment relates to the units in the Qualification Handbook. The assessment(s) can be achieved at pass grade only. If any task is not achieved the candidate is unsuccessful.

This assessment is for unit 306 Utility Arboriculture Use of a Chainsaw from a Mobile Elevating Work Platform (MEWP) covering the following learning outcome:

1. Carry out utility arboriculture use of a chainsaw from a mobile elevated work platform (MEWP)

General guidance on the requirements for assessment can be found in the Assessor Guidance document available on the City & Guilds web site www.nptc.org.uk

The assessor must complete the Practical Table mark sheet for each candidate which should be kept by the assessor for a minimum period of twelve months.

Record of assessment (ROA)

A prepopulated record of assessment must be completed by the assessor following an assessment. The number of learning outcomes is listed above, these must be ticked in the relevant 'met' or 'not met' sections of the ROA.

ARAS Forms

An Assessment Result Advice Slip (ARAS form) must be completed by the assessor following an assessment. The ARAS is not a certificate but, based on the evidence of the candidate's performance, is a recommendation to City & Guilds that the candidate has either met or not met the assessment criteria. All feedback is to be recorded by the assessor on the feedback section of the ARAS form.

Assessment Time

The expected assessment time for this qualification is $1\frac{1}{2} - 2$ hours.

Site/workshop requirements:

Simulated overhead electrical network, trees of an appropriate size for pruning

Equipment/Machinery:

Mobile elevated work platform, LOLER compliant machine, pruning saw/chainsaw

Consumables:

fuel and oil/charged battery

This is a closed book assessment.

In areas where different voltages are used to the ones listed within this guidance, regional variation may be applied.

Practical observation descriptor table

Unit 306 Utility Arboriculture Use of a Chainsaw from a Mobile Elevating Work Platform (MEWP)

Act	ivity number and description from check list	Assessment criteria
1	Identify the hazards, risks and controls associated with the site, task, and machine	Identify hazards, risks, and controls relevant to the site task and machine
2	State the emergency procedures relevant to the site	Emergency procedures relevant to the work site
3	State industry guides relevant to using a chainsaw from a mobile elevating work platform (MEWP)	 Industry guides relevant to aerial tree pruning: AA Technical guide 5 Use of Mobile elevating work platforms (MEWP) in tree work Tree work recommendations BS3998
4	Explain the meaning of the warning decals on the MEWP	Explain the meaning of the warning decals on the MEWP
5	Explain the function of all the instruments and controls of the machine	Explain the function of all the instruments and controls of the machine
6	Carry out pre-use and running checks for the MEWP in accordance with the operator's manual	Carry out pre-use and running checks in accordance with the operator's manual
7	Site set up in accordance with site requirements and risk assessment	Site set up may include: warning signs traffic management warning tape barriers other
8	Explain how to carry out a MEWP to MEWP rescue	 Rescue from a MEWP may include: trained and competent MEWP operator places work platform close to casualty/operator MEWP operator connects casualty/operator to suitable attachment point in the rescue MEWP MEWP operator assists casualty/operator into the basket MEWP operator disconnects casualty/operator from their original system descent made

9	Explain the potential implication on a MEWP's safe working load limit during aerial rescue	The implications on the MEWP's safe working limit maybe: • exceeding the rated load of the work platform • structural collapse • non – function • overturn of the MEWP • other
10	Explain how the species, condition of trees and time of year affect the work	Species, condition of tree and time of year may affect the work owing to: Species: brittle timber – loss of control responses to pruning other Condition: dead – loss of control, safety compromised diseased – biosecurity measures other Time of year: some species bleed heavily if pruned at certain times of year promotion of subsequent disease or infection other
11	Explain different cuts and when they may be used	 Cuts that maybe used and their application: Sink Cut: directional sink with back cut retaining hinge which aide's direction Step Cut: two over lapping cuts used on handheld sections Inboard: finishing cut towards main stem, reducing risk of saw being taken Out board: finishing cut away from main stem, timber falls flat and reduces the risk of tearing Vertical: on upright or semi-upright timber. Can be one of the above cuts Horizontal: on lateral stems. Can be one of the above cuts V Cut: two joining directional sinks with back cut, used on smaller diameter stems under tension Holding Cut: sink cut with retained hinge and hold at the rear, used on larger diameter stems under tension

12	State the potential defects that maybe present on the overhead line	Potential defects that maybe present on the overhead line may include: • broken or damaged conductors • irregular spacing of conductors • ground clearance • damaged or rotten poles • condition of stays • other
13	State the requirements if earthing the MEWP is necessary	 The requirements for earthing the MEWP may include: cable avoidance tool (CAT scanner) shall be used before any earth rods are driven into the soil earth rods shall be inserted to a minimum depth of 300mm in a square formation earth rods shall be positioned at least 500mm from identified underground services earth nest shall be positioned a minimum of eight metres from the vehicle earth rods must be driven into the ground before connecting the earth cable to vehicle chassis the earth rods shall be applied to a designated earthing point on the vehicle if fitted
14	State the factors affecting the use of MEWPs in proximity to overhead power lines	 The factors affecting the use of MEWPs in proximity to overhead power lines may include: use of MEWP approved by the network operator MEWP operator must be competent and authorised by the network operator MEWPS may only be used in accordance with network operator guidance, including limitations of live and dead working and voltages network operator control room shall be made aware of operator's daily whereabouts MEWPS should not be used in situations where there is imminent likelihood of an electrical storm A nominated ground rescue person should be available on-site to conduct a rescue
15	State the points to be considered when setting up the MEWP	 The points to be considered when setting up the MEWP may include: ground conditions must be confirmed as appropriate for MEWP operation position the MEWP using spreader plates so that it is out of the drop zone MEWP must never be positioned directly beneath energised conductors MEWP bucket shall never be positioned directly above or below energised conductors operatives not within the MEWP bucket while it is being manoeuvred/ positioned

16	Describe the points to be considered for safe operation of the MEWP	 The points to be considered for safe operation of the MEWP may include: no part of the MEWP shall ever breach the vicinity zone, The only exception to this will be where no branches breach the Live Zone and there is further supervision and a method statement approved by the Network Operator that ensures there is no breach of the Live Zone no part of any person's body shall ever breach the vicinity zone no tools or equipment except approved insulated tools shall breach the vicinity zone no person shall work directly above or below any live conductor dedicated electrical observer/ lookout capable of stopping work must be used when working above the level of the electrical apparatus dedicated electrical observer/ lookout capable of stopping work must be used to maintain clearances drop zone positioned not to compromise the access equipment or infrastructure
17	State emergency procedures involving a MEWP which is in contact with an overhead power line	Emergency procedures involving a MEWP which is in contact with an overhead power line may include: • stop all work • inform the MEWP operator (if necessary) • inform the supervisor • ensuring no one touches the MEWP or attempts to use ground controls • move away from the immediate area of the machine • ensure that no one is directly beneath the conductors • keep all personnel at least five metres from the machine • contact the emergency control room to request emergency disconnection of power • other
18	State ways of dealing with an injured operator unable to bring themselves down involving a MEWP which is <u>not</u> in contact with an overhead power line	Ways of dealing with an injured operator who is unable to bring themselves down may include: rescue operator with second MEWP if available initiate manual override ground controls as per manufactures instructions other

19	Explain how trees are electrically categorised when located in proximity to an overhead line and in which document it can be referenced	 trees within the Vicinity Zone (including the Live Zone) at or above the level of conductors or associated equipment Category B: trees outside but capable of breaching the Vicinity Zone (including the Live Zone) adjacent to conductors or associated equipment Category C: trees within the Vicinity Zone (including the Live Zone) that are beneath the conductors or associated equipment Category D: trees outside the Vicinity Zone with no potential of breaching the Vicinity Zone Document for reference may be: G55
20	State the electrical method of work required prior to and during the aerial pruning of trees for all tree categories	Procedure for category A trees: With the line live the method of work should be established by incorporating the following control measures: aerial tree works will be carried out with the line made dead and earths applied, the only exception to this will be where no branches breach the Live Zone and there is further supervision and a method statement approved by the Network Operator that ensures there is no breach of the Live Zone trees with branches in the Vicinity Zone but not in the Live Zone should only be pruned where a procedure approved by the Network Operator is in place if branches protrude through the Vicinity Zone and up above the height of the Vicinity Zone and overhang the extent of the Live Zone then the works will be carried out with the line dead a dedicated electrical observer/ lookout capable of stopping work will be required to ensure that the required control measures are being adhered to

	Procedure for entageny P trace:
	Procedure for category B trees:
20 cont.	With the line live the method of work should be established by incorporating the following control measures: • in the circumstance where there is extensive overhang which cannot be removed using an approved method over the Live Zone then works shall be carried out dead • full account of the weather conditions must be taken • control measures should, where necessary, include preparatory work to remove branches in a logical manner to avoid the risk of small branches cut higher up in the crown outside the Vicinity Zone bouncing or cartwheeling onto the line • if branches have the potential to breach the Live or Vicinity Zone, then only small sections should be removed to avoid a phase-to-phase contact or damage to the network • the maximum length of cut section should be recorded on the risk assessment and a dedicated observer capable of stopping work must be used • a dedicated electrical observer/lookout capable of stopping work must be used to maintain clearances if a climber or mobile elevating work platform is above the level of conductors Procedure for category C trees: With the line live the method of work should be established by incorporating the following control measures: • remove branches in the Live Zone with approved insulated tools before any aerial pruning • MEWP must never be positioned directly beneath energised conductors • If the trees are below the level of the Live Zone, then they may be pruned, ensuring that no part of the operators' body, tools or equipment can breach the Vicinity Zone and that branches are not caused to breach the Live Zone, a dedicated electrical observer/ lookout capable of stopping work should be used in this instance.

		Procedure for category D trees:
20 cont.		With the line live the method of work should be established by incorporating the following control measures: use non-insulated tools and avoid any breach of the Vicinity Zone by operatives, tools, or equipment
21	State factors to consider when pruning trees from a MEWP adjacent to power lines	 Considerations when pruning trees from a MEWP adjacent to power lines may include: material must be handled to prevent anything entering the Vicinity Zone no work should be attempted directly above the Live Zone there must be no likelihood of any sections bouncing into the Vicinity Zone handheld sections must be thrown away from the conductors avoiding the Vicinity Zone cuts must be made accurately to ensure that sections break cleanly without tearing
22	State the process when dealing with vegetation which cannot be cut with a chainsaw or hand saw	 When dealing with vegetation which cannot be cut with a chainsaw/hand saw: material must be cut using approved insulated tools the operator and all non-insulated equipment must remain outside the Vicinity Zone appropriate pruning points are identified and the length of cut material is appropriate dedicated electrical observer/ lookout capable of stopping work must be used to maintain clearances
23	Set up the MEWP as per manufacturers information and job specification	 Set up of the MEWP should include: as per manufacturers/operator's manual appropriate PPE worn work restraint/full body harness set up position appropriate for intended operation examination of ground conditions deployment of stabilisers, outriggers, and jacks use of extending axles where applicable secure set up position other
24	Demonstrate safe starting of the chainsaw	Chainsaw is checked started, and function tested ready for use in accordance with manufactures information

25	Operate the MEWP safely	Safe operation of the MEWP should include: all round observation correct use of controls control of basket boom correctly slewed MEWP bucket elevated to suitable work position to carry out task effective communication other
26	Demonstrate a variety of cuts on branches in proximity to overhead lines	Step Cut and Sink Cut sections should be removed, taking the following points into account: characteristics and properties of the wood allowed for manageable sections selected operator holding the saw using both the front and top/rear handles of the saw side or reducing cuts used where appropriate appropriate hinge left on Sink Cut sections position of cuts on Step Cut sections and a complete overlap of cuts achieved the branch collar and/or branch bark ridge is identified when pruning chain brake applied or saw switched off whilst breaking and casting sections operator maintains awareness of activity below ensure clear and concise communication sections cut small enough for ease of handling sections cast away from the conductors to prevent breach of Vicinity Zone all pruning operations carried out to prevent the mobile elevated work platform and non-insulated equipment breaching the Vicinity Zone prune to encourage any new growth to grow away from the line handheld sections are cast into a predetermined area
27	Demonstrate how to lower the MEWP in a controlled manner	 Lowering of the MEWP should consider: platform slewed and lowered in correct sequence platform lowered slowly and carefully platform stowed and where applicable locked in travel position other

28	Demonstrate how to convert the MEWP to transport position in accordance with the operator's manual	Convert the MEWP to transport position in accordance with the operator's manual: • reference to operator's manual • appropriate PPE used • debris removed • stabilisers retracted and secure • warning lights off • platform checked for roadworthiness as appropriate
29	Explain the reasons for inspecting the MEWP after use	The reasons for inspecting the MEWP after use maybe: • remove any operational debris from MEWP • identify damage that may have been caused through use • ensure vehicle is still roadworthy • other
30	Dispose of waste safely in line with legislation	All waste produced is disposed of in line with legislation, good practice, and site requirements
31	Use appropriate tools, equipment, and personal protective equipment (PPE)	All tools, equipment and personal protective equipment is used in line with industry good practice
32	Carry out work to minimise environmental damage	It is ensured that any possible environmental damage is always minimised
33	Work in a way which maintains health and safety and is consistent with relevant legislation and industry good practice	All activities must be completed in a way which protects the operator and those around them

Practical tables

Unit 306 Utility Arboriculture Use of a Chainsaw from a Mobile Elevating Work Platform (MEWP)

Candidate name:	
Date:	
Start time:	
Finish time:	

All criteria must be achieved.

Activity number and description		
1.	Identify the hazards, risks and controls associated with the site, task, and machine	
2.	State the emergency procedures relevant to the site	
3.	State industry guides relevant to using a chainsaw from a MEWP	
4.	Explain the meaning of the warning decals on the MEWP	
5.	Explain the function of all the instruments and controls of the machine	
6.	Carry out pre-use and running checks for the MEWP	
7.	Site set up in accordance with site requirements and risk assessment	
8.	Explain how to carry out a MEWP to MEWP rescue	
9.	Explain the implication on a MEWP's safe working load limit during aerial rescue	
10.	Explain how the species, condition of trees and time of year affect the work	
11.	Explain different cuts and when they may be used	
12.	State the potential defects that maybe present on the overhead line	
13.	State the requirements if earthing the MEWP is necessary	
14.	State the factors affecting the use of MEWPs in proximity to overhead power lines	
15.	State the points to be considered when setting up the MEWP	
16.	Describe the points to be considered for safe operation of the MEWP	
17.	State emergency procedures involving a MEWP which is in contact with an overhead power line	
18.	State ways of dealing with an injured operator involving a MEWP which is not in contact with an overhead power line	
19.	Explain how trees are electrically categorized	
20.	State the electrical method of work required prior to and during the pruning of trees	
21.	State factors to consider when pruning trees from a MEWP adjacent to power lines	
22.	State the process when dealing with vegetation which cannot be cut with a chainsaw or hand saw	

23. Set up the MEWP as per manufacturers information and job specification			
24. Demonstrate safe starting of the chainsaw			
25. Operate the MEWP safely			
26. Demonstrate a variety of cuts on branches in proximity to overhead lines			
27. Demonstrate how to lower the MEWP in a controlled manner			
28. Demonstrate how to convert the MEWP to transport position			
29. Explain the reasons for inspecting the MEWP after use			
30. Dispose of waste safely in line with legislation			
31. Use appropriate tools, equipment, and personal protective equipment (PPE)			
32. Carry out work to minimise environmental damage			
33. Work in a way which maintains health and safety			
Grade (P/X)			
Assessor feedback: Candidate feedback:			
Candidate signature and date			
Candidate signature and date			
Assessor signature and date			

Appendix 1 Sources of general information

The following documents contain essential information for centres delivering City & Guilds qualifications. To download the documents and to find other useful documents, go to the Centre Document Library on www.cityandguilds.com or click on the links below:

Quality Assurance Standards: Centre Handbook

This document is for all approved centres and provides guidance to support their delivery of our qualifications. It includes information on

- Centre quality assurance criteria and monitoring activities
- Administration and assessment systems
- Centre-facing support teams at City & Guilds / ILM
- Centre quality assurance roles and responsibilities.

The Centre Handbook should be used to ensure compliance with the terms and conditions of the Centre Contract.

Quality Assurance Standards: Centre Assessment

This document sets out the minimum common quality assurance requirements for our regulated and non-regulated qualifications that feature centre assessed components. Specific guidance will also be included in relevant qualification handbooks and/or assessment documentation.

It incorporates our expectations for centre internal quality assurance and the external quality assurance methods we use to ensure that assessment standards are met and upheld. It also details the range of sanctions that may be put in place when centres do not comply with our requirements, or actions that will be taken to align centre marking/assessment to required standards. Additionally, it provides detailed guidance on the secure and valid administration of centre-assessments.

Access arrangements - When and how applications need to be made to City & Guilds provides full details of the arrangements that may be made to facilitate access to assessments and qualifications for candidates who are eligible for adjustments in assessment.

The Centre Document Library also contains useful information on such things as:

- Conducting examinations
- Registering learners
- Appeals and malpractice

Useful contacts

Please visit the Contact Us section of the City & Guilds website, Contact us

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