



Level 2 Certificate of Competence in the Safe Use of Mowers (0014-35)

February 2020 Version 1.0

Qualification Handbook

Qualification at a glance

Industry area	Horticulture and Agriculture
City & Guilds number	0014-35
Age group	16-19, 19+
Entry requirements	Centres must ensure that any pre-requisites stated in the <i>What is this qualification about?</i> section are met.
Assessment	<p>To gain this qualification, candidates must successfully achieve the following assessment:</p> <p>Practical assessment with oral questioning by a City & Guilds NPTC approved Assessor. The Assessor can be the same individual who carried out the training or could be a different person. The Assessor must be approved and registered with City & Guilds NPTC.</p> <p>The assessment must be a stand-alone process that is separate to the training, and cannot be spread out across the length of the training course i.e. the assessment is conducted at the end of the training course or on a separate day.</p>
Grading	Pass only
Approvals	Full centre approval Qualification approval
Support materials	If applicable
Registration and certification	Registration and certification of this qualification is through the Online Registration System via Walled Garden, and is subject to end dates.

Title and level	Size (GLH)	TQT	City & Guilds qualification number	Ofqual accreditation number
Level 2 Certificate of Competence in the Safe Use of Mowers	7-8	10-11	0014-35	603/5341/7

Version and date	Change detail	Section
1.0 February 2020	First version	

Contents

1	Introduction	5
	Purpose statement	5
	Qualification structure	7
2	Centre requirements	9
	Approval	9
	Physical resources	9
	Internal Quality Assurance	10
	Age restrictions	10
3	Administration	11
	External quality assurance	11
	Malpractice	12
	Access arrangements and special consideration	12
4	Units	14
Unit 213	Prepare a pedestrian mower for operation	15
	What is this unit about?	15
	Learning outcomes	15
	Scope of content	16
Unit 214	Operate a pedestrian mower	21
	What is this unit about?	21
	Learning outcomes	21
	Scope of content	22
Unit 215	Prepare a ride-on mower for operation	24
	What is this unit about?	24
	Learning outcomes	24
	Scope of content	25
Unit 216	Operate a ride-on mower	30
	What is this unit about?	30
	Learning outcomes	30
	Scope of content	31
Unit 217	Prepare a tractor mounted/trailed mower for operation	33
	What is this unit about?	33
	Learning outcomes	33
	Scope of content	34
Unit 218	Operate a tractor mounted/trailed mower	40
	What is this unit about?	40
	Learning outcomes	40
	Scope of content	41
Appendix 1	Sources of general information	43

1 Introduction

Purpose statement

The following purpose is for the **Level 2 Certificate of Competence in the Safe Use of Mowers (X/000/XXX)**

Area	Description
OVERVIEW	
Who is this qualification for?	Individuals who operate mowers as part of their work in agriculture, horticulture, landscaping, grounds maintenance, greenkeeping, parks, gardens and also in amenity use. It will provide the individual with the knowledge, understanding and skills required to prepare and operate a mower safely and to industry standards in line with current legislation.
What does this qualification cover?	Individuals can choose the type of mower for assessment: pedestrian, ride-on or tractor mounted/trailed mower. The assessment covers pre-use checks, maintenance, identification of controls and instruments, and operating the machine taking into account the type of cutting mechanism used (e.g., rotary, cylinder, flail or reciprocating knife).
WHAT COULD THIS QUALIFICATION LEAD TO?	
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 safe operation of mowers 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 safely operate mowers 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 other land-based machinery such as Certificate of Competence in the Safe Use of Hand Held Hedge Cutters.
WHO SUPPORTS THIS QUALIFICATION?	
Employer/Higher Education Institutions	The National Farmers Union

FURTHER INFORMATION

Please refer to the Qualification Handbook, available on the City & Guilds NPTC website, for more information on the structure of this qualification, the content of the units, and assessment.

Qualification structure

For the **Level 2 Certificate of Competence in the Safe Use of Mowers (Pedestrian Controlled)**. Learners must be trained and assessed the units listed below. The qualification will be endorsed to the context of the unit assessed:

Unit number	Unit title	GLH
Learners must achieve		
213	Prepare a pedestrian controlled mower for operation	4
214	Operate a pedestrian controlled mower	3

Qualification Endorsement Certification Module numbers

Certification module number	Certification module title
903	Level 2 Certificate of Competence in the Safe Use of Mowers (Pedestrian Controlled) (Cylinder)
904	Level 2 Certificate of Competence in the Safe Use of Mowers (Pedestrian Controlled) (Rotary)
905	Level 2 Certificate of Competence in the Safe Use of Mowers (Pedestrian Controlled) (Flail)
906	Level 2 Certificate of Competence in the Safe Use of Mowers (Pedestrian Controlled) (Reciprocating knife)

For the **Level 2 Certificate of Competence in the Safe Use of Mowers (Ride-on)**. Learners must be trained and assessed in the units listed below. The qualification will be endorsed to the context of the unit assessed:

Unit number	Unit title	GLH
Learners must achieve		
215	Prepare a ride-on mower for operation	5
216	Operate a ride-on mower	3

Qualification Endorsement Certification Module numbers

Certification module number	Certification module title
-----------------------------	----------------------------

907	Level 2 Certificate of Competence in the Safe Use of Mowers (Ride-on) (Cylinder)
908	Level 2 Certificate of Competence in the Safe Use of Mowers (Ride-on) (Rotary)
909	Level 2 Certificate of Competence in the Safe Use of Mowers (Ride-on) (Flail)
910	Level 2 Certificate of Competence in the Safe Use of Mowers (Ride-on) (Reciprocating knife)

For the **Level 2 Certificate of Competence in the Safe Use of Mowers (Tractor mounted/ trailed)**. Learners must be trained and assessed in the units listed below. The qualification will be endorsed to the context of the unit assessed:

Unit number	Unit title	GLH
Learners must achieve		
217	Prepare a tractor mounted/ trailed mower for operation	5
218	Operate a tractor mounted/ trailed mower	3

Qualification Endorsement Certification Module numbers

Certification module number	Certification module title
911	Level 2 Certificate of Competence in the Safe Use of Mowers (Tractor mounted/ trailed) (Cylinder)
912	Level 2 Certificate of Competence in the Safe Use of Mowers (Tractor mounted/ trailed) (Rotary)
913	Level 2 Certificate of Competence in the Safe Use of Mowers (Tractor mounted/ trailed) (Flail)
914	Level 2 Certificate of Competence in the Safe Use of Mowers (Tractor mounted/ trailed) (Reciprocating knife)

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 0014-01/02 Level 2 Award in the safe Use of Pedestrian Controlled Mowers, 0014-03/04 Level 2 Award in the Safe Use of Ride-on Mowers or 0014-05/06 Level 2 Award in the Safe Use of Tractor Mounted Mowers, there is a Fast Track method of approval. Please email 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. They do not have to be independent, but can be, and can 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

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

Internal Quality Assurance

Internal quality assurance is key to ensuring accuracy and consistency of tutors and markers. Internal Quality Assurers (IQAs) monitor the work of all tutors involved with a qualification to ensure they are applying standards consistently throughout assessment activities. IQAs must have, and maintain an appropriate level of technical competence and be qualified to make both marking and quality assurance decisions through a teaching qualification or recent, relevant experience.

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).

For this qualification, standards and rigorous quality assurance are maintained by the use of:

- internal quality assurance

In order to carry out the quality assurance role, Internal Quality Assurers (IQAs) must have and maintain an appropriate level of technical competence and have recent relevant assessment experience. For more information on the requirements, refer to *Section 2: Centre requirements* in this handbook.

To meet the quality assurance criteria for this qualification, the centre must ensure that the following procedures are followed:

- suitable training of staff involved in the assessment of the qualification to ensure they understand the process of marking and standardisation
- completion by the person responsible for internal standardisation of the Centre Declaration Sheet to confirm that internal standardisation has taken place
- the completion by candidates and supervisors/tutors of the record form for each candidate's work.

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.

4 Units

Unit 213

Prepare a pedestrian mower for operation

Level:	2
GLH	4

What is this unit about?

The aim of this unit is to provide the learner with the knowledge, understanding and skills required to prepare a pedestrian mower for operation safely and to industry standards.

Learning outcomes

In this unit, learners will be able to

1. Know the requirements of risk assessment, legislation and safety when preparing a pedestrian mower
2. Carry out pre-use checks and maintain a pedestrian mower

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. Know the requirements of risk assessment, legislation and safety when preparing a pedestrian mower**

Topics:

- 1.1 Site specific hazard and risk assessment
- 1.2 Relevant health and safety legislation in relation to mowing operations
- 1.3 Personal Protective Equipment (PPE)
- 1.4 Power unit and fuel requirements
- 1.5 Safety features of the equipment being used

Topic 1.1

The hazards, evaluate the associated risks and implement appropriate control measures relating to the site, task and machine:

- Slopes
- Ground conditions
- Contact with moving parts
- Manual handling
- Overhead obstructions
- Surface obstructions
- People and/or animals
- Ditches/waterways
- Hot components
- Exhaust fumes
- Fuel and oil
- Bio hazards
- Dust/fungal spores
- Flying debris
- Operator over-reaching
- Contact with the cutters
- Insect bites/stings
- Fire

Site walk and report:

- Evaluate risks
- Implement appropriate control measures
- Confirm that the condition of the site is acceptable
- Confirm who they would report to if the site condition is unsuitable

Topic 1.2

Relevant pieces of health and safety legislation in relation to the preparation and use of the machine:

- Health and Safety at Work Etc. Act (HASAWA):
 - Duties imposed on the employer/employee/others

- Provision and Use of Work Equipment Regulations (PUWER):
 - Machine must be suitable for the task
 - Machine must be properly maintained according to manufacturer's recommendations
- Management of Health and Safety at Work Regulations (MHSWR):
 - Risk assessments must be completed and communicated to all relevant persons
- Manual Handling Operations Regulations (MHOR):
 - Avoid manual handling where possible, use safe lifting techniques
- Control of Substances Hazardous to Health (COSHH):
 - fuel handling and protection from contaminants
- Personal Protective Equipment Regulations (PPE):
 - PPE must be provided, maintained and worn
- The Control of Noise at Work Regulations:
 - Hearing protection must be used over 85 decibels (dB)
- Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR):
 - Certain categories of injuries must be reported
- Wildlife and Countryside Act (WCA):
 - Operations must be carried out avoiding disturbance to wildlife
- Health & Safety (First Aid) Regulations:
 - Need for an accident book and knowledge of where it is kept
- The Control of Vibration at Work Regulations:
 - to reduce the risk to health from vibrations

Topic 1.3

Suitable Personal Protective Equipment (PPE) required for operation:

- Eye protection
- Head protection
- Hearing protection
- Dust mask
- Hand protection
- Non-slag clothing
- High visibility clothing
- Safety footwear

Topic 1.4

The power unit and fuel requirements:

- Petrol
- Diesel
- Battery

Safety precautions that should be observed with flammable liquids (if applicable):

- No smoking/naked flames
- Allowing engine to cool before re-fuelling
- Avoiding contact with hot surfaces
- Fuel topped up to correct level
- Any spillage is dealt with using the correct method
- Be kept away from any sources of ignition

Fuel storage and transportation requirements (if applicable):

- Container specifically designed for fuel storage
- Have a non-spill spout
- Be clearly labelled
- Have securely fitting caps
- Be kept away from any sources of ignition

Topic 1.5

The guarding requirements for the mower:

- All moving and hot parts must be guarded

The meaning of the safety decals:

- operator and bystander protection decals

Safety features:

- Operator presence controls (OPC)

Learning outcome:

2. Carry out pre-use checks and maintain a pedestrian mower

Topics:

- 2.1 The function of all controls
- 2.2 Daily pre-use checks to the pedestrian mower
- 2.3 Refuelling the mower
- 2.4 Maintaining the cutting mechanism

Topic 2.1

All controls applicable to the mower

Topic 2.2

Daily pre-use checks, referring to manual if required:

- All pre-use checks applicable to the mower as specified in the manual

Topic 2.3

How to correctly refuel the mower (if applicable):

- Refueled in accordance with manufacturer's handbook/operators manual
- Checking the fuel level – allowing for expansion
- Cap correctly refitted

Topic 2.4

Cylinder Mowers

Cutting mechanism:

- Check the bed knife and cylinder for wear and damage

Checks and adjustments:

- Bed knife to cylinder clearance

- Carry out adjustments in accordance with manufacturer's handbook

Process for maintaining the cutting cylinder:

- Back lapping procedure explained

Rotary Mowers

Checks:

- Blade(s) condition
- Blade(s) security

Maintaining rotary blades:

- How to safely remove blade(s) from the mower
- Sharpening the blade
- How to balance the blade
- How to check that fitting is correct and tightness/torque setting is appropriate

Reasons for balancing blades:

- Reducing vibration
- Reducing noise
- Reducing bearing wear
- Protecting the operator

Flail Mowers

Checks:

- Flail condition
- Flail security

Process for maintaining flail blades:

- How to safely remove/secure flail
- Sharpening/reversing/replacing the flail
- How to check that fitting is correct and tightness/torque setting is appropriate

Reasons for maintaining balance:

- Reducing vibration
- Reducing noise
- Reducing bearing wear
- Protecting the operator

Reciprocating Knife Mower

Checks:

- Knife condition
- Knife security

Process for maintaining the reciprocating knife:

- How to safely remove knife from the mower
- Sharpening the knife sections

- How to refit the knife to the mower
- How to check that fitting is correct including adjustment of knife clips, ledger plates, wear plates and knife register

Unit 214

Operate a pedestrian mower

Level:	2
GLH	3

What is this unit about?

The aim of this unit is to provide the learner with the knowledge, understanding and skills required to operate a pedestrian mower safely and to industry standards.

Learning outcomes

In this unit, learners will be able to

1. Operate a pedestrian mower

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. Operate a pedestrian mower

Topics:

- 1.1 Test start and stop procedure
- 1.2 Operating adjustments to the mower
- 1.3 Operating the mower
- 1.4 Minimising environmental damage when working
- 1.5 Quality of the completed mowing operation
- 1.6 Post-use tasks

Topic 1.1

Test start and stop procedure:

- Start the machine
- Check operator presence control(s)
- Stop the machine

Topic 1.2

Operating adjustments to the mower:

- Height adjustment
- Grass collection/recycling

Topic 1.3

Operate the mower to a required specification for 15 minutes:

- Move the mower to the work site
- Task started at an appropriate point
- Appropriate forward speed maintained
- Suitable engine speed
- Work checked following 'trial' cut
- Minimise overlap/misses

Topic 1.4

Carrying out work in a manner which minimises environmental damage:

- Climatic conditions are acceptable
- Ground conditions are acceptable
- Turns made without excessive damage to the surface
- Cut material disposed of/recycled in accordance with legislative and organisational requirements

Topic 1.5

Walk site and comment on the finish:

- Finish complies with agreed specification

Topic 1.6

Reasons for regularly cleaning the mower:

- Prevents personal contamination
- Prevents corrosion
- Makes visual inspection for damage possible
- Facilitates maintenance and adjustments

The personal protective equipment (PPE) required for cleaning operations:

- Eye protection
- Safety footwear
- Overall/coverall
- Hand protection
- Face shield
- Dust mask

Methods of cleaning the mower:

- A brush
- Compressed/blown air
- Water/pressure washer

Unit 215

Prepare a ride-on mower for operation

Level:	2
GLH	5

What is this unit about?

The aim of this unit is to provide the learner with the knowledge, understanding and skills required to prepare a ride-on mower for operation safely and to industry standards.

Learning outcomes

In this unit, learners will be able to

1. Know the requirements of risk assessment, legislation and safety when preparing a ride-on mower
2. Carry out pre-use checks and maintain a ride-on mower

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. Know the requirements of risk assessment, legislation and safety when preparing a ride-on mower**

Topics:

- 1.1 Site specific hazard and risk assessment
- 1.2 Relevant health and safety legislation in relation to mowing operations
- 1.3 Legal and safety requirements
- 1.4 Personal Protective Equipment (PPE)
- 1.5 Power unit and fuel requirements
- 1.6 Safety features of the equipment being used

Topic 1.1

The hazards, evaluate the associated risks and implement appropriate control measures relating to the site, task and machine:

- Slopes
- Ground conditions
- Contact with moving parts
- Manual handling
- Overhead obstructions
- Surface obstructions
- People and/or animals
- Ditches/waterways
- Hot components
- Exhaust fumes
- Fuel and oil
- Bio hazards
- Dust/fungal spores
- Flying debris
- Operator over-reaching
- Contact with the cutters
- Insect bites/stings
- Fire

Site walk and report:

- Evaluate risks
- Implement appropriate control measures
- Confirm that the condition of the site is acceptable
- Confirm who they would report to if the site condition is unsuitable

Topic 1.2

Relevant pieces of health and safety legislation in relation to the preparation and use of the machine:

- Health and Safety at Work Etc. Act (HASAWA):

- Duties imposed on the employer/employee/others
- Provision and Use of Work Equipment Regulations (PUWER):
 - Machine must be suitable for the task
 - Machine must be properly maintained according to manufacturer's recommendations
- Management of Health and Safety at Work Regulations (MHSWR):
 - Risk assessments must be completed and communicated to all relevant persons
- Manual Handling Operations Regulations (MHOR):
 - Avoid manual handling where possible, use safe lifting techniques
- Control of Substances Hazardous to Health (COSHH):
 - fuel handling and protection from contaminants
- Personal Protective Equipment Regulations (PPE):
 - PPE must be provided, maintained and worn
- The Control of Noise at Work Regulations:
 - Hearing protection must be used over 85 decibels (dB)
- Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR):
 - Certain categories of injuries must be reported
- Wildlife and Countryside Act (WCA):
 - Operations must be carried out avoiding disturbance to wildlife
- Health & Safety (First Aid) Regulations:
 - Need for an accident book and knowledge of where it is kept
- The Control of Vibration at Work Regulations:
 - to reduce the risk to health from vibrations

Topic 1.3

Legal requirements for operating a ride-on mower on/near a public highway:

- Be road legal
- Comply with the road vehicle lighting requirements
- Be registered and taxed
- Be approved for use on the road
- Appropriate insurance
- Orange flashing beacon when driven on unrestricted dual carriageways (other situations subject to individual risk assessment)
- Be operated by somebody holding a suitable driving licence
- Observe legal/manufacturers speed limit

Appropriate precautions that can be made to protect the operator, public and animals:

- Authorities should be informed about work
- Warning signs should be erected
- High visibility clothing should be worn
- An "exclusion zone" could be set up the road or dual carriageway lane could be closed or coned off

Topic 1.4

Suitable Personal Protective Equipment (PPE) required for operation:

- Eye protection
- Head protection
- Hearing protection

- Dust mask
- Hand protection
- Non-snag clothing
- High visibility clothing
- Safety footwear

Topic 1.5

The power unit and fuel requirements:

- Petrol
- Diesel
- Battery

Safety precautions that should be observed with flammable liquids (if applicable):

- No smoking/naked flames
- Allowing engine to cool before re-fuelling
- Avoiding contact with hot surfaces
- Fuel topped up to correct level
- Any spillage is dealt with using the correct method
- Be kept away from any sources of ignition

Fuel storage and transportation requirements (if applicable):

- Container specifically designed for fuel storage
- Have a non-spill spout
- Be clearly labelled
- Have securely fitting caps
- Be kept away from any sources of ignition

Topic 1.5

The guarding requirements for the mower:

- All moving and hot parts must be guarded

The meaning of the safety decals:

- operator and bystander protection decals

Safety features:

- Operator presence controls (OPC)

Learning outcome:

2. Carry out pre-use checks and maintain a ride-on mower

Topics:

- 2.1 The function of all controls
- 2.2 Daily pre-use checks to the ride-on mower
- 2.3 Maintaining the cutting mechanism

Topic 2.1

All controls applicable to the mower.

Topic 2.2

Daily pre-use checks, referring to manual if required:

- All pre-use checks applicable to the mower as specified in the manual

How to correctly refuel the mower (if applicable):

- Refueled in accordance with manufacturer's handbook/operator's manual
- Checking the fuel level – allowing for expansion
- Cap correctly refitted

Topic 2.3

Cylinder Mowers

Cutting mechanism:

- Check the bed knife and cylinder for wear and damage

Checks and adjustments:

- Bed knife to cylinder clearance
- Carry out adjustments in accordance with manufacturer's handbook

Process for maintaining the cutting cylinder:

- Back lapping procedure explained

Rotary Mowers

Checks:

- Blade(s) condition
- Blade(s) security

Maintaining rotary blades:

- How to safely remove blade(s) from the mower
- Sharpening the blade
- How to balance the blade
- How to check that fitting is correct and tightness/torque setting is appropriate

Reasons for balancing blades:

- Reducing vibration
- Reducing noise
- Reducing bearing wear
- Protecting the operator

Flail Mowers

Checks:

- Flail condition
- Flail security

Process for maintaining flail blades:

- How to safely remove/secure flail
- Sharpening/reversing/replacing the flail
- How to check that fitting is correct and tightness/torque setting is appropriate

Reasons for maintaining balance:

- Reducing vibration
- Reducing noise
- Reducing bearing wear
- Protecting the operator

Reciprocating Knife Mower

Checks:

- Knife condition
- Knife security

Process for maintaining the reciprocating knife:

- How to safely remove knife from the mower
- Sharpening the knife sections
- How to refit the knife to the mower
- How to check that fitting is correct including adjustment of knife clips, ledger plates, wear plates and knife register

Unit 216

Operate a ride-on mower

Level:	2
GLH	3

What is this unit about?

The aim of this unit is to provide the learner with the knowledge, understanding and skills required to operate a ride-on mower safely and to industry standards.

Learning outcomes

In this unit, learners will be able to

1. Operate a ride-on mower

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. Operate a ride-on mower

Topics:

- 1.1 Test start and stop procedure
- 1.2 Operating adjustments to the mower
- 1.3 Operating the mower
- 1.4 Minimising environmental damage when working
- 1.5 Quality of the completed mowing operation
- 1.6 Post-use tasks

Topic 1.1

Test start and stop procedure:

- Start the machine
- Check operator presence control(s)
- Stop the machine

SAFE STOP procedure as defined by Health and Safety Executive (HSE).

Topic 1.2

Operating adjustments to the mower:

- Height adjustment
- Grass collection/recycling

Topic 1.3

Operate the mower to a required specification for 15 minutes:

- Move the mower to the work site
- Task started at an appropriate point
- Appropriate forward speed maintained
- Suitable engine speed
- Work checked following 'trial' cut
- Minimise overlap/misses

Topic 1.4

Carrying out work in a manner which minimises environmental damage:

- Climatic conditions are acceptable
- Ground conditions are acceptable
- Turns made without excessive damage to the surface
- Cut material disposed of/recycled in accordance with legislative and organisational requirements

Topic 1.5

Walk site and comment on the finish:

- Finish complies with agreed specification

Topic 1.6

Reasons for regularly cleaning the mower:

- Prevents personal contamination
- Prevents corrosion
- Makes visual inspection for damage possible
- Facilitates maintenance and adjustments

The personal protective equipment (PPE) required for cleaning operations:

- Eye protection
- Safety footwear
- Overall/coverall
- Hand protection
- Face shield
- Dust mask

Methods of cleaning the mower:

- A brush
- Compressed/blown air
- Water/pressure washer
- Deck hose attachment

Unit 217

Prepare a tractor mounted/trailed mower for operation

Level:	2
GLH	5

What is this unit about?

The aim of this unit is to provide the learner with the knowledge, understanding and skills required to prepare a tractor mounted/trailed mower for operation safely and to industry standards.

Learning outcomes

In this unit, learners will be able to

1. Know the requirements of risk assessment, legislation and safety when preparing a tractor mounted/trailed mower
2. Carry out pre-use checks and maintain a tractor mounted/trailed mower

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. Know the requirements of risk assessment, legislation and safety when preparing a tractor mounted/trailed mower

Topics:

- 1.1 Site specific hazard and risk assessment
- 1.2 Relevant health and safety legislation in relation to mowing operations
- 1.3 Legal and safety requirements for operating a tractor mower on/near a public highway
- 1.4 Personal Protective Equipment (PPE)
- 1.5 Safety issues in relation to the preparation and use of tractors mowers

Topic 1.1

The hazards, evaluate the associated risks and implement appropriate control measures relating to the site, task and machine:

- Slopes
- Ground conditions
- Contact with moving parts
- Manual handling
- Overhead obstructions
- Surface obstructions
- People and/or animals
- Ditches/waterways
- Hot components
- Exhaust fumes
- Fuel and oil
- Bio hazards
- Dust/fungal spores
- Flying debris
- Operator over-reaching
- Contact with the cutters
- Insect bites/stings
- Fire

Inspection of site before work commences:

- Confirm the condition of the site as acceptable for the operation to take place
- Ongoing observation of site to identify hazards
- Report to the appropriate person if the site condition is unsuitable
- Ground conditions, sufficient to support machine, provide traction
- Weather conditions

Topic 1.2

Relevant pieces of health and safety legislation in relation to the preparation and use of the machine:

- Health and Safety at Work Etc. Act (HASAWA):
 - Duties imposed on the employer/employee/others
- Provision and Use of Work Equipment Regulations (PUWER):
 - Machine must be suitable for the task
 - Machine must be properly maintained according to manufacturer's recommendations
- Management of Health and Safety at Work Regulations (MHSWR):
 - Risk assessments must be completed and communicated to all relevant persons
- Manual Handling Operations Regulations (MHOR):
 - Avoid manual handling where possible, use safe lifting techniques
- Control of Substances Hazardous to Health (COSHH):
 - fuel handling and protection from contaminants
- Personal Protective Equipment Regulations (PPE):
 - PPE must be provided, maintained and worn
- The Control of Noise at Work Regulations:
 - Hearing protection must be used over 85 decibels (dB)
- Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR):
 - Certain categories of injuries must be reported
- Wildlife and Countryside Act (WCA):
 - Operations must be carried out avoiding disturbance to wildlife
- Health & Safety (First Aid) Regulations:
 - Need for an accident book and knowledge of where it is kept
- The Control of Vibration at Work Regulations:
 - to reduce the risk to health from vibrations

Topic 1.3

Legal and safety requirements for operating a tractor mower on/near a public highway:

- Be road legal
- Comply with the road vehicle lighting requirements
- Be registered and taxed
- Be approved for use on the road
- Appropriate insurance
- Orange flashing beacon when driven on unrestricted dual carriageways (other situations subject to individual risk assessment)
- Be operated by somebody holding a suitable driving licence

Factors relating to preparing the machine for road use:

- Four-wheel drive mode disengaged (if applicable)
- Differential lock disengaged
- Independent brakes locked together (if applicable)
- Cutting units locked in transport position

Precautions that can be made to protect the operator, public and animals:

- Authorities should be informed about work
- Warning signs should be erected
- High visibility clothing should be worn
- An "exclusion zone" could be set up the road or dual carriageway lane could be closed or coned off

Topic 1.4

Suitable Personal Protective Equipment (PPE) required for operation:

- Eye protection
- Head protection
- Hearing protection
- Dust mask
- Hand protection
- Non-snag clothing
- High visibility clothing
- Safety footwear

Topic 1.5

Precautions to be taken when attaching implements (response must include SAFE STOP procedure for PTO shafts):

- Do not enter danger zones (e.g. Between mower and tractor when attaching or removing)
- If using a remote linkage control the operator must not be in a position whereby injury may be caused by the tractor or mower
- Clear communication is established between driver and assistant

SAFE STOP procedure as defined by Health and Safety Executive (HSE).

Learning outcome:

2. Carry out pre-use checks and maintain a tractor mounted/trailed mower

Topics:

- 2.1 The function of all controls
- 2.2 How to maintain the efficiency of tractor and attachment performance
- 2.3 Checks to the tractor to ensure that it is safe to use
- 2.4 Statutory guarding and safety requirements for PTO shafts
- 2.5 The function of all controls
- 2.6 Daily pre-use checks to the mower
- 2.7 Maintaining the cutting mechanism

Topic 2.1

Safely mount and dismount from tractor cab/platform using hand and footholds provided (usually facing inwards)

The functions of all instruments and controls on the tractor:

- All internal/external controls and instrumentation

Interpret information and warning symbols:

- Interpretation of information and warning symbols
- Interpretation of decals

Topic 2.2

Measures that can be taken to ensure efficiency and economic fuel use:

- Ensure air filter is clean
- Effective use of engine speed control
- Appropriate gear selection
- Effective use of engine/transmission management systems (if applicable)
- Use differential lock to prevent wheel slip
- Ensure appropriate tyre pressures for the task
- Use of economy PTO mode

Topic 2.3

Inspection of tractor prior to use to establish that it complies with statutory legislation and it is safe to use:

- Horn working
- All lights working
- Cab glass undamaged and clean,
- Wipers in working order
- Mirrors clean and undamaged
- Indicators clearly visible and undamaged
- Operator presence controls
- Wheel nuts tight and secure (visual check only)
- Tyre pressures (visual check only)
- Tyres free from excessive wear and damage
- Lubrication sites identified
- Absence/severity of oil leaks
- Battery isolation devices working
- Tractor guarding – as appropriate for the task

Daily pre-use checks, referring to manual if required:

- All pre-use checks applicable to the mower as specified in the manual

Adjustments to ensure comfort and safety:

- Mirrors adjusted for clear view
- Steering wheel adjusted to suit operator
- Seat adjusted to suit operator
- Condition and function of seat-belt

Safe starting and stopping procedure:

- Controls in neutral
- Cold starting technique demonstrated or explained
- Engine started
- SAFE STOP procedures followed

Statutory guarding requirements:

- The PTO stub shaft is fully enclosed when not in use
- All guards are secure and undamaged as identified in operator's manual
- Exhaust heat shield is in place and undamaged

Safe operation of brakes and steering:

- All round observation before moving off

- Brakes checked by driving short distance on level, smooth ground and apply foot brake

How to correctly refuel the mower (if applicable):

- Refueled in accordance with manufacturer's handbook/operator's manual
- Checking the fuel level – allowing for expansion
- Cap correctly refitted

Topic 2.4

Statutory guarding requirements for PTO shafts:

- The PTO shaft is fully enclosed when attached
- The PTO shaft guard is secured to tractor and implement to prevent rotation

Factors to consider when using the PTO shaft:

- Tractor and PTO mower are compatible
- Correct speed stated for mower
- Correct drawbar length to ensure adequate PTO shaft length/overlap/angle
- Correct overlap of sliding shaft and the guards
- Shaft is adequately lubricated
- Use of 'economy mode' explained
- Tractor stub shaft is fully enclosed when no shaft is attached

Consequences of operating a PTO powered mower at incorrect speeds:

- Excess wear on mower
- Excess vibration in cab
- Increased risk of stones/debris being thrown up
- Mower may not achieve desired result

Topic 2.5

All controls applicable to the mower.

Topic 2.6

All pre-use checks applicable to the mower.

Topic 2.7

Cylinder Mowers

Cutting mechanism:

- Check the bed knife and cylinder for wear and damage

Checks and adjustments:

- Bed knife to cylinder clearance
- Carry out adjustments in accordance with manufacturer's handbook

Process for maintaining the cutting cylinder:

- Back lapping procedure explained

Rotary Mowers

Checks:

- Blade(s) condition
- Blade(s) security

Maintaining rotary blades:

- How to safely remove blade(s) from the mower
- Sharpening the blade
- How to balance the blade
- How to check that fitting is correct and tightness/torque setting is appropriate

Reasons for balancing blades:

- Reducing vibration
- Reducing noise
- Reducing bearing wear
- Protecting the operator

Flail Mowers

Checks:

- Flail condition
- Flail security

Process for maintaining flail blades:

- How to safely remove/secure flail
- Sharpening/reversing/replacing the flail
- How to check that fitting is correct and tightness/torque setting is appropriate

Reasons for maintaining balance:

- Reducing vibration
- Reducing noise
- Reducing bearing wear
- Protecting the operator

Reciprocating Knife Mower

Checks:

- Knife condition
- Knife security

Process for maintaining the reciprocating knife:

- How to safely remove knife from the mower
- Sharpening the knife sections
- How to refit the knife to the mower
- How to check that fitting is correct including adjustment of knife clips, ledger plates, wear plates and knife register

Unit 218

Operate a tractor mounted/trailed mower

Level:	2
GLH	3

What is this unit about?

The aim of this unit is to provide the learner with the knowledge, understanding and skills required to operate a tractor mounted/trailed mower safely and to industry standards.

Learning outcomes

In this unit, learners will be able to

1. Operate a tractor mounted/trailed mower

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. Operate a tractor mounted/trailed mower

Topics:

- 1.1 Test start and stop procedure
- 1.2 Operating adjustments to the mower
- 1.3 Operating the mower
- 1.4 Minimising environmental damage when working
- 1.5 Quality of the completed mowing operation
- 1.6 Post-use tasks

Topic 1.1

Test start and stop procedure:

- Start the machine
- Check operator presence control(s)
- Stop the machine

Topic 1.2

Operating adjustments to the mower:

- Height adjustment

Topic 1.3

Operate the mower to a required specification for 15 minutes:

- Move the mower to the work site
- Task started at an appropriate point
- Appropriate forward speed maintained
- Suitable engine speed
- Work checked following 'trial' cut
- Minimise overlap/misses

Topic 1.4

Carrying out work in a manner which minimises environmental damage:

- Climatic conditions are acceptable
- Ground conditions are acceptable
- Turns made without excessive damage to the surface
- Cut material disposed of/recycled in accordance with legislative and organisational requirements

Topic 1.5

Walk site and comment on the finish:

- Finish complies with agreed specification

Topic 1.6

Reasons for regularly cleaning the mower:

- Prevents personal contamination
- Prevents corrosion
- Makes visual inspection for damage possible
- Facilitates maintenance and adjustments

The personal protective equipment (PPE) required for cleaning operations:

- Eye protection
- Safety footwear
- Overall/coverall
- Hand protection
- Face shield
- Dust mask

Methods of cleaning the mower:

- A brush
- Compressed/blown air
- Water/pressure washer

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 **Centres and Training Providers homepage** on **www.cityandguilds.com**.

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

Every effort has been made to ensure that the information contained in this publication is true and correct at the time of going to press. However, City & Guilds' products and services are subject to continuous development and improvement and the right is reserved to change products and services from time to time. City & Guilds cannot accept liability for loss or damage arising from the use of information in this publication.

If you have a complaint, or any suggestions for improvement about any of the services that we provide, email: feedbackandcomplaints@cityandguilds.com

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).

Copyright

The content of this document is, unless otherwise indicated, © The City and Guilds of London Institute and may not be copied, reproduced or distributed without prior written consent. However, approved City & Guilds centres and candidates studying for City & Guilds qualifications may photocopy this document free of charge and/or include a PDF version of it on centre intranets on the following conditions:

- centre staff may copy the material only for the purpose of teaching candidates working towards a City & Guilds qualification, or for internal administration purposes
- candidates may copy the material only for their own use when working towards a City & Guilds qualification

The Standard Copying Conditions (see the City & Guilds website) also apply.

City & Guilds

Giltspur House

5-6 Giltspur Street

London EC1A 9DE

www.cityandguilds.com
