



Level 3 Certificate of Competence in Aerial Tree Rigging (0039-32)

August 2021 Version 1.1

Assessment Pack – Centre Version

Version and date	Change detail	Section
1.0	First version	
1.1 August 2021	Assessor instructions updated	1. Introduction

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Introduction

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

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 outcomes is listed above, these must be ticked into 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 is 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 2 – 4 hours.

Site/workshop requirements:

Trees of sufficient size and form to enable all assessment criteria to be assessed

Branches of a minimum diameter of 100mm

Vertical timber with a minimum diameter of 200mm.

Equipment/Machinery:

LOLER compliant Mobile Elevated Work Platform (MEWP) if used

LOLER compliant climbing equipment with documented evidence, for the Candidate and the Assessor

LOLER compliant rigging equipment

Top handled or rear handled Chainsaw (max guide bar 15 inch) with maintenance tools

Handsaw

First aid kit

Consumables:

Fuel and chainsaw oil

This is not an open book assessment, however additional technical information may be sought from the relevant manufactures operator manuals or any other appropriate training or safety publication.

Practical observation descriptor table

303 Aerial tree rigging

Activity number and description from check list	Assessment criteria
1.	Identify the hazards, risks and controls associated with the site, task and machine
2.	Identify hazards, risks and controls relevant to the site task and machine
3.	<p>State the emergency procedures relevant to the site</p> <p>Emergency procedures relevant to the work site</p> <p>State industry guides and information relevant to aerial tree rigging</p> <p>Industry guides relevant to aerial tree pruning:</p> <ul style="list-style-type: none"> • AA Technical Guide 1 Tree climbing and aerial rescue • AA Technical Guide 2 Use of tools in a tree • AA Technical Guide 3 Rigging and dismantling • AA Technical Guide 5 Use of Mobile elevating work platforms in tree work • Evaluation of current rigging and dismantling practices used in arboriculture HSE RR668 • Tree work recommendations BS3998
4.	<p>Perform a tree condition assessment of the tree and work at height assessment prior to commencing the work</p> <p>Potential hazards that may be encountered may include:</p> <ul style="list-style-type: none"> • evidence of cavities, decay or decay fungi • deadwood and broken branches • dead or flaking bark • v shaped unions • cracks • nesting insects • the presence of power lines or telephone wires • targets and obstacles underneath the tree

5.	Discuss a working at height assessment	<p>Working at height assessment may include:</p> <ul style="list-style-type: none"> • can the work be carried out from ground level • the use of a mobile elevating work platform (MEWP) to prevent a fall • The use of suitable equipment minimise the distance and consequence of a fall
6.	State when tree rigging may be required and its limitations	<p>Rigging may be required when:</p> <ul style="list-style-type: none"> • free fall techniques are not possible • other <p>Limitations may include:</p> <ul style="list-style-type: none"> • higher competency levels of staff required • potentially time consuming to set up and use • equipment intensive • other
7.	Discuss site zoning in relation to on site preparation	<p>Work site layout factors to consider may include:</p> <ul style="list-style-type: none"> • work zone: an area where hazards may be encountered • drop zone: an area where it is anticipated materials may fall • exclusion zone: the overall operational area • other
8.	Describe how to select compatible components to make up a rigging system appropriate for the anticipated load	<p>Selection of compatible components may include:</p> <ul style="list-style-type: none"> • knowledge of loads that equipment may be subject to • consideration of strength loss due to configuration, age and condition • compatibility with any other components • other
9.	Select compatible components to make up the rigging system	<p>Candidate to select components which may include:</p> <ul style="list-style-type: none"> • rigging blocks

		<ul style="list-style-type: none"> • rigging ropes • connectors • slings • strops • lowering devices • redirect pulleys • other
10.	Use and maintain tools, equipment and personal protective equipment (PPE)	<p>Candidate to select compliant PPE and safety clothing for tree climbing and chainsaw use to include:</p> <ul style="list-style-type: none"> • tree climbing helmet • personal first aid kit • knife with retractable blade or handsaw • chainsaw protective footwear with good grip and ankle support • non- snag clothing • eye protection • hearing protection • chainsaw protective clothing • appropriate chainsaw with lanyard. <p>Candidate to select appropriate compliant climbing equipment</p>
11.	Describe how to select suitable work positions and planned drop zones	<p>Factors to consider when selecting a work position may include:</p> <ul style="list-style-type: none"> • minimising climbers risk • minimising potential equipment damage • available anchor points • risk assessment • other <p>Factors to consider when selecting an appropriate drop zone may include:</p> <ul style="list-style-type: none"> • suitable areas • identification of targets • access and egress • other
12.	Describe how to select suitable anchor points for the anticipated load without	Suitable anchor points may be selected in terms of:

	compromising the workers access position	<ul style="list-style-type: none"> • sufficient size and strength • tree form and condition • work to be completed • anticipated load • obstacles beneath • climbers position and anchor points • planned drop zone • other
13.	Explain how to calculate the mass of the load	<p>Calculated the weight of the section and mass of the load:</p> <ul style="list-style-type: none"> • Log mass chart (length x diameter = log mass x safety factor x species correction factor)
14.	Explain how to calculate the peak load on the rigging pulley	<p>Calculation of the load for the rigging point when lowering timber may include:</p> <p>Rigging point above the load</p> <ul style="list-style-type: none"> • log mass x 2 = load <p>Rigging point below the load</p> <ul style="list-style-type: none"> • log mass x 11 = load
15.	Calculate the anticipated loads	<p>Calculate load:</p> <ul style="list-style-type: none"> • above the load • below the load
16.	Describe how to minimise shock loading in the rigging system	<p>Shock loading may be minimised by:</p> <ul style="list-style-type: none"> • allowing sections to run • removing smaller sections • placing more rope in the system • reconfigure rigging system • other
17.	Describe methods of adding friction into the rigging system	<p>Methods of adding friction may include:</p> <ul style="list-style-type: none"> • natural tree structure • rigging bollard • capstan • figure of eight • rigging rings • other
18.	State the considerations for selecting friction devices	<p>Considerations for the selection of friction devices may be:</p>

		<ul style="list-style-type: none"> • size/mass of the load • availability of anchor points • safety being compromised • simplicity of operation • potential of equipment damage • other
19.	Explain how to remove tree sections	<p>The basic principles of various rigging techniques may include:</p> <p>Tip tie techniques:</p> <ul style="list-style-type: none"> • rope attached to tip end of branch <p>Butt tie techniques:</p> <ul style="list-style-type: none"> • rope attached to butt end of branch <p>Balance/ cradle:</p> <ul style="list-style-type: none"> • use multiple attachment points to suspended a horizontal load <p>Snatching:</p> <ul style="list-style-type: none"> • section tied above rigging point <p>Speed line:</p> <ul style="list-style-type: none"> • after removal of tree section the load is transferred to the speed line to be moved to the designated drop zone <p>Lifting techniques:</p> <ul style="list-style-type: none"> • during the removal of a tree section the load is lifted by an appropriate lifting device
20.	Describe how, when and where to use	<p>Rigging systems to include:</p> <p>Drift load transfer line:</p> <ul style="list-style-type: none"> • moving suspended loads from one place to another <p>Spider leg:</p> <ul style="list-style-type: none"> • used to create a multiple attachment <p>Speedline:</p> <ul style="list-style-type: none"> • transport a suspended load <p>False anchor points:</p> <ul style="list-style-type: none"> • to create an artificial anchor <p>Pull/ tag line:</p>

		<ul style="list-style-type: none"> assist the removal of a section
21.	Demonstrate tying of knots that may be used in rigging	<p>Demonstration of the following knots must be demonstrated during the assessment:</p> <ul style="list-style-type: none"> timber hitch cow hitch running bowline clove hitch
22.	Use access and positioning methods appropriate to the tree	<p>All anchor points selected taking into consideration:</p> <ul style="list-style-type: none"> size, strength and structure position in relation to the parts of the tree to be accessed use of equipment to minimise damage to the tree if appropriate <p>Candidate establishes their initial anchor points taking into account:</p> <ul style="list-style-type: none"> suitability of the techniques used accurate installation of equipment organisation of ropes safety and position of the anchor points testing of the anchor points by thorough loading prior to ascent <p>Technique used takes into account:</p> <ul style="list-style-type: none"> efficient use of technique chosen candidate is attached to the tree at all times in accordance with industry good practice appropriate selection of anchor points appropriate route taken up the tree correct use of systems when changing anchor points thorough load testing of new anchor points

		<ul style="list-style-type: none"> • risk of a fall is managed at all times • correct use of equipment <p>An appropriate MEWP if applicable is set up and used in accordance with AA technical guide 5 use of mobile elevating work platform</p>
23.	Remove tree sections using suitable rigging and appropriate cuts	<p>Tree sections removed using the following techniques:</p> <ul style="list-style-type: none"> • tip tie • butt tie • cradle • vertical free fall • vertical lowered section <p>Taking the following points into account:</p> <ul style="list-style-type: none"> • suitable anchor points for climbing and lowering lines • relative positions of climbing and lowering lines • appropriate equipment selected for the anchor point of the lowering line • use of a craning fork where appropriate • appropriate means for the control of friction employed in the lowering system • manageable sections selected • position and method of attaching rope to the section • use of pull line if appropriate • appropriate safe and secure working position attained • characteristics and properties of the wood considered • correct position, depth and accuracy of cuts • chain brake applied or saw switched off whilst lowering sections • the climber must direct the ground operations • limbs are lowered under control

24.	Dispose of waste in line with work specification	All waste produced from activities is disposed of in line with legislation, good practice and/or site requirements
25.	Communicate appropriately with ground staff	communication between climber and ground staff maintained when appropriate
26.	Applied pruning specification	Pruning specifications executed as per industry good practice and job specification
27.	Used appropriate tools, equipment and personal protective equipment (PPE)	All tools, equipment and personal protective equipment is used in line with industry good practice
28.	Carried out work to minimise environmental damage	It is ensured that any possible environmental damage is minimised at all times
29.	Worked 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

Appendix 1 Practical tables

303 Aerial tree rigging

Candidate name:

Date:

Start time:

Finish time:

All criteria must be achieved.

Activity number and description	Achieved
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 and information relevant to aerial tree rigging	
4. Perform a tree condition assessment of the tree and work at height assessment prior to commencing the work	
5. Discuss a working at height assessment	
6. State when tree rigging may be required and its limitations	
7. Discuss site zoning in relation to on site preparation	
8. Describe how to select compatible components to make up a rigging system appropriate for the anticipated load	
9. Select compatible components to make up the rigging system	
10. Use and maintain tools, equipment and personal protective equipment (PPE)	
11. Describe how to select suitable work positions and planned drop zones	
12. Describe how to select suitable anchor points for the anticipated load without compromising the workers access position	
13. Explain how to calculate the mass of the load	
14. Explain how to calculate the peak load on the rigging pulley	
15. Calculate the anticipated loads	
16. Describe how to minimise shock loading in the rigging system	
17. Describe methods of adding friction into the rigging system	
18. State the considerations for selecting friction devices	
19. Explain how to remove tree sections	
20. Describe how, when and where to use	
21. Demonstrate tying of knots that may be used in rigging	
22. Use access and positioning methods appropriate to the tree	
23. Remove tree sections using suitable rigging and appropriate cuts	
24. Dispose of waste in line with work specification	
25. Communicate appropriately with ground staff	
26. Applied pruning specification	

27. Used appropriate tools, equipment and personal protective equipment (PPE)	
28. Carried out work to minimise environmental damage	
29. Worked in a way which maintains health and safety and is consistent with relevant legislation and industry good practice	
Grade (P/X)	

Candidate signature and date	
Assessor signature and date	

Assessor feedback:

Appendix 2 Sources of general information

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

City & Guilds Centre Manual

This document provides guidance for organisations wishing to become City & Guilds approved centres, as well as information for approved centres delivering City & Guilds qualifications. It covers the centre and qualification approval process as well as providing guidance on delivery, assessment and quality assurance for approved centres.

It also details the City & Guilds requirements for ongoing centre and qualification approval, and provides examples of best practice for centres. Specifically, the document includes sections on:

- the centre and qualification approval process
- assessment, internal quality assurance and examination roles at the centre
- registration and certification of candidates
- non-compliance and malpractice
- complaints and appeals
- equal opportunities
- data protection
- management systems
- maintaining records
- internal quality assurance
- external quality assurance.

Our Quality Assurance Requirements

This document explains the requirements for the delivery, assessment and awarding of our qualifications. All centres working with City & Guilds must adopt and implement these requirements across all of their qualification provision. Specifically, this document:

- specifies the quality assurance and control requirements that apply to all centres
- sets out the basis for securing high standards, for all our qualifications and/or assessments
- details the impact on centres of non-compliance

Our Quality Assurance Requirements document encompasses the relevant regulatory requirements of the following documents, which apply to all UK centres working with City & Guilds:

- Ofqual's General Conditions of Recognition

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

- **Walled Garden:** how to register and certificate candidates on line
- **Events:** dates and information on the latest Centre events
- **Online assessment:** how to register for e-assessments.

Useful contacts

UK learners

General qualification information

E:

learnersupport@cityandguilds.com

International learners

General qualification information

E: intcg@cityandguilds.com

Centres

Exam entries, Certificates, Registrations/enrolment, Invoices, Missing or late exam materials, Nominal roll reports, Results

E: information@cityandguilds.com

Single subject qualifications

Exam entries, Results, Certification, Missing or late exam materials, Incorrect exam papers, Forms request (BB, results entry), Exam date and time change

E: singlesubjects@cityandguilds.com

International awards

Results, Entries, Enrolments, Invoices, Missing or late exam materials, Nominal roll reports

E: intops@cityandguilds.com

Walled Garden

Re-issue of password or username, Technical problems, Entries, Results, e-assessment, Navigation, User/menu option, Problems

E: walledgarden@cityandguilds.com

Employer

Employer solutions, Mapping, Accreditation, Development Skills, Consultancy

T: +44 (0)121 503 8993

E: business@cityandguilds.com

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About City & Guilds

As the UK's leading vocational education organisation, City & Guilds is leading the talent revolution by inspiring people to unlock their potential and develop their skills. City & Guilds is recognised and respected by employers across the world as a sign of quality and exceptional training.

City & Guilds Group

The City & Guilds Group operates from three major hubs: London (servicing Europe, the Caribbean and Americas), Johannesburg (servicing Africa), and Singapore (servicing Asia, Australia and New Zealand). The Group also includes the Institute of Leadership & Management (management and leadership qualifications), City & Guilds Licence to Practice (land-based qualifications) and Learning Assistant (an online e-portfolio).

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