City & Guilds NPTC Level 2 Award in The Safe Application of Pesticides using Self-propelled, Mounted, Trailed Horizontal Boom Sprayers (PA2) (601/5141/9)

Version 1.0 (February 2024)

Qualification Handbook

Qualification at a glance

Subject area	Pesticides
City & Guilds number	0216
Age group approved	16+
Entry requirements	Candidate must meet minimum age requirements, Completion of unit 101 from 0216-49
Assessment	To gain this qualification, candidates must successfully achieve the following assessments: • One to one practical assessment with oral questioning by an NPTC City & Guilds approved assessor
Grading	Met/Not Met
Approvals	Full Centre approval required
Support materials	Qualification Handbook (candidates). Assessment materials (approved assessment Centers only).
Registration and certification	Consult the Walled Garden/Online Catalogue for last Registration and Certification dates.

Title and level	City & Guilds qualification number	Regulatory reference number	GLH	TQT
City & Guilds NPTC Level 2 Award in The Safe Application of Pesticides using Self-propelled, Mounted, Trailed Horizontal Boom Sprayers (PA2)	0216-50	601/5141/9	54	60

Version and date	Change detail	Section
1.0 February 2024	Initial version	All

Contents

1 Introduction

This document tells you what you need to do to deliver the **City & Guilds NPTC Level 2 Award in The Safe Application of Pesticides Using Self Propelled, Mounted, Trailed Horizontal Boom Sprayers (0216-50):**

Area	Description
Who is the qualification for?	This is an Independently Assessed qualification (PA2) Type of Learner: If your job involves applying pesticides in a commercial role then you are legally required by the Plant Protection Products (Sustainable Use) Regulations (2012) to take this qualification. Qualification Overview: This qualification is designed specifically for those who wish to use either self propelled, mounted or trailed horizontal boom sprayers as part of their daily role. The award will supersede the old 0216 (PA2) unit. What you need to do: Candidates to undertake an oral and practical assessment
What does the qualification cover?	This qualification covers the requirements for the safe application of pesticides using self-propelled, mounted or trailed horizontal boom sprayers. Please refer to the Qualification Handbook for more detail.
What opportunities for progression are there?	Pre-requisite – 0216-49 City & Guilds Level 2 Principles of Safe Handling and Application of Pesticides Recommended progression onto 0216-63 – City & Guilds Level 3 Award in Responsible Pesticide Management. Once a candidate has successfully completed this qualification, they are able to legally apply pesticides using the methods and equipment identified within this qualification.

Area	Description
Who did we develop the qualification with?	Developed with the Health and Safety Executive, Chemical Regulation Division, Voluntary Initiative and practicing industry stakeholders, DEFRA, Environment Agency.
Is it part of an apprenticeship framework or initiative?	No

Assessment Guidance for the Candidate

A list of registered Assessment Centres is available from City & Guilds NPTC. (www.nptc.org.uk)

Assessment is a process by which it is confirmed that the candidate is competent in the unit(s) within the award to which the assessment relates. It is the process of collecting evidence about the candidates capabilities and judging whether that evidence is sufficient to attribute competence.

The Candidate must be registered through the City & Guilds approved Assessment Centre for this qualification prior to the assessment.

Structure

To achieve the City & Guilds NPTC Level 2 Award in The Safe Application Pesticides Using Self Propelled, Mounted, Trailed Horizontal Boom Sprayers (0216-50) learners must achieve:

City & Guilds unit number	Unit title	GLH
Pre-Requisite unit from 2016-49:		
Learners must have achieved **this** mandatory unit prior:		
101	Principles of safe handling and application of pesticides (PA1)	26
Optional units:		
Learners must achieve **one** of the following **five** units from the optional units.		
111	Operating mounted, trailed and self propelled hydraulic nozzle or rotary atomiser horizontal boom sprayers (PA2A) (D/505/7664)	28
112	Operating mounted, trailed and self propelled air / fluid nozzle horizontal boom sprayers (PA2C) (M505/7667)	28
113	Operating mounted, trailed and self propelled downward air assisted horizontal boom sprayers (PA2E) (M/505/7670)	28
114	Operating mounted or trailed wick type applicators (PA2F) (F/506/8298)	28
115	Operating vehicle mounted kerb sprayers fitted with hydraulic nozzles/rotary atomisers (PA2AR) (D/505/7681)	28

Total Qualification Time (TQT)

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 demonstrate the achievement of the level of attainment necessary for the award of a qualification.

TQT comprises of the following two elements:

1) the number of hours that an awarding organisation has assigned to a qualification for guided learning
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 NPTC Level 2 Award in The Safe Application of Pesticides Using Self Propelled, Mounted, Trailed Horizontal Boom Sprayers (0216-50)	54	60

2 Centre requirements

Approval

Full approval

To offer this qualification, new centres will need to gain both centre and qualification approval. Please refer to the document **Centre Approval process: Quality Standards** for further information. 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.

Centre staff should familiarise themselves with the structure, content and assessment requirements of the qualification before delivering a course programme.

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.

Appeals and Equal opportunities

Centres must have their own auditable, appeals procedures. If a Candidate is not satisfied with the examination conditions or a Candidate feels the opportunity for examination is being denied, the Centre Manager should, in the first instance, address the problem. If, however the problem cannot be resolved, City & Guilds will arbitrate and a Principal Verifier may be approached to offer independent advice.

All appeals must be clearly documented by the Centre Manager and made available to the Principal Verifier or City & Guilds if advice is required.

Should occasions arise when Centres are not satisfied with any aspect of the verification process, they should contact the Quality Assurance Manager at City & Guilds NPTC, 5-6 Giltspur Steet, London, EC1A 9DE.

Access to the qualification is open to all, irrespective of gender, race, creed or special needs. Subject to H&S restrictions the Centre Manager should ensure that no learner is subjected to unfair discrimination on any grounds in relation to access to assessment and to the fairness of the assessment. QCA requires City & Guilds to monitor centres to check whether equal opportunities policies are being adhered to.

Quality assurance

Approved centres must have effective quality assurance systems to ensure optimum delivery and assessment of qualifications. Quality assurance includes initial centre approval, qualification approval and the centre's own internal procedures for monitoring quality. Centres are responsible for internal quality assurance and City & Guilds is responsible for external quality assurance. All external quality assurance processes reflect the minimum requirements for verified and moderated assessments, as detailed in the Centre Assessment Standards Scrutiny (CASS), section H2 of Ofqual's General Conditions. For more information on both CASS and City and Guilds Quality Assurance processes visit: the What is CASS? and Quality Assurance Standards documents on the City & Guilds website.

Learner entry requirements

As part of the assessment for this qualification, learners must have achieved PA1 0216-49 Principles of Safe Handling and Application of Pesticides prior to completing this qualification.

Age restrictions

This qualification is approved for learners aged 16 or above.

Access arrangements and reasonable adjustments

Access arrangements are adjustments that allow candidates with disabilities, special educational needs, and temporary injuries to access the assessment and demonstrate their skills and knowledge without changing the demands of the assessment. These arrangements must be made before assessment takes place.

The Equality Act 2010 requires City & Guilds to make reasonable adjustments where a

disabled person would be at a substantial disadvantage in undertaking an assessment.

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

3 Delivering the qualification

Initial assessment and induction

An initial assessment of each learner should be made before the start of their programme to identify:

- if the learner has any specific training needs
- support and guidance they may need when working towards their qualification.
- any units they have already completed or credit they have accumulated which is relevant to the qualification
- the appropriate type and level of qualification.

We recommend that centres provide an induction programme so the learner fully understands the requirements of the qualification, their responsibilities as a learner and the responsibilities of the centre. This information can be recorded on a learning contract.

Support materials

The following resources are available for this qualification:

Description	How to access
Candidate Handbook	www.nptc.org.uk
Assessment Pack (available only to assessors)	www.nptc.org.uk

4 Assessment

Assessment of the qualification

Candidates must:

- have a completed practical observation with oral questioning for each optional unit.

Assessment types			
Unit	**Title**	**Assessment method**	**Where to obtain assessment materials**
111	Operating mounted, trailed and self propelled hydraulic nozzle or rotary atomiser horizontal boom sprayers	Practical observations with oral questioning. Centres may use the materials provided by City & Guilds.	www.nptc.org.uk
112	Operating mounted, trailed and self propelled air / fluid nozzle horizontal boom sprayers	Practical observations with oral questioning. Centres may use the materials provided by City & Guilds.	www.nptc.org.uk
113	Operating mounted, trailed and self propelled downward air assisted horizontal boom sprayers	Practical observations with oral questioning. Centres may use the materials provided by City & Guilds.	www.nptc.org.uk
114	Operating mounted or trailed wick type applicators	Practical observations with oral questioning. Centres may use the materials provided by City & Guilds.	www.nptc.org.uk
115	Operating vehicle mounted kerb sprayers fitted with hydraulic nozzles/rotary atomisers	Practical observations with oral questioning. Centres may use the materials provided by City & Guilds.	www.nptc.org.uk

Assessment strategy

City & Guilds has written the practical observations with oral questioning for each optional unit to use with this qualification, live assessment materials can be downloaded by the assessor via the Assessment Pack from the NPTC website.

Time constraints

The following must be applied to the assessment of this qualification:

Candidates must finish their assessment within 24 months of date of initial registration.

Assessments should take no longer than 1.5 – 3 hours.

Qualification registration is valid for two years.

Summary of responsibilities in the assessment process		
Centre responsibilities	Candidate responsibilities	Assessor responsibilities
A suitable site is made available for the assessment to take place		Ensuring that the site provided is suitable for the assessment to take place
Machinery, equipment and materials are available to enable assessment of all the activities to take place	To be familiar with the machinery/equipment being used for the assessment	Ensuring that the machinery, equipment and materials provided satisfy the assessment requirements
	To bring appropriate Personal Protective Equipment (PPE) to the assessment	Ensuring that candidate's PPE complies with the requirements of the assessment
	To bring relevant training materials (including calibration sheet if applicable)	
	To bring a product label appropriate for the assessment	To ensure that the product label is appropriate for the assessment (or provide a suitable alternative)

5 Units

Structure of the units

These units each have the following:

- City & Guilds reference number
- title
- level
- guided learning hours (GLH)
- unit aim
- assessment type
- learning outcomes, which are comprised of a number of assessment criteria

Guidance for delivery of the units

This qualification comprises a number of **units**. A unit describes what is expected of a competent person in particular aspects of their job.

Each **unit** is divided into l**earning outcomes** which describe in further detail the skills and knowledge that a candidate should possess.

Each **learning outcome** has a set of **assessment criteria** (performance and knowledge and understanding) which specify the desired criteria that must be satisfied before an individual can be said to have performed to the agreed standard.

Unit 111 Operating mounted, trailed and self propelled hydraulic nozzle or rotary atomiser horizontal boom sprayers

Level:	2
GLH:	28
Assessment type:	Practical Observation with Oral Questioning
Aim:	The aim of this unit is for the candidate to safely apply pesticides using mounted, trailed and self-propelled hydraulic nozzle or rotary atomiser horizontal boom sprayers.

Learning outcome

The learner will:

LO1 Know the legislative and safety regulations relating to application equipment (**Criteria 1.1 – 1.2**)

Assessment criteria

The learner can:

AC1.1 Describe the legal requirements relating to applying pesticides using horizontal boom sprayers

AC1.2 Describe how to apply pesticides safely using horizontal boom sprayers following industry best practice

Topic 1.1

May include:

- all required guards are in place and equipment complies with legal requirements
- comply with all relevant road traffic regulations when operating or transporting on the public highway
- comply with The Plant Protection Products (Sustainable Use) Regulations 2012
- the operator must hold the appropriate certification for the equipment they are using

Topic 1.2

Operator safety regulations may include:

- comply with Pesticide Codes of Practice
- adopt industry best practice
- be aware of any safety implications imposed by Risk/COSHH assessment and comply with the requirements

Checks to protect self from pesticide contamination:

Sealed cab:

- fit carbon filter
- use of in-cab controls
- ensure ventilation system is functional
- close all windows
- contaminated PPE stored in external locker
- awareness of the siting of pressurised components within confines of cab

Open cab/canopy/platform:

- use of appropriate PPE
- awareness of the siting of pressurised
- components within confines of cab/canopy/platform

Checks to protect self from physical danger during operation:

- compatibility of prime mover and sprayer
- front weights
- wheel track width
- correct tyre pressures
- condition of tyres
- brake function

Safe practice when driving on uneven/sloping terrain:

- assess conditions
- select four wheel drive
- appropriate speed
- correct gear selection
- effect of changing load on stability
- use of weights to stabilise prime mover
- correct turning procedure
- keep centre of gravity as low as possible

Consideration for safe driving on a public highway:

- independent brakes coupled together
- travelling at high speed makes vehicle unstable

Learning outcome

The learner will:

LO2 Be able to assess the environmental factors relating to the mixing and application site (**Criteria 2.1 – 2.2**)

Assessment criteria

The learner can:

AC2.1 Identify risks to the environment
AC2.2 Explain how to minimize risks to the environment

Topic 2.1
May include:

- ground conditions
- water courses
- environmental margins/strips/areas
- drains
- boreholes
- wildlife
- non-target plants
- sensitive crops/areas
- hedgerows
- housing
- public access
- other risks particular to the site

Topic 2.2
Explanation may include the following points:

- check and maintain application rate
- avoid spray drift
- avoid off target application
- observe buffer zones
- comply with LERAP requirements
- inform neighbours
- erect warning signs
- use an appropriate pesticide (minimal environmental impact)
- appropriate timing of application

Minimising spray drift:

- avoidance of contamination to people and the environment

Check wind speed and direction:

- use of an anemometer at suitable height or visual signs

- wind direction

Factors that affect spray drift:
- weather conditions
- direction of spraying
- nozzle type and size
- pressure
- forward speed
- boom height
- rotary atomiser speed
- defective equipment

Learning outcome

The learner will:

LO3 Be able to read and interpret product information (**Criteria 3.1 – 3.2**)

Assessment criteria

The learner can:
AC3.1 Read product information
AC3.2 Interpret product information

Topic 3.1 – 3.2

May include:
- product name
- active substance(s) (ingredient(s))

Important information:
- field of use
- crop/target
- maximum individual dose
- maximum total dose
- maximum number of treatments
- specific product precautions/warnings
- operator protection
- environmental protection
- restrictions on use

Crop specific information:
- crop/target
- dose rate
- water volume
- timing

Mixing and spraying:

- filling
- reduced volume applications (if applicable)
- recommended nozzles
- recommended pressure
- spray quality
- additional label information
- compatibility

Learning outcome

The learner will:

LO4 Be able to prepare and calibrate the applicator (**Criteria 4.1 – 4.5**)

Assessment criteria

The learner can:

AC4.1 Identify applicator components and controls
AC4.2 Carry out pre-use checks to the prime mover
AC4.3 Carry out pre-use and operational checks to the sprayer
AC4.4 Calibrate the sprayer and record relevant data
AC4.5 Calculate the quantities of pesticide and water required

Topic 4.1

May include:

- main spray tank
- pump
- pulsation damper
- filling control and devices
- agitation control
- pressure adjustment control
- pressure gauge
- on/off control
- boom isolators
- boom section pressure compensation controls
- filters
- tank wash system
- clean water tank(s)
- nozzles/atomisers
- diaphragm check valves
- tank drain
- other components/controls specific to the applicator

Nozzle types:

- flat fan – fine/medium/coarse spray
- air inclusion – medium/coarse spray, low-drift

- cone – fine spray, good coverage

Topic 4.2

May include:

- guards in place and in good condition
- visual inspection of the wheels and tyres
- tyre pressures
- fuel level adequate
- engine oil level is within acceptable limits
- hydraulic oil level is within acceptable limits (if
- accessible)
- transmission oil level is within acceptable limits (if
- accessible)
- coolant level is adequate
- engine air filter is clean

Topic 4.3

May include all/some of the following as applicable to the sprayer/applicator:

Security of attachment

- safe unfolding of booms to avoid personal contamination and contact with Over Head Power Lines (OHPL) and any other overhead hazards
- fasteners tight
- straps inspected and adjusted if necessary
- linkage secure
- sideways movement restricted
- drawbar pin secured

Possible mechanical defects:

- seized, worn or damaged controls/components
- atomiser drives and electrical connectors

Applicator lubrication:

- identification of lubrication points
- visual inspection of lubrication points
- visual inspection of levels

Boom settings, suspension and break-back devices:

- boom suspension operational
- break-back efficiency
- height adjustment

Candidate to remove, clean and refit filter:

- remove and clean using appropriate method
- contain spillage
- check for defects, replace if damaged
- refit

Candidate to remove, clean and refit a nozzle/restrictor:

- remove and clean using appropriate method
- contain spillage
- check for defects replace if worn/damaged
- refit

Use of control panel may include:

- functions of control panel
- recognition of malfunctions before and during
- operation
- check accuracy of base settings
- switch to manual/test mode where possible

Part fill applicator to include:

- suitable site selected
- fill by usual on-site method, following approved
- procedures
- clean water supply

Check for leaks/spray patterns:

- suitable site selected
- use higher than normal operating pressure
- visual check of all nozzles/atomisers for correct
- spray patterns, absence of blockages, streaking, pulsing
- correct alignment
- replace defective nozzles/atomisers/discs
- lids and seals
- pipe work and connections
- control valves
- filters
- pressure gauge
- diaphragm check valves

Action in event of control panel failing:

- stop pesticide application
- manual operation of controls if possible

Topic 4.4

Calibration may include the following:

- suitable forward speed for crop/target and ground conditions
- appropriate gear selected and engine speed established
- accurate measurement of distance
- accurate measurement of time taken to cover distance
- correct use of formula to establish forward speed

Calculate required output/volume rate:

- correct use of formula

Selection of nozzle/atomiser:

- use of manufacturers operators handbook
- use of nozzle/atomiser manufacturers literature
- confirm requirements of product label

Operating pressure/disc speed:

- pressure as determined by nozzle chart
- disc speed as determined by manufacturers literature
- pressurise/purge appropriate to the system

Nozzle/atomiser outputs:

- use a measuring jug to check output from at least
- one nozzle/atomiser per boom section (minimum of three per applicator)
- compare with target output
- vary pressure to make small adjustments
- change nozzles/atomisers if required
- or any other acceptable method

Calibration data:

- registration number of vehicle
- tyre size and pressure
- gear selected
- engine speed
- vehicle forward speed
- application volume
- nozzle/atomiser fitted
- pressure/disc speed
- flow rate

Topic 4.5

May include:

- amount of water required for specified area
- amount of pesticide required for specified area
- amount of pesticide required for full tank

Learning outcome

The learner will:

LO5 Be able to operate the application equipment (**Criteria 5.1 – 5.4**)

Assessment criteria

The learner can:

AC5.1 Measure the required quantities and add to the sprayer
AC5.2 Demonstrate safe and accurate application procedures
AC5.3 Carry out all activities protecting human health and the environment
AC5.4 Complete a treatment record

Topic 5.1

To include:

- correct selection and use of PPE (as required by the product label and/or COSHH assessment)
- observance of pesticide manufacturers instructions for mixing sequence and agitation (or other recommended method)
- suitable site selected
- clean water supply
- accurate measurement of water
- accurate measurement of pesticide
- use of filling device (if fitted)
- avoidance of spillage
- return to secure storage

Topic 5.2

Methods to achieve accurate application
May include any of the following:

- tramlines
- crop rows
- blob markers
- marker poles
- marker dyes
- use of GPS

Refilling applicator part way through application
Explanation to include:

- avoid contact with contaminated crop
- mark the location at which the applicator emptied
- refill applicator
- continue spraying by accurately matching at the appropriate point

Procedure when nozzle/restrictor becomes blocked during an application
Explanation to include:

- select and use appropriate PPE
- care not to walk in contaminated crop
- clean or replace nozzle/restrictor as appropriate

Demonstrate safe and accurate application procedures to include:

- ensure boom is level or aligned to the target
- correct boom height according to target and type of nozzle
- operate controls to start and finish applying accurately at the beginning and end of each bout

- correct forward speed and pressure
- accurate matching of bouts / use of driving aids
- coping with obstacles (if applicable)
- all of specified area treated, minimising overlaps and misses
- awareness of changes in wind speed and direction

Topic 5.3

To include:

- prevention of personal injury and contamination through correct selection and use of PPE (as required by the product information and/or COSHH/Risk Assessment)
- prevention of public / bystander contamination
- safe filling procedure
- avoidance of spray drift
- avoidance of off-target application
- avoidance of over dosing/under dosing crop/target

Topic 5.4

Completion of the treatment record must be:

- accurate
- legible (if handwritten)

Learning outcome

The learner will:

LO6 Know how to carry out post-operational procedures (**Criteria 6.1 – 6.3**)

Assessment criteria

The learner can:

AC6.1 Explain how to manage surplus pesticide and dispose of waste material

AC6.2 Explain how to clean and decontaminate the sprayer and, if applicable, the prime mover

AC6.3 Describe the storage requirements for the sprayer

Topic 6.1

Surplus concentrate pesticide:

- return to temporary mobile store
- return to fixed store

Containers:

- triple rinsed
- placed in secure storage until disposal
- returned to supplier
- collected by licensed waste contractor

Packaging:

- thoroughly emptied
- placed in secure storage until disposal
- collected by licensed waste disposal contractor

Surplus dilute pesticide:

- back on to site as long as it is below the maximum dose rate
- use on another approved crop/target
- treated by specialist treatment facility on site (e.g. a lined bio bed)
- collected by licensed waste disposal contractor

Topic 6.2

May include:

- select and use appropriate PPE
- appropriate site
- thorough washing with water and suitable cleaning agent (if recommended/required)
- internal and external surfaces
- use of in-built wash systems if provided
- care to ensure contamination ‘hot-spots’ are clean
- thorough flushing of systems
- safe disposal of contaminated washings
- when cleaning should take place
- safe procedures followed

Topic 6.3

May include:

- ensure the applicator is clean and dry
- inspect for wear and damage
- replace any worn or damaged parts
- controls left in appropriate positions
- frost protection measures implemented
- lubricate as required
- store undercover and out of direct sunlight
- store in a secure area

Unit 111 Operating mounted, trailed and self propelled hydraulic nozzle or rotary atomiser horizontal boom sprayers

Supporting information

Evidence requirements

Assessment carried out by oral questioning and practical observation.

Unit guidance

Candidates must successfully achieve all assessment activities in their chosen unit(s).

Safe Practice

The Assessor and Candidate must wear Personal Protective Equipment (PPE) when appropriate.

The Assessor must ensure that a Site Specific Risk Assessment is carried out.

All equipment must be operated in such a way that the Candidate, Assessor, other persons and the environment are not endangered. Failure to operate safely and comply with these requirements will result in the Candidate not meeting the required standard.

A breach of Health and Safety that puts any person at risk during the assessment process will result in the assessment being terminated and the Candidate not meeting the required standard. The Assessor may stop the assessment on the grounds of safety at any time at their discretion.

Candidates who undertake this assessment and have met the requirements are reminded of their legal obligation to receive/undertake appropriate additional training in the use of any equipment that differs from that used during the assessment, but which they are nevertheless qualified to use.

Suggested learning resources

Code of Practice for Using Plant Protection Products.

This is available from www.hse.gov.uk

Unit 112 Operating mounted, trailed and self propelled air / fluid nozzle horizontal boom sprayers

Level:	2
GLH:	28
Assessment type:	Practical Observation with Oral Questioning
Aim:	The aim of this unit is for the candidate to safely operate mounted, trailed and self-propelled air / fluid nozzle horizontal boom sprayers.

Learning outcome

The learner will:

LO1 Know the legislative and safety regulations relating to application equipment (**Criteria 1.1 – 1.2**)

Assessment criteria

The learner can:

AC1.1 Describe the legal requirements relating to applying pesticides using horizontal boom sprayers with thin fluid nozzles

AC1.2 Describe how to apply pesticides safely using horizontal boom sprayers following industry best practice

Topic 1.1
May include:

- all required guards are in place and equipment complies with legal requirements
- comply with all relevant road traffic regulations when operating or transporting on the public highway
- comply with The Plant Protection Products (Sustainable Use) Regulations 2012
- the operator must hold the appropriate certification for the equipment they are using

Topic 1.2

Operator safety regulations may include:

- comply with Pesticide Codes of Practice
- adopt industry best practice
- be aware of any safety implications imposed by Risk/COSHH assessment and comply with the requirements

Checks to protect self from pesticide contamination:
Cabbed:

- fit carbon filter
- use of in-cab controls
- ensure ventilation system is functional
- close all windows
- contaminated PPE stored in external locker
- awareness of the siting of pressurised components within confines of cab

Open cab/canopy/platform:

- use of appropriate PPE
- awareness of the siting of pressurised
- components within confines of cab/canopy/platform

Checks to protect self from physical danger during operation:

- compatibility of prime mover and sprayer
- front weights
- wheel track width
- correct tyre pressures
- condition of tyres
- brake function

Safe practice when driving on uneven/sloping terrain:

- assess conditions
- select four wheel drive
- appropriate speed
- correct gear selection
- effect of changing load on stability
- use of weights to stabilise prime mover
- correct turning procedure
- keep centre of gravity as low as possible

Consideration for safe driving on a public highway:

- independent brakes coupled together
- travelling at high speed makes vehicle unstable

Learning outcome

The learner will:

LO2 Be able to assess the environmental factors relating to the mixing and application site (**Criteria 2.1 – 2.2**)

Assessment criteria

The learner can:

AC2.1 Identify risks to the environment

AC2.2 Explain how to minimize risks to the environment

Topic 2.1

May include:

- ground conditions
- water courses
- environmental margins/strips/areas
- drains
- boreholes
- wildlife
- non-target plants
- sensitive crops/areas
- hedgerows
- housing
- public access
- other risks particular to the site

Topic 2.2

Explanation to include the following points:

- check and maintain application rate
- avoid spray drift
- observe buffer zones
- comply with LERAP requirements
- inform neighbours
- erect warning signs
- use an appropriate pesticide (minimal environmental impact)
- careful timing of application

Minimising spray drift:

- avoidance of contamination to people and the environment

Check wind speed and direction:

- use of anemometer at suitable height or visual signs
- wind direction

Factors that affect spray drift:

- weather conditions
- direction of spraying
- restrictor size
- air pressure
- fluid pressure
- forward speed
- boom height
- defective equipment

Learning outcome

The learner will:

LO3 Be able to read and interpret product information (**Criteria 3.1 – 3.2**)

Assessment criteria

The learner can:

AC3.1 Read product information

AC3.2 Interpret product information

Topic 3.1 – 3.2

The following to be provided:

- product name
- active substance(s) (ingredient(s))

Important information:

- field of use
- crop/target
- maximum individual dose
- maximum total dose
- maximum number of treatments
- specific product precautions/warnings
- operator protection
- environmental protection
- restrictions on use

Crop specific information:

- crop/target
- dose rate
- water volume
- timing

Mixing and spraying:

- filling
- reduced volume applications (if applicable)
- recommended nozzles
- recommended pressure

- spray quality
- additional label information
- compatibility

Learning outcome

The learner will:

LO4 Be able to prepare and calibrate the applicator (**Criteria 4.1 – 4.5**)

Assessment criteria

The learner can:

AC4.1 Identify applicator components and controls
AC4.2 Carry out pre-use checks to the prime mover
AC4.3 Carry out pre-use and operational checks to the sprayer
AC4.4 Calibrate the sprayer and record relevant data
AC4.5 Calculate the quantities of pesticide and water required for a specified area

Topic 4.1

May include:

- main spray tank
- pump
- compressor
- air inlet
- pressure relief device
- pulsation damper
- filling control and devices
- agitation control
- fluid pressure adjustment control
- air pressure adjustment control
- air and fluid pressure gauges
- on/off control
- boom isolators
- boom section pressure compensation controls
- filters
- tank wash system
- clean water tank
- nozzle flow restrictors
- nozzle flood jets
- diaphragm check valves
- tank drain
- other components/controls specific to the applicator

Nozzle restrictors:

- green (35) - 50-120 l/ha. Low volume application
- blue (40) 60 -150 l/ha. Medium volume application
- yellow (50) - 90-250 l/ha. High volume application

Topic 4.2

May include:

- guards in place and in good condition
- visual inspection of the wheels and tyres
- tyre pressures
- fuel level adequate
- engine oil level is within acceptable limits
- hydraulic oil level is within acceptable limits (if accessible)
- transmission oil level is within acceptable limits (if accessible)
- coolant level is adequate
- engine air filter is clean

Topic 4.3

May include all/some of the following as applicable to the sprayer/applicator:

Security of attachment

- Safe unfolding of booms to avoid personal contamination and contact with Over Head Power Lines (OHPL) and any other over head hazards
- fasteners tight
- straps inspected and adjusted if necessary
- linkage secure
- sideways movement restricted
- drawbar pin secured

Possible mechanical defects:

- seized, worn or damaged controls/components

Applicator lubrication:

- identification of lubrication points
- visual inspection of lubrication points
- visual inspection of levels

Boom settings, suspension and break-back devices:

- boom suspension operational
- break-back efficiency
- height adjustment

Candidate to remove, clean and refit filter:

- remove and clean using appropriate method
- contain spillage
- check for defects
- refit

Candidate to Remove, clean/replace and refit a nozzle restrictor and flood jet:

- remove and clean using appropriate method
- contain spillage
- check for defects
- replace if worn/damaged
- refit

Use of control panel may include:
- functions of control panel
- recognition of malfunctions before and during operation
- check accuracy of calibration
- switch to manual/test mode where applicable

Part fill applicator to include:
- suitable site selected
- fill by usual on-site method, following approved procedures
- clean water supply

Check for leaks/spray patterns:
- use higher than normal operating pressure
- visual check of all nozzles for correct spray patterns, absence of blockages, streaking, pulsing and correct alignment
- replace defective nozzle restrictors and/or flood jets
- lids and seals
- liquid and air pipe work and connections
- control valves
- filters
- liquid and air pressure gauge
- diaphragm check valves

Action in event of control panel failing:
- stop pesticide application
- manual operation of controls if possible

Topic 4.4
Calibration may include the following:
- suitable forward speed for crop/target and ground conditions
- appropriate gear selected and engine speed established (if applicable)
- accurate measurement of distance
- accurate measurement of time taken to cover distance
- correct use of formula to establish forward speed

Calculate required output/volume rate:
- correct use of formula

Selection of nozzle restrictor:
- use of manufacturers operators handbook

- use of manufacturers literature
- confirm requirements of product label

Operating pressure for liquid and air:
- pressure as determined by manufacturers literature
- pressurise/purge appropriate to the system

Nozzle outputs:
- use a measuring jug to check output from at least
- one nozzle per boom section (minimum of three per applicator)
- compare with target output
- vary pressure to make small adjustments
- change nozzle restrictors and/or flood jets if required
- or any other acceptable method

Calibration data:
- registration number of vehicle
- tyre size and pressure
- gear selected
- engine speed
- vehicle forward speed
- application volume
- nozzle restrictor fitted
- air pressure
- liquid pressure
- flow rate

Topic 4.5

May include:
- amount of water required for specified area
- amount of pesticide required for specified area
- amount of pesticide required for full tank

Learning outcome

The learner will:

LO5 Be able to operate the application equipment (**Criteria 5.1 – 5.4**)

Assessment criteria

The learner can:
AC5.1 Measure the required quantities and add to the sprayer
AC5.2 Demonstrate safe and accurate application procedures
AC5.3 Carry out all activities protecting human health and the environment
AC5.4 Complete a treatment record

Topic 5.1

May include:

- correct selection and use of PPE (as required by the product label and/or COSHH Assessment)
- suitable site selected
- fill by usual on-site method, following approved procedures
- clean water supply
- accurate measurement of water
- accurate measurement of pesticide
- correct filling procedure
- use of filling device if fitted
- avoidance of spillage
- observance of pesticide manufacturers
- instructions for mixing and agitation

Topic 5.2

Methods to achieve accurate application

May include any of the following:

- tramlines
- crop rows
- blob markers
- marker poles
- marker dyes
- use of GPS

Refilling applicator part way through application

Explanation to include:

- avoid contact with contaminated crop
- mark the spot at which the applicator emptied
- refill applicator
- continue spraying by accurately matching at the appropriate point

Procedure when nozzle/restrictor becomes blocked during an application

Explanation to include:

- select and use appropriate PPE
- care not to walk in contaminated crop
- clean or replace nozzle restrictor or flood jet as appropriate

Demonstrate safe and accurate application procedures to include:

- ensure boom is level or aligned to the target
- correct boom height according to target and type of nozzle
- operate controls to start and finish applying
- accurately at the beginning and end of each bout
- correct forward speed and pressure for site conditions

- accurate matching of bouts / use of driving aids
- coping with obstacles
- all of specified area treated, minimising overlaps and misses
- awareness of changes in wind speed and direction

Topic 5.3

To include:

- prevention of personal injury and contamination through correct selection and use of PPE (as required by the product label and/or COSHH Assessment)
- prevention of public / bystander contamination
- safe filling procedure
- avoidance of spray drift
- avoidance of off-target application
- avoidance of over dosing/under dosing crop/target

Topic 5.4

Completion of the treatment record must be:

- accurate
- legible (if handwritten)

Learning outcome

The learner will:

LO6 Know how to carry out post-operational procedures (**Criteria 6.1 – 6.3**)

Assessment criteria

The learner can:

AC6.1 Explain how to manage surplus pesticide and dispose of waste material
AC6.2 Explain how to clean and decontaminate the sprayer and, if applicable, the prime mover
AC6.3 Describe the storage requirements for the sprayer

Topic 6.1

Surplus concentrate pesticide:

- return to temporary mobile store
- return to fixed store

Containers:

- triple rinsed
- placed in secure storage until disposal
- returned to supplier
- collected by licensed waste contractor

Packaging:

- thoroughly emptied
- placed in secure storage until disposal
- collected by licensed waste disposal contractor

Surplus dilute pesticide:

- back on to site as long as it is below the maximum dose rate
- use on another approved crop/target
- treated by specialist treatment facility on site (e.g. a lined bio bed)
- collected by licensed waste disposal contractor

Topic 6.2

May include:

- select and use appropriate PPE
- appropriate site
- thorough washing with water and suitable cleaning agent (if recommended/required)
- internal and external surfaces
- use of in-built wash systems if provided
- care to ensure contamination 'hot-spots' are clean
- thorough flushing of systems
- safe disposal of contaminated washings
- when cleaning should take place
- safe procedures followed

Topic 6.3

May include:

- ensure the applicator is clean and dry
- inspect for wear and damage
- replace any worn or damaged parts
- controls left in appropriate positions
- frost protection measures implemented
- lubricate as required
- store undercover and out of direct sunlight
- store in a secure area

Unit 112 Operating mounted, trailed and self propelled air / fluid nozzle horizontal boom sprayers

Supporting information

Evidence requirements

Assessment carried out by oral questioning and practical observation.

Unit guidance

Candidates must successfully achieve all assessment activities in their chosen unit(s).

Safe Practice

The Assessor and Candidate must wear Personal Protective Equipment (PPE) when appropriate.

The Assessor must ensure that a Site Specific Risk Assessment is carried out.

All equipment must be operated in such a way that the Candidate, Assessor, other persons and the environment are not endangered. Failure to operate safely and comply with these requirements will result in the Candidate not meeting the required standard.

A breach of Health and Safety that puts any person at risk during the assessment process will result in the assessment being terminated and the Candidate not meeting the required standard. The Assessor may stop the assessment on the grounds of safety at any time at their discretion.

Candidates who undertake this assessment and have met the requirements are reminded of their legal obligation to receive/undertake appropriate additional training in the use of any equipment that differs from that used during the assessment, but which they are nevertheless qualified to use.

Suggested learning resources

Code of Practice for Using Plant Protection Products.

This is available from www.hse.gov.uk

Unit 113 Operating mounted, trailed and self propelled downward air assisted horizontal boom sprayers

Level:	2
GLH:	28
Assessment type:	Practical Observation with Oral Questioning
Aim:	The aim of this unit is for the candidate to safely operate mounted, trailed and self-propelled downward air assisted horizontal boom sprayers.

Learning outcome

The learner will:

LO1 Know the legislative and safety regulations relating to application equipment (**Criteria 1.1 – 1.2**)

Assessment criteria

The learner can:

AC1.1 Describe the legal requirements relating to applying pesticides using horizontal boom sprayers
AC1.2 Describe how to apply pesticides safely using horizontal boom sprayers following industry best practice

Topic 1.1
May include:

- all required guards are in place and equipment complies with legal requirements
- comply with all relevant road traffic regulations when operating or transporting on the public highway
- comply with The Plant Protection Products (Sustainable Use) Regulations 2012
- the operator must hold the appropriate certification for the equipment they are using

Topic 1.2

Operator safety regulations may include:

- comply with Pesticides Codes of Practice
- adopt industry best practice
- be aware of any safety implications imposed by
- Risk/COSHH Assessment and comply with the requirements

Checks to protect self from pesticide contamination:
Cabbed:

- fit carbon filter
- use of in-cab controls
- ensure ventilation system is functional
- close all windows
- contaminated PPE stored in external locker
- awareness of the siting of pressurised
- components within confines of the cab

Open cab/canopy/platform:

- use of appropriate PPE
- awareness of the siting of pressurised
- components within confines of the
- cab/canopy/platform

Checks to protect self from physical danger during operation:

- compatibility of prime mover and sprayer
- front weights
- wheel track width
- correct tyre pressures
- condition of tyres
- brake function

Safe practice when driving on uneven/sloping terrain:

- assess conditions
- select four wheel drive (if fitted)
- appropriate speed
- correct gear selection
- effect of changing load on stability
- use of weights to stabilise prime mover
- correct turning procedure
- keep centre of gravity as low as possible

Consideration for safe driving on a public highway:

- independent brakes coupled together
- travelling at high speed makes vehicle unstable

Learning outcome

The learner will:

LO2 Be able to assess the environmental factors relating to the mixing and application site (**Criteria 2.1 – 2.2**)

Assessment criteria

The learner can:

AC2.1 Identify risks to the environment
AC2.2 Explain how to minimize risks to the environment

Topic 2.1

May include:

- ground conditions
- water courses
- environmental margins/strips/areas
- drains
- boreholes
- wildlife
- non-target plants
- sensitive crops/areas
- hedgerows
- housing
- public access
- other risks particular to the site

Topic 2.2

Explanation to include the following points:

- check and maintain application rate
- avoid spray drift
- observe buffer zones
- comply with LERAP requirements
- inform neighbours
- erect warning signs
- use an appropriate pesticide (minimal environmental impact)
- careful timing of application

Minimising spray drift:

- avoidance of contamination to people and the environment

Check wind speed and direction:

- use of anemometer at suitable heights or visual signs
- wind direction

Factors that affect spray drift:

- weather conditions
- direction of spraying
- nozzle type and size
- air outlet/nozzle angle
- air assistance
- liquid pressure
- forward speed
- boom height
- defective equipment

Learning outcome

The learner will:

LO3 Be able to read and interpret product information (**Criteria 3.1 – 3.2**)

Assessment criteria

The learner can:

AC3.1 Read product information
AC3.2 Interpret product information

Topic 3.1-3.2

The following to be provided:

- product name
- active substance(s) (ingredient(s))

Important information:

- field of use
- crop/target
- maximum individual dose
- maximum total dose
- maximum number of treatments
- specific product precautions/warnings
- operator protection
- environmental protection
- restrictions on use

Crop specific information:

- crop/target

- dose rate
- water volume
- timing

Mixing and spraying:

- filling
- reduced volume applications (if applicable)
- recommended nozzles
- recommended pressure
- spray quality
- additional label information
- compatibility

Learning outcome

The learner will:

LO4 Be able to prepare and calibrate the applicator (**Criteria 4.1 – 4.5**)

Assessment criteria

The learner can:

AC4.1 Identify applicator components and controls
AC4.2 Carry out pre-use checks to the prime mover
AC4.3 Carry out pre-use and operational checks to the sprayer
AC4.4 Calibrate the sprayer and record relevant data
AC4.5 Calculate the quantities of pesticide and water required for a specified area

Topic 4.1

May include:

- main spray tank
- pump
- pressure relief device
- pulsation damper
- filling control and devices
- agitation control
- liquid pressure adjustment control
- fan
- air intake
- air bag/sleeve
- fan speed adjustment control
- air outlet angle control
- fan speed indicator
- on/off control
- boom isolators
- boom section pressure compensation controls
- filters

- tank wash system
- clean water tank
- nozzles
- nozzle angle control
- diaphragm check valves
- tank drain
- other components/controls specific to the applicator

Nozzle types:

- flat flan – fine/medium/coarse spray
- air inclusion – medium/coarse spray, low drift
- cone – fine spray, good coverage

Topic 4.2

May include:

- visual inspection of the wheels and tyres
- tyre pressures
- fuel level adequate
- engine oil level is within acceptable limits
- hydraulic oil level is within acceptable limits (if accessible)
- transmission oil level is within acceptable limits (if accessible)
- coolant level is adequate
- engine air filter is clean

Topic 4.3

May include all/some of the following as applicable to the sprayer/applicator:
Security of attachment

- Safe unfolding of booms to avoid personal
- contamination and contact with Over Head Power Lines (OHPL) and any other over head hazards
- fasteners tight
- straps inspected and adjusted if necessary
- linkage secure
- sideways movement restricted
- drawbar pin secured

Possible mechanical defects:

- seized, worn or damaged controls/component

Applicator lubrication:

- identification of lubrication points
- visual inspection of lubrication points
- visual inspection of levels

Boom settings, suspension and break-back devices:

- boom suspension operational
- break-back efficiency
- height adjustment

Candidate to remove, clean and refit filter:

- remove and clean using appropriate method
- contain spillage
- check for defects
- refit

Candidate to remove, clean and refit a nozzle:

- remove and clean using appropriate method
- contain spillage
- check for defects
- replace if worn/damaged
- refit

Use of control panel may include:

- functions of control panel
- recognition of malfunctions before and during operation
- check accuracy of calibration
- switch to manual/test mode where applicable

Part fill applicator to include:

- suitable site selected
- fill by usual on-site method, following approved
- procedures
- clean water supply

Check for air leaks/spray patterns:

- use higher than normal operating pressure
- visual check of all nozzles for correct spray
- patterns, absence of blockages, streaking, pulsing
- and correct alignment
- replace defective nozzles
- lids and seals
- liquid pipe work and connections
- air bag/sleeve
- control valves
- filters
- liquid pressure gauge
- diaphragm check valves

Action in event of control panel failing:

- stop pesticide application
- manual operation of controls if possible

Topic 4.4

Calibration may include the following:

- suitable forward speed for crop/target and ground conditions
- appropriate gear selected and engine speed established (if applicable)
- accurate measurement of distance

- accurate measurement of time taken to cover distance
- correct use of formula to establish forward speed

Calculate required output/volume rate:

- correct use of formula

Selection of nozzle/air speed:

- use of manufacturers operators handbook
- use of manufacturers literature
- confirm requirements of product label

Operating pressure for liquid, and set air speed:

- liquid pressure as determined by manufacturers literature
- air speed as determined by manufacturers literature
- pressurise/purge appropriate to the system

Nozzle outputs:

- use a measuring jug to check output from at least one nozzle per boom section (minimum of three per applicator)
- compare with target output
- vary pressure to make small adjustments
- change nozzles if required
- or any other acceptable method

Calibration data:

- registration number of vehicle
- tyre size and pressure
- gear selected
- engine speed
- vehicle forward speed
- application volume
- nozzles fittedliquid pressure
- flow rate

Topic 4.5

May include:

- amount of water required for specified area
- amount of pesticide required for specified area
- amount of pesticide required for full tank

Learning outcome

The learner will:

LO5 Be able to operate the application equipment (**Criteria 5.1 – 5.4**)

Assessment criteria

The learner can:

AC5.1 Measure the required quantities and add to the sprayer
AC5.2 Demonstrate safe and accurate application procedures
AC5.3 Carry out all activities protecting human health and the environment
AC5.4 Complete a treatment record

Topic 5.1

To include:

- correct selection and use of PPE (as required by the product label and/or COSHH Assessment)
- suitable site selected
- fill by usual on-site method, following approved procedures
- clean water supply
- accurate measurement of water
- accurate measurement of pesticide
- correct filling procedure
- use of filling device if fitted
- avoidance of spillage
- observance of pesticide manufacturers instructions for mixing and agitation

Topic 5.2

Methods to achieve accurate application

May include any of the following:

- tramlines
- crop rows
- blob markers
- marker poles
- marker dyes
- use of GPS

Refilling applicator part way through application

Explanation to include:

- avoid contact with contaminated crop
- mark the spot at which the applicator emptied
- refill applicator
- continue spraying by accurately matching at the appropriate point

Procedure when nozzle/restrictor becomes blocked during an application

Explanation to include:

- select and use appropriate PPE
- care not to walk in contaminated crop
- clean or replace nozzle as appropriate

Procedure in event of failure of air assistance system:

- stop spraying
- continue to spray without using downwards air assistance (if conditions allow)

Effects of increasing the speed of air assistance:

- keeps the air bag/sleeve inflated over its entire
- length
- a larger air volume is produced, which may;
    - improve penetration of the spray into the crop
    - lead to excessive drift

Adjusting air outlet angle and/or nozzle angle
Inclining forward will:

- open the crop canopy and counteract the effect on the spray created by the forward speed of the sprayer
- counteract the effect on the spray created by a head wind
- open the crop canopy and counteract the effect on the spray created by a tail wind

Demonstrate safe and accurate application procedures to include:

- ensure boom is level or aligned to the target
- correct boom height according to target and type of nozzle
- correct air speed according to target and conditions
- correct air outlet and nozzle angle according to target and conditions
- operate controls to start and finish applying accurately at the beginning and end of each bout
- correct forward speed and pressure for site conditions
- accurate matching of bouts / use of driving aids
- coping with obstacles
- all of specified area treated, minimising overlaps and misses
- awareness of changes in wind speed and direction

Topic 5.3

To include:

- prevention of personal injury and contamination through correct selection and use of PPE (as required by the product label and/or COSHH Assessment)
- prevention of public / bystander contamination
- safe filling procedure
- avoidance of spray drift
- avoidance of off target application
- avoidance of over dosing/under dosing crop/target

Topic 5.4
Completion of the treatment record must be:

- accurate
- legible (if handwritten)

Learning outcome

The learner will:

LO6 Know how to carry out post-operational procedures (**Criteria 6.1 – 6.3**)

Assessment criteria

The learner can:

AC6.1 Explain how to manage surplus pesticide and dispose of waste material
AC6.2 Explain how to clean and decontaminate the sprayer and, if applicable, the prime mover
AC6.3 Describe the storage requirements for the sprayer

Topic 6.1

Surplus concentrate pesticide:

- return to temporary mobile store
- return to fixed store

Containers:

- triple rinsed
- placed in secure storage until disposal
- returned to supplier
- collected by a licensed waste disposal contractor

Packaging:

- thoroughly emptied
- placed in secure storage until disposal
- collected by a licensed waste disposal contractor

Surplus dilute pesticide:

- back on to site as long as it is below the maximum dose rate
- use on another approved crop/target
- treated by specialist treatment facility on site (e.g. a lined bio bed)
- collected by a licensed waste disposal contractor

Topic 6.2

May include:

- select and use appropriate PPE
- appropriate site
- thorough washing with water and suitable additive if required
- internal and external surfaces
- use of in-built wash systems if provided
- care to ensure contamination ‘hot-spots’ are clean
- thorough flushing of systems, including air bag/sleeve

- safe disposal of contaminated washings
- when cleaning should take place
- safe procedures followed

Topic 6.3

May include:

- ensure the applicator is clean and dry
- inspect for wear and damage
- replace any worn or damaged parts
- controls left in appropriate positions
- frost protection measures implemented
- lubricate as required
- store undercover and out of direct sunlight
- store in a secure area

Unit 113 Operating mounted, trailed and self propelled downward air assisted horizontal boom sprayers

Supporting information

Evidence requirements

Assessment carried out by oral questioning and practical observation.

Unit guidance

Candidates must successfully achieve all assessment activities in their chosen unit(s).

Safe Practice

The Assessor and Candidate must wear Personal Protective Equipment (PPE) when appropriate.

The Assessor must ensure that a Site Specific Risk Assessment is carried out.

All equipment must be operated in such a way that the Candidate, Assessor, other persons and the environment are not endangered. Failure to operate safely and comply with these requirements will result in the Candidate not meeting the required standard.

A breach of Health and Safety that puts any person at risk during the assessment process will result in the assessment being terminated and the Candidate not meeting the required standard. The Assessor may stop the assessment on the grounds of safety at any time at their discretion.

Candidates who undertake this assessment and have met the requirements are reminded of their legal obligation to receive/undertake appropriate additional training in the use of any equipment that differs from that used during the assessment, but which they are nevertheless qualified to use.

Suggested learning resources

Code of Practice for Using Plant Protection Products.

This is available from www.hse.gov.uk

Unit 114 Operating mounted or trailed wick type applicators

Level:	2
GLH:	28
Assessment type:	Practical Observation with Oral Questioning
Aim:	The aim of this unit is for the candidate to safely operate mounted or trailed wick type applicators.

Learning outcome

The learner will:

LO1 Know the legislative and safety regulations relating to application equipment (**Criteria 1.1 – 1.2**)

Assessment criteria

The learner can:

AC1.1 Describe the legal requirements relating to applying pesticides using wick type applicators
AC1.2 Describe how to apply pesticides safely using wick type applicators following industry best practice

Topic 1.1

May include:

- all required guards are in place and equipment complies with legal requirements
- comply with all relevant road traffic regulations when operating or transporting on the public highway
- comply with The Plant Protection Products (Sustainable Use) Regulations 2012)
- the operator must hold the appropriate certification for the equipment they are using

Topic 1.2

Operator safety regulations may include:

- comply with Pesticides Codes of Practice
- adopt industry best practice
- be aware of any safety implications imposed by Risk/COSHH Assessment and comply with the requirements

Checks to protect self from pesticide contamination:
Cabbed:

- fit carbon filter
- use of in-cab controls
- ensure ventilation system is functional
- close all windows
- contaminated PPE stored in external locker

Open cab/canopy/platform:

- use of appropriate PPE

Checks to protect self from physical danger during operation:

- compatibility of prime mover and sprayer
- front weights
- wheel track width
- correct tyre pressures
- condition of tyres
- brake function

Safe practice when driving on uneven/sloping terrain:

- assess conditions
- select four wheel drive (if fitted)
- appropriate speed
- correct gear selection
- effect of changing load on stability
- use of weights to stabilise prime mover
- correct turning procedure
- keep centre of gravity as low as possible

Consideration for safe driving on a public highway:

- independent brakes coupled together
- travelling at high speed makes vehicle unstable

Learning outcome

The learner will:

LO2 Be able to assess the environmental factors relating to the mixing and application site (**Criteria 2.1 – 2.2**)

Assessment criteria

The learner can:

AC2.1 Identify risks to the environment
AC2.2 Explain how to minimize risks to the environment

Topic 2.1

May include:

- ground conditions
- water courses
- environmental margins/strips/areas
- drains
- boreholes
- wildlife
- non-target plants
- sensitive crops/areas
- hedgerows
- housing
- public access
- other risks particular to the site

Topic 2.2

Explanation to include the following points:

- check and maintain application rate
- observe buffer zones
- inform neighbours
- erect warning signs
- use an appropriate pesticide (minimal environmental impact)
- careful timing of application

Minimising off target application:

- avoidance of contamination to people and the environment

Learning outcome

The learner will:

LO3 Be able to read and interpret product information (**Criteria 3.1 – 3.2**)

Assessment criteria

The learner can:

AC3.1 Read product information
AC3.2 Interpret product information

Topic 3.1 - 3.2

The following to be provided:

- product name
- active substance(s) (ingredient(s))

Important information:

- field of use
- crop/target
- maximum individual dose
- maximum total dose
- maximum number of treatments
- specific product precautions/warnings
- operator protection
- environmental protection
- restrictions on use

Crop specific information:

- crop/target
- dose rate
- timing
- dilution rate
- mixing and filling
- additional label information
- compatibility

Learning outcome

The learner will:

LO4 Be able to prepare and calibrate the applicator (**Criteria 4.1 – 4.5**)

Assessment criteria

The learner can:

AC4.1 Identify applicator components and controls
AC4.2 Carry out pre-use checks to the prime mover
AC4.3 Carry out pre-use and operational checks to the applicator
AC4.4 Set up the applicator and record relevant data

Topic 4.1

May include:

- main tank
- wick
- pump
- filling control and devices
- agitation control

- pressure adjustment control
- pressure gauge
- on/off control
- filters
- clean water tank
- nozzles/distribution system
- diaphragm check valves
- tank drain
- other components/controls specific to the applicator

Topic 4.2

May include:

- guards in place and in good condition
- visual inspection of the wheels and tyres
- tyre pressures
- fuel level adequate
- engine oil level is within acceptable limits
- hydraulic oil level is within acceptable limits (if accessible)
- transmission oil level is within acceptable limits (if accessible)
- coolant level is adequate
- engine air filter is clean

Topic 4.3

May include all/some of the following as applicable to the applicator:

Security of attachment

- Safe unfolding of booms to avoid personal contamination and contact with Over Head Power Lines (OHPL) and any other over head hazards
- fasteners tight
- straps inspected and adjusted if necessary
- linkage secure
- sideways movement restricted
- drawbar pin secured

Possible mechanical defects:

- seized, worn or damaged controls/components
- electrical connectors
- condition of wick

Applicator lubrication:

- identification of lubrication points
- visual inspection of lubrication points
- visual inspection of levels

Candidate to remove, clean and refit filter:

- remove and clean using appropriate method
- contain spillage
- check for defects

- refit

Part fill applicator to include:
- suitable site selected
- fill by usual on-site method, following approved
- procedures
- clean water supply

Check for leaks/correct distribution:
- visual check of all nozzles/distribution system for
- even application to wick
- replace defective nozzles/distribution system
- components
- lids and seals
- pipe work and connections
- control valves
- filters
- pressure gauge
- diaphragm check valves

Topic 4.4

Set up may include the following:
- suitable forward speed for target and ground conditions

Frame settings:
- height adjustment

Prime wick:
- travel slowly forward to ensure even distribution
- time required to prime wick (wet/dry)
- adjust flow rate to wick

Operational data:
- registration number of vehicle
- gear selected
- priming time for wick
- liquid pressure (if applicable)
- flow rate setting

Topic 4.5

To include:
- amount of water required for specified area
- amount of pesticide required for specified area
- amount of pesticide required for full tank

Learning outcome

The learner will:

LO5 Be able to operate the application equipment (**Criteria 5.1 – 5.4**)

Assessment criteria

The learner can:

AC5.1 Measure the required quantities and add to the applicator
AC5.2 Demonstrate safe and accurate application procedures
AC5.3 Carry out all activities protecting human health and the environment
AC5.4 Complete a treatment record

Topic 5.1

To include:

- correct selection and use of PPE (as required by the product label and/or COSHH Assessment)
- suitable site selected
- fill by usual on-site method, following approved procedures
- clean water supply
- accurate measurement of water
- accurate measurement of pesticide
- correct filling procedure
- use of filling device if fitted
- avoidance of spillage
- observance of pesticide manufacturers instructions for mixing and agitation

Topic 5.2

Methods to achieve accurate application
May include any of the following:

- blob markers
- marker poles
- applicator wheelings
- use of GPS

Refilling applicator part way through application
Explanation to include:

- avoid contact with contaminated crop
- mark the spot at which the applicator emptied
- refill applicator
- continue application by accurately matching at the appropriate point

Problems when working on sideways sloping ground may include:

- increased saturation of lowest side of wick

- decreased saturation of highest side of wick

Procedure when nozzle/restrictor becomes blocked during an application
Explanation to include:

- select and use appropriate PPE
- care not to walk in contaminated crop
- clean or replace nozzle/distribution system as appropriate

Demonstrate safe and accurate application procedures to include:

- ensure wick is level or aligned to the target
- correct wick height according to target
- operate controls to start and finish applying accurately to the target
- avoidance of over-saturating wick
- avoidance of under-saturating wick
- correct forward speed for site conditions
- accurate matching of bouts/use of driving aids
- coping with obstacles
- all of specified area treated, minimising overlaps and misses

Topic 5.3
To include:

- prevention of personal injury and contamination through correct selection and use of PPE (as required by the product label and/or COSHH Assessment)
- prevention of public/bystander contamination
- safe filling procedure
- avoidance of drips from wick
- avoidance of off target application
- avoidance of over dosing/under dosing crop/target

Topic 5.4
Completion of the treatment record must be:

- accurate
- legible (if handwritten)

Learning outcome

The learner will:

LO6 Know how to carry out post-operational procedures (**Criteria 6.1 – 6.3**)

Assessment criteria

The learner can:

AC6.1 Explain how to manage surplus pesticide and dispose of waste material
AC6.2 Explain how to clean and decontaminate the applicator and, if applicable, the prime mover
AC6.3 Describe the storage requirements for the applicator

Topic 6.1

Surplus concentrate pesticide:

- return to temporary mobile store
- return to fixed store

Containers:

- triple rinsed
- placed in secure storage until disposal
- returned to supplier
- collected by a licensed waste disposal contractor

Packaging:

- thoroughly emptied
- placed in secure storage until disposal
- collected by a licensed waste disposal contractor

Surplus dilute pesticide:

- back on to site as long as it is below the maximum dose rate
- use on another approved crop/target
- treated by specialist treatment facility on site (e.g. a lined bio bed)
- collected by a licensed waste disposal contractor

Topic 6.2

May include:

- select and use appropriate PPE
- appropriate site
- thorough washing with water and suitable additive if required
- internal and external surfaces
- cleaning of the wick
- thorough flushing of systems
- safe disposal of contaminated washings
- when cleaning should take place
- safe procedures followed

Topic 6.3

May include:

- ensure the applicator is clean and dry
- inspect for wear and damage
- replace any worn or damaged parts
- controls left in appropriate positions
- frost protection measures implemented
- lubricate as required
- store undercover and out of direct sunlight
- store in a secure area

Unit 114 Operating mounted or trailed wick type applicators

Supporting information

Evidence requirements

Assessment carried out by oral questioning and practical observation.

Unit guidance

Candidates must successfully achieve all assessment activities in their chosen unit(s).

Safe Practice

The Assessor and Candidate must wear Personal Protective Equipment (PPE) when appropriate.

The Assessor must ensure that a Site Specific Risk Assessment is carried out.

All equipment must be operated in such a way that the Candidate, Assessor, other persons and the environment are not endangered. Failure to operate safely and comply with these requirements will result in the Candidate not meeting the required standard.

A breach of Health and Safety that puts any person at risk during the assessment process will result in the assessment being terminated and the Candidate not meeting the required standard. The Assessor may stop the assessment on the grounds of safety at any time at their discretion.

Candidates who undertake this assessment and have met the requirements are reminded of their legal obligation to receive/undertake appropriate additional training in the use of any equipment that differs from that used during the assessment, but which they are nevertheless qualified to use.

Suggested learning resources

Code of Practice for Using Plant Protection Products.

This is available from www.hse.gov.uk

Unit 115 Operating vehicle mounted kerb sprayers fitted with hydraulic nozzles/rotary atomisers

Level:	2
GLH:	28
Assessment type:	Practical Observation with Oral Questioning
Aim:	The aim of this unit is for the candidate to safely operate vehicle mounted kerb sprayers fitted with hydraulic nozzles/rotary atomisers.

Learning outcome

The learner will:

LO1 Know the legislative and safety regulations relating to application equipment (**Criteria 1.1 – 1.2**)

Assessment criteria

The learner can:

AC1.1 Describe the legal requirements relating to applying pesticides using vehicle mounted kerb sprayers
AC1.2 Describe how to apply pesticides safely using vehicle mounted kerb sprayers following industry best practice

Topic 1.1
May include:

- all required guards are in place and equipment complies with legal requirements
- comply with all relevant road traffic regulations when operating or transporting on the public highway
- comply with The Plant Protection Products (Sustainable Use) Regulations 2012
- the operator must hold the appropriate certification for the equipment they are using

Topic 1.2
Operator safety regulations may include:

- comply with Pesticides Codes of Practice

- adopt industry best practice particular in respect of non-porous surfaces and risk of contamination of surface and ground water
- be aware of any safety implications imposed by Risk/COSHH Assessment and comply with the requirements

Checks to protect self from pesticide contamination:
Cabbed:

- fit carbon filter
- use of in-cab controls
- ensure ventilation system is functional
- close all windows
- contaminated PPE stored in external locker
- awareness of the siting of pressurised components within confines of the cab

Open cab/canopy/platform:

- use of appropriate PPE
- awareness of the siting of pressurised components within confines of the cab/canopy/platform

Checks to protect self from physical danger during operation:

- compatibility of prime mover and sprayer
- wheel track width
- correct tyre pressures
- condition of tyres
- brake function

Safe practice when driving on uneven/sloping terrain:

- assess conditions
- appropriate speed
- correct gear selection
- effect of changing load on stability
- correct turning procedure
- keep centre of gravity as low as possible

Consideration for safe driving on a public highway:

- travelling at high speed makes vehicle unstable
- slow moving vehicle protocols

Learning outcome

The learner will:

LO2 Be able to assess the environmental factors relating to the mixing and application site (**Criteria 2.1 – 2.2**)

Assessment criteria

The learner can:

AC2.1 Identify risks to the environment
AC2.2 Explain how to minimize risks to the environment

Topic 2.1
May include:

- hard surface run-off
- drains
- water courses
- environmental areas
- wildlife
- non-target plants
- sensitive crops/areas
- hedgerows
- housing
- public access
- other risks particular to the site

Topic 2.2
Explanation to include the following points:

- check and maintain application rate
- avoid run-off
- avoid spray drift
- observe buffer zones
- inform neighbours
- appropriate warning signs
- use an appropriate pesticide (minimal
- environmental impact)
- careful timing of application

Minimising spray drift:

- avoidance of contamination to people and the environment

Check wind speed and direction:

- use of anemometer at suitable heights or visual signs
- wind direction

Factors that affect spray drift:

- weather conditions
- direction of spraying
- nozzle type and size
- pressure
- forward speed
- nozzle height
- rotary atomiser speed
- defective equipment

Learning outcome

The learner will:

LO3 Be able to read and interpret product information (**Criteria 3.1 – 3.2**)

Assessment criteria

The learner can:

AC3.1 Read product information
AC3.2 Interpret product information

Topic 3.1 - Topic 3.2

The following to be provided:

- product name
- active substance(s) (ingredient(s))

Important information:

- field of use
- target
- maximum individual dose
- maximum total dose
- maximum number of treatments
- specific product precautions/warnings
- operator protection
- environmental protection
- restrictions on use

Target specific information:

- target
- dose rate
- water volume
- timing

Mixing and spraying:

- filling
- recommended nozzles
- recommended pressure
- spray quality
- additional label information

Learning outcome

The learner will:

LO4 Be able to prepare and calibrate the applicator (**Criteria 4.1 – 4.5**)

Assessment criteria

The learner can:

AC4.1 Identify applicator components and controls
AC4.2 Carry out pre-use checks to the prime mover
AC4.3 Carry out pre-use and operational checks to the sprayer / applicator
AC4.4 Set up the sprayer and record relevant data

Topic 4.1

May include:

- main spray tank
- pump
- filling control and devices
- agitation control
- pressure adjustment control
- pressure gauge
- on/off control
- boom isolators
- filters
- tank wash system
- clean water tank
- nozzles/atomisers/spray heads
- diaphragm check valves
- tank drain
- other components/controls specific to the applicator

Nozzle types:

- Flat flan – fine/medium/coarse spray
- Air inclusion – medium/coarse spray, low drift

Topic 4.2

May include:

- visual inspection of the wheels and tyres
- tyre pressures
- fuel level adequate/motive batteries charged
- oil level(s) within acceptable limits
- coolant level is adequate
- engine air filter is clean

Topic 4.3

May include all/some of the following as applicable to the sprayer/applicator:
Security of attachment

- fasteners tight
- straps inspected and adjusted if necessary

Possible mechanical defects:

- seized, worn or damaged controls/components
- atomiser drives and electrical connectors

Applicator lubrication:

- identification of lubrication points
- visual inspection of lubrication points
- visual inspection of levels

Spray head attachments/break-back devices

- height adjustment
- break-back efficiency

Candidate to remove, clean and refit filter:

- remove and clean using appropriate method
- contain spillage
- check for defects
- refit

Candidate to remove, clean/replace and refit a nozzle/restrictor/spray head:

- remove and clean using appropriate method
- contain spillage
- check for defects
- replace if worn/damaged
- refit

Use of control panel may include:

- functions of control panel
- recognition of malfunctions before and during operation
- switch to manual/test mode where applicable

Part fill applicator to include:

- suitable site selected
- fill by usual on-site method, following approved procedures
- clean water supply

Check for air leaks/spray patterns:

- or attach pesticide container
- use higher than normal operating pressure
- visual check of all nozzles/atomisers/spray heads for correct spray patterns, absence of blockages, streaking and pulsing
- replace defective nozzles/atomisers/spray heads
- lids and seals
- pipe work and connections
- control valves
- filters
- pressure gauge
- diaphragm check valves

Action in event of control panel failing:

- stop pesticide application
- manual operation of controls if possible

Topic 4.4

May include:

- suitable forward speed for target and ground conditions
- appropriate gear selected and engine speed established (if applicable)
- accurate measurement of distance
- accurate measurement of time taken to cover distance
- correct use of formula to establish forward speed

Calculate required output/volume rate:

- correct use of formula

Selection of appropriate nozzle/atomiser/spray head:

- use of manufacturers operators handbook
- use of nozzle/atomiser/spray head manufacturers literature
- confirm requirements of product label

Operating pressure/disc speed:

- pressure as determined by nozzle chart
- disc speed as determined by manufacturers literature
- pressurise/purge appropriate to the system

Nozzle/atomiser/spray head outputs:

- use a measuring jug to check nozzle/atomiser/spray head output
- compare with target output
- vary pressure/flow rate to make small adjustments
- change nozzles/atomisers/spray heads if required
- Or any other acceptable method

Calibration data:

- registration number of vehicle
- tyre size and pressure
- gear selected
- engine speed
- vehicle forward speed
- application volume
- nozzle/atomiser/spray head fitted
- pressure/disc speed
- flow rate

Topic 4.5

May include:

- amount of water required for specified area
- amount of pesticide required for specified area
- amount of pesticide required for full tank

Learning outcome

The learner will:

LO5 Be able to operate the application equipment (**Criteria 5.1 – 5.4**)

Assessment criteria

The learner can:

AC5.1 Measure the required quantities and add to the sprayer or attach pesticide container
AC5.2 Demonstrate safe and accurate application procedures
AC5.3 Carry out all activities protecting human health and the environment
AC5.4 Complete a treatment record

Topic 5.1

To include:

- correct selection and use of PPE (as required by the product label and/or COSHH Assessment)
- suitable site selected
- fill by usual on-site method, following approved procedures
- clean water supply
- accurate measurement of water
- accurate measurement of pesticide
- correct filling procedure
- avoidance of spillage
- observance of pesticide manufacturers
- instructions for mixing and agitation
- correct selection and use of PPE (as required by the product label and/or COSHH Assessment)
- suitable site selected
- container undamaged
- correct procedure for attaching container
- avoidance of spillage
- check for leakage

Topic 5.2
Refilling applicator part way through application
Explanation to include:

- avoid contact with contaminated area
- mark the spot at which the applicator emptied
- refill applicator
- continue spraying by accurately matching at the appropriate point

Procedure when nozzle/restrictor/spray head becomes blocked during an application

- select and use appropriate PPE
- care not to walk on contaminated area

- clean or replace nozzle/restrictor/spray head as appropriate

Demonstrate safe and accurate application procedures to include:

- ensure spray head is aligned to the target
- correct spray head height to achieve compliance with hard-surface recommendations
- operate controls to apply accurately
- correct forward speed and pressure for site conditions
- coping with obstacles
- all of specified area treated
- awareness of changes in wind speed and direction

Topic 5.3

May include:

- prevention of public / bystander contamination
- prevention of personal injury and contamination through correct selection and use of PPE (as required by the product label and/or COSHH Assessment)
- safe filling procedure
- avoidance of spray drift
- avoidance of off target application
- avoidance of over dosing/under dosing target

Topic 5.4

Completion of the treatment record must be:

- accurate
- legible (if handwritten)

Learning outcome

The learner will:

LO6 Know how to carry out post-operational procedures (**Criteria 6.1 – 6.3**)

Assessment criteria

The learner can:

AC6.1 Explain how to manage surplus pesticide and dispose of waste material
AC6.2 Explain how to clean and decontaminate the applicator and, if applicable, the prime mover
AC6.3 Describe the storage requirements for the applicator

Topic 6.1

Surplus concentrate pesticide:

- return to temporary mobile store
- return to fixed store

Containers:

- triple rinsed

- placed in secure storage until disposal
- returned to supplier
- collected by a licensed waste disposal contractor

Packaging:

- thoroughly emptied
- placed in secure storage until disposal
- collected by a licensed waste disposal contractor

Surplus dilute pesticide:

- back on to site as long as it is below the maximum dose rate
- use on another approved target
- treated by specialist treatment facility on site (e.g. a lined bio bed)
- collected by a licensed waste disposal contractor

Topic 6.2

May include:

- select and use appropriate PPE
- appropriate site
- thorough washing with water and suitable additive if required
- internal and external surfaces
- use of in-built wash systems if provided
- thorough flushing of systems
- safe disposal of contaminated washings
- when cleaning should take place
- safe procedures followed

Topic 6.3

May include:

- ensure the applicator is clean and dry
- inspect for wear and damage
- replace any worn or damaged parts
- controls left in appropriate positions
- frost protection measures implemented
- lubricate as required
- store undercover and out of direct sunlight
- store in a secure area

Unit 115 Operating vehicle mounted kerb sprayers fitted with hydraulic nozzles/rotary atomisers

Supporting information

Evidence requirements

Assessment carried out by oral questioning and practical observation.

Unit guidance

Candidates must successfully achieve all assessment activities in their chosen unit(s).

Safe Practice

The Assessor and Candidate must wear Personal Protective Equipment (PPE) when appropriate.

The Assessor must ensure that a Site Specific Risk Assessment is carried out.

All equipment must be operated in such a way that the Candidate, Assessor, other persons and the environment are not endangered. Failure to operate safely and comply with these requirements will result in the Candidate not meeting the required standard.

A breach of Health and Safety that puts any person at risk during the assessment process will result in the assessment being terminated and the Candidate not meeting the required standard. The Assessor may stop the assessment on the grounds of safety at any time at their discretion.

Candidates who undertake this assessment and have met the requirements are reminded of their legal obligation to receive/undertake appropriate additional training in the use of any equipment that differs from that used during the assessment, but which they are nevertheless qualified to use.

Suggested learning resources

Code of Practice for Using Plant Protection Products.

This is available from www.hse.gov.uk

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** or click on the links below:

Centre Handbook: Quality Assurance Standards

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.

Centre Handbook: Quality Assurance Standards

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.**

City & Guilds

For over 140 years, we have worked with people, organisations and economies to help them identify and develop the skills they need to thrive. We understand the life-changing link between skills development, social mobility, prosperity and success. Everything we do is focused on developing and delivering high-quality training, qualifications, assessments and credentials that lead to jobs and meet the changing needs of industry.

We partner with our customers to deliver work-based learning programmes that build competency to support better prospects for people, organisations and wider society. We create flexible learning pathways that support lifelong employability because we believe that people deserve the opportunity to (re)train and (re)learn again and again – gaining new skills at every stage of life, regardless of where they start.

The City & Guilds community of brands includes Gen2, ILM, Intertrain, Kineo and The Oxford Group.

Copyright

Published by City & Guilds, a registered charity established to promote education and training.

City & Guilds of London Institute
Giltspur House
5–6 Giltspur Street
London
EC1A 9DE

cityandguildsgroup.com