



# City & Guilds Level 2 Award in the Safe Application of Pesticides Using Pedestrian Handheld Equipment (PA6) (0216-78)

Version 1.0 (December 2025)

## Qualification Handbook

Candidates are **not** permitted to refer to this document during the practical observation and oral questioning.

## Qualification at a glance

<b>Subject area</b>	Pesticides and Pest Control
<b>City &amp; Guilds number</b>	0216-78
<b>Age group approved</b>	16+
<b>Entry requirements</b>	Learners must have achieved the Principles of Safe Handling and Application of Pesticides (PA1) (or equivalent) before being assessed for this qualification
<b>Assessment</b>	<p>This is an independently assessed qualification.</p> <p>To gain this qualification, candidates must successfully achieve the following:</p> <ul style="list-style-type: none"> <li>• one to one practical observation with oral questioning</li> </ul>
<b>Grading</b>	Pass/Fail
<b>Approvals</b>	Full approval required
<b>Support materials</b>	Qualification handbook Practical assessment guidance (available via the Assessor secure area of <a href="http://www.nptc.org.uk">www.nptc.org.uk</a> )
<b>Registration and certification</b>	Consult Walled Garden for last dates.

Title and level	City & Guilds qualification number	Regulatory reference number	GLH	TQT
City & Guilds Level 2 Award in the Safe Application of Pesticides Using Pedestrian Handheld Equipment (PA6)	0216-78	610/6552/3	54	60

Version and date	Change detail	Section
1.0 December 2025	Initial version	All

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# 1 Introduction

This document tells you what you need to do to deliver the qualification.

Area	Description
Who is the qualification for?	<p>The term “pesticides” is defined as any substance, preparation or organism that is prepared for or used to control any pest. The term “pesticide” is used to cover pesticides and Plant Protection Products (PPPs).</p> <p>This qualification is for those individuals whose job involves applying professional pesticide products. It is a legal requirement under the Plant Protection Products (Sustainable Use) Regulations (2012) to hold an approved qualification.</p> <p>This qualification is designed specifically for those who wish to apply pesticides using various types of handheld applicators.</p>
What does the qualification cover?	<p>This qualification covers:</p> <ul style="list-style-type: none"><li>• understanding the legislative, regulatory and Codes of Practice (CoP) requirements relating to applicator use</li><li>• reading and interpreting information on a product label</li><li>• assessing the environmental risks relating to the filling and application site</li><li>• preparing and calibrating the applicator</li><li>• operating the applicator</li><li>• knowing how to carry out post-operational procedures</li></ul>
What opportunities for progression are there?	<p>This qualification will support progression into/sustainment in employment where applying pesticides using handheld applicators is part of the role. This qualification will also support progression into further learning in pesticides and pest control.</p> <p>Recommended progression onto 0216-87 City &amp; Guilds Level 3 Award in Responsible Pesticide Management (RA-RPM) is also available.</p> <p>City &amp; Guilds offer a range of refreshers in pesticides and pest control. Under the Provision and Use of Work Equipment Regulations (PUWER) it is recommended that individuals have a refresher every 2–5 years.</p>

Area	Description
	<p>Each refresher covers the appropriate practical skills required to meet legislation, industry technical standards and industry good practice.</p> <p>The refresher encourages looking forward and identifying opportunities to learn something new, refresh existing knowledge, improve skills, and keep up to date with the latest developments in a profession or industry.</p>
Who did we develop the qualification with?	<p>Developed with City &amp; Guilds NPTC stakeholders, associates and industry representatives.</p> <p>Compliance with the requirements of the Health and Safety Executive, Chemical Regulation Division, Voluntary Initiative, Department for Environment, Food and Rural Affairs (DEFRA), and the relevant Environmental Agency.</p>
Is it part of an apprenticeship framework or initiative?	No

## Structure

To achieve the City & Guilds Level 2 Award in the Safe Application of Pesticides Using Pedestrian Handheld Equipment (pedestrian handheld applicators fitted with hydraulic nozzles or rotary atomisers to apply pesticides to land) (PA6A) (0216-78), learners must achieve:

City & Guilds unit number	Unit title	GLH
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### Mandatory unit:

Learners **must** achieve the following mandatory unit.

Unit 265	Operating pedestrian handheld applicators fitted with hydraulic nozzles or rotary atomisers to apply pesticides to land (PA6A)	54
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To achieve the City & Guilds Level 2 Award in the Safe Application of Pesticides Using Pedestrian Handheld Equipment (pedestrian handheld applicators fitted with hydraulic nozzles or rotary atomisers to apply pesticides to land and to or near water) (PA6AW) (0216-78), learners must achieve:

City & Guilds unit number	Unit title	GLH
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### Mandatory units:

Learners **must** achieve the following mandatory units.

Unit 265	Operating pedestrian handheld applicators fitted with hydraulic nozzles or rotary atomisers to apply pesticides to land (PA6A)	54
<b>This unit must be achieved prior to assessment for PA6AW</b>		
Unit 266	Operating pedestrian handheld applicators fitted with hydraulic nozzles or rotary atomisers to apply pesticides to or near water (PA6AW)	54

To achieve the City & Guilds Level 2 Award in the Safe Application of Pesticides Using Pedestrian Handheld Equipment (pedestrian handheld applicators to apply pesticides pellets or granules to land) (PA6G) (0216-78), learners must achieve:

City & Guilds unit number	Unit title	GLH
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### Mandatory unit:

Learners **must** achieve the following mandatory unit.

Unit 267	Operating pedestrian handheld applicators to apply pesticides pellets or granules to land (PA6G)	54
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To achieve the City & Guilds Level 2 Award in the Safe Application of Pesticides Using Pedestrian Handheld Equipment (pedestrian handheld applicators to apply pesticides pellets or granules to land and to or near water) (PA6GW) (0216-78), learners must achieve:

City & Guilds unit number	Unit title	GLH
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**Mandatory units:**

Learners **must** achieve the following mandatory units.

Unit 267	Operating pedestrian handheld applicators to apply pesticides pellets or granules to land (PA6G)	54
<b>This unit must be achieved prior to assessment for PA6G</b>		
Unit 268	Operating pedestrian handheld applicators to apply pesticides pellets or granules to or near water (PA6GW)	54

To achieve the City & Guilds Level 2 Award in the Safe Application of Pesticides Using Pedestrian Handheld Equipment (installing pesticide plugs in standing trees or stumps) (PA6PP) (0216-78), learners must achieve:

City & Guilds unit number	Unit title	GLH
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**Mandatory unit:**

Learners **must** achieve the following mandatory unit.

Unit 269	Installing pesticide plugs in standing trees or stumps (PA6PP)	54
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To achieve the City & Guilds Level 2 Award in the Safe Application of Pesticides Using Pedestrian Handheld Equipment (handheld pesticide injection equipment) (PA6INJ) (0216-78), learners must achieve:

City & Guilds unit number	Unit title	GLH
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**Mandatory unit:**

Learners **must** achieve the following mandatory unit.

Unit 270	Operating handheld pesticide injection equipment (PA6INJ)	54
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To achieve the City & Guilds Level 2 Award in the Safe Application of Pesticides Using Pedestrian Handheld Equipment (handheld applicators requiring minimal calibration) (PA6MC) (0216-78), learners must achieve:

City & Guilds unit number	Unit title	GLH
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**Mandatory unit:**

Learners **must** achieve the following mandatory unit.

Unit 271	Operating handheld applicators requiring minimal calibration (PA6MC)	
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## Total Qualification Time (TQT)

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 consists of the following two elements:

the number of hours that an awarding organisation has assigned to a qualification for guided learning

an estimate of the number of hours a learner will reasonably be likely to spend in preparation, study or any other form of participation in education or training, including assessment, which takes place as directed by – but, unlike guided learning, not under the immediate guidance or supervision of – a lecturer, supervisor, tutor or other appropriate provider of education or training.

Title and level	GLH	TQT
City & Guilds Level 2 Award in the Safe Application of Pesticides Using Pedestrian Handheld Equipment (PA6)	54	60

## 2 Centre requirements

### Approval

#### Full approval

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

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

### Resource requirements

#### Centres

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

#### Centre Staffing

Staff delivering these qualifications must be able to demonstrate that they meet the following occupational expertise requirements. They must have:

##### Technical competence

- be occupationally competent or possess technical expertise equivalent to the level of training being delivered.
- experience should reflect current industry standards and practice.

##### Professional experience

- must have current and relevant experience in the specific subject area being delivered and assessed.

##### Training delivery

- proven track record of delivering training.

#### Assessors

Assessors must be approved Certificate of Competence (CoC) City & Guilds NPTC Assessors and **must be independent and cannot have been involved with the training of the candidate.**

Assessors must use the practical assessment guidance which is available via the assessor secure area of **[www.nptc.org.uk](http://www.nptc.org.uk)**.

##### Assessors must:

- 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 training.

Demonstrating continuing technically relevant Continuing Professional Development (CPD) with these requirements is a pre-requisite for assessors to remain on the list of approved assessors.

### **Continuing Professional Development (CPD)**

Centres are expected to support their staff in ensuring that their knowledge of the occupational area remains current and of best practice in delivery, mentoring, training, assessment and quality assurance, and that it takes account of any national or legislative developments.

### **Physical resources**

Centres must be able to demonstrate that they have access to the physical resources required to deliver this qualification and its assessments:

#### **Site requirements:**

- a dry location for questioning and documentation completion
- a suitable area for calibration of the applicator
- a site for calculating and measuring pesticide and water and adding to the applicator
- a specified area for application

#### **Equipment/Machinery:**

Any equipment/machinery used for the delivery or assessment must comply with current legal requirements.

- applicator: pedestrian handheld equipment
- Personal Protective Equipment (PPE)/Respiratory Protective Equipment (RPE)
- measuring tape and/or wheel
- stopwatch
- compass and anemometer
- measuring jug(s)
- calculator
- bout markers
- drip tray
- spillage kit

#### **Documentation:**

- product label and/or appropriate EAMU provided by the candidate
- calibration aids
- application record provided by the candidate
- manufacturer's operator's handbook/literature
- nozzle chart(s)

#### **Consumables:**

- first aid kit
- water supply
- simulated pesticide product or actual product may be used if required

#### **Additional information:**

Additional information may be sought from the relevant manufacturer's operator's manual, product information or database, nozzle chart(s) or any other publication by the government or a government agency.

## Quality assurance

Approved centres must have effective quality assurance systems to ensure optimal 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 & Guilds quality assurance processes visit the [What is CASS?](#) and [Quality Assurance Standards](#) documents on the City & Guilds website.

Standards and rigorous quality assurance are maintained by the use of:

- internal quality assurance
- City & Guilds external quality assurance.

In order to carry out the quality assurance role, Internal Quality Assurers (IQAs) must:

- have appropriate teaching and vocational knowledge and expertise
- have experience in quality management/internal quality assurance
- hold or be working towards an appropriate teaching/training/assessing qualification
- be familiar with the occupation and technical content covered within the qualification.

External quality assurance for the qualification will be provided by City & Guilds. External Quality Assurers (EQAs) are appointed by City & Guilds to approve centres, and to monitor the assessment and internal quality assurance carried out by centres. External quality assurance is carried out to ensure that assessment is valid and reliable, and that there is good assessment practice in centres.

The role of the EQA is to:

- provide advice and support to centre staff
- ensure the quality and consistency of assessments and marking/grading within and between centres by the use of systematic sampling
- provide feedback to centres and to City & Guilds.

## Learner entry requirements

Learners must have achieved the Principles of Safe Handling and Application of Pesticides (PA1) (or equivalent) before being assessed for this qualification.

Centres must ensure that learners have the potential and opportunity to gain the qualification successfully.

## Age restrictions

This qualification is approved for learners aged 16 or above.

## Access arrangements, reasonable adjustments and special consideration

City & Guilds has considered the design of this qualification and its assessments in order to best support accessibility and inclusion for all learners. City & Guilds understands however that individuals have diverse learning needs and may require reasonable adjustments to fully participate. Reasonable adjustments, such as additional time or alternative formats, may be provided to accommodate learners with disabilities and support fair access to assessment.

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.

Special consideration is a post examination adjustment to a candidate's mark or grade to reflect temporary injury, illness or other indisposition at the time of the examination/assessment.

Please refer to the documents 'Joint Council for Qualifications (JCQ) Access Arrangements and Reasonable Adjustments', 'JCQ – A Guide to the special consideration process' and 'Access arrangements – When and how applications need to be made to City & Guilds' for more information. All of these are available on the **[City & Guilds website](#)**

## 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
- any 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.

### Inclusion and diversity

City & Guilds is committed to improving inclusion and diversity within the way we work and how we deliver our purpose which is to help people and organisations develop the skills they need for growth. More information and guidance to support centres in supporting inclusion and diversity through the delivery of City & Guilds qualifications can be found here: **[Inclusion and diversity | City & Guilds \(cityandguilds.com\)](#)**

### Sustainability

City & Guilds are committed to net zero. Our ambition is to reduce our carbon emissions by at least 50% before 2030 and develop environmentally responsible operations to achieve net zero by 2040 or sooner if we can. City & Guilds is committed to supporting qualifications that help our customers to consider sustainability and their environmental footprint.

More information and guidance to support centres in developing sustainable practices through the delivery of City & Guilds qualifications can be found here: **[Our Pathway to Net Zero | City & Guilds \(cityandguilds.com\)](#)**

Centres should consider their own carbon footprint when delivering this qualification and consider reasonable and practical ways of delivering this qualification with sustainability in mind. This could include:

- reviewing purchasing and procurement processes (such as buying in bulk to reduce the amount of travel time and energy and considering and investing in the use of resources that can be reused, instead of the use of disposable or single use consumables)
- waste procedures (ensuring that waste is minimised and recycling is in place wherever possible)
- minimising water use and considering options for reuse/salvage wherever possible.

## Support materials

The following resources are available for this qualification:

Description	How to access
Qualification handbook	<a href="http://www.nptc.org.uk">www.nptc.org.uk</a>
Practical assessment guidance	Available only via the assessor secure area <a href="http://www.nptc.org.uk">www.nptc.org.uk</a>

## 4 Assessment

### Assessment of the qualification

Candidates must successfully complete:

- one practical observation with oral questioning for **each** registered unit

Unit	Title	Assessment method	Where to obtain assessment materials
Unit 265	Operating pedestrian handheld applicators fitted with hydraulic nozzles or rotary atomisers to apply pesticides to land (PA6A)	<b>Practical observation with oral questioning</b> Externally set, assessed by a City & Guilds NPTC approved assessor, externally verified	Assessors must use the materials provided by City & Guilds. Practical assessment guidance can be downloaded from the assessor secure area of <a href="http://www.nptc.org.uk">www.nptc.org.uk</a>
Unit 266	Operating pedestrian handheld applicators fitted with hydraulic nozzles or rotary atomisers to apply pesticides to or near water (PA6AW)	<b>Practical observation with oral questioning</b> Externally set, assessed by a City & Guilds NPTC approved assessor, externally verified	Assessors must use the materials provided by City & Guilds. Practical assessment guidance can be downloaded from the assessor secure area of <a href="http://www.nptc.org.uk">www.nptc.org.uk</a>
Unit 267	Operating pedestrian handheld applicators to apply pesticides pellets or granules to land (PA6G)	<b>Practical observation with oral questioning</b> Externally set, assessed by a City & Guilds NPTC approved assessor, externally verified	Assessors must use the materials provided by City & Guilds. Practical assessment guidance can be downloaded from the assessor secure area of <a href="http://www.nptc.org.uk">www.nptc.org.uk</a>

Unit <b>268</b>	Operating pedestrian handheld applicators to apply pesticides pellets or granules to or near water (PA6GW)	<b>Practical observation with oral questioning</b>  Externally set, assessed by a City & Guilds NPTC approved assessor, externally verified	Assessors must use the materials provided by City & Guilds.  Practical assessment guidance can be downloaded from the assessor secure area of <a href="http://www.nptc.org.uk"><b>www.nptc.org.uk</b></a>
Unit <b>269</b>	Installing pesticide plugs in standing trees or stumps (PA6PP)	<b>Practical observation with oral questioning</b>  Externally set, assessed by a City & Guilds NPTC approved assessor, externally verified	Assessors must use the materials provided by City & Guilds.  Practical assessment guidance can be downloaded from the assessor secure area of <a href="http://www.nptc.org.uk"><b>www.nptc.org.uk</b></a>
Unit <b>270</b>	Operating handheld pesticide injection equipment (PA6INJ)	<b>Practical observation with oral questioning</b>  Externally set, assessed by a City & Guilds NPTC approved assessor, externally verified	Assessors must use the materials provided by City & Guilds.  Practical assessment guidance can be downloaded from the assessor secure area of <a href="http://www.nptc.org.uk"><b>www.nptc.org.uk</b></a>
Unit <b>271</b>	Operating handheld applicators requiring minimal calibration (PA6MC)	<b>Practical observation with oral questioning</b>  Externally set, assessed by a City & Guilds NPTC approved assessor, externally verified	Assessors must use the materials provided by City & Guilds.  Practical assessment guidance can be downloaded from the assessor secure area of <a href="http://www.nptc.org.uk"><b>www.nptc.org.uk</b></a>

## Assessment strategy

City & Guilds has written the following assessments to use with this qualification:

- live practical assessment guidance (practical observation with oral questioning) that can be downloaded from the assessor secure area of the NPTC website.

During the assessment the candidate may refer to operator manuals, training materials or safety publications, but they may **not** refer to the Qualification Handbook (QHB).

## Time constraints

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

- candidates must complete their assessment within 12 months of initial registration.
- practical observation and oral questioning for PA6A, PA6AW, PA6G and PA6GW should take between 1.5–3 hours.
- practical observation and oral questioning for PA6PP, PA6INJ and PA6MC should take between 1–2 hours.

## Summary of responsibilities in preparing for 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 and/or equipment and materials are available to enable assessment of all the activities to take place	To be familiar with the machinery and/or equipment being used for the assessment	Ensuring that the machinery and/or equipment and materials provided satisfy the assessment requirements
	To bring appropriate Personal Protective Equipment (PPE) and/or Respiratory Protective Equipment (RPE) to the assessment	Wearing appropriate PPE and/or RPE. Ensuring that candidate's PPE and/or RPE complies with the requirements of the assessment
	To bring relevant training materials (if applicable)	
	To bring a product label and application record appropriate for the assessment	To ensure that the product label and application record 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)
- assessment method
- unit aim
- Learning Outcomes (LOs), which are comprised of a number of Assessment Criteria (ACs)
- supporting information

### Guidance for delivery of the units

This qualification comprises of 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 **Learning Outcomes (LOs)** which describe in further detail the skills and knowledge that an individual should possess.

Each Learning Outcome (LO) has a set of **Assessment Criteria (ACs)** (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.

Supporting information provides guidance of the evidence requirement for the units, specific guidance on safe practice, and suggested learning resources. Centres are advised to review this information carefully before delivering the unit.

## Unit 265 Operating pedestrian handheld applicators fitted with hydraulic nozzles or rotary atomisers to apply pesticides to land (PA6A)

<b>Level:</b>	2
<b>GLH:</b>	54
<b>Assessment method:</b>	Practical observation with oral questioning
<b>Aim:</b>	The purpose of this unit is for learners to safely operate handheld applicators fitted with hydraulic or rotary atomisers to apply pesticide to land.

### Learning Outcomes

- LO1 Understand the legislative, regulatory and Codes of Practice (CoP) requirements relating to applicator use
- LO2 Read and interpret information on a product label
- LO3 Assess the environmental risks relating to the filling and application site
- LO4 Prepare and calibrate the applicator
- LO5 Operate the applicator
- LO6 Know how to carry out post-operational procedures

Assessment Criteria	Scope of study
AC1.1 Describe the legislative, regulatory and Codes of Practice (CoP) requirements relating to applicator use	<p><b>Assessment Criteria 1.1</b></p> <p>Legislative, regulatory and Codes of Practice (CoP) requirements relating to applicator use:</p> <ul style="list-style-type: none"> <li>a) Operator's responsibility under legislation:               <ul style="list-style-type: none"> <li>i) Follow product label requirements for correct application of pesticides.</li> <li>ii) Follow employer instructions and training for applicator use.</li> <li>iii) Use Integrated Pest Management (IPM) techniques where possible.</li> <li>iv) Protect flora and fauna from harm when carrying out work.</li> <li>v) Ensure public access on foot to area of land is not prohibited/restricted during work unless permission is granted.</li> <li>vi) Do not apply pesticides to public rights of way unless specifically for managing access.</li> </ul> </li> <li>b) Operator's responsibility under regulations:               <ul style="list-style-type: none"> <li>i) Follow obligations on the use and disposal of Plant Protection Products (PPPs), including packaging.</li> <li>ii) Read, understand and comply with Control of Substances Hazardous to Health (COSHH)/risk assessments and adhere to the control measures put in place.</li> </ul> </li> </ul>

- iii) Use, maintain and store Personal Protective Equipment (PPE)/Respiratory Protective Equipment (RPE) as provided and instructed.
- iv) Follow instructions and training in the inspection, use, calibration and maintenance of applicators.
- v) Follow compliance requirements for the management and disposal of waste.
- vi) Be prepared for inspection of PPPs record keeping and storage.
- vii) Know the company policy on how to report Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) to the HSE (Health and Safety Executive).
- c) Operator's responsibility under Pesticide Code of Practice (CoP) for using Plant Protection Products (PPPs):
  - i) Hold (or be under supervision of a holder of) a specified certificate directly related to the application method and/or applicator being used (Certificates of Competence (CoC)).
  - ii) Apply pesticides safely and effectively following product information and complying with current legislation.
- d) Work in accordance with the UK Pesticides National Action Plan (NAP):
  - i) Use IPM and alternative approaches or techniques where possible.
  - ii) Reduce impact by applying pesticides at appropriate times, safely monitor and contain active substances which are particularly harmful.
  - iii) Ensure storage, handling and disposal operations do not endanger human health or the environment, comply with inspections, enforcement and other official control activities.

AC2.1 Read and interpret information on a product label

#### Assessment Criteria 2.1

Information on a product label:

- a) Product information:
  - i) Product name
  - ii) Active substance(s) (ingredients)
  - iii) Product group symbol
  - iv) Approval number
  - v) Reason for use
  - vi) Expiry date/shelf life.
- b) Important information:
  - i) Approved field of use
  - ii) Maximum individual dose
  - iii) Maximum total dose
  - iv) Maximum number of treatments
  - v) Latest time of application.
- c) Safety precautions:
  - i) Operator protection
  - ii) Environmental protection
  - iii) Buffer zone
  - iv) Restrictions on use
  - v) Specific product precautions.
- d) Crop specific information:
  - i) Crop/target
  - ii) Dose rate
  - iii) Timing of application(s)
  - iv) Water volume.
- e) Mixing and application information:
  - i) Appropriate for applicator
  - ii) Filling
  - iii) Recommended nozzles
  - iv) Recommended pressure
  - v) Reduced volume applications

Assessment Criteria	Scope of study
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	<ul style="list-style-type: none"> <li>vi) Spray quality</li> <li>vii) Compatibility</li> <li>viii) Label information unique to the product.</li> </ul>
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AC3.1 Identify environmental risks to the filling and application site and explain how to minimise these risks

**Assessment Criteria 3.1**

Environmental risks to the filling and application site and how to minimise these risks:

- a) Environmental factors at risk at the filling and application site:
  - i) Ground conditions.
  - ii) Water courses.
  - iii) Drains.
  - iv) Boreholes.
  - v) Environmental margins/strips/areas.
  - vi) Wildlife.
  - vii) Beneficial insects.
  - viii) Non-target plants.
  - ix) Sensitive crops/areas.
  - x) Hedgerows.
  - xi) Housing.
  - xii) Public access.
  - xiii) Other environmental factors relevant to the site.
- b) Minimise risks to the filling and application site:
  - i) Check and maintain application rate.
  - ii) Monitor weather conditions.
  - iii) Avoid spray drift.
  - iv) Avoid off target application.
  - v) Avoid surface run-off.
  - vi) Observe buffer zones.
  - vii) Observe environmental margins/strips/areas.
  - viii) Inform neighbours.
  - ix) Erect warning signs.
  - x) Use an appropriate pesticide (minimal environmental impact).
  - xi) Appropriate timing of application.

AC4.1 Carry out pre-use checks to the applicator

**Assessment Criteria 4.1**

Pre-use checks to the applicator:

- a) Applicator depressurised.
- b) Applicator components to be inspected for serviceability and contamination:
  - i) Tank and lid
  - ii) Filters
  - iii) Hoses
  - iv) Pump
  - v) Connections
  - vi) Seals
  - vii) On/off control
  - viii) Lance
  - ix) Straps
  - x) Pump, visual assessment only
  - xi) Batteries
  - xii) Engine.

AC4.2 Select nozzles/atomisers according to application requirements and identify suitable operating pressure

**Assessment Criteria 4.2**

Nozzle selection according to application requirements and suitable operating pressure:

- a) Use of nozzles:
  - i) Deflector:
    - medium or coarse spray quality
    - generally used for overall application.
  - ii) Air inclusion:
    - medium or coarse spray quality
    - overlap requirements
    - used for drift reduction.
  - iii) Full cone:
    - medium or coarse spray quality
    - used for spot application and spraying around obstacles.
  - iv) Standard flat fan:
    - fine, medium or coarse spray quality
    - overlap requirements
    - generally used for overall application.
  - v) Even spray flat fan:
    - fine, medium or coarse spray quality
    - used for general purpose.
  - vi) Hollow cone:
    - fine spray quality
    - generally used for insecticide and fungicide treatment.
- b) Fit nozzle/atomiser for use and select the correct pressure:
  - i) Suitable nozzle/atomiser selected
  - ii) Nozzle/atomiser fitted correctly
  - iii) Correct pressure selected.
- c) Part-fill the applicator and check for satisfactory performance:
  - i) Applicator checked for leaks under pressure
  - ii) Nozzle/atomiser(s) undamaged
  - iii) Correct spray pattern for nozzle
  - iv) Condition confirmed as suitable for operation.

AC4.3 Calibrate the applicator

**Assessment Criteria 4.3**

Calibrate the applicator:

- a) Calibrate the applicator.
- b) Calculate application volume and check against product label information.
- c) Make applicator adjustments based on requirements.
- d) Factors that would affect calibration:
  - i) Walking speed.
  - ii) Spray width.
  - iii) Pressure.
  - iv) Nozzle/atomiser fitted.

AC5.1 Measure and calculate the area to be treated

**Assessment Criteria 5.1**

Measure and calculate the area to be treated:

- a) Measure the area to be treated:
  - i) Accurate measurement of dimensions.
- b) Calculate the area to be treated:
  - i) Accurate calculation of area.

AC5.2 Calculate and measure the required quantities of pesticide and water and add to the applicator or attach a pesticide container

**Assessment Criteria 5.2**

Calculate and measure the required quantities of pesticide and water and add to the applicator or attach a pesticide container:

- a) Calculate the quantities of pesticide and water required:
  - i) Amount of water required for specified area.
  - ii) Amount of pesticide required for specified area.

Assessment Criteria	Scope of study
	<ul style="list-style-type: none"> <li>iii) Amount of pesticide required for full tank.</li> <li>b) Measure quantities of pesticide and water and add to the applicator, or attach a pesticide container:               <ul style="list-style-type: none"> <li>i) Correct selection and use of Personal Protective Equipment (PPE)/Respiratory Protective Equipment (RPE) (as required by the product label and/or Control of Substances Hazardous to Health (COSHH)/risk assessment)</li> <li>ii) Manual handling considerations</li> <li>iii) Correct mixing sequence</li> <li>iv) Adequate agitation</li> <li>v) Suitable site selected with provision for containment and access to a spill kit</li> <li>vi) Accurate measurement of pesticide and water</li> <li>vii) Correct filling procedure or attach a pesticide container                   <ul style="list-style-type: none"> <li>• correct procedure for attaching container</li> <li>• container undamaged</li> </ul> </li> <li>viii) Avoidance of spillage</li> <li>ix) Return concentrate pesticide to secure storage.</li> </ul> </li> </ul>

AC5.3 Explain how to safely and accurately operate the applicator

**Assessment Criteria 5.3**

Safe and accurate operation of the applicator:

- a) Marking out the site to achieve accurate application:
  - i) Crop rows.
  - ii) Marker cones/poles.
  - iii) Marker dye.
- b) Procedure for refilling the applicator part way through application:
  - i) Avoid transfer of pesticide to non-target area
  - ii) Mark the point at which the applicator emptied
  - iii) Refill applicator away from the application area
  - iv) Recommence spraying where the applicator emptied.
- c) Actions to take when an applicator develops a fault during application:
  - i) Select and use appropriate Personal Protective Equipment (PPE)/Respiratory Protective Equipment (RPE)
  - ii) Avoid transfer of pesticide to non-target area
  - iii) Fault identified and rectified if within the operator's level of capability and responsibility.

AC5.4 Carry out safe and accurate application procedures

**Assessment Criteria 5.4**

Safe and accurate application procedures:

- a) Check wind speed and direction:
  - i) Use of an anemometer.
  - ii) Use of visual signs.
  - iii) Use of a compass.
- b) Safe and accurate application procedures for overall application:
  - i) Treatment area clearly identified
  - ii) Walking speed maintained
  - iii) Accurate switching on/off points
  - iv) Accurate matching of bouts
  - v) Area treated minimising overlaps and misses
  - vi) Avoidance of off target contamination/application.
- c) Safe and accurate application procedures for spot application:
  - i) Identify and fit appropriate nozzle for spot application
  - ii) Identify/calculate dilution rate from the product label
  - iii) Add application mix to the applicator
  - iv) Treatment area clearly identified
  - v) Suitable height of nozzle
  - vi) Accurate switching on/off points
  - vii) Area treated minimising overlaps and misses

Assessment Criteria	Scope of study
	<ul style="list-style-type: none"> <li>viii) Avoidance of run-off</li> <li>ix) Avoidance of off target contamination/application.</li> <li>d) Completion of an application record must be:               <ul style="list-style-type: none"> <li>i) Accurate</li> <li>ii) Legible.</li> </ul> </li> </ul>
<p>AC6.1 Explain how to manage and dispose of surplus dilute pesticide</p>	<p><b>Assessment Criteria 6.1</b></p> <p>Managing and disposing of surplus dilute pesticide:</p> <ul style="list-style-type: none"> <li>a) Managing surplus dilute pesticide:           <ul style="list-style-type: none"> <li>i) Below the maximum dose rate: apply to the original application target/site.</li> <li>ii) At maximum dose rate: apply to another untreated approved target/site.</li> </ul> </li> <li>b) Disposing of surplus dilute pesticide:           <ul style="list-style-type: none"> <li>i) Treated by a specialist treatment facility on site.</li> <li>ii) Collected by a licensed waste disposal contractor.</li> </ul> </li> </ul>
<p>AC6.2 Explain how to clean, decontaminate and store the applicator</p>	<p><b>Assessment Criteria 6.2</b></p> <p>Cleaning, decontaminating and storing the applicator:</p> <ul style="list-style-type: none"> <li>a) Cleaning and decontaminating the applicator:           <ul style="list-style-type: none"> <li>i) Reducing the risk of personal contamination:               <ul style="list-style-type: none"> <li>• select and use appropriate Personal Protective Equipment (PPE)/Respiratory Protective Equipment (RPE).</li> </ul> </li> <li>ii) Reducing the risk of environmental contamination:               <ul style="list-style-type: none"> <li>• appropriate site.</li> <li>• safe disposal of contaminated washings.</li> </ul> </li> <li>iii) Effective cleaning and decontamination:               <ul style="list-style-type: none"> <li>• ensure the applicator is made safe</li> <li>• care to ensure contamination 'hot spots' are clean.</li> <li>• thorough washing of internal and external surfaces with water and suitable cleaning agent.</li> <li>• thorough flushing of systems.</li> </ul> </li> <li>iv) When cleaning of the applicator should take place:               <ul style="list-style-type: none"> <li>• after the application is completed.</li> <li>• if changing to a different product.</li> <li>• to avoid applicator damage from pesticide.</li> <li>• to carry out maintenance.</li> </ul> </li> </ul> </li> <li>b) Storage requirements for the applicator:           <ul style="list-style-type: none"> <li>i) Refer to manufacturer's handbook.</li> <li>ii) Clean and dry.</li> <li>iii) Inspect for wear and damage.</li> <li>iv) Replace any worn or damaged parts.</li> <li>v) Frost protection measures implemented.</li> <li>vi) Lubricate.</li> <li>vii) Store undercover and out of direct sunlight.</li> <li>viii) Leave in a stable position.</li> <li>ix) Store in a secure area.</li> </ul> </li> </ul>

## Unit 266 Operating pedestrian handheld applicators fitted with hydraulic nozzles or rotary atomisers to apply pesticides to or near water (PA6AW)

<b>Level:</b>	2
<b>GLH:</b>	54
<b>Assessment method:</b>	Practical observation with oral questioning
<b>Aim:</b>	The purpose of this unit is for learners to safely operate handheld applicators fitted with hydraulic or rotary atomisers to apply pesticide to or near water.

### Learning Outcomes

- LO1 Understand the legislative, regulatory and Codes of Practice (CoP) requirements relating to applicator use
- LO2 Read and interpret information on a product label
- LO3 Assess the environmental risks relating to the filling and application site
- LO4 Prepare and calibrate the applicator
- LO5 Operate the applicator
- LO6 Know how to carry out post-operational procedures

Assessment Criteria	Scope of study
AC1.1 Describe the legislative, regulatory and Codes of Practice (CoP) requirements relating to applicator use	<p><b>Assessment Criteria 1.1</b></p> <p>Legislative, regulatory and Codes of Practice (CoP) requirements relating to applicator use:</p> <ul style="list-style-type: none"> <li>a) Operator's responsibility under legislation:               <ul style="list-style-type: none"> <li>i) Follow product label requirements for correct application of pesticides.</li> <li>ii) Follow employer instructions and training for applicator use.</li> <li>iii) Use Integrated Pest Management (IPM) techniques where possible.</li> <li>iv) Protect flora and fauna from harm when carrying out work.</li> <li>v) Ensure public access on foot to area of land is not prohibited/restricted during work unless permission is granted.</li> <li>vi) Do not apply pesticides to public rights of way unless specifically for managing access.</li> </ul> </li> <li>b) Operator's responsibility under regulations:               <ul style="list-style-type: none"> <li>i) Follow obligations on the use and disposal of Plant Protection Products (PPPs), including packaging.</li> <li>ii) Read, understand and comply with Control of Substances Hazardous to Health (COSHH)/risk assessments and adhere to the control measures put in place.</li> </ul> </li> </ul>

- iii) Use, maintain and store Personal Protective Equipment (PPE)/Respiratory Protective Equipment (RPE) as provided and instructed.
- iv) Follow instructions and training in the inspection, use, calibration and maintenance of applicators.
- v) Follow compliance requirements for the management and disposal of waste.
- vi) Be prepared for inspection of PPPs record keeping and storage.
- vii) Know the company policy on how to report Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) to the HSE (Health and Safety Executive).
- c) Operator's responsibility under Pesticide Code of Practice (CoP) for using Plant Protection Products (PPPs):
  - i) Hold (or be under supervision of a holder of) a specified certificate directly related to the application method and/or applicator being used (Certificates of Competence (CoC)).
  - ii) Apply pesticides safely and effectively following product information and complying with current legislation.
- d) Work in accordance with the UK Pesticides National Action Plan (NAP):
  - i) Use IPM and alternative approaches or techniques where possible.
  - ii) Reduce impact by applying pesticides at appropriate times, safely monitor and contain active substances which are particularly harmful.
  - iii) Ensure storage, handling and disposal operations do not endanger human health or the environment, comply with inspections, enforcement and other official control activities.

AC1.2 State how to apply pesticides safely to or near water following industry best practice

#### Assessment Criteria 1.2

Applying pesticides to or near water:

- a) Operator's responsibility under legislation and regulations:
  - i) Ensure the pesticide product has aquatic approval.
  - ii) Seek approval from appropriate environmental agency.
- b) The term "to or near water":
  - i) Wet or dry ditches
  - ii) Drainage channels
  - iii) Streams
  - iv) Rivers
  - v) Canals
  - vi) Ponds
  - vii) Lakes/lochs
  - viii) Reservoirs
  - ix) Areas immediately adjacent to watercourses.
- c) Operator safety considerations when applying pesticides to or near water:
  - i) Check bank stability before applying.
  - ii) Availability of a second person on site.
  - iii) Availability of life ring/rescue devices.
  - iv) Check tidal activity.

AC2.1 Read and interpret information on a product label

#### Assessment Criteria 2.1

Information on a product label:

- a) Product information:
  - i) Product name
  - ii) Active substance(s) (ingredients)
  - iii) Product group symbol
  - iv) Approval number

- v) Reason for use
- vi) Expiry date/shelf life.
- b) Important information:
  - i) Approved field of use
  - ii) Maximum individual dose
  - iii) Maximum total dose
  - iv) Maximum number of treatments
  - v) Latest time of application.
- c) Safety precautions:
  - i) Operator protection
  - ii) Environmental protection
  - iii) Buffer zone
  - iv) Restrictions on use
  - v) Specific product precautions.
- d) Crop specific information:
  - i) Crop/target
  - ii) Dose rate
  - iii) Timing of application(s)
  - iv) Water volume.
- e) Mixing and application information:
  - i) Appropriate for applicator
  - ii) Filling
  - iii) Recommended nozzles
  - iv) Recommended pressure
  - v) Reduced volume applications
  - vi) Spray quality
  - vii) Compatibility
  - viii) Label information unique to the product.

AC3.1 Identify environmental risks to the filling and application site and explain how to minimise these risks

### Assessment Criteria 3.1

Environmental risks to the filling and application site and how to minimise these risks:

- a) Environmental factors at risk at the filling and application site:
  - i) Ground conditions.
  - ii) Water courses.
  - iii) Drains.
  - iv) Boreholes.
  - v) Environmental margins/strips/areas.
  - vi) Wildlife.
  - vii) Beneficial insects.
  - viii) Non-target plants.
  - ix) Sensitive crops/areas.
  - x) Hedgerows.
  - xi) Housing.
  - xii) Public access.
  - xiii) Other environmental factors relevant to the site.
- b) Minimise risks to the filling and application site:
  - i) Check and maintain application rate.
  - ii) Monitor weather conditions.
  - iii) Avoid spray drift.
  - iv) Avoid off target application.
  - v) Avoid surface run-off.
  - vi) Observe buffer zones.
  - vii) Observe environmental margins/strips/areas.
  - viii) Inform neighbours.
  - ix) Erect warning signs.
  - x) Use an appropriate pesticide (minimal environmental impact).
  - xi) Appropriate timing of application.

AC3.2 Identify environmental risks to the filling and aquatic application site and how to minimise these risks

### Assessment Criteria 3.2

Environmental risks to the filling and aquatic application site and how to minimise these risks:

- a) Environmental factors at risk at the filling and aquatic application site:
  - i) Livestock drinking points.
  - ii) Recreational use of water body/course.
  - iii) Water extraction points.
  - iv) De-oxygenation of water.
  - v) Removal of fish cover.
  - vi) Removal of bankside wildlife habitat.
  - vii) Removal of bankside vegetation leading to bank erosion.
  - viii) Other environmental factors relevant to the site.
- b) Minimise risks to the aquatic environment:
  - i) Work in an upstream direction.
  - ii) Check weather suitability before treatment.
  - iii) Check downstream uses before treatment.
  - iv) Seek approval from appropriate environmental agency.
  - v) Use of an appropriate pesticide (minimal environmental impact).
  - vi) Appropriate timing of treatment.

AC4.1 Carry out pre-use checks to the applicator

### Assessment Criteria 4.1

Pre-use checks to the applicator:

- a) Applicator depressurised.
- b) Applicator components to be inspected for serviceability and contamination:
  - i) Tank and lid
  - ii) Pump
  - iii) Filters
  - iv) Hoses
  - v) Connections
  - vi) Seals
  - vii) On/off control
  - viii) Lance
  - ix) Straps
  - x) Pump, visual assessment only
  - xi) Batteries
  - xii) Engine.

AC4.2 Select nozzles according to application requirements and identify suitable operating pressure

### Assessment Criteria 4.2

Nozzle selection according to application requirements and suitable operating pressure:

- a) Use of nozzles:
  - i) Deflector:
    - medium or coarse spray quality
    - generally used for overall application.
  - ii) Air inclusion:
    - medium or coarse spray quality
    - overlap requirements
    - used for drift reduction.
  - iii) Full cone:
    - medium or coarse spray quality
    - used for spot application and spraying around obstacles.
  - iv) Standard flat fan:
    - fine, medium or coarse spray quality
    - overlap requirements
    - generally used for overall application.

- v) Even spray flat fan:
  - fine, medium or coarse spray quality
  - used for general purpose.
- vi) Hollow cone:
  - fine spray quality
  - generally used for insecticide and fungicide treatment.
- b) Fit nozzle/atomiser for use and select the correct pressure:
  - i) Suitable nozzle/atomiser selected
  - ii) Nozzle/atomiser fitted correctly
  - iii) Correct pressure selected.
- c) Part-fill the applicator and check for satisfactory performance:
  - i) Applicator checked for leaks under pressure
  - ii) Nozzle/atomiser(s) undamaged
  - iii) Correct spray pattern for nozzle
  - iv) Condition confirmed as suitable for operation.

AC4.3 Calibrate the applicator

**Assessment Criteria 4.3**

Calibrate the applicator:

- a) Calibrate the applicator.
- b) Calculate application volume and check against product label information.
- c) Make applicator adjustments based on requirements.
- d) Factors that would affect calibration:
  - i) Walking speed.
  - ii) Spray width.
  - iii) Pressure.
  - iv) Nozzle/atomiser fitted.

AC5.1 Measure and calculate the area to be treated

**Assessment Criteria 5.1**

Measure and calculate the area to be treated:

- a) Measure the area to be treated:
  - i) Accurate measurement of dimensions.
- b) Calculate the area to be treated:
  - i) Accurate calculation of area.

AC5.2 Calculate and measure the required quantities of pesticide and water and add to the applicator or attach a pesticide container

**Assessment Criteria 5.2**

Calculate and measure the required quantities of pesticide and water and add to the applicator or attach a pesticide container:

- a) Calculate the quantities of pesticide and water required:
  - i) Amount of water required for specified area.
  - ii) Amount of pesticide required for specified area.
  - iii) Amount of pesticide required for full tank.
- b) Measure quantities of pesticide and water and add to the applicator, or attach a pesticide container:
  - i) Correct selection and use of Personal Protective Equipment (PPE)/Respiratory Protective Equipment (RPE) (as required by the product label and/or Control of Substances Hazardous to Health (COSHH)/risk assessment)
  - ii) Manual handling considerations
  - iii) Correct mixing sequence
  - iv) Adequate agitation
  - v) Suitable site selected with provision for containment and access to a spill kit
  - vi) Accurate measurement of pesticide and water
  - vii) Correct filling procedure or attach a pesticide container
    - correct procedure for attaching container

Assessment Criteria	Scope of study
	<ul style="list-style-type: none"> <li>• container undamaged</li> <li>viii) Avoidance of spillage</li> <li>ix) Return concentrate pesticide to secure storage.</li> </ul>
AC5.3 Explain how to safely and accurately operate the applicator	<p><b>Assessment Criteria 5.3</b></p> <p>Safe and accurate operation of the applicator:</p> <ol style="list-style-type: none"> <li>a) Procedure for refilling the applicator part way through application: <ol style="list-style-type: none"> <li>i) Avoid transfer of pesticide to non-target area</li> <li>ii) Mark the point at which the applicator emptied</li> <li>iii) Refill applicator away from the application area</li> <li>iv) Recommence spraying where the applicator emptied.</li> </ol> </li> <li>b) Actions to take when an applicator develops a fault during the application procedure: <ol style="list-style-type: none"> <li>i) Select and use appropriate Personal Protective Equipment (PPE)/Respiratory Protective Equipment (RPE)</li> <li>ii) Avoid transfer of pesticide to contaminated area</li> <li>iii) Fault identified and rectified if within the operator's level of capability and responsibility.</li> </ol> </li> </ol>
AC5.4 Carry out safe and accurate application procedures	<p><b>Assessment Criteria 5.4</b></p> <p>Safe and accurate application procedures:</p> <ol style="list-style-type: none"> <li>a) Check wind speed and direction: <ol style="list-style-type: none"> <li>i) Use of an anemometer.</li> <li>ii) Use of visual signs.</li> <li>iii) Use of a compass.</li> </ol> </li> <li>b) Safe and accurate application procedures: <ol style="list-style-type: none"> <li>i) Treatment area clearly identified</li> <li>ii) Check tidal timings</li> <li>iii) Direction of travel established dependent on the water flow</li> <li>iv) Bankside safety implemented</li> <li>v) Walking speed maintained</li> <li>vi) Accurate switching on/off points</li> <li>vii) Area treated minimising overlaps and misses</li> <li>viii) Avoidance of off target contamination/application.</li> </ol> </li> <li>c) Completion of an application record must be: <ol style="list-style-type: none"> <li>i) Accurate</li> <li>ii) Legible.</li> </ol> </li> </ol>
AC6.1 Explain how to manage and dispose of surplus pesticide	<p><b>Assessment Criteria 6.1</b></p> <p>Managing and disposing of surplus pesticide:</p> <ol style="list-style-type: none"> <li>a) Managing surplus dilute pesticide for further use: <ol style="list-style-type: none"> <li>i) At maximum dose rate: apply to another untreated approved target/site.</li> </ol> </li> <li>b) Disposing of surplus dilute pesticide: <ol style="list-style-type: none"> <li>i) Treated by a specialist treatment facility on site.</li> <li>ii) Collected by a licensed waste disposal contractor.</li> </ol> </li> </ol>
AC6.2 Explain how to clean, decontaminate and store the applicator	<p><b>Assessment Criteria 6.2</b></p> <p>Cleaning, decontaminating and storing the applicator:</p> <ol style="list-style-type: none"> <li>a) Cleaning and decontaminating the applicator: <ol style="list-style-type: none"> <li>i) Reducing the risk of personal contamination: <ul style="list-style-type: none"> <li>• select and use appropriate Personal Protective Equipment (PPE)/Respiratory Protective Equipment (RPE).</li> </ul> </li> </ol> </li> </ol>

Assessment Criteria	Scope of study
	<ul style="list-style-type: none"> <li>ii) Reducing the risk of environmental contamination:               <ul style="list-style-type: none"> <li>• appropriate site.</li> <li>• safe disposal of contaminated washings.</li> </ul> </li> <li>iii) Effective cleaning and decontamination:               <ul style="list-style-type: none"> <li>• ensure the applicator is made safe</li> <li>• care to ensure contamination 'hot spots' are clean.</li> <li>• thorough washing of internal and external surfaces with water and suitable cleaning agent.</li> <li>• thorough flushing of systems.</li> </ul> </li> <li>iv) When cleaning of the applicator should take place:               <ul style="list-style-type: none"> <li>• after the application is completed.</li> <li>• if changing to a different product.</li> <li>• to avoid applicator damage from pesticide.</li> <li>• to carry out maintenance.</li> </ul> </li> <li>b) Storage requirements for the applicator:               <ul style="list-style-type: none"> <li>i) Refer to manufacturer's handbook.</li> <li>ii) Clean and dry.</li> <li>iii) Inspect for wear and damage.</li> <li>iv) Replace any worn or damaged parts.</li> <li>v) Frost protection measures implemented.</li> <li>vi) Lubricate.</li> <li>vii) Store undercover and out of direct sunlight.</li> <li>viii) Leave in a stable position.</li> <li>ix) Store in a secure area.</li> </ul> </li> </ul>

## Unit 267 Operating pedestrian handheld applicators to apply pesticides pellets or granules to land (PA6G)

<b>Level:</b>	2
<b>GLH:</b>	54
<b>Assessment method:</b>	Practical observation with oral questioning
<b>Aim:</b>	The purpose of this unit is for learners to safely operate handheld applicators to apply pesticide pellets or granules to land.

### Learning Outcomes

- LO1 Understand the legislative, regulatory and Codes of Practice (CoP) requirements relating to applicator use
- LO2 Read and interpret information on a product label
- LO3 Assess the environmental risks relating to the filling and application site
- LO4 Prepare and calibrate the applicator
- LO5 Operate the applicator
- LO6 Know how to carry out post-operational procedures

Assessment Criteria	Scope of study
AC1.1 Describe the legislative, regulatory and Codes of Practice (CoP) requirements relating to applicator use	<p><b>Assessment Criteria 1.1</b></p> <p>Legislative, regulatory and Codes of Practice (CoP) requirements relating to applicator use:</p> <ul style="list-style-type: none"><li>a) Operator's responsibility under legislation:<ul style="list-style-type: none"><li>i) Follow product label requirements for correct application of pesticides.</li><li>ii) Follow employer instructions and training for applicator use.</li><li>iii) Use Integrated Pest Management (IPM) techniques where possible.</li><li>iv) Protect flora and fauna from harm when carrying out work.</li><li>v) Ensure public access on foot to area of land is not prohibited/restricted during work unless permission is granted.</li><li>vi) Do not apply pesticides to public rights of way unless specifically for managing access.</li></ul></li><li>b) Operator's responsibility under regulations:<ul style="list-style-type: none"><li>i) Follow obligations on the use and disposal of Plant Protection Products (PPPs), including packaging.</li><li>ii) Read, understand and comply with Control of Substances Hazardous to Health (COSHH)/risk assessments and adhere to the control measures put in place.</li><li>iii) Use, maintain and store Personal Protective Equipment (PPE)/Respiratory Protective Equipment (RPE) as provided and instructed.</li></ul></li></ul>

- iv) Follow instructions and training in the inspection, use, calibration and maintenance of applicators.
- v) Follow compliance requirements for the management and disposal of waste.
- vi) Be prepared for inspection of PPPs record keeping and storage.
- vii) Know the company policy on how to report Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) to the HSE (Health and Safety Executive).
- c) Operator's responsibility under Pesticide Code of Practice (CoP) for using Plant Protection Products (PPPs):
  - i) Hold (or be under supervision of a holder of) a specified certificate directly related to the application method and/or applicator being used (Certificates of Competence (CoC)).
  - ii) Apply pesticides safely and effectively following product information and complying with current legislation.
- d) Work in accordance with the UK Pesticides National Action Plan (NAP):
  - i) Use IPM and alternative approaches or techniques where possible.
  - ii) Reduce impact by applying pesticides at appropriate times, safely monitor and contain active substances which are particularly harmful.
  - iii) Ensure storage, handling and disposal operations do not endanger human health or the environment, comply with inspections, enforcement and other official control activities.

AC2.1 Read and interpret information on a product label

**Assessment Criteria 2.1**

Information on a product label:

- a) Product information:
  - i) Product name
  - ii) Active substance(s) (ingredients)
  - iii) Product group symbol
  - iv) Approval number
  - v) Reason for use
  - vi) Expiry date/shelf life.
- b) Important information:
  - i) Approved field of use
  - ii) Maximum individual dose
  - iii) Maximum total dose
  - iv) Maximum number of treatments
  - v) Latest time of application.
- c) Safety precautions:
  - i) Operator protection
  - ii) Environmental protection
  - iii) Buffer zone
  - iv) Restrictions on use
  - v) Specific product precautions.
- d) Crop specific information:
  - i) Crop/target
  - ii) Dose rate
  - iii) Timing of application(s).
- e) Mixing and application information:
  - i) Appropriate for applicator
  - ii) Filling
  - iii) Compatibility
  - iv) Label information unique to the product.

AC3.1 Identify environmental risks to the filling and application site

**Assessment Criteria 3.1**

Environmental risks to the filling and application site and how to minimise these risks:

**Assessment Criteria****Scope of study**

and explain how to minimise these risks

- a) Environmental factors at risk at the filling and application site:
  - i) Ground conditions.
  - ii) Water courses.
  - iii) Drains.
  - iv) Boreholes.
  - v) Environmental margins/strips/areas.
  - vi) Wildlife.
  - vii) Beneficial insects.
  - viii) Non-target plants.
  - ix) Sensitive crops/areas.
  - x) Hedgerows.
  - xi) Housing.
  - xii) Public access.
  - xiii) Other environmental factors relevant to the site.
- b) Minimise risks to the filling and application site:
  - i) Check and maintain application rate.
  - ii) Monitor weather conditions.
  - iii) Avoid off target application.
  - iv) Observe buffer zones.
  - v) Observe environmental margins/strips/areas.
  - vi) Inform neighbours.
  - vii) Erect warning signs.
  - viii) Use an appropriate pesticide (minimal environmental impact).
  - ix) Appropriate timing of application.

AC4.1 Carry out pre-use checks to the applicator

**Assessment Criteria 4.1**

Pre-use checks to the applicator:

- a) Isolate power unit (if applicable).
- b) Applicator components to be inspected for serviceability and contamination:
  - i) Hopper and lid
  - ii) Agitator
  - iii) Metering device
  - iv) Spinning disc condition
  - v) On/off control
  - vi) Straps or harness
  - vii) Wheels and tyres.

AC4.2 Identify settings and adjustments according to applicator requirements

**Assessment Criteria 4.2**

Settings and adjustments according to applicator requirements:

- a) Height adjustment.
- b) Spread width adjustment.
- c) Disc speed adjustment.
- d) Metering devices.

AC4.3 Calibrate the applicator

**Assessment Criteria 4.3**

Calibrate the applicator:

- a) Calibrate the applicator.
- b) Calculate application output and check against product label information.
- c) Make applicator adjustments based on requirements.
- d) Factors that would affect calibration:
  - i) Walking speed.
  - ii) Spread width.
  - iii) Aperture setting.

**Assessment Criteria****Scope of study**

AC5.1 Measure and calculate the area to be treated

**Assessment Criteria 5.1**

Measure and calculate the area to be treated:

- a) Measure the area to be treated:
  - i) Accurate measurement of dimensions.
- b) Calculate the area to be treated:
  - i) Accurate calculation of area.

AC5.2 Calculate and measure the required quantities of pesticide and add to the applicator

**Assessment Criteria 5.2**

Calculate and measure the required quantities of pesticide and add to the applicator:

- a) Calculate the quantities of pesticide required:
  - i) Amount of pesticide required for specified area.
- b) Measure quantities of pesticide and add to the applicator:
  - i) Correct selection and use of Personal Protective Equipment (PPE)/Respiratory Protective Equipment (RPE) (as required by the product label and/or Control of Substances Hazardous to Health (COSHH)/risk assessment)
  - ii) Manual handling considerations
  - iii) Suitable site selected with provision for containment and access to a spill kit
  - iv) Accurate measurement of pesticide
  - v) Correct filling procedure
  - vi) Avoidance of spillage
  - vii) Return surplus pesticide to secure storage.

AC5.3 Explain how to safely and accurately operate the applicator

**Assessment Criteria 5.3**

Safe and accurate operation of the applicator:

- a) Procedure for refilling the applicator part way through application:
  - i) Avoid transfer of pesticide to a non-target area
  - ii) Mark the point at which the applicator emptied
  - iii) Refill applicator away from the application area
  - iv) Continue spreading by accurately matching at the appropriate point.
- b) Actions to take when an applicator develops a fault during application:
  - i) Select and use appropriate Personal Protective Equipment (PPE)/Respiratory Protective Equipment (RPE)
  - ii) Avoid transfer of pesticide to a non-target area
  - iii) Fault identified and rectified if within the operator's level of capability and responsibility.

AC5.4 Carry out safe and accurate application procedures

**Assessment Criteria 5.4**

Safe and accurate application procedures:

- a) Check wind speed and direction:
  - i) Use of an anemometer.
  - ii) Use of visual signs.
  - iii) Use of a compass.
- b) Safe and accurate application procedures:
  - i) Treatment area clearly identified
  - ii) Walking speed maintained
  - iii) Accurate switching on/off points
  - iv) Accurate matching of bouts
  - v) Area treated minimising overlaps and misses
  - vi) Avoidance of off target contamination/application.

Assessment Criteria	Scope of study
	<p>c) Completion of an application record must be:</p> <ol style="list-style-type: none"> <li>i) Accurate</li> <li>ii) Legible.</li> </ol>
AC6.1 Explain how to manage and dispose of surplus pesticide	<p><b>Assessment Criteria 6.1</b></p> <p>Managing and disposing of surplus pesticide:</p> <ol style="list-style-type: none"> <li>a) Managing surplus pesticide for further use: <ol style="list-style-type: none"> <li>i) Carefully return to original packaging.</li> <li>ii) Return to safe storage.</li> </ol> </li> <li>b) Disposing of surplus pesticide: <ol style="list-style-type: none"> <li>i) Collected by a licensed waste disposal contractor.</li> <li>ii) Below the maximum dose rate: apply to the original application target/site.</li> <li>iii) At maximum dose rate: apply to another untreated approved target/site.</li> </ol> </li> </ol>
AC6.2 Explain how to clean, decontaminate and store the applicator	<p><b>Assessment Criteria 6.2</b></p> <p>Cleaning, decontaminating and storing the applicator:</p> <ol style="list-style-type: none"> <li>a) Cleaning and decontaminating the applicator: <ol style="list-style-type: none"> <li>i) Reducing the risk of personal contamination: <ul style="list-style-type: none"> <li>• select and use appropriate Personal Protective Equipment (PPE)/Respiratory Protective Equipment (RPE).</li> </ul> </li> <li>ii) Reducing the risk of environmental contamination: <ul style="list-style-type: none"> <li>• appropriate site.</li> <li>• thorough cleaning of internal and external surfaces (if required).</li> </ul> </li> <li>iii) Effective cleaning and decontamination: <ul style="list-style-type: none"> <li>• ensure the applicator is made safe</li> <li>• care to ensure contamination 'hot spots' are clean.</li> </ul> </li> <li>iv) When cleaning of the applicator should take place: <ul style="list-style-type: none"> <li>• after the application is completed.</li> <li>• if changing to a different product.</li> <li>• to avoid applicator damage from pesticide.</li> <li>• to carry out maintenance.</li> </ul> </li> </ol> </li> <li>b) Storage requirements for the applicator: <ol style="list-style-type: none"> <li>i) Refer to manufacturer's handbook.</li> <li>ii) Clean and dry.</li> <li>iii) Inspect for wear and damage.</li> <li>iv) Replace any worn or damaged parts.</li> <li>v) Lubricate.</li> <li>vi) Store undercover and out of direct sunlight.</li> <li>vii) Leave in a stable position.</li> <li>viii) Store in a secure area.</li> </ol> </li> </ol>

## Unit 268 Operating pedestrian handheld applicators to apply pesticides pellets or granules to or near water (PA6GW)

<b>Level:</b>	2
<b>GLH:</b>	54
<b>Assessment method:</b>	Practical observation with oral questioning
<b>Aim:</b>	The purpose of this unit is for learners to safely operate handheld applicators to apply pesticide pellets or granules to or near water.

### Learning Outcomes

- LO1 Understand the legislative, regulatory and Codes of Practice (CoP) requirements relating to applicator use
- LO2 Read and interpret information on a product label
- LO3 Assess the environmental risks relating to the filling and application site
- LO4 Prepare and calibrate the applicator
- LO5 Operate the applicator
- LO6 Know how to carry out post-operational procedures

Assessment Criteria	Scope of study
AC1.1 Describe the legislative, regulatory and Codes of Practice (CoP) requirements relating to applicator use	<p><b>Assessment Criteria 1.1</b></p> <p>Legislative, regulatory and Codes of Practice (CoP) requirements relating to applicator use:</p> <ul style="list-style-type: none"><li>a) Operator's responsibility under legislation:<ul style="list-style-type: none"><li>i) Follow product label requirements for correct application of pesticides.</li><li>ii) Follow employer instructions and training for applicator use.</li><li>iii) Use Integrated Pest Management (IPM) techniques where possible.</li><li>iv) Protect flora and fauna from harm when carrying out work.</li><li>v) Ensure public access on foot to area of land is not prohibited/restricted during work unless permission is granted.</li><li>vi) Do not apply pesticides to public rights of way unless specifically for managing access.</li></ul></li><li>b) Operator's responsibility under regulations:<ul style="list-style-type: none"><li>i) Follow obligations on the use and disposal of Plant Protection Products (PPPs), including packaging.</li><li>ii) Read, understand and comply with Control of Substances Hazardous to Health (COSHH)/risk assessments and adhere to the control measures put in place.</li></ul></li></ul>

- iii) Use, maintain and store Personal Protective Equipment (PPE)/Respiratory Protective Equipment (RPE) as provided and instructed.
- iv) Follow instructions and training in the inspection, use, calibration and maintenance of applicators.
- v) Follow compliance requirements for the management and disposal of waste.
- vi) Be prepared for inspection of PPPs record keeping and storage.
- vii) Know the company policy on how to report Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) to the HSE (Health and Safety Executive).
- c) Operator's responsibility under Pesticide Code of Practice (CoP) for using Plant Protection Products (PPPs):
  - i) Hold (or be under supervision of a holder of) a specified certificate directly related to the application method and/or applicator being used (Certificates of Competence (CoC)).
  - ii) Apply pesticides safely and effectively following product information and complying with current legislation.
- d) Work in accordance with the UK Pesticides National Action Plan (NAP):
  - i) Use IPM and alternative approaches or techniques where possible.
  - ii) Reduce impact by applying pesticides at appropriate times, safely monitor and contain active substances which are particularly harmful.
  - iii) Ensure storage, handling and disposal operations do not endanger human health or the environment, comply with inspections, enforcement and other official control activities.

AC1.2 State how to apply pesticides safely to or near water following industry best practice

**Assessment Criteria 1.2**

Applying pesticides to or near water:

- a) Operator's responsibility under legislation and regulations:
  - i) Ensure the pesticide product has aquatic approval.
  - ii) Seek approval from appropriate environmental agency.
- b) The term "to or near water":
  - i) Wet or dry ditches.
  - ii) Drainage channels.
  - iii) Streams.
  - iv) Rivers.
  - v) Canals.
  - vi) Ponds.
  - vii) Lakes/lochs.
  - viii) Reservoirs.
  - ix) Areas immediately adjacent to watercourses.
- c) Operator safety considerations when applying pesticides to or near water:
  - i) Check bank stability before applying.
  - ii) Availability of a second person on site.
  - iii) Availability of life ring/rescue devices.

AC2.1 Read and interpret information on a product label

**Assessment Criteria 2.1**

Information on a product label:

- a) Product information:
  - i) Product name
  - ii) Active substance(s) (ingredients)
  - iii) Product group symbol
  - iv) Approval number
  - v) Reason for use

- vi) Expiry date/shelf life.
- b) Important information:
  - i) Approved field of use
  - ii) Maximum individual dose
  - iii) Maximum total dose
  - iv) Maximum number of treatments
  - v) Latest time of application.
- c) Safety precautions:
  - i) Operator protection
  - ii) Environmental protection
  - iii) Buffer zone
  - iv) Restrictions on use
  - v) Specific product precautions.
- d) Crop specific information:
  - i) Crop/target
  - ii) Dose rate
  - iii) Timing of application(s).
- e) Mixing and application information:
  - i) Appropriate for applicator
  - ii) Filling
  - iii) Recommended nozzles
  - iv) Recommended pressure
  - v) Reduced volume applications
  - vi) Spray quality
  - vii) Compatibility
  - viii) Label information unique to the product.

AC3.1 Identify environmental risks to the filling and application site and explain how to minimise these risks

### Assessment Criteria 3.1

Environmental risks to the filling and application site and how to minimise these risks:

- a) Environmental factors at risk at the filling and application site:
  - i) Ground conditions.
  - ii) Water courses.
  - iii) Drains.
  - iv) Boreholes.
  - v) Environmental margins/strips/areas.
  - vi) Wildlife.
  - vii) Beneficial insects.
  - viii) Non-target plants.
  - ix) Sensitive crops/areas.
  - x) Hedgerows.
  - xi) Housing.
  - xii) Public access.
  - xiii) Other environmental factors relevant to the site.
- b) Minimise risks to the filling and application site:
  - i) Check and maintain application rate.
  - ii) Monitor weather conditions.
  - iii) Avoid spray drift.
  - iv) Avoid off target application.
  - v) Avoid surface run-off.
  - vi) Observe buffer zones.
  - vii) Observe environmental margins/strips/areas.
  - viii) Inform neighbours.
  - ix) Erect warning signs.
  - x) Use an appropriate pesticide (minimal environmental impact).
  - xi) Appropriate timing of application.

**Assessment Criteria****Scope of study**

AC3.2 Identify environmental risks to the filling and aquatic application site and how to minimise these risks

**Assessment Criteria 3.2**

Environmental risks to the filling and aquatic application site and how to minimise these risks:

- a) Environmental factors at risk at the filling and aquatic application site:
  - i) Livestock drinking points.
  - ii) Recreational use of water body/course.
  - iii) Water extraction points.
  - iv) De-oxygenation of water.
  - v) Removal of fish cover.
  - vi) Removal of bankside wildlife habitat.
  - vii) Removal of bankside vegetation leading to bank erosion.
  - viii) Other environmental factors relevant to the site.
- b) Minimise risks to the aquatic environment:
  - i) Work in an upstream direction.
  - ii) Check weather suitability before treatment.
  - iii) Check downstream uses before treatment.
  - iv) Seek approval from appropriate environmental agency.
  - v) Use of an appropriate pesticide (minimal environmental impact).
  - vi) Appropriate timing of treatment.

AC4.1 Carry out pre-use checks to the applicator

**Assessment Criteria 4.1**

Pre-use checks to the applicator:

- a) Isolate power unit (if applicable).
- b) Applicator components to be inspected for serviceability and contamination:
  - i) Hopper and lid
  - ii) Agitator
  - iii) Metering device
  - iv) Spinning disc condition
  - v) On/off control
  - vi) Straps or harness
  - vii) Wheels and tyres.

AC4.2 Identify settings and adjustments according to applicator requirements

**Assessment Criteria 4.2**

Settings and adjustments according to applicator requirements:

- a) Height adjustment.
- b) Spread width adjustment.
- c) Disc speed adjustment.
- d) Metering devices.

AC4.3 Calibrate the applicator

**Assessment Criteria 4.3**

Calibrate the applicator:

- a) Calibrate the applicator.
- b) Calculate application output and check against product label information.
- c) Make applicator adjustments based on requirements.
- d) Factors that would affect calibration:
  - i) Walking speed.
  - ii) Spread width.
  - iii) Aperture setting.

Assessment Criteria	Scope of study
AC5.1 Measure and calculate the area to be treated	<p><b>Assessment Criteria 5.1</b></p> <p>Measure and calculate the area to be treated:</p> <ul style="list-style-type: none"> <li>a) Measure the area to be treated: <ul style="list-style-type: none"> <li>i) Accurate measurement of dimensions.</li> </ul> </li> <li>b) Calculate the area to be treated: <ul style="list-style-type: none"> <li>i) Accurate calculation of area.</li> </ul> </li> </ul>
AC5.2 Calculate and measure the required quantities of pesticide and add to the applicator	<p><b>Assessment Criteria 5.2</b></p> <p>Calculate and measure the required quantities of pesticide and add to the applicator:</p> <ul style="list-style-type: none"> <li>a) Calculate the quantities of pesticide required: <ul style="list-style-type: none"> <li>i) Amount of pesticide required for specified area.</li> </ul> </li> <li>b) Measure quantities of pesticide and add to the applicator: <ul style="list-style-type: none"> <li>i) Correct selection and use of Personal Protective Equipment (PPE)/Respiratory Protective Equipment (RPE) (as required by the product label and/or Control of Substances Hazardous to Health (COSHH)/risk assessment)</li> <li>ii) Manual handling considerations</li> <li>iii) Suitable site selected with provision for containment and access to a spill kit</li> <li>iv) Accurate measurement of pesticide</li> <li>v) Correct filling procedure</li> <li>vi) Avoidance of spillage</li> <li>vii) Return surplus pesticide to secure storage.</li> </ul> </li> </ul>
AC5.3 Carry out safe and accurate application procedures	<p><b>Assessment Criteria 5.3</b></p> <p>Safe and accurate application procedures:</p> <ul style="list-style-type: none"> <li>a) Check wind speed and direction: <ul style="list-style-type: none"> <li>i) Use of an anemometer.</li> <li>ii) Use of visual signs.</li> <li>iii) Use of a compass.</li> </ul> </li> <li>b) Safe and accurate application procedures: <ul style="list-style-type: none"> <li>i) Treatment area clearly identified</li> <li>ii) Check tidal timings</li> <li>iii) Direction of travel established dependent on the water flow</li> <li>iv) Bankside safety implemented</li> <li>v) Walking speed maintained</li> <li>vi) Accurate switching on/off points</li> <li>vii) Area treated minimising overlaps and misses</li> <li>viii) Avoidance of off target contamination/application.</li> <li>ix) Completion of an application record must be:</li> <li>x) Accurate</li> <li>xi) Legible.</li> </ul> </li> </ul>
AC6.1 Explain how to manage and dispose of surplus pesticide	<p><b>Assessment Criteria 6.1</b></p> <p>Managing and disposing of surplus pesticide:</p> <ul style="list-style-type: none"> <li>a) Managing surplus pesticide for further use: <ul style="list-style-type: none"> <li>i) Carefully return to original packaging.</li> <li>ii) Return to safe storage.</li> </ul> </li> <li>b) Disposing of surplus pesticide: <ul style="list-style-type: none"> <li>i) Collected by a licensed waste disposal contractor.</li> <li>ii) Below the maximum dose rate: apply to the original application target/site.</li> </ul> </li> </ul>

Assessment Criteria	Scope of study
	iii) At maximum dose rate: apply to another untreated approved target/site.

AC6.2 Explain how to clean, decontaminate and store the applicator

**Assessment Criteria 6.2**

Cleaning, decontaminating and storing the applicator:

- a) Cleaning and decontaminating the applicator:
  - i) Reducing the risk of personal contamination:
    - select and use appropriate Personal Protective Equipment (PPE)/Respiratory Protective Equipment (RPE).
  - ii) Reducing the risk of environmental contamination:
    - appropriate site.
    - thorough cleaning of internal and external surfaces (if required).
  - iii) Effective cleaning and decontamination:
    - ensure the applicator is made safe
    - care to ensure contamination 'hot spots' are clean.
  - iv) When cleaning of the applicator should take place:
    - after the application is completed.
    - if changing to a different product.
    - to avoid applicator damage from pesticide.
    - to carry out maintenance.
- b) Storage requirements for the applicator:
  - i) Refer to manufacturer's handbook.
  - ii) Clean and dry.
  - iii) Inspect for wear and damage.
  - iv) Replace any worn or damaged parts.
  - v) Lubricate.
  - vi) Store undercover and out of direct sunlight.
  - vii) Leave in a stable position.
  - viii) Store in a secure area.

## Unit 269 Installing pesticide plugs in standing trees or stumps (PA6PP)

<b>Level:</b>	2
<b>GLH:</b>	54
<b>Assessment method:</b>	Practical observation with oral questioning
<b>Aim:</b>	The purpose of this unit is for learners to safely install pesticide plugs in standing trees or stumps.

### Learning Outcomes

- LO1 Understand the legislative, regulatory and Codes of Practice (CoP) requirements relating to installation equipment
- LO2 Read and interpret information on a product label
- LO3 Assess the environmental risks relating to the filling and installation site
- LO4 Prepare and calibrate the installation equipment
- LO5 Operate the installation equipment
- LO6 Know how to carry out post-operational procedures

Assessment Criteria	Scope of study
AC1.1 Describe the legislative, regulatory and Codes of Practice (CoP) requirements relating to applicator use	<p><b>Assessment Criteria 1.1</b></p> <p>Legislative, regulatory and Codes of Practice (CoP) requirements relating to applicator use:</p> <ul style="list-style-type: none"><li>a) Operator's responsibility under legislation:<ul style="list-style-type: none"><li>i) Follow product label requirements for correct application of pesticides.</li><li>ii) Follow employer instructions and training for applicator use.</li><li>iii) Use Integrated Pest Management (IPM) techniques where possible.</li><li>iv) Protect flora and fauna from harm when carrying out work.</li><li>v) Ensure public access on foot to area of land is not prohibited/restricted during work unless permission is granted.</li><li>vi) Do not apply pesticides to public rights of way unless specifically for managing access.</li></ul></li><li>b) Operator's responsibility under regulations:<ul style="list-style-type: none"><li>i) Follow obligations on the use and disposal of Plant Protection Products (PPPs), including packaging.</li><li>ii) Read, understand and comply with Control of Substances Hazardous to Health (COSHH)/risk assessments and adhere to the control measures put in place.</li><li>iii) Use, maintain and store Personal Protective Equipment (PPE)/Respiratory Protective Equipment (RPE) as provided and instructed.</li><li>iv) Follow instructions and training in the inspection, use, calibration and maintenance of applicators.</li></ul></li></ul>

- v) Follow compliance requirements for the management and disposal of waste.
- vi) Be prepared for inspection of PPPs record keeping and storage.
- vii) Know the company policy on how to report Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) to the HSE (Health and Safety Executive).
- c) Operator's responsibility under Pesticide Code of Practice (CoP) for using Plant Protection Products (PPPs):
  - i) Hold (or be under supervision of a holder of) a specified certificate directly related to the application method and/or applicator being used (Certificates of Competence (CoC)).
  - ii) Apply pesticides safely and effectively following product information and complying with current legislation.
- d) Work in accordance with the UK Pesticides National Action Plan (NAP):
  - i) Use IPM and alternative approaches or techniques where possible.
  - ii) Reduce impact by applying pesticides at appropriate times, safely monitor and contain active substances which are particularly harmful.
  - iii) Ensure storage, handling and disposal operations do not endanger human health or the environment, comply with inspections, enforcement and other official control activities.

AC1.2 State how to apply pesticides safely to or near water following industry best practice

**Assessment Criteria 1.2**

Applying pesticides to or near water:

- a) Operator's responsibility under legislation and regulations:
  - i) Ensure the pesticide product has aquatic approval.
  - ii) Seek approval from appropriate environmental agency.
- b) The term "to or near water":
  - i) Wet or dry ditches.
  - ii) Drainage channels.
  - iii) Streams.
  - iv) Rivers.
  - v) Canals.
  - vi) Ponds.
  - vii) Lakes/lochs.
  - viii) Reservoirs.
  - ix) Areas immediately adjacent to watercourses.
- c) Operator safety considerations when applying pesticides to or near water:
  - i) Check bank stability before applying.
  - ii) Availability of a second person on site.
  - iii) Availability of life ring/rescue devices.

AC2.1 Read and interpret information on a product label

**Assessment Criteria 2.1**

Information on a product label:

- a) Product information:
  - i) Product name
  - ii) Active substance(s) (ingredients)
  - iii) Product group symbol
  - iv) Approval number
  - v) Reason for use
  - vi) Expiry date/shelf life.
- b) Important information:
  - i) Approved field of use
  - ii) Maximum individual dose
  - iii) Maximum total dose

- iv) Maximum number of treatments
- v) Latest time of application.
- c) Safety precautions:
  - i) Operator protection
  - ii) Environmental protection
  - iii) Restrictions on use
  - iv) Specific product precautions.
- d) Crop specific information:
  - i) Crop/target
  - ii) Dose rate
  - iii) Timing of application(s)
- e) Mixing and application information:
  - i) Appropriate for applicator
  - ii) Label information unique to the product.

AC3.1 Identify environmental risks to the filling and installation site and explain how to minimise these risks

**Assessment Criteria 3.1**

Environmental risks to the filling and installation site and how to minimise these risks:

- a) Environmental factors at risk at the filling and installation site:
  - i) Ground conditions.
  - ii) Water courses.
  - iii) Boreholes.
  - iv) Environmental margins/strips/areas.
  - v) Wildlife.
  - vi) Beneficial insects.
  - vii) Non-target plants.
  - viii) Sensitive crops/areas.
  - ix) Public access.
  - x) Other environmental factors relevant to the site.
- b) Minimise risks to the filling and application site:
  - i) Check and maintain application rate.
  - ii) Monitor weather conditions.
  - iii) Avoid off target application.
  - iv) Observe environmental margins/strips/areas.
  - v) Inform neighbours.
  - vi) Erect warning signs.
  - vii) Use an appropriate pesticide (minimal environmental impact).
  - viii) Appropriate timing of application.

AC3.2 Identify environmental risks to the filling and aquatic installation site and how to minimise these risks

**Assessment Criteria 3.2**

Environmental risks to the filling and aquatic installation site and how to minimise these risks:

- a) Environmental factors at risk at the filling and aquatic installation site:
  - i) Removal of fish cover.
  - ii) Removal of bankside wildlife habitat.
  - iii) Removal of bankside vegetation leading to bank erosion.
  - iv) Other environmental factors relevant to the site.
- b) Minimise risks to the aquatic environment:
  - i) Seek approval from appropriate environmental agency.
  - ii) Use of an appropriate pesticide (minimal environmental impact).
  - iii) Appropriate timing of treatment.

AC4.1 Carry out pre-use checks to the installation equipment

**Assessment Criteria 4.1**

Pre-use checks applicable to the installation equipment:

- a) All required guards are in place and in good condition as stated in the operator's manual.

Assessment Criteria	Scope of study
	<ul style="list-style-type: none"> <li>b) Battery sufficiently charged.</li> <li>c) Adequate fuel.</li> <li>d) Air filter clean and in good condition.</li> <li>e) Cooling fins clean/vents clean and clear.</li> <li>f) Drill bit securely fitted in chuck.</li> <li>g) Depth gauge secure and set correctly.</li> <li>h) Hammer head securely fitted to shaft.</li> <li>i) Other checks specific to the equipment being used.</li> </ul>
<p>AC5.1 Measure the diameter of the standing tree or stump to be treated and calculate the number of plugs required</p>	<p><b>Assessment Criteria 5.1</b></p> <p>Measure the diameter of the standing tree or stump to be treated and calculate the number of plugs required:</p> <ul style="list-style-type: none"> <li>a) Measure the diameter of the standing tree or stump to be treated: <ul style="list-style-type: none"> <li>i) Accurate measurement of the diameter.</li> </ul> </li> <li>b) Calculate the number of plugs required: <ul style="list-style-type: none"> <li>i) Accurate calculation of number of plugs.</li> </ul> </li> </ul>
<p>AC5.2 Carry out safe and accurate installation procedures</p>	<p><b>Assessment Criteria 5.2</b></p> <p>Safe and accurate installation procedures:</p> <ul style="list-style-type: none"> <li>a) Safe and accurate installation procedures: <ul style="list-style-type: none"> <li>i) Correct selection and use of Personal Protective Equipment (PPE)/Respiratory Protective Equipment(RPE) (as required by the product label and/or Control of Substances Hazardous to Health (COSHH) risk assessment)</li> <li>ii) Check tidal timings</li> <li>iii) Bankside safety implemented</li> <li>iv) Drill holes: <ul style="list-style-type: none"> <li>• at correct spacing</li> <li>• into the correct part of the stump/tree</li> <li>• to the correct depth.</li> </ul> </li> <li>v) Plugs installed by fully inserting them into drill holes.</li> </ul> </li> <li>b) Completion of an application record must be: <ul style="list-style-type: none"> <li>i) Accurate</li> <li>ii) Legible.</li> </ul> </li> </ul>
<p>AC6.1 Explain how to manage and dispose of surplus pesticide</p>	<p><b>Assessment Criteria 6.1</b></p> <p>Managing and disposing of surplus pesticide:</p> <ul style="list-style-type: none"> <li>a) Managing surplus pesticide for further use: <ul style="list-style-type: none"> <li>i) Carefully return to original packaging.</li> <li>ii) Return to secure store.</li> </ul> </li> <li>b) Disposing of surplus pesticide: <ul style="list-style-type: none"> <li>i) Treated by a specialist treatment facility on site.</li> <li>ii) Collected by a licensed waste disposal contractor.</li> </ul> </li> </ul>
<p>AC6.2 Explain how to clean, decontaminate and store the installation equipment</p>	<p><b>Assessment Criteria 6.2</b></p> <p>Cleaning, decontaminating and storing the installation equipment:</p> <ul style="list-style-type: none"> <li>a) Cleaning and decontaminating the installation equipment: <ul style="list-style-type: none"> <li>i) Reducing the risk of personal contamination: <ul style="list-style-type: none"> <li>• select and use appropriate Personal Protective Equipment (PPE)/Respiratory Protective Equipment (RPE).</li> </ul> </li> <li>ii) Reducing the risk of environmental contamination: <ul style="list-style-type: none"> <li>• appropriate site.</li> <li>• thorough cleaning of equipment.</li> </ul> </li> </ul> </li> </ul>

Assessment Criteria	Scope of study
	<ul style="list-style-type: none"> <li>iii) Effective cleaning and decontamination:               <ul style="list-style-type: none"> <li>• ensure the installation equipment is made safe</li> </ul> </li> <li>iv) When cleaning of the installation equipment should take place:               <ul style="list-style-type: none"> <li>• after the application is completed.</li> <li>• if changing to a different product.</li> <li>• to avoid applicator damage from pesticide.</li> <li>• to carry out maintenance.</li> </ul> </li> <li>b) Storage requirements for the installation equipment:               <ul style="list-style-type: none"> <li>i) Refer to manufacturer's handbook.</li> <li>ii) Ensure the installation equipment is clean and dry.</li> <li>iii) Inspect for wear and damage.</li> <li>iv) Replace any worn or damaged parts.</li> <li>v) Lubricate.</li> <li>vi) Leave in a stable position.</li> <li>vii) Store in a secure area.</li> </ul> </li> </ul>

## Unit 270 Operating handheld pesticide injection equipment (PA6INJ)

<b>Level:</b>	2
<b>GLH:</b>	54
<b>Assessment method:</b>	Practical observation with oral questioning
<b>Aim:</b>	The purpose of this unit is for learners to safely operate handheld pesticide injection equipment.

### Learning Outcomes

- LO1 Understand the legislative, regulatory and Codes of Practice (CoP) requirements relating to injection equipment
- LO2 Read and interpret information on a product label
- LO3 Assess the environmental risks relating to the filling and injection site
- LO4 Prepare and calibrate the injection equipment
- LO5 Operate the injection equipment
- LO6 Know how to carry out post-operational procedures

Assessment Criteria	Scope of study
AC1.1 Describe the legislative, regulatory and Codes of Practice (CoP) requirements relating to injection equipment	<p><b>Assessment Criteria 1.1</b></p> <p>Legislative, regulatory and Codes of Practice (CoP) requirements relating to injection equipment:</p> <ul style="list-style-type: none"> <li>a) Operator's responsibility under legislation:               <ul style="list-style-type: none"> <li>i) Follow product label requirements for correct application of pesticides.</li> <li>ii) Follow employer instructions and training for applicator use.</li> <li>iii) Use Integrated Pest Management (IPM) techniques where possible.</li> <li>iv) Protect flora and fauna from harm when carrying out work.</li> <li>v) Ensure public access on foot to area of land is not prohibited/restricted during work unless permission is granted.</li> <li>vi) Do not apply pesticides to public rights of way unless specifically for managing access.</li> </ul> </li> <li>b) Operator's responsibility under regulations:               <ul style="list-style-type: none"> <li>i) Follow obligations on the use and disposal of Plant Protection Products (PPPs), including packaging.</li> <li>ii) Read, understand and comply with Control of Substances Hazardous to Health (COSHH)/risk assessments and adhere to the control measures put in place.</li> <li>iii) Use, maintain and store Personal Protective Equipment (PPE)/Respiratory Protective Equipment (RPE) as provided and instructed.</li> <li>iv) Follow instructions and training in the inspection, use, calibration and maintenance of applicators.</li> <li>v) Follow compliance requirements for the management and disposal of waste.</li> </ul> </li> </ul>

- vi) Be prepared for inspection of PPPs record keeping and storage.
- vii) Know the company policy on how to report Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) to the HSE (Health and Safety Executive).
- c) Operator's responsibility under Pesticide Code of Practice (CoP) for using Plant Protection Products (PPPs):
  - i) Hold (or be under supervision of a holder of) a specified certificate directly related to the application method and/or applicator being used (Certificates of Competence (CoC)).
  - ii) Apply pesticides safely and effectively following product information and complying with current legislation.
- d) Work in accordance with the UK Pesticides National Action Plan (NAP):
  - i) Use IPM and alternative approaches or techniques where possible.
  - ii) Reduce impact by applying pesticides at appropriate times, safely monitor and contain active substances which are particularly harmful.
  - iii) Ensure storage, handling and disposal operations do not endanger human health or the environment, comply with inspections, enforcement and other official control activities.

AC1.2 State how to inject pesticides safely to or near water following industry best practice

**Assessment Criteria 1.2**

Injecting pesticides to or near water:

- a) Operator's responsibility under legislation and regulations:
  - i) Ensure the pesticide product has aquatic approval.
  - ii) Seek approval from appropriate environmental agency.
- b) The term "to or near water":
  - i) Wet or dry ditches.
  - ii) Drainage channels.
  - iii) Streams.
  - iv) Rivers.
  - v) Canals.
  - vi) Ponds.
  - vii) Lakes/lochs.
  - viii) Reservoirs.
  - ix) Areas immediately adjacent to watercourses.
- c) Operator safety considerations when injecting pesticides to or near water:
  - i) Check bank stability before applying.
  - ii) Availability of a second person on site.
  - iii) Availability of life ring/rescue devices.

AC1.3 Describe how to inject pesticides safely following industry best practice

**Assessment Criteria 1.3**

Method for injecting the target with pesticide:

- a) Injection site on plant/target.
- b) Growth stage.
- c) Time of year.
- d) Marking system to avoid misses/overdosing.

AC2.1 Read and interpret information on a product label

**Assessment Criteria 2.1**

Information on a product label:

- a) Product information:
  - i) Product name
  - ii) Active substance(s) (ingredients)
  - iii) Product group symbol
  - iv) Approval number
  - v) Reason for use
  - vi) Expiry date/shelf life.

Assessment Criteria	Scope of study
	<ul style="list-style-type: none"> <li>b) Important information:               <ul style="list-style-type: none"> <li>i) Approved field of use</li> <li>ii) Maximum individual dose</li> <li>iii) Maximum total dose</li> <li>iv) Maximum number of treatments</li> <li>v) Latest time of application.</li> </ul> </li> <li>c) Safety precautions:               <ul style="list-style-type: none"> <li>i) Operator protection</li> <li>ii) Environmental protection</li> <li>iii) Buffer zone</li> <li>iv) Restrictions on use</li> <li>v) Specific product precautions.</li> </ul> </li> <li>d) Crop specific information:               <ul style="list-style-type: none"> <li>i) Crop/target</li> <li>ii) Dose rate</li> <li>iii) Timing of application(s)</li> <li>iv) Water volume.</li> </ul> </li> <li>e) Mixing and application information:               <ul style="list-style-type: none"> <li>i) Appropriate for applicator</li> <li>ii) Filling</li> <li>iii) Label information unique to the product.</li> </ul> </li> </ul>

AC3.1 Identify environmental risks for the filling and injection site and explain how to minimise these risks

**Assessment Criteria 3.1**

Environmental risks for the filling and injection site and how to minimise these risks:

- a) Environmental factors at risk at the filling and injection site:
  - i) Ground conditions.
  - ii) Water courses.
  - iii) Drains.
  - iv) Boreholes.
  - v) Environmental margins/strips/areas.
  - vi) Wildlife.
  - vii) Beneficial insects.
  - viii) Non-target plants.
  - ix) Sensitive crops/areas.
  - x) Housing.
  - xi) Public access.
  - xii) Other environmental factors relevant to the site.
- b) Minimise risks to the filling and injection site:
  - i) Check and maintain application rate.
  - ii) Monitor weather conditions.
  - iii) Avoid off target application.
  - iv) Observe environmental margins/strips/areas.
  - v) Inform neighbours.
  - vi) Erect warning signs.
  - vii) Use an appropriate pesticide (minimal environmental impact).
  - viii) Appropriate timing of application.

AC3.2 Identify environmental risks for the filling and aquatic injection site and how to minimise these risks

**Assessment Criteria 3.2**

Environmental risks to the filling and aquatic injection site and how to minimise these risks:

- a) Environmental factors at risk at the filling and aquatic injection site:
  - i) Removal of fish cover.
  - ii) Removal of bankside wildlife habitat.
  - iii) Removal of bankside vegetation leading to bank erosion.
  - iv) Other environmental factors relevant to the site.
- b) Minimise risks to the aquatic environment:
  - i) Seek approval from appropriate environmental agency.
  - ii) Use of an appropriate pesticide (minimal environmental impact).

Assessment Criteria	Scope of study
	iii) Appropriate timing of treatment.
AC4.1 Identify and select equipment according to injection requirements	<p><b>Assessment Criteria 4.1</b></p> <p>Equipment according to injection requirements:</p> <ul style="list-style-type: none"> <li>a) Long needle: <ul style="list-style-type: none"> <li>i) Initial treatment</li> <li>ii) Thick stems.</li> </ul> </li> <li>b) Short needle: <ul style="list-style-type: none"> <li>i) Repeat treatment</li> <li>ii) Thin stems.</li> </ul> </li> </ul>
AC4.2 Carry out pre-use checks to the injection equipment	<p><b>Assessment Criteria 4.2</b></p> <p>Pre-use checks to the injection equipment:</p> <ul style="list-style-type: none"> <li>a) Injection equipment components to be inspected for serviceability and contamination: <ul style="list-style-type: none"> <li>i) Tank/bottle/container</li> <li>ii) Lid</li> <li>iii) Pump</li> <li>iv) Filters</li> <li>v) Hoses</li> <li>vi) Connections</li> <li>vii) Seals <ul style="list-style-type: none"> <li>viii) On/off control</li> </ul> </li> <li>ix) Straps.</li> </ul> </li> <li>b) Check the injection equipment for satisfactory performance: <ul style="list-style-type: none"> <li>i) Injection equipment checked for leaks</li> <li>ii) Condition confirmed as suitable for operation.</li> </ul> </li> <li>c) Fit and check the needle for use: <ul style="list-style-type: none"> <li>i) Suitable needle selected</li> <li>ii) Needle undamaged</li> <li>iii) Needle fitted correctly.</li> </ul> </li> </ul>
AC4.3 Calibrate the injection equipment	<p><b>Assessment Criteria 4.3</b></p> <p>Calibrate the injection equipment:</p> <ul style="list-style-type: none"> <li>a) Calibrate the injection equipment.</li> <li>b) Check delivery rate against applicator setting and required volume.</li> <li>c) Make injection equipment adjustments based on requirements.</li> </ul>
AC5.1 Calculate and measure the required quantities of pesticide and water and add to the injection equipment, or attach a pesticide container	<p><b>Assessment Criteria 5.1</b></p> <p>Calculate and measure the required quantities of pesticide and water and add to the injection equipment:</p> <ul style="list-style-type: none"> <li>a) Calculate the quantities of pesticide and water required: <ul style="list-style-type: none"> <li>i) Amount of water required for specified targets.</li> <li>ii) Amount of pesticide required for specified targets.</li> <li>iii) Amount of pesticide required for full tank/bottle/container.</li> </ul> </li> <li>b) Measure quantities of pesticide and water and add to the injection equipment, or attach a pesticide container: <ul style="list-style-type: none"> <li>i) Correct selection and use of Personal Protective Equipment (PPE)/Respiratory Protective Equipment (RPE) (as required by the product label and/or Control of Substances Hazardous to Health (COSHH)/risk assessment)</li> <li>ii) Manual handling considerations</li> <li>iii) Observance of pesticide manufacturer's instructions for mixing sequence and agitation (or other recommended method)</li> </ul> </li> </ul>

Assessment Criteria	Scope of study
	<ul style="list-style-type: none"> <li>iv) Suitable site selected with provision for containment and access to a spill kit</li> <li>v) Accurate measurement of pesticide and water</li> <li>vi) Correct filling procedure or attach a pesticide container <ul style="list-style-type: none"> <li>• correct procedure for attaching container</li> <li>• container undamaged</li> </ul> </li> <li>vii) Avoidance of spillage</li> <li>viii) Return pesticide to secure storage.</li> </ul>

AC5.2 Carry out safe and accurate application procedures

**Assessment Criteria 5.2**

Safe and accurate application procedures:

- a) Safe and accurate application procedures:
  - i) Targets clearly identified
  - ii) Targets treated minimising overlaps and misses
  - iii) Avoidance of off target contamination/application.
- b) Completion of an application record must be:
  - i) Accurate
  - ii) Legible.

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

**Assessment Criteria 6.1**

Managing and disposing of surplus pesticide:

- a) Managing surplus pesticide for further use:
  - i) Apply to another untreated/approved target/site.
  - ii) Carefully return to container.
  - iii) Return to secure store.
- b) Disposing of surplus pesticide:
  - i) Treated by a specialist treatment facility on site.
  - ii) Collected by a licensed waste disposal contractor.

AC6.2 Explain how to clean, decontaminate and store the injection equipment

**Assessment Criteria 6.2**

Cleaning, decontaminating and storing the injection equipment:

- a) Cleaning and decontaminating the injection equipment and:
  - i) Reducing the risk of personal contamination:
    - select and use appropriate Personal Protective Equipment (PPE)/Respiratory Protective Equipment (RPE).
  - ii) Reducing the risk of environmental contamination:
    - appropriate site.
    - thorough washing with water and suitable cleaning agent.
    - safe disposal of contaminated washings.
  - iii) Effective cleaning and decontamination:
    - ensure the injection equipment is made safe
    - care to ensure contamination 'hot spots' are clean.
  - iv) When cleaning of the injection equipment should take place
    - after the application is completed.
    - if changing to a different product.
    - to avoid applicator damage from pesticide.
    - to carry out maintenance.
- b) Storage requirements for the injection equipment:
  - i) Refer to manufacturer's handbook.
  - ii) Clean and dry.
  - iii) Inspect for wear and damage.
  - iv) Replace any worn or damaged parts.
  - v) Lubricate.
  - vi) Leave in a stable position.
  - vii) Store in a secure area.

## Unit 271 Operating handheld applicators requiring minimal calibration (PA6MC)

<b>Level:</b>	2
<b>GLH:</b>	54
<b>Assessment method:</b>	Practical observation with oral questioning
<b>Aim:</b>	The purpose of this unit is for learners to safely operate handheld applicators requiring minimal calibration.

### Learning Outcomes

- LO1 Understand the legislative, regulatory and Codes of Practice (CoP) requirements relating to applicator use
- LO2 Read and interpret information on a product label
- LO3 Assess the environmental risks relating to the filling and application site
- LO4 Prepare and calibrate the applicator
- LO5 Operate the applicator
- LO6 Know how to carry out post-operational procedures

Assessment Criteria	Scope of study
AC1.1 Describe the legislative, regulatory and Codes of Practice (CoP) requirements relating to applicator use	<p><b>Assessment Criteria 1.1</b></p> <p>Legislative, regulatory and Codes of Practice (CoP) requirements relating to applicator use:</p> <ul style="list-style-type: none"><li>a) Operator's responsibility under legislation:<ul style="list-style-type: none"><li>i) Follow product label requirements for correct application of pesticides.</li><li>ii) Follow employer instructions and training for applicator use.</li><li>iii) Use Integrated Pest Management (IPM) techniques where possible.</li><li>iv) Protect flora and fauna from harm when carrying out work.</li><li>v) Ensure public access on foot to area of land is not prohibited/restricted during work unless permission is granted.</li><li>vi) Do not apply pesticides to public rights of way unless specifically for managing access.</li></ul></li><li>b) Operator's responsibility under regulations:<ul style="list-style-type: none"><li>i) Follow obligations on the use and disposal of Plant Protection Products (PPPs), including packaging.</li><li>ii) Read, understand and comply with Control of Substances Hazardous to Health (COSHH)/risk assessments and adhere to the control measures put in place.</li><li>iii) Use, maintain and store Personal Protective Equipment (PPE)/Respiratory Protective Equipment (RPE) as provided and instructed.</li><li>iv) Follow instructions and training in the inspection, use, calibration and maintenance of applicators.</li></ul></li></ul>

- v) Follow compliance requirements for the management and disposal of waste.
- vi) Be prepared for inspection of PPPs record keeping and storage.
- vii) Know the company policy on how to report Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) to the HSE (Health and Safety Executive).
- c) Operator's responsibility under Pesticide Code of Practice (CoP) for using Plant Protection Products (PPPs):
  - i) Hold (or be under supervision of a holder of) a specified certificate directly related to the application method and/or applicator being used (Certificates of Competence (CoC)).
  - ii) Apply pesticides safely and effectively following product information and complying with current legislation.
- d) Work in accordance with the UK Pesticides National Action Plan (NAP):
  - i) Use IPM and alternative approaches or techniques where possible.
  - ii) Reduce impact by applying pesticides at appropriate times, safely monitor and contain active substances which are particularly harmful.
  - iii) Ensure storage, handling and disposal operations do not endanger human health or the environment, comply with inspections, enforcement and other official control activities.

AC1.2 State how to apply pesticides safely to or near water following industry best practice

#### Assessment Criteria 1.2

Applying pesticides to or near water:

- a) Operator's responsibility under legislation and regulations:
  - i) Ensure the pesticide product has aquatic approval.
  - ii) Seek approval from appropriate environmental agency.
- b) The term "to or near water":
  - i) Wet or dry ditches.
  - ii) Drainage channels.
  - iii) Streams.
  - iv) Rivers.
  - v) Canals.
  - vi) Ponds.
  - vii) Lakes/lochs.
  - viii) Reservoirs.
  - ix) Areas immediately adjacent to watercourses.
- c) Operator safety considerations when applying pesticides to or near water:
  - i) Check bank stability before applying.
  - ii) Availability of a second person on site.
  - iii) Availability of life ring/rescue devices.

AC2.1 Read and interpret information on a product label

#### Assessment Criteria 2.1

Information on a product label:

- a) Product information:
  - i) Product name
  - ii) Active substance(s) (ingredients)
  - iii) Product group symbol
  - iv) Approval number
  - v) Reason for use
  - vi) Expiry date/shelf life.
- b) Important information:
  - i) Approved field of use
  - ii) Maximum individual dose
  - iii) Maximum total dose

- iv) Maximum number of treatments
- v) Latest time of application.
- c) Safety precautions:
  - i) Operator protection
  - ii) Environmental protection
  - iii) Buffer zone
  - iv) Restrictions on use
  - v) Specific product precautions.
- d) Crop specific information:
  - i) Crop/target
  - ii) Dose rate
  - iii) Timing of application(s)
  - iv) Water volume.
- e) Mixing and application information:
  - i) Appropriate for applicator
  - ii) Filling
  - iii) Compatibility
  - iv) Label information unique to the product.

AC3.1 Identify environmental risks for the filling and application site and explain how to minimise these risks

### Assessment Criteria 3.1

Environmental risks for the filling and application site and how to minimise these risks:

- a) Environmental factors at risk at the filling and application site:
  - i) Ground conditions.
  - ii) Water courses.
  - iii) Drains.
  - iv) Boreholes.
  - v) Environmental margins/strips/areas.
  - vi) Wildlife.
  - vii) Beneficial insects.
  - viii) Non-target plants.
  - ix) Sensitive crops/areas.
  - x) Hedgerows.
  - xi) Housing.
  - xii) Public access.
  - xiii) Other environmental factors relevant to the site.
- b) Minimise risks to the filling and application site:
  - i) Check and maintain application rate.
  - ii) Monitor weather conditions.
  - iii) Avoid spray drift.
  - iv) Avoid off target application.
  - v) Avoid surface run-off.
  - vi) Observe environmental margins/strips/areas.
  - vii) Inform neighbours.
  - viii) Erect warning signs.
  - ix) Use an appropriate pesticide (minimal environmental impact).
  - x) Appropriate timing of application.

AC3.2 Identify environmental risks for the filling and aquatic application site and how to minimise these risks

### Assessment Criteria 3.2

Environmental risks to the filling and aquatic application site and how to minimise these risks:

- a) Environmental factors at risk at the filling and aquatic application site:
  - i) Livestock drinking points.
  - ii) Recreational use of water body/course.
  - iii) Water extraction points.
  - iv) De-oxygenation of water.
  - v) Removal of fish cover.
  - vi) Removal of bankside wildlife habitat.

- vii) Removal of bankside vegetation leading to bank erosion.
- viii) Other environmental factors relevant to the site.
- b) Minimise risks to the aquatic environment:
  - i) Work in an upstream direction.
  - ii) Check weather suitability before treatment.
  - iii) Check downstream uses before treatment.
  - iv) Seek approval from appropriate environmental agency.
  - v) Use of an appropriate pesticide (minimal environmental impact).
  - vi) Appropriate timing of treatment.

AC4.1 Carry out pre-use checks to the applicator

**Assessment Criteria 4.1**

Pre-use checks to the applicator:

- a) Applicator depressurised.
- b) Applicator components to be inspected for serviceability and contamination:
  - i) Tank/container
  - ii) Wick/brush and bristles
  - iii) Nozzles
  - iv) Foam pads
  - v) Lid
  - vi) Filters
  - vii) Hoses
  - viii) Connections
  - ix) Seals
  - x) On/off control
  - xi) Lance
  - xii) Straps
  - xiii) Pump, visual assessment only
  - xiv) Batteries
  - xv) Engine
  - xvi) Other components/controls specific to the applicator.

AC4.2 Calibrate the applicator

**Assessment Criteria 4.2**

Calibrate the applicator:

- a) Establish dilution rate for the product from the product label.
- b) Calibrate the applicator.
- c) Calculate dilution rate and check against product label information.
- d) Factors that would affect calibration:
  - i) Applicator used.
  - ii) Walking speed.
  - iii) Nozzle fitted (swath width if appropriate).
  - iv) Disc(s) fitted (swath width if appropriate).
  - v) Wick priming time.
  - vi) Pressure setting.

AC5.1 Identify the target to be treated

**Assessment Criteria 5.1**

Identify the target to be treated:

- a) Accurate identification of target.

AC5.2 Calculate and measure the required quantities of pesticide and water and add to the applicator or attach a pesticide container

**Assessment Criteria 5.2**

Calculate and measure the required quantities of pesticide and water and add to the applicator:

- a) Calculate the quantities of pesticide and water required:
  - i) Amount of water required for identified target.

- ii) Amount of pesticide required for identified target.
- b) Measure correct quantities of pesticide and water and add to the applicator, or attach a pesticide container:
  - i) Correct selection and use of Personal Protective Equipment (PPE)/Respiratory Protective Equipment (RPE) (as required by the product label and/or Control of Substances Hazardous to Health (COSHH)/risk assessment)
  - ii) Manual handling considerations
  - iii) Observance of pesticide manufacturer's instructions for mixing sequence and agitation (or other recommended method)
  - iv) Suitable site selected with provision for containment and access to a spill kit
  - v) Accurate measurement of pesticide and water
  - vi) Correct filling procedure
  - vii) Avoidance of spillage
  - viii) Return pesticide to secure storage.

AC5.3 Explain how to safely and accurately operate the applicator

**Assessment Criteria 5.3**

Safe and accurate operation of the applicator:

- a) Actions to take when an applicator develops a fault during application:
  - i) Select and use appropriate Personal Protective Equipment (PPE)/Respiratory Protective Equipment (RPE)
  - ii) Avoid transfer of pesticide to non-target area
  - iii) Fault identified and rectified if within the operator's level of capability and responsibility.

AC5.4 Carry out safe and accurate application procedures

**Assessment Criteria 5.4**

Safe and accurate application procedures:

- a) Check wind speed and direction:
  - i) Use of an anemometer.
  - ii) Use of visual signs.
  - iii) Use of a compass.
- b) Safe and accurate application procedures:
  - i) Target clearly identified
  - ii) Check tidal timings
  - iii) Bankside safety implemented
  - iv) Walking speed maintained
  - v) Accurate switching on/off points
  - vi) Target treated minimising overlaps and misses
  - vii) Avoidance of off target contamination/application.
- c) Completion of an application record must be:
  - i) Accurate
  - ii) Legible.

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

**Assessment Criteria 6.1**

Managing and disposing of surplus dilute pesticide:

- a) Managing surplus dilute pesticide:
  - i) Below the maximum dose rate: apply to the original application target/site.
  - ii) At maximum dose rate: apply to another untreated approved target/site.
- b) Disposing of surplus dilute pesticide:
  - i) Treated by a specialist treatment facility on site.
  - ii) Collected by a licensed waste disposal contractor.

AC6.2 Explain how to clean, decontaminate and store the applicator

### Assessment Criteria 6.2

Cleaning, decontaminating and storing the applicator:

- a) Cleaning and decontaminating the applicator:
    - i) Reducing the risk of personal contamination:
      - select and use appropriate Personal Protective Equipment (PPE)/Respiratory Protective Equipment (RPE).
    - ii) Reducing the risk of environmental contamination:
      - appropriate site.
      - safe disposal of contaminated washings.
    - iii) Effective cleaning and decontamination:
      - ensure the applicator is made safe
      - care to ensure contamination 'hot spots' are clean.
      - thorough washing of internal and external surfaces with water and suitable cleaning agent.
      - thorough flushing of systems.
    - iv) When cleaning of the applicator should take place:
      - after the application is completed.
      - if changing to a different product.
      - to avoid applicator damage from pesticide.
      - to carry out maintenance.
  - b) Storage requirements for the applicator:
    - i) Refer to manufacturer's handbook.
    - ii) Clean and dry.
    - iii) Inspect for wear and damage.
    - iv) Replace any worn or damaged parts.
    - v) Frost protection measures implemented.
    - vi) Lubricate.
    - vii) Store undercover and out of direct sunlight.
    - viii) Leave in a stable position.
    - ix) Store in a secure area.
-

# Supporting information

## Evidence requirements

Practical observation and oral questioning by a City & Guilds NPTC approved assessor.

A prepopulated Record Of Assessment (ROA) must be completed by the assessor following an assessment. **All** Assessment Criteria (AC) must be completed as either 'met' or 'not met' for each outcome on the ROA.

The assessment(s) can be achieved at **pass** only. **All** Assessment Criteria (AC) must be met to achieve a pass result, if any AC is not met the candidate is unsuccessful and will fail the assessment.

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.

## Unit guidance

The delivery of this qualification should be carried out in a real-life working environment with a suitable site with crop and/or target.

Learners should be familiar with all equipment and machinery that they are going to operate.

Provision must be made to comply with environmental and sustainability regulations and standards; segregation of resources for reuse, recycling and disposal should be implemented.

New technologies should be included within delivery of this qualification to allow learners to practise without wasting products. Artificial intelligence (AI) and virtual reality (VR) could also be used to deliver knowledge and practical sessions.

It is recommended that the delivery integrates visits/engagement with local industry and employers to ensure that the implementation of legislation, policies, codes of practice and industry best practice are up to date.

## Safe practice

The assessor and candidate must wear Personal Protective Equipment (PPE) and, if required, Respiratory Protective Equipment (RPE) during the practical activities.

Assessors must ensure a site-specific risk assessment is carried out and sufficient control measures are implemented.

A First Aid kit meeting current regulations, of the appropriate size for the number of persons on site, must be available.

All equipment and/or machinery used in the delivery and assessment of the qualification must comply with manufacturer's guidelines and the relevant requirements of the Provision and Use of Work Equipment Regulations (PUWER) 1998. Equipment and/or machines must be used/operated in such a way that the learner, assessor, other persons and/or equipment and/or machinery are not endangered.

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.

### **Suggested learning resources**

Health and Safety Executive (HSE) information sheet AIS16 & AIS22 Available via:

**<https://www.hse.gov.uk/pubns/ais16.htm>**

National Sprayer Testing Scheme (NSTS). Available via:

**<https://www.nsts.org.uk/Documents-Links>**

Pesticides Code of Practice. Available via: **<https://www.hse.gov.uk/pesticides/using-pesticides/codes-of-practice/code-of-practice-for-using-plant-protection-products.htm>**

The Official Controls (Plant Protection Products) Regulations 2020. Available via:

**<https://www.legislation.gov.uk/ukxi/2020/552/contents>**

UK Pesticides National Action Plan 2025: Working for a more sustainable future. Available via:

**<https://www.gov.uk/government/publications/uk-pesticides-national-action-plan-2025/uk-pesticides-national-action-plan-2025-working-for-a-more-sustainable-future>**

Voluntary Initiative. Available via: **<https://voluntaryinitiative.org.uk/>**

Additional information may be sought from the relevant manufacturer's operator's manual, product information or database, nozzle chart(s) or any other publication by the government or a government agency.

## 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 [www.cityandguilds.com](http://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 assessment: quality assurance standards**

This document sets out the minimum common quality assurance requirements for our qualifications that feature centre-assessed components.

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 guidance on administering portfolios and controlled assessments, including a definition of supervised conditions.

### **Access arrangements: when and how applications need to be made to City & Guilds**

This 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.

## City & Guilds

City & Guilds is the global skills partner, empowering people, organisations and economies to develop the skills they need for growth. With almost 150 years of trusted expertise, we support people into work, help them develop on the job and move into the next job.

We work with Governments, employers, training providers, colleges and industry stakeholders to design and deliver high-quality training, qualifications, assessments and credentials that lead to meaningful career progression. We understand the life changing link between skills development, social mobility and success. Our solutions span critical sectors including construction, engineering, transport, energy and electrical, serving over 1 million learners annually.

Through our comprehensive portfolio of brands and trusted global network, we set industry-wide standards for technical, behavioural and commercial skills to improve performance and productivity. We believe you can achieve your potential - and we're here to help make it happen.

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