



# City & Guilds Level 3 Certificate of Competence in Aerial Tree Rigging (0039-32)

September 2022 Version 1.2

**Qualification Handbook**

## Qualification at a glance

|                                       |  |
|---------------------------------------|--|
| <b>Industry area</b>                  | Forestry and Arboriculture   |
| <b>City &amp; Guilds number</b>       | 0039-32  |
| <b>Age group</b>                      | 16-19, 19+   |
| <b>Entry requirements</b>             | Centres must ensure that any pre-requisites stated in the <i>What is this qualification about?</i> section are met.  |
| <b>Assessment</b>                     | <p>Candidates must have achieved City &amp; Guilds 0039-20 Level 2 Certificate of Competence in Chainsaw Maintenance and Cross-Cutting, 0039-21 Level 2 Certificate of Competence in Felling Small Trees up to 380mm, 0039-22 Level 2 Certificate of Competence in Tree Climbing and Aerial Rescue and 0039-23 Level 2 Certificate of Competence in Using a Chainsaw from a Rope and Harness (or equivalent versions).</p> <p>To gain this qualification, candidates must successfully achieve the following assessments:</p> <ul style="list-style-type: none"> <li>One to one practical assessment with oral questioning by an NPTC City &amp; Guilds approved assessor</li> </ul> |
| <b>Grading</b>                        | Pass only  |
| <b>Approvals</b>                      | Full centre approval<br>Qualification approval   |
| <b>Support materials</b>              | Assessment Pack – Centre Version   |
| <b>Registration and certification</b> | Registration and certification of this qualification is through the Walled Garden and is subject to end dates.   |

| Title and level  | Size (GLH) | TQT | City & Guilds qualification number | Ofqual number |
|--|------------|-----|------------------------------------|---------------|
| City & Guilds Level 3 Certificate of Competence in Aerial Tree Rigging | 24         | 28  | 0039-32                            | 603/7359/3    |

| Version and date   | Change detail  | Section                                 |
|--------------------|--|---|
| 1.0                | First version  |   |
| 1.1 October 2021   | AO name added to the qualification title                                       | Throughout                              |
| 1.2 September 2022 | Formatting changes<br>Updated logo<br>Updated 'Sources of general information' | Throughout<br>Front cover<br>Appendix 1 |

# Contents

|                   |   |           |
|-------------------|---|-----------|
| <b>1</b>          | <b>Introduction</b>                           | <b>4</b>  |
|                   | Purpose of Qualification                      | 4         |
|                   | Qualification structure                       | 5         |
| <b>2</b>          | <b>Centre requirements</b>                    | <b>6</b>  |
|                   | Approval                                      | 6         |
|                   | Physical resources                            | 6         |
|                   | Age restrictions                              | 7         |
| <b>3</b>          | <b>Administration</b>                         | <b>8</b>  |
|                   | External quality assurance                    | 8         |
|                   | Malpractice                                   | 8         |
|                   | Access arrangements and special consideration | 9         |
| <b>Unit 303</b>   | <b>Aerial Tree Rigging</b>                    | <b>10</b> |
|                   | What is this unit about?                      | 10        |
|                   | Learning outcomes                             | 10        |
|                   | Scope of content                              | 10        |
| <b>Appendix 1</b> | <b>Sources of general information</b>         | <b>16</b> |

# 1 Introduction

## Purpose of Qualification

The following purpose is for the **City & Guilds Level 3 Certificate of Competence in Aerial Tree Rigging (603/7356/8)**

| Area   | Description  |
|--|--|
| <b>OVERVIEW</b>  |  |
| Who is this qualification for?   | Individuals who use chainsaws as part of their work in arboriculture, forestry or other industries. It will provide the individual with the knowledge, understanding and skills required to carry out aerial tree rigging safely and to industry standards in line with current legislation. |
| What does this qualification cover?  | It covers risk assessment, emergency planning, legislation, industry best practice, tree condition and working at height assessment and tree rigging.  |
| <b>WHAT COULD THIS QUALIFICATION LEAD TO?</b>  |  |
| Will the qualification lead to employment, and if so, in which job role and at what level? | This qualification will support progression into employment where using aerial rigging is part of the role. Safe operational skills are key to efficient use, good working practice and preventing accidents, leading to business benefits in terms of less machinery damage and down time.  |
| Why choose this qualification over similar qualifications?                                 | This is a specialist qualification demonstrating the individual is able to use aerial rigging to a recognised level of competency.   |
| Will the qualification lead to further learning?   | Individuals who successfully complete this qualification could go on to increase their level of proficiency through consolidation practice within a working environment, or develop skills in safely operating chainsaws, e.g., Level 3 Certificate of Competence in Aerial Tree Pruning.    |
| <b>WHO SUPPORTS THIS QUALIFICATION?</b>  |  |
| Employer/Higher Education Institutions   | The Arboricultural Association   |
| Further information  | Please refer to the City & Guilds NPTC website for more information on the assessment.   |

## Qualification structure

For the **City & Guilds Level 3 Certificate of Competence in Aerial Tree Rigging** learners must be trained and assessed in a minimum of one of the units listed below. The qualification will be endorsed to the context of the unit assessed:

| Unit number                  | Unit title          | GLH |
|------------------------------|---------------------|-----|
| <b>Learners must achieve</b> |                     |     |
| 303                          | Aerial tree rigging | 24  |

## Total Qualification Time

Total Qualification Time (TQT) is the number of notional hours which represents an estimate of the total amount of time that could reasonably be expected for a learner to achieve and demonstrate the achievement of the level of attainment necessary for the award of a qualification.

TQT is comprised of the following two elements:

- 1) The number of hours which an awarding organisation has assigned to a qualification for Guided Learning, and
- 2) An estimate of the number of hours a Learner will reasonably be likely to spend in preparation, study or any other form of participation in education or training, including assessment, which takes place as directed by - but, unlike Guided Learning, not under the Immediate Guidance or Supervision of - a lecturer, supervisor, tutor or other, appropriate provider of education or training

| Title and level  | GLH | TQT |
|--|-----|-----|
| City & Guilds Level 3 Certificate of Competence in Aerial Tree Rigging | 24  | 28  |

## 2 Centre requirements

### Approval

New centres will need to gain centre approval. Existing City & Guilds centres who do not currently offer this qualification must go through the Qualification Approval (QAP) process. For centres currently offering City & Guilds Level 3 in Aerial Tree Rigging (0021-09) there is a Fast Track method of approval. Please email [qasupport@cityandguilds.com](mailto:qasupport@cityandguilds.com) for further information on the approval process

### Centre staffing

Staff delivering these qualifications must be able to demonstrate that they meet the following requirements:

- be technically competent in the areas in which they are delivering
- be able to deliver across the breadth and depth of the content of the qualification being taught
- have recent relevant teaching and assessment experience in the specific area they will be teaching, or be working towards this
- demonstrate continuing CPD.

### Physical resources

Centres must be able to demonstrate that they have access to the equipment and technical resources required to deliver this qualification and its assessments.

### Assessment Guidance for the Assessor

Staff assessing these qualifications must be approved Certificate of Competence City & Guilds NPTC Assessors and must be independent **and cannot have been involved with the training of the Candidate**. This qualification can only be assessed by an Assessor who is suitably qualified and meets the requirements of the awarding body.

Certificate of Competence City & Guilds NPTC Assessors must meet the following requirements:

- show competence and provide evidence of industry expertise in the qualification/s they wish to assess
- hold the qualification as a candidate and have been technically evaluated as an Assessor
- be up to date with their verification and relevant first aid
- demonstrate continuing technically relevant CPD

Compliance with these requirements is a pre-requisite for Assessors remaining on the list of approved Assessors.

Verification is a process of monitoring assessment; it is an essential check to confirm that the assessment procedures are being carried out in the way City & Guilds has laid down. The overall aim of verification is to establish a system of quality assurance that is acceptable in terms of both credibility and cost effectiveness and approved Assessors will be subject to a regular visit by the Verifier at a time when assessments are being undertaken.

A selection of assessment reports completed by the Assessor will be evaluated by a City & Guilds approved Quality Consultant.

### **Safe Practice**

Appropriate PPE must be worn at all times

All equipment must be operated in such a way that the Candidate, Assessor, other persons, animals or other equipment are not endangered.

If these conditions are not observed this will result in the Candidate not meeting the required standard.

### **Validation of Equipment**

Any item(s) equipment used for the assessment must comply with current legal requirements.

Additional information may be sought from the relevant manufacturer's instruction book, operators' manual, product label/database or any other Government/Government Agency publication.

### **Age restrictions**

This qualification is approved for learners aged 16 – 19, 19+.

## 3 Administration

Approved centres must have effective quality assurance systems to ensure valid and reliable delivery and assessment of qualifications. Quality assurance includes initial centre registration by City & Guilds and the centre's own internal procedures for monitoring quality assurance procedures.

Consistent quality assurance requires City & Guilds and its associated centres to work together closely; our Quality Assurance Model encompasses both internal quality assurance (activities and processes undertaken within centres) and external quality assurance (activities and processes undertaken by City & Guilds).

### External quality assurance

City & Guilds will undertake external moderation activities to ensure that the quality assurance criteria for this qualification are being met. Centres must ensure that they co-operate with City & Guilds staff and representatives when undertaking these activities.

City & Guilds requires the Head of Centre to

- facilitate any inspection of the centre which is undertaken on behalf of City & Guilds
- make secure arrangements to receive, check and keep assessment material secure at all times, maintain the security of City & Guilds confidential material from receipt to the time when it is no longer confidential and keep completed assignment work and examination scripts secure from the time they are collected from the candidates to their dispatch to City & Guilds.

### Malpractice

Please refer to the City & Guilds guidance notes *Managing cases of suspected malpractice in examinations and assessments*. This document sets out the procedures to be followed in identifying and reporting malpractice by candidates and/or centre staff and the actions which City & Guilds may subsequently take. The document includes examples of candidate and centre malpractice and explains the responsibilities of centre staff to report actual or suspected malpractice. Centres can access this document on the City & Guilds website.

Examples of candidate malpractice are detailed below (please note that this is not an exhaustive list):

- falsification of assessment evidence or results documentation
- plagiarism of any nature
- collusion with others
- copying from another candidate (including the use of ICT to aid copying), or allowing work to be copied
- deliberate destruction of another's work
- false declaration of authenticity in relation to assessments
- impersonation.

These actions constitute malpractice, for which a penalty (eg disqualification from the assessment) will be applied.

Where suspected malpractice is identified by a centre after the candidate has signed the declaration of authentication, the Head of Centre must submit full details of the case to City &



Guilds at the earliest opportunity. Please refer to the form in the document *Managing cases of suspected malpractice in examinations and assessments*. Alternatively please complete the form, JCQ/M1. Copies of this form can be found on the JCQ website: <http://www.jcq.org.uk>

### **Access arrangements and special consideration**

We have taken note of the provisions of equalities legislation in developing and administering this specification.

We can make arrangements so that candidates with disabilities, special educational needs and temporary injuries can access the assessment. These arrangements must be made before assessment takes place.

It is the responsibility of the centre to ensure at the start of a programme of learning that candidates will be able to access the requirements of the qualification.

Please refer to the *JCQ access arrangements and reasonable adjustments and Access arrangements - when and how applications need to be made to City & Guilds* for more information. Both are available on the City & Guilds website:

**<http://www.cityandguilds.com/delivering-our-qualifications/centre-development/centre-document-library/policies-and-procedures/access-arrangements-reasonable-adjustments>**

### **Special consideration**

We can give special consideration to candidates who have had a temporary illness, injury or indisposition at the time of the examination. Where we do this, it is given after the examination.

Applications for either access arrangements or special consideration should be submitted to City & Guilds by the Examinations Officer at the centre. For more information please consult the current version of the JCQ document, *A guide to the special consideration process*.

### **Language of examinations**

City & Guilds has a responsibility to ensure that candidates can be assessed in the following languages only:

- English
- English in Northern Ireland
- English in Wales.

|               |    |
|---------------|----|
| <b>Level:</b> | 3  |
| <b>GLH</b>    | 24 |

**What is this unit about?**

The aim of this unit is to provide the learner with the knowledge, understanding and skills required to carry out aerial tree rigging.

**Learning outcomes**

In this unit, learners will be able to

1. Carry out aerial tree rigging

**Scope of content**

This section gives details of the scope of content to be covered in the teaching of the unit to ensure that all the learning outcomes can be achieved.

**Learning outcome:**

1. Carry out aerial tree rigging

**Topics:**

- 1.1 Hazards, risks, controls, emergency procedures and industry guides
- 1.2 Tree condition and working at height assessment
- 1.3 Tree rigging

### **Topic 1.1**

Hazards, risks and controls relevant to the site task and machine.

Emergency procedures relevant to the work site .

Industry guides relevant to aerial tree pruning:

- 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

### **Topic 1.2**

Potential hazards that may be encountered may include:

- 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

Working at height assessment may include:

- 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

### **Topic 1.3**

Rigging may be required when:

- Free fall techniques are not possible
- Other

Limitations may include:

- Higher competency levels of staff required
- Potentially time consuming to set up and use
- Equipment intensive
- Other

Work site layout factors to consider may include:

- 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

Selection of compatible components may include:

- 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

Components which may include:

- Rigging blocks
- Rigging ropes
- Connectors
- Slings
- Strops
- Lowering devices
- Redirect pulleys
- Other

Compliant PPE and safety clothing for tree climbing and chainsaw use to include:

- 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.

Appropriate compliant climbing equipment.

Factors to consider when selecting a work position may include:

- Minimising climbers' risk
- Minimising potential equipment damage
- Available anchor points
- Risk assessment
- Other

Factors to consider when selecting an appropriate drop zone may include:

- Suitable areas
- Identification of targets
- Access and egress
- Other

Suitable anchor points may be selected in terms of:

- 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

Calculated the weight of the section and mass of the load:

- Log mass chart (Length x diameter = log mass x safety factor x species correction factor)

Calculation of the load for the rigging point when lowering timber may include:

Rigging point above the load:

- Log mass x 2 = load

Rigging point below the load:

- Log mass x 11 = load

Calculate load:

- Above the load
- Below the load

Shock loading may be minimised by:

- Allowing sections to run
- Removing smaller sections
- Placing more rope in the system
- Reconfigure rigging system
- Other

Methods of adding friction may include:

- Natural tree structure
- Rigging bollard
- Capstan
- Figure of eight
- Rigging rings
- Other

Considerations for the selection of friction devices may be:

- Size/ mass of the load
- Availability of anchor points
- Safety being compromised
- Simplicity of operation
- Potential of equipment damage
- Other

The basic principles of various rigging techniques may include:

Tip tie techniques:

- Rope attached to tip end of branch

Butt tie techniques:

- Rope attached to butt end of branch

Balance/cradle:

- Use multiple attachment points to suspend a horizontal load

Snatching:

- Section tied above rigging point

Speed line:

- After removal of tree section, the load is transferred to the speed line to be moved to the designated drop zone

Lifting techniques:

- During the removal of a tree section the load is lifted by an appropriate lifting device

Rigging systems to include:

Drift load transfer line:

- Moving suspended loads from one place to another

Spider leg:

- Used to create a multiple attachment

Speedline:

- Transport a suspended load

False anchor points:

- To create an artificial anchor

Pull/ tag line:

- Assist the removal of a section

Knots:

- Timber hitch
- Cow hitch
- Running bowline
- Clove hitch

All anchor points selected taking into consideration:

- 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

Establish initial anchor points taking into account:

- 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

Technique used takes into account:

- 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
- Risk of a fall is managed at all times
- Correct use of equipment

An appropriate MEWP if applicable is set up and used in accordance with AA Technical Guide 5 use of mobile elevating work platform.

Tree sections removed using the following techniques:

- Tip tie
- Butt tie
- Cradle
- Vertical free fall
- Vertical lowered section

Taking the following points into account:

- 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

All waste produced from activities is disposed of in line with legislation, good practice and/or site requirements.

Communication between climber and ground staff maintained when appropriate.

Pruning specifications executed as per industry good practice and job specification.

All tools, equipment and personal protective equipment is used in line with industry good practice.

It is ensured that any possible environmental damage is minimised at all times during chainsaw maintenance activities.

All activities must be completed in a way which protects the operator and those around them.

## Appendix 1 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 *Centre Document Library* on [www.cityandguilds.com](http://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*



## **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. We offer over 500 qualifications across 28 industries through 8500 centres worldwide and award around two million certificates every year. 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 is a leader in global skills development. Our purpose is to help people, organisations and economies develop their skills for growth. We work with education providers, employers and governments in over 100 countries across the world to help people, businesses and economies grow by shaping skills systems and supporting skills development.

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