



City & Guilds NPTC LEVEL 2 AWARD IN THE SAFE APPLICATION OF PESTICIDES USING PEDESTRIAN HAND HELD EQUIPMENT(PA6) (601/5145/6)

Version 1.1 (July 2024)

Assessment Pack – Centre and Candidate Version

Version and date	Change detail	Section
1.0 February 2024	First version	All
1.1 July 2024	Correction to Introduction of Unit 152 and 153	Introduction Page 3

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Introduction

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

This assessment is for the following units and learning outcomes:

151 Operating pedestrian hand held applicator fitted with hydraulic nozzles or rotary atomisers to apply pesticides to land covering the following learning outcomes:

1. Know the legislative and safety regulations relating to applicator use
2. Be able to assess the environmental factors relating to mixing and application
3. Be able to read and interpret product information
4. Be able to prepare and calibrate a hand held pedestrian applicator
5. Be able to operate the application equipment
6. Know how to carry out post-operational procedures

152 Operating pedestrian hand held applicators fitted with hydraulic nozzles or rotary atomisers to apply pesticides to or near water covering the following learning outcomes:

1. Know the legislative and safety regulations relating to applicator use
2. Be able to assess the environmental factors relating to mixing and application
3. Be able to read and interpret product information
4. Be able to prepare and calibrate a hand held pedestrian applicator
5. Be able to operate the application equipment
6. Know how to carry out post-operational procedures

153 Operating pedestrian hand held applicators to apply pesticide pellets or granules to land covering the following learning outcomes:

Know the legislative and safety regulations relating to applicator use

1. Be able to assess the environmental factors relating to the application site
2. Be able to read and interpret product information
3. Be able to prepare and calibrate a hand held pedestrian applicator
4. Be able to operate the applicator
5. Know how to carry out post-operational procedures

154 Operating pedestrian hand held applicators to apply pesticide pellets or granules to or near water covering the following learning outcomes:

1. Know the legislative and safety regulations relating to applicator use
2. Be able to assess the environmental factors relating to the application site
3. Be able to read and interpret product information
4. Be able to prepare and calibrate a hand held pedestrian applicator
5. Be able to operate the applicator
6. Know how to carry out post-operational procedures

155 Installing pesticide plugs in tree stumps covering the following learning outcomes:

1. Know the legislative and safety regulations relating to pesticide plug installation
2. Be able to assess the environmental factors relating to the installation site
3. Be able to read and interpret product information
4. Be able to prepare pesticide plug application equipment and calculate numbers of plugs required
5. Be able to install pesticide plugs
6. Know how to carry out post-operational procedures

156 Operating hand held pesticide injection equipment covering the following learning outcomes:

1. Know the legislative and safety regulations relating to pesticide injection equipment
2. Be able to assess the environmental factors relating to the site
3. Be able to read and interpret product information
4. Be able to prepare and calibrate the pesticide injection equipment
5. Be able to inject pesticide
6. Know how to carry out post-operational procedures

157 Operating hand held applicators requiring minimal calibration covering the following learning outcomes:

1. Know the legislative and safety regulations relating to applicator use
2. Be able to assess the environmental factors relating to the site
3. Be able to read and interpret product information
4. Be able to prepare and calibrate a hand held applicator
5. Be able to operate the application equipment
6. Know how to carry out post-operational procedures

General guidance on the requirements for assessment can be found in the Assessor Guidance General guidance on the requirements for assessment can be found in the Assessor Guidance document available on the City & Guilds web site www.nptc.org.uk

The assessor must complete the Practical Table mark sheet for each candidate which should be kept by the assessor for a minimum period of twelve months.

Record of assessment (ROA)

A prepopulated record of assessment must be completed by the assessor following an assessment. The number of outcomes is listed above, these must be ticked into the relevant met or not met sections of the ROA.

ARAS Forms

An Assessment Result Advice Slip (ARAS form) must be completed by the assessor following an assessment. The ARAS is not a certificate but, based on the evidence of the candidate's performance, is a recommendation to City & Guilds that the candidate has either met or not met the assessment criteria. All feedback is to be recorded by the assessor on the feedback section of the ARAS form.

Assessment Time

The expected assessment time for this qualification is 1.5 – 3 hours.

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

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

Practical observation descriptor table

151 Operating pedestrian hand held applicators fitted with hydraulic nozzles or rotary atomisers to apply pesticides to land

Activity number and description from check list		Assessment criteria
1.1	Describe the legal requirements relating to applying pesticides using hand held pedestrian equipment	May include: <ul style="list-style-type: none"> all required guards are in place and equipment complies with legal requirements comply with The Plant Protection Products (Sustainable Use) Regulations 2012 the operator must hold the appropriate certification for the equipment they are using
1.2	Describe how to apply pesticides safely using hand held pedestrian equipment following industry best practice	May include: <ul style="list-style-type: none"> comply with Pesticide Codes of Practice adopt industry best practice be aware of any safety implications imposed by Risk/COSHH assessment and comply with the requirements Overall treatment includes: <ul style="list-style-type: none"> consistent walking speed

		<ul style="list-style-type: none"> • regular pumping to maintain constant pressure • consistent nozzle height • accurate on/off points • matching of bouts • avoidance of off target application <p>Spot treatment includes:</p> <ul style="list-style-type: none"> • use of a suitable nozzle • maintaining a suitable height • timed treatment • avoidance of under/over dosing • avoidance of off target application
2.1	Identify risks to the environment	<p>May include the following:</p> <ul style="list-style-type: none"> • ground conditions • water courses • drains • boreholes • environmental margins/strips/areas • wildlife • non-target plants • sensitive crops/areas • hedgerows • housing • public access • other risks particular to the site
2.2	Explain how to minimize risks to the environment	<p>Explanation may include the following points:</p> <ul style="list-style-type: none"> • check and maintain application rate • avoid spray drift • avoid off target application • observe buffer zones • inform neighbours • erect warning signs • use an appropriate pesticide (minimal environmental impact) • appropriate timing of application <p>Reasons for minimising spray drift:</p> <ul style="list-style-type: none"> • avoidance of contamination to people and the environment <p>Check and comment on wind speed:</p> <ul style="list-style-type: none"> • use of an anemometer at suitable height or visual signs • wind direction <p>Factors that affect spray drift:</p> <ul style="list-style-type: none"> • weather conditions • direction of spraying • nozzle type and size • pressure • walking speed • nozzle height • rotary atomiser speed • defective equipment

<p style="text-align: center;">3.1 – 3.2</p>	<p>Read product information</p> <p>Interpret product information</p>	<p>To include the following:</p> <ul style="list-style-type: none"> • product name • active substance(s) (ingredient(s)) <p>Important information:</p> <ul style="list-style-type: none"> • field of use • crop/target • maximum individual dose • maximum total dose • maximum number of treatments <p>May include the following:</p> <ul style="list-style-type: none"> • specific product precautions/warnings • operator protection • environmental protection • restrictions on use <p>Crop specific information:</p> <ul style="list-style-type: none"> • crop/target • dose rate • water volume • timing <p>Mixing and spraying:</p> <ul style="list-style-type: none"> • filling • reduced volume applications (if applicable) • recommended nozzles • recommended pressure • spray quality • additional label information • compatibility
<p style="text-align: center;">4.1</p>	<p>Carry out pre use checks to the sprayer/applicator</p>	<p>To include:</p> <ul style="list-style-type: none"> • sprayer/applicator de-pressurised <p>Sprayer/applicator components to be inspected for serviceability and contamination that may include:</p> <ul style="list-style-type: none"> • tank • lid • filters • hoses • connections • seals • on/off control • lance • straps • pump, visual assessment only • batteries (if applicable) • engine (if applicable) <p>Part fill applicator and check for satisfactory operation:</p> <ul style="list-style-type: none"> • sprayer/applicator checked for leaks under pressure • any problems identified to be rectified if within operators level of responsibility and ability

		<ul style="list-style-type: none"> condition confirmed as suitable for operation
4.2	Identify suitable operating pressure and select nozzles according to application requirements	<p>Identify and explain the use of nozzles:</p> <ul style="list-style-type: none"> deflector - medium/coarse spray quality. Generally used to apply herbicides air inclusion - medium/coarse spray quality. Good drift reduction properties full cone - medium/coarse spray quality. Suitable for spot treatment and spraying around obstacles fan nozzle - fine, medium or coarse spray quality. General purpose <p>Fit required nozzle and select pressure:</p> <ul style="list-style-type: none"> suitable nozzle selected nozzle fitted correctly correct pressure selected <p>Check nozzle condition and spray pattern:</p> <ul style="list-style-type: none"> nozzle undamaged correct spray pattern for nozzle
4.3	Calibrate the sprayer/applicator and record relevant data	<p>Calibration to include:</p> <ul style="list-style-type: none"> calculation of water volume rate check water volume rate against product information recommendations <p>Calibration data may include:</p> <ul style="list-style-type: none"> applicator used walking speed nozzle(s) fitted (swath width if appropriate) pressure setting flow rate
4.4	Measure the area to be treated	<p>To include:</p> <ul style="list-style-type: none"> accurate measurement of dimensions
4.5	Calculate the area to be treated	<p>To include:</p> <ul style="list-style-type: none"> accurate calculation of area
4.6	Calculate the quantities of pesticide and water required, if applicable	<p>To include:</p> <ul style="list-style-type: none"> amount of water required for specified area amount of pesticide required for specified area amount of pesticide required for full tank
5.1	Measure the required quantities and add to the applicator, or attach pesticide container	<p>To include:</p> <ul style="list-style-type: none"> correct selection and use of PPE (as required by the product label and/or COSHH Assessment) observance of pesticide manufacturers instructions for mixing sequence and agitation (or other recommended method) suitable site selected clean water supply

		<ul style="list-style-type: none"> • accurate measurement of water • accurate measurement of pesticide • avoidance of spillage or • attach a pesticide container • return to secure storage
5.2	Demonstrate safe and accurate application procedures	<p>To include:</p> <ul style="list-style-type: none"> • treatment area clearly identified • walking speed maintained • accurate switching on/off points • accurate matching of bouts • obstacles dealt with correctly (if applicable) • area treated minimising overlaps and misses • awareness of changing weather conditions and appropriate action taken (if applicable) • avoidance of off target application/contamination
5.3	Carry out all activities protecting human health and the environment	<p>To include:</p> <ul style="list-style-type: none"> • prevention of personal injury and contamination through correct selection and use of PPE (as required by the product information, COSHH and Risk Assessment) • prevention of public/bystander contamination • safe filling procedure • avoidance of spray drift • avoidance of off target application/contamination • avoidance of over dosing/under dosing crop/target/plant material
5.4	Complete a treatment record	<p>Completion of the treatment record must be:</p> <ul style="list-style-type: none"> • accurate • legible (if handwritten)
6.1	Explain how to manage surplus pesticide and dispose of waste material	<p>Surplus concentrate pesticide:</p> <ul style="list-style-type: none"> • return to temporary mobile store • return to fixed store <p>Containers:</p> <ul style="list-style-type: none"> • triple rinsed • placed in secure storage until disposal • returned to supplier • collected by a licensed waste disposal contractor <p>Packaging:</p> <ul style="list-style-type: none"> • thoroughly emptied • placed in secure storage until disposal

		<ul style="list-style-type: none"> collected by a licensed waste disposal contractor <p>Surplus dilute pesticide:</p> <ul style="list-style-type: none"> back on to site as long as it is below the maximum dose rate use on another approved crop/target treated by specialist treatment facility on site (e.g. a lined bio bed) collected by a licensed waste disposal contractor
6.2	Explain how to clean and decontaminate the sprayer/applicator	<p>May include:</p> <ul style="list-style-type: none"> select and use appropriate PPE appropriate site thorough washing with water and suitable cleaning agent (if recommended/required) internal and external surfaces care to ensure contamination 'hot-spots' are clean thorough flushing of system safe disposal of contaminated washings when cleaning should take place safe procedures followed
6.3	Describe the storage requirements for the sprayer/applicator	<p>May include:</p> <ul style="list-style-type: none"> ensure the applicator is clean and dry inspect for wear and damage replace any worn or damaged parts frost protection measures implemented lubricate as required store undercover and out of direct sunlight store in a secure area

152 Operating pedestrian hand held applicators fitted with hydraulic nozzles or rotary atomisers to apply pesticides to or near water

Activity number and description from check list		Assessment criteria
1.1	Describe the legal requirements relating to applying pesticides to or near water using hand held pedestrian equipment	<p>May include:</p> <ul style="list-style-type: none"> all required guards are in place and equipment complies with legal requirements comply with The Plant Protection Products (Sustainable Use) Regulations 2012

		<ul style="list-style-type: none"> the operator must hold the appropriate certification for the equipment they are using <p>Both required:</p> <ul style="list-style-type: none"> ensure the pesticide has aquatic approval seek environmental agency approval
1.2	Describe how to apply pesticides safely to or near water using hand held pedestrian equipment following industry best practice	<p>May include:</p> <ul style="list-style-type: none"> comply with Pesticide Codes of Practice adopt industry best practice be aware of any safety implications imposed by Risk/COSHH Assessment and comply with the requirements <p>Overall treatment includes:</p> <ul style="list-style-type: none"> consistent walking speed regular pumping to maintain constant pressure consistent nozzle height accurate on/off points matching of bouts avoidance of off target application <p>Spot treatment includes:</p> <ul style="list-style-type: none"> use of a suitable nozzle maintaining a suitable height timed treatment avoidance of under/over dosing avoidance of off target application <p>The term on or near water may include the following:</p> <ul style="list-style-type: none"> wet or dry ditches drainage channels streams rivers canals ponds lakes/lochs reservoirs and areas immediately adjacent <p>Operator safety considerations:</p> <ul style="list-style-type: none"> check bank stability before applying availability of a second person on site availability of life ring/rescue devices

<p style="text-align: center;">2.1</p>	<p>Identify risks to the aquatic environment</p>	<p>May include the following:</p> <ul style="list-style-type: none"> • ground conditions • wildlife • non-target plants • environmental margins/strips/areas • hedgerows • housing • public access • sensitive crops/areas • water courses • boreholes • livestock drinking points • recreational use of water body/course • water extraction points • de-oxygenation of water • removal of fish cover • removal of bankside wildlife habitat • removal of bankside vegetation leading to bank erosion • other risks specific to the site
<p style="text-align: center;">2.2</p>	<p>Explain how to minimize risks to the environment</p>	<p>Explanation may include the following points:</p> <ul style="list-style-type: none"> • work in an upstream direction • check weather suitability before treatment • check downstream uses before treatment • seek environmental agency approval • use of an appropriate pesticide (minimal environmental impact) • appropriate timing of treatment <p>Reasons for minimizing spray drift:</p> <ul style="list-style-type: none"> • check and maintain application rate • avoid spray drift • avoid off target application • exclude livestock • erect warning signs • inform neighbours <p>Check and comment on wind speed</p> <ul style="list-style-type: none"> • use of anemometer at suitable height or visual signs • wind direction <p>Reasons for minimising spray drift:</p>

		<ul style="list-style-type: none"> • avoidance of contamination to people and the environment, including the aquatic environment <p>Factors that affect spray drift</p> <ul style="list-style-type: none"> • weather conditions • direction of spraying • nozzle type and size • pressure • walking speed • nozzle height • rotary atomiser speed • defective equipment
3.1 - 3.2	<p>Read product information</p> <p>Interpret product information</p>	<p>To include the following:</p> <ul style="list-style-type: none"> • product name • active substance(s) (ingredient(s)) <p>Important information:</p> <ul style="list-style-type: none"> • field of use • crop/target • maximum individual dose • maximum total dose • maximum number of treatments <p>May include the following:</p> <ul style="list-style-type: none"> • specific product precautions/warnings • operator protection • environmental protection • restrictions on use <p>Crop specific information:</p> <ul style="list-style-type: none"> • crop/target • dose rate • water volume • timing <p>Mixing and spraying:</p> <ul style="list-style-type: none"> • filling • reduced volume applications (if applicable) • recommended nozzles • recommended pressure • spray quality • additional label information • compatibility
4.1	<p>Carry out pre use checks to the sprayer/applicator</p>	<p>To include:</p> <ul style="list-style-type: none"> • sprayer/applicator de-pressurised <p>Sprayer/applicator components to be inspected for serviceability and contamination that may include:</p> <ul style="list-style-type: none"> • tank

		<ul style="list-style-type: none"> • lid • filters • hoses • connections • seals • on/off control • lance • straps • pump, visual assessment only • batteries (if applicable) • engine (if applicable) <p>Part fill applicator and check for satisfactory operation:</p> <ul style="list-style-type: none"> • sprayer/applicator checked for leaks under pressure • any problems identified to be rectified if within operators level of responsibility and ability • condition confirmed as suitable for operation
4.2	Identify suitable operating pressure and select nozzles according to application requirements	<p>Identify and explain the use of nozzles:</p> <ul style="list-style-type: none"> • deflector - medium/coarse spray quality. Generally used to apply herbicides • air inclusion - medium/coarse spray quality. Good drift reduction properties • full cone - medium/coarse spray quality. Suitable for spot treatment and spraying around obstacles • fan nozzle - fine, medium or coarse spray quality. General purpose <p>Fit the required nozzle and select pressure</p> <ul style="list-style-type: none"> • suitable nozzle selected • nozzle fitted correctly • correct pressure selected <p>Check nozzle condition and spray pattern:</p> <ul style="list-style-type: none"> • nozzle undamaged • correct spray pattern for nozzle
4.3	Calibrate the sprayer/applicator and record relevant data	<p>Calibration to include:</p> <ul style="list-style-type: none"> • calculation of water volume rate • check water volume rate against product information recommendations <p>Calibration data may include:</p> <ul style="list-style-type: none"> • applicator used • walking speed

		<ul style="list-style-type: none"> • nozzle(s) fitted (swath width if appropriate) • pressure setting
4.4	Measure the area to be treated	<p>To include:</p> <ul style="list-style-type: none"> • accurate measurement of dimensions
4.5	Calculate the area to be treated	<p>To include:</p> <ul style="list-style-type: none"> • accurate calculation of area
4.6	Calculate the quantities of pesticide and water required, if applicable	<p>To include:</p> <ul style="list-style-type: none"> • amount of water required for specified area • amount of pesticide required for specified area • amount of pesticide required for full tank
5.1	Measure the required quantities and add to the applicator, or attach pesticide container	<p>To include:</p> <ul style="list-style-type: none"> • correct selection and use of PPE (as required by the product label and/or COSHH Assessment) • observance of pesticide manufacturers instructions for mixing sequence and agitation (or other recommended method) • suitable site selected • clean water supply • accurate measurement of water • accurate measurement of pesticide • avoidance of spillage or • attach a pesticide container
5.2	Demonstrate safe and accurate application procedures	<p>To include:</p> <ul style="list-style-type: none"> • bankside safety implemented • treatment area clearly identified • walking speed maintained • accurate switching on/off points • accurate matching of bouts • obstacles dealt with correctly (if applicable) • area treated minimising overlaps and misses • awareness of changing weather conditions and appropriate action taken (if applicable) • avoidance of off target application/contamination
5.3	Carry out all activities protecting human health and the environment	<p>To include:</p> <ul style="list-style-type: none"> • prevention of personal injury and contamination through correct selection and use of PPE (as required by the

		<p>product information, COSHH and Risk Assessment)</p> <ul style="list-style-type: none"> • prevention of public/bystander contamination • safe filling procedure • avoidance of spray drift • avoidance of off target application/contamination • avoidance of over dosing/under dosing crop/target/plant material • minimising the impact on the aquatic environment
5.4	Complete a treatment record	<p>Completion of the treatment record must be:</p> <ul style="list-style-type: none"> • accurate • legible (if handwritten)
6.1	Explain how to manage surplus pesticide and dispose of waste material	<p>Surplus concentrate pesticide:</p> <ul style="list-style-type: none"> • return to temporary mobile store • return to fixed store <p>Containers:</p> <ul style="list-style-type: none"> • triple rinsed • secure storage until disposal • returned to supplier • collected by a licensed waste disposal contractor <p>Packaging:</p> <ul style="list-style-type: none"> • thoroughly emptied • placed in secure storage until disposal • collected by a licensed waste disposal contractor <p>Surplus dilute pesticide:</p> <ul style="list-style-type: none"> • back on to site as long as it is below the maximum dose rate • use on another approved crop/target • treated by specialist treatment facility on site (e.g. a lined bio bed) • collected by a licensed waste disposal contractor
6.2	Explain how to clean and decontaminate the sprayer/applicator	<p>May include:</p> <ul style="list-style-type: none"> • select and use appropriate PPE • appropriate site • thorough washing with water and suitable cleaning agent (if recommended/required) • internal and external surfaces • care to ensure contamination 'hot-spots' are clean • thorough flushing of system • safe disposal of contaminated washings • when cleaning should take place • safe procedures followed
6.3	Describe the storage requirements for the sprayer/applicator	<p>May include:</p>

		<ul style="list-style-type: none"> • ensure the applicator is clean and dry • inspect for wear and damage • replace any worn or damaged parts • frost protection measures implemented • lubricate as required • store undercover and out of direct sunlight • store in a secure area
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153 Operating pedestrian hand held applicators to apply pesticide pellets or granules to land

Activity number and description from check list		Assessment criteria
1.1	Outline the legal requirements relating to applying pesticide pellets/granules using pedestrian hand held applicators	<p>May include:</p> <ul style="list-style-type: none"> • all required guards are in place and equipment complies with legal requirements • comply with The Plant Protection Products (Sustainable Use) Regulations 2012 • the operator must hold the appropriate certification for the equipment they are using
1.2	Describe how to apply pesticide pellets/granules using pedestrian hand held applicators following industry best practice	<p>May include:</p> <ul style="list-style-type: none"> • comply with Pesticide Codes of Practice • adopt industry best practice • be aware of any safety implications imposed by Risk/COSHH Assessment and comply with the requirements <p>Overall treatment includes:</p> <ul style="list-style-type: none"> • consistent walking speed • accurate switching on/off points • matching of bouts • avoidance of off target application <p>Spot treatment includes:</p> <ul style="list-style-type: none"> • maintaining a suitable applicator height • avoidance of under/over dosing • avoidance of off target application
2.1	Identify risks to the environment	<p>May include the following:</p> <ul style="list-style-type: none"> • ground conditions • water courses • drains • boreholes

		<ul style="list-style-type: none"> • environmental margins/strips/areas • wildlife • non-target plants • sensitive crops/areas • hedgerows • housing • public access • other risks particular to the site
2.2	Explain how to minimize risks to the environment	<p>Explanation may include the following points:</p> <ul style="list-style-type: none"> • check and maintain application rate • avoid off target application • observe buffer zones • inform neighbours • erect warning signs • use an appropriate pesticide (minimal environmental impact) • appropriate timing of application <p>Reasons for minimising off target application:</p> <ul style="list-style-type: none"> • avoidance of contamination to people and the environment <p>Check and comment on wind speed:</p> <ul style="list-style-type: none"> • use of an anemometer at suitable height or visual signs • wind direction <p>Factors that affect uniformity of spread:</p> <ul style="list-style-type: none"> • weather conditions • direction of spreading • pellet/granule density and size • applicator height • applicator set level • defective equipment
3.1 – 3.2	Read product information Interpret product information	<p>To include the following:</p> <ul style="list-style-type: none"> • Product name • active substance(s) (ingredient(s)) <p>Important information:</p> <ul style="list-style-type: none"> • field of use • crop/target • maximum individual dose • maximum total dose • maximum number of treatments <p>May include the following:</p> <ul style="list-style-type: none"> • specific product precautions/warnings • operator protection

		<ul style="list-style-type: none"> • environmental protection • restrictions on use <p>Crop specific information:</p> <ul style="list-style-type: none"> • crop/target • dose rate • timing • additional label information
4.1	Carry out pre-use checks to the applicator	<p>Applicator components to be inspected for serviceability and contamination that may include:</p> <ul style="list-style-type: none"> • hopper • lid • agitator • metering device • spinning disc condition • on/off control • straps or harness (if applicable) • wheels and tyres (if applicable)
4.2	Identify settings and adjustments	<p>May include:</p> <ul style="list-style-type: none"> • height adjustment • spread width adjustment • disc speed adjustment • metering device
4.3	Calibrate the applicator and record relevant data	<p>Calibration may include:</p> <ul style="list-style-type: none"> • calculation of walking speed • measure spread width • calculate application rate • check rate against product information recommendations <p>Calibration data may include:</p> <ul style="list-style-type: none"> • walking speed • applicator used • height setting • spread width • metering device setting • pellet/granule used
4.4	Measure the area to be treated	<p>To include:</p> <ul style="list-style-type: none"> • accurate measurement of dimensions
4.5	Calculate the area to be treated	<p>To include:</p> <ul style="list-style-type: none"> • accurate calculation of area
4.6	Calculate the quantities of pesticide required	<p>To include:</p> <ul style="list-style-type: none"> • amount of pesticide required for specified area
5.1	Measure/weigh the required quantities and add to the applicator	<p>To include all of the following:</p>

		<ul style="list-style-type: none"> • correct selection and use of PPE/RPE (as required by the product label, COSHH and Risk Assessment) • suitable site selected • add product following product recommendations and approved procedures • accurate measurement of pesticide product • avoidance of spillage
5.2	Demonstrate safe and accurate application procedures	<p>To include:</p> <ul style="list-style-type: none"> • treatment area clearly identified • walking speed maintained • accurate switching on/off points • accurate matching of bouts • obstacles dealt with correctly (if applicable) • area treated minimising overlaps and misses • awareness of changing weather conditions and appropriate action taken (if applicable) • avoidance of off target application/contamination
5.3	Carry out all activities protecting human health and the environment	<p>To include:</p> <ul style="list-style-type: none"> • prevention of personal injury and contamination through correct selection and use of PPE/RPE (as required by the product information, COSHH/Risk Assessment) • prevention of public/bystander contamination • safe filling procedure • avoidance of off target application • avoidance of over dosing/under dosing crop/target/plant material
5.4	Complete a treatment record	<p>Completion of the treatment record must be:</p> <ul style="list-style-type: none"> • accurate • legible (if handwritten)
6.1	State how to recover and store surplus pellets/granules and how to dispose of waste material	<p>Surplus pesticide pellets/granules</p> <ul style="list-style-type: none"> • careful return to packaging • return to temporary mobile store • return to fixed store <p>Packaging:</p> <ul style="list-style-type: none"> • thoroughly emptied

		<ul style="list-style-type: none"> placed in secure storage until disposal collected by licensed waste disposal contractor
6.2	Explain how to clean and decontaminate the applicator	<p>May include:</p> <ul style="list-style-type: none"> select and use correct PPE selection of an appropriate site for cleaning the applicator clean the applicator following product information and manufacturer's recommendations safe disposal of contaminated waste in an appropriate manner following good practice safe procedures followed
6.3	Describe the storage requirements for the applicator	<p>May include:</p> <ul style="list-style-type: none"> ensure the applicator is clean inspect for wear or damage replace any worn or damaged parts lubricate if required store in a secure area store under cover and out of direct sunlight

154 Operating pedestrian hand held applicators to apply pesticide pellets or granules to or near water

Activity number and description from check list		Assessment criteria
1.1	Describe the legal requirements relating to applying pesticide pellets/granules to or near water using pedestrian hand held applicators	<p>May include:</p> <ul style="list-style-type: none"> all required guards are in place and equipment complies with legal requirements comply with The Plant Protection Products (Sustainable Use) Regulations 2012 the operator must hold the appropriate certification for the equipment they are using <p>Both required:</p> <ul style="list-style-type: none"> ensure the pesticide has aquatic approval seek Environmental Agency approval
1.2	Describe how to apply pesticide pellets/granules to or near water using pedestrian hand held applicators following industry best practice	<p>May include:</p> <ul style="list-style-type: none"> comply with Pesticide Codes of Practice adopt industry best practice be aware of any safety implications imposed by Risk/COSHH

		<p>Assessment and comply with the requirements</p> <p>Overall treatment includes:</p> <ul style="list-style-type: none"> • consistent walking speed • accurate switching on/off points • matching of bouts • avoidance of off target application <p>Spot treatment includes:</p> <ul style="list-style-type: none"> • maintaining a suitable applicator height • avoidance of under/over dosing • avoidance of off target application <p>The term on or near water may include the following:</p> <ul style="list-style-type: none"> • wet or dry ditches • drainage channels • streams • rivers • canals • ponds • lakes/lochs • reservoirs • and areas immediately adjacent <p>Operator safety considerations</p> <ul style="list-style-type: none"> • check bank stability before applying • availability of a second person on site • availability of life ring/rescue devices
2.1	Identify risks to the aquatic environment	<p>May include the following:</p> <ul style="list-style-type: none"> • ground conditions • wildlife • non-target plants • environmental margins/strips/areas • hedgerows • housing • public access • sensitive crops/areas • water courses • boreholes • livestock drinking points • recreational use of water body/course • water extraction points • de-oxygenation of water • removal of fish cover • removal of bankside wildlife habitat

		<ul style="list-style-type: none"> • removal of bankside vegetation leading to bank erosion • other risks specific to the site
2.2	Explain how to minimise risks to the environment	<p>Explanation may include the following points:</p> <ul style="list-style-type: none"> • work in an upstream direction • check weather suitability before treatment • check downstream uses before treatment • seek Environmental Agency approval • use of an appropriate pesticide (minimal environmental impact) • appropriate timing of treatment • check and maintain application rate • avoid off-target application • exclude livestock • erect warning signs • inform neighbours <p>Reasons for minimising off target application:</p> <ul style="list-style-type: none"> • avoidance of contamination to people and the environment <p>Check and comment on wind speed:</p> <ul style="list-style-type: none"> • use of an anemometer at suitable height or visual signs • wind direction <p>Factors that affect uniformity of spread:</p> <ul style="list-style-type: none"> • weather conditions • direction of spreading • pellet/granule density and size • applicator height • applicator set level • defective equipment
3.1 – 3.2	Read product information Interpret product information	<p>Important information:</p> <ul style="list-style-type: none"> • field of use (aquatic approval) • target • maximum individual dose • maximum total dose • maximum number of treatments <p>May include the following:</p> <ul style="list-style-type: none"> • specific product precautions/warnings • operator protection • environmental protection • restrictions on use

		<p>Crop specific information:</p> <ul style="list-style-type: none"> • target • dose rate • timing • additional label information
4.1	Carry out pre use checks to the applicator	<p>Applicator components to be inspected for service ability and contamination that may include:</p> <ul style="list-style-type: none"> • hopper • lid • agitator • metering device • spinning disc condition • on/off control • straps or harness (if applicable) • wheels and tyres (if applicable)
4.2	Identify settings and adjustments	<p>May include:</p> <ul style="list-style-type: none"> • height adjustment • spread width adjustment • disc speed adjustment • metering device
4.3	Calibrate the applicator and record relevant data	<p>Calibration may include:</p> <ul style="list-style-type: none"> • measure spread width • calculate application rate • check rate against product information recommendations <p>Calibration data may include:</p> <ul style="list-style-type: none"> • walking speed • applicator used • height setting • spread width • metering device setting • pellet/granule used
4.4	Measure the area to be treated	<p>To include:</p> <ul style="list-style-type: none"> • accurate measurement of dimensions
4.5	Calculate the area to be treated	<p>To include:</p> <ul style="list-style-type: none"> • accurate calculation of area
4.6	Calculate the quantities of pesticide required	<p>To include:</p> <ul style="list-style-type: none"> • amount of pesticide required for specified area
5.1	Measure/weigh the required quantities and add to the applicator	<p>To include all of the following:</p> <ul style="list-style-type: none"> • correct selection and use of PPE/RPE (as required by the product label, COSHH and Risk Assessment)

		<ul style="list-style-type: none"> • suitable site selected • add product following product recommendations and approved procedures • accurate measurement of pesticide product • avoidance of spillage
5.2	Demonstrate safe and accurate application procedures	<p>To include:</p> <ul style="list-style-type: none"> • bankside safety implemented • treatment area clearly identified • walking speed maintained • accurate switching on/off point • obstacles dealt with correctly (if applicable) • all of specified area treated • awareness of changing weather conditions and • appropriate action taken (if applicable) • avoidance of off target application/contamination
5.3	Carry out all activities protecting human health and the environment	<p>To include:</p> <ul style="list-style-type: none"> • prevention of personal injury and contamination through correct selection and use of PPE/RPE (as required by the product information, COSHH/Risk Assessment) • prevention of public/bystander contamination • safe filling procedure • avoidance of off target application • avoidance of over dosing/under dosing crop/target/plant material • minimising the impact on the aquatic environment
5.4	Complete a treatment record	<p>Completion of the treatment record must be:</p> <ul style="list-style-type: none"> • accurate • legible (if handwritten)
6.1	State how to recover and store surplus pellets/granules and how to dispose of waste material	<p>Surplus pesticide pellets/granules:</p> <ul style="list-style-type: none"> • careful return to packaging • return to temporary mobile store • return to fixed store <p>Packaging:</p> <ul style="list-style-type: none"> • thoroughly emptied • placed in secure storage until disposal • collected by a licensed waste disposal contractor

6.2	Explain how to clean and decontaminate the applicator	<p>May include:</p> <ul style="list-style-type: none"> • select and use correct PPE/RPE • selection of an appropriate site for cleaning the applicator • clean the applicator following product information and manufacturer recommendations • safe disposal of contaminated waste in an appropriate manner following good practice • safe procedures followed
6.3	Describe the storage requirements for the applicator	<ul style="list-style-type: none"> • ensure the applicator is clean inspect for wear or damage • repair or notify supervisor if not within operators level of responsibility and ability lubricate if required store in a secure area • store under cover and out of direct sunlight

155 Installing pesticide plugs in tree stumps

Activity number and description from check list	Assessment criteria
1.1	<p>Describe the legislative and safety regulations relating to pesticide plug installation</p> <p>May include:</p> <ul style="list-style-type: none"> • all required guards are in place and equipment complies with legal requirements • comply with The Plant Protection Products (Sustainable Use) Regulations 2012 • the operator must hold the appropriate certification for the equipment they are using <p>Both required:</p> <ul style="list-style-type: none"> • ensure the pesticide has aquatic approval • seek environmental agency approval
1.2	<p>Describe how to install pesticide plugs safely following industry best practice</p> <p>May include;</p> <ul style="list-style-type: none"> • comply with Pesticide Codes of Practice • adopt industry best practice • be aware of any safety implications imposed by Risk/COSHH Assessment and comply with the requirements <p>The term on or near water may include the following:</p>

		<ul style="list-style-type: none"> • wet or dry ditches • drainage channels • streams • rivers • canals • ponds • lakes/lochs • reservoirs • and areas immediately adjacent <p>On or near water safety considerations</p> <ul style="list-style-type: none"> • check bank stability before applying • availability of a second person on site • availability of life ring/rescue devices
2.1	Identify risks to the environment from installing pesticide plugs	<p>May include:</p> <ul style="list-style-type: none"> • water courses • Tree Preservation Orders • conservation areas • wildlife • non-target species • leaving hazardous standing dead wood • housing • public access <p>Risks to aquatic environment:</p> <ul style="list-style-type: none"> • livestock drinking points • recreational use of water body/course • water extraction points • de-oxygenation of water • removal of fish cover • removal of bankside wildlife habitat • removal of bankside vegetation leading to bank erosion • other risks specific to the site
2.2	Explain how to minimize risks to the environment	<p>May include:</p> <ul style="list-style-type: none"> • permission sought from appropriate regulatory body (if required) • use an appropriate pesticide • careful timing of application • check and maintain application rate • work in an upstream direction • check weather suitability before treatment • check downstream uses before treatment

		<ul style="list-style-type: none"> • seek environmental agency approval • exclude livestock
3.1 - 3.2	Read product information Interpret product information	<p>The following to be tested:</p> <ul style="list-style-type: none"> • product name • active substance(s) (ingredient(s)) <p>Important information:</p> <ul style="list-style-type: none"> • field of use • crop/situation • maximum individual dose • maximum total dose <p>May include the following:</p> <ul style="list-style-type: none"> • specific product precautions/warnings • operator protection • environmental protection • restrictions on use <p>Crop specific information:</p> <ul style="list-style-type: none"> • target • dose rate • timing • additional label information
4.1	Carry out pre use checks to the application equipment	<p>May include:</p> <ul style="list-style-type: none"> • all required guards are in place and in good condition as stated in the operators manual (if applicable) • battery sufficiently charged (if applicable) • adequate fuel (if applicable) • air filter clean and in good condition (if applicable) • cooling fins clean/vents clean and clear (if applicable) • drill bit securely fitted in chuck • depth gauge secure and set correctly • hammer head securely fitted to shaft (if applicable) • any other checks specific to the equipment used
4.2	Measure the diameter of the tree or stump to be treated	<p>To include:</p> <ul style="list-style-type: none"> • accurate measurement • accurate calculation (if required)
4.3	Calculate the number of plugs	<p>To include:</p> <ul style="list-style-type: none"> • accurate calculations
5.1	Demonstrate safe and accurate installation procedures	<p>To include:</p>

		<ul style="list-style-type: none"> • correct selection and use of PPE (as required by the product label, COSHH/Risk Assessment) • plugs installed at correct spacing • plugs installed in to the correct part of the stump/tree • plugs installed to the correct depth
5.2	Carry out all activities protecting human health and the environment	<p>To include:</p> <ul style="list-style-type: none"> • prevention of personal injury and contamination through correct selection and use of PPE (as required by the product information, COSHH/Risk Assessment) • prevention of public/bystander contamination • safe installation procedure • avoidance of non-target species application • avoidance of over dosing/under dosing
5.3	Complete a treatment record	<p>Completion of the treatment record must be:</p> <ul style="list-style-type: none"> • accurate • legible (if handwritten)
6.1	State how to deal with unused pesticide plugs and packaging	<p>Explanation may include:</p> <ul style="list-style-type: none"> • careful return to packaging • return to temporary mobile store • return to fixed store • packaging thoroughly emptied • placed in secure storage until disposal • collected by licence waste disposal contractor
6.2	State how to clean application equipment	<p>May include:</p> <ul style="list-style-type: none"> • select and use correct PPE • selection of an appropriate site for cleaning the applicator • clean the applicator following product information and manufacturer's recommendations • safe disposal of contaminated waste in an appropriate manner following good practice • safe procedures followed
6.3	State how to store application equipment	<p>May include:</p> <ul style="list-style-type: none"> • ensure the applicator is clean • inspect for wear or damage • replace any worn or damaged parts

		<ul style="list-style-type: none"> • lubricate if required • store in a secure area
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156 Operating hand held pesticide injection equipment

Activity number and description from check list		Assessment criteria
1.1	Describe the legal requirements relating to applying pesticides using injection equipment	<p>May include:</p> <ul style="list-style-type: none"> • comply with The Plant Protection Products (Sustainable Use) Regulations 2012 • the operator must hold the appropriate certification for the equipment they are using <p>Both required:</p> <ul style="list-style-type: none"> • ensure the pesticide has aquatic approval • seek environmental agency approval
1.2	Describe how to inject pesticides safely following industry best practice	<p>May include:</p> <ul style="list-style-type: none"> • comply with Pesticide Codes of Practice • adopt industry best practice • be aware of any safety implications imposed by Risk/COSHH Assessment and comply with the requirements <p>Injecting the target:</p> <ul style="list-style-type: none"> • injection site on plant/target • growth stage • time of year • marking system to avoid misses/overdosing <p>The term on or near water may include the following:</p> <ul style="list-style-type: none"> • wet or dry ditches • drainage channels • streams • rivers • canals • ponds • lakes/lochs • reservoirs • and areas immediately adjacent <p>On or near water operator safety considerations:</p> <ul style="list-style-type: none"> • check bank stability before applying • availability of a second person on site • availability of life ring/rescue devices
2.1	Identify risks to the environment	<p>May include the following:</p> <ul style="list-style-type: none"> • water courses • drains • boreholes

		<ul style="list-style-type: none"> • environmental margins/strips/areas • wildlife • non-target plants • conservation areas • leaving hazardous standing dead wood • sensitive crops/areas • hedgerows • housing • public access <p>Risks to aquatic environment</p> <ul style="list-style-type: none"> • livestock drinking points • recreational use of water body/course • water extraction points • de-oxygenation of water • removal of fish cover • removal of bankside wildlife habitat • removal of bankside vegetation leading to bank erosion • other risks particular to the site
2.2	Explain how to minimise risks to the environment	<p>May include:</p> <ul style="list-style-type: none"> • suitable mixing/filling site chosen • permission sought from appropriate regulatory body (if required) • use an appropriate pesticide (minimal environmental impact) • careful timing of application • check and maintain application rate • erect warning signs • notify neighbours before application • work in an upstream direction • check weather suitability before treatment • check downstream uses before treatment • seek environmental agency approval • exclude livestock
3.1 - 3.2	Read product information Interpret product information	<p>The following to be tested:</p> <ul style="list-style-type: none"> • product name • active substance(s) (ingredient(s)) <p>Important information:</p> <ul style="list-style-type: none"> • field of use • target • maximum individual dose • maximum total dose <p>May include the following:</p> <ul style="list-style-type: none"> • specific product precautions/warnings • operator protection • environmental protection • restrictions on use

		<p>Crop specific information:</p> <ul style="list-style-type: none"> • target • dose rate • dilution rate if applicable • timing <p>Mixing and spraying:</p> <ul style="list-style-type: none"> • filling • additional label information
4.1	Identify and select equipment according to application requirements	<p>May include:</p> <ul style="list-style-type: none"> • long needle for initial treatment or thicker stems • short needle for repeat treatment or thinner stems
4.2	Carry out pre use checks to the applicator	<p>Applicator components to be inspected for serviceability and contamination that may include:</p> <ul style="list-style-type: none"> • tank/bottle/container • lid • filters • hoses • connections • seals • on/off control • straps <p>To include</p> <ul style="list-style-type: none"> • applicator checked for leaks • any problems identified to be rectified if within operators level of responsibility and ability • condition confirmed as suitable for operation <p>Fit the required needle for use:</p> <ul style="list-style-type: none"> • suitable needle selected • needle fitted correctly • needle undamaged
4.3	Calibrate the applicator	<p>Calibration to include:</p> <ul style="list-style-type: none"> • delivery rate checked against applicator setting and required volume <p>Calibration data may include:</p> <ul style="list-style-type: none"> • applicator used • needle fitted • applicator setting • pesticide used
4.4	Calculate quantities required	<p>May include:</p> <ul style="list-style-type: none"> • amount of water required for specified targets • amount of pesticide required for specified targets • amount of pesticide required for full tank/bottle/container

5.1	Measure the pesticide, mix with water and fill the applicator and/or attach pesticide container	<p>To include all of the following;</p> <ul style="list-style-type: none"> • correct selection and use of PPE (as required by the product information and/or COSHH Assessment) • suitable site selected • observance of pesticide manufacturers instructions for mixing • correct use of water supply • accurate measurement of water • accurate measurement of pesticide • avoidance of spillage <p>and/or</p> <ul style="list-style-type: none"> • attach pesticide container
5.2	Demonstrate safe and accurate injection procedures	<p>To include:</p> <ul style="list-style-type: none"> • targets clearly identified • targets treated avoiding misses and overdosing • awareness of changing weather conditions and appropriate action taken (if applicable)
5.3	Carry out all activities protecting human health and the environment	<p>To include:</p> <ul style="list-style-type: none"> • prevention of personal injury and contamination through correct selection and use of PPE (as required by the product information, COSHH/ Risk Assessment) • prevention of public/bystander contamination • safe filling procedure • avoidance of off target application/contamination • avoidance of over dosing/under dosing target/plant material
5.4	Complete a treatment record	<p>Completion of the treatment record must be:</p> <ul style="list-style-type: none"> • accurate • legible (if handwritten)
6.1	Explain how to manage surplus pesticide and dispose of waste material	<p>Surplus concentrate pesticide:</p> <ul style="list-style-type: none"> • return to temporary mobile store • return to fixed store <p>Containers:</p> <ul style="list-style-type: none"> • triple rinsed if applicable • placed in secure storage until disposal • returned to supplier • collected by a licensed waste disposal contractor • packaging thoroughly emptied • placed in secure storage until disposal <p>Surplus dilute pesticides</p> <ul style="list-style-type: none"> • use on another approved target

		<ul style="list-style-type: none"> • by specialist treatment facility on site (e.g. a lined bio bed) • collected by a licensed waste disposal contractor
6.2	Explain how to clean the injection equipment	<p>May include:</p> <ul style="list-style-type: none"> • select and use correct PPE • selection of an appropriate site for cleaning the applicator • triple rinse the applicator following product • information recommendations • thorough flushing of system • safe disposal of contaminated washings in an appropriate manner following good practice • safe procedures followed
6.3	Explain how to store the injection equipment	<p>May include:</p> <ul style="list-style-type: none"> • ensure the injection equipment is clean and dry • inspect for wear or damage • repair or notify supervisor if not within operators • level of responsibility and ability • lubricate if required • needle covered/removed to protect operator • store in a secure area • store under cover and out of direct sunlight

157 Operating other Hand Held Applicators Requiring Minimal Calibration

Activity number and description from check list		Assessment criteria
1.1	Describe the legal requirements relating to applying pesticides using hand held equipment	<p>May include:</p> <ul style="list-style-type: none"> • comply with The Plant Protection Products • (Sustainable Use) Regulations 2012 • the operator must hold the appropriate certification for the equipment they are using <p>Both required:</p> <ul style="list-style-type: none"> • ensure the pesticide has aquatic approval • seek environmental agency approval
1.2	Describe how to apply pesticides safely using hand held equipment following industry best practice	<p>May include;</p> <ul style="list-style-type: none"> • comply with Pesticide Codes of Practice • adopt industry best practice • be aware of any safety implications imposed by Risk/COSHH

		<p>Assessment and comply with the requirements</p> <p>Overall treatment includes:</p> <ul style="list-style-type: none"> • consistent walking speed • regular pumping to maintain constant pressure • consistent nozzle height • accurate on/off points • matching of bouts • avoidance of off target application <p>Spot treatment includes:</p> <ul style="list-style-type: none"> • use of a suitable nozzle • maintaining a suitable height • timed treatment • avoidance of under/over dosing • avoidance of off target application <p>The term on or near water may include the following:</p> <ul style="list-style-type: none"> • wet or dry ditches • drainage channels • streams • rivers • canals • ponds • lakes/lochs • reservoirs • and areas immediately adjacent <p>On or near water operator safety considerations:</p> <ul style="list-style-type: none"> • check bank stability before applying • availability of a second person on site • availability of life ring/rescue devices
2.1	Identify risks to the environment	<p>May include the following:</p> <ul style="list-style-type: none"> • ground conditions • water courses • drains • boreholes • environmental margins/strips/areas • wildlife • non-targets • sensitive crops/areas • hedgerows • housing • public access <p>Risks to the aquatic environment</p> <ul style="list-style-type: none"> • livestock drinking points • recreational use of water body/course • water extraction points • de-oxygenation of water • removal of fish cover

		<ul style="list-style-type: none"> • removal of bankside wildlife habitat • removal of bankside vegetation leading to bank erosion • other risks specific to the site
2.2	Explain how to minimize risks to the environment	<p>Explanation to include the following points:</p> <ul style="list-style-type: none"> • use of an appropriate pesticide (minimal environmental impact) • careful timing of application • check and maintain application rate • avoid spray drift • avoid off target application • observe buffer zones • erect warning signs • notify neighbours before application • work in an upstream direction • check weather suitability before treatment • check downstream uses before treatment • seek environmental agency approval • exclude livestock <p>Check and comment on wind speed:</p> <ul style="list-style-type: none"> • use of anemometer at suitable height or visible signs • wind direction <p>Reasons for minimising spray drift:</p> <ul style="list-style-type: none"> • avoidance of contamination to people and the environment <p>Factors that affect spray drift:</p> <ul style="list-style-type: none"> • weather conditions • direction of spraying • nozzle type and size (if applicable) • pressure (if applicable) • disc type • disc speed • nozzle/disc height • forward speed • defective equipment <p>Factors affecting off target application</p> <ul style="list-style-type: none"> • wick too low • wick over saturated and dripping
3.1 - 3.2	Read product information Interpret product information	<p>To include the following:</p> <ul style="list-style-type: none"> • product name • active substance(s) (ingredient(s)) <p>Important information:</p> <ul style="list-style-type: none"> • field of use • crop/target • maximum individual dose • maximum total dose • maximum number of treatments <p>May include the following:</p>

		<ul style="list-style-type: none"> • specific product precautions/warnings • operator protection • environmental protection • restrictions on use <p>Crop specific information:</p> <ul style="list-style-type: none"> • crop/target • dose rate • water volume • timing <p>Mixing and spraying:</p> <ul style="list-style-type: none"> • filling • recommended nozzles • recommended pressure • spray quality • additional label information • compatibility
4.1	Carry out pre use checks to the applicator	<p>May include:</p> <ul style="list-style-type: none"> • sprayer/applicator de-pressurised <p>Sprayer/applicator components to be inspected for serviceability and contamination that may include:</p> <ul style="list-style-type: none"> • tank/container • wick • lid • filters • hoses • connections • seals • on/off control • lance • straps • bristles • pump (if accessible) • batteries (if applicable) • engine (if applicable) <p>Part fill applicator and check for satisfactory operation:</p> <ul style="list-style-type: none"> • applicator checked for leaks under pressure • any problems identified to be rectified if within operators level of responsibility and ability • condition confirmed as suitable for operation
4.2	Identify any controls or components applicable to the applicator	<p>May include:</p> <ul style="list-style-type: none"> • tank • pump • on/off • filters • nozzle(s)/disc(s)/distribution system

		<ul style="list-style-type: none"> • other components/controls specific to the applicator
4.3	Calibrate the applicator and record relevant data	<p>Calibration may include:</p> <ul style="list-style-type: none"> • calculation of water volume rate • check water volume rate against product information recommendations • flow rate adjusted to distribution system <p>Calibration data may include:</p> <ul style="list-style-type: none"> • applicator used • walking speed • nozzle(s) fitted (swath width if appropriate) • disc(s) fitted (swath width if appropriate) • pressure setting • wick priming time
4.4	Measure and calculate the area/target to be treated	<p>To include:</p> <ul style="list-style-type: none"> • accurate calculation of area/target
4.5	Calculate the quantities of pesticide and water required, if applicable	<p>To include if applicable:</p> <ul style="list-style-type: none"> • amount of water required for specified area • amount of pesticide required for specified area • amount of pesticide required for full tank/container
5.1	Measure the required quantities and add to the applicator, or attach pesticide container	<p>To include all of the following:</p> <ul style="list-style-type: none"> • correct selection and use of PPE (as required by the product label, COSHH/Risk Assessment) • suitable site selected • add product following product recommendations and approved procedures • correct use of water supply • accurate measurement of water • accurate measurement of pesticide • avoidance of spillage <p>or</p> <ul style="list-style-type: none"> • attach pesticide container
5.2	Demonstrate safe and accurate application procedures	<p>May include:</p> <ul style="list-style-type: none"> • treatment area/target clearly identified • walking speed maintained • accurate switch on/off points • accurate matching of bouts • obstacles dealt with correctly (if applicable) • walking direction • area treated minimising overlaps and misses

		<ul style="list-style-type: none"> • awareness of changing weather conditions and appropriate action taken (if applicable)
5.3	Carry out all activities protecting human health and the environment	<p>To include:</p> <ul style="list-style-type: none"> • prevention of personal injury and contamination through correct selection and use of PPE (as required by the product information, COSHH/Risk Assessment) • prevention of public/bystander contamination • safe filling procedure • avoidance of off target application • avoidance of over dosing/under dosing crop/target/plant material
5.4	Complete a treatment record	<p>Completion of the treatment record must be:</p> <ul style="list-style-type: none"> • accurate • legible (if handwritten)
6.1	Explain how to manage surplus pesticide and dispose of waste material	<p>Surplus concentrate pesticide:</p> <ul style="list-style-type: none"> • return to temporary mobile store • return to fixed store <p>Containers:</p> <ul style="list-style-type: none"> • triple rinsed • placed in secure storage until disposal • returned to supplier • collected by licensed waste contractor <p>Packaging:</p> <ul style="list-style-type: none"> • thoroughly emptied • placed in secure storage until disposal • collected by licensed waste disposal contractor <p>Surplus dilute pesticide:</p> <ul style="list-style-type: none"> • back on to area/target as long as it is below the maximum dose rate • use on another approved area/target • treated by specialist treatment facility on site (e.g. a lined bio bed) • collected by a licensed waste disposal contractor
6.2	Explain how to clean and decontaminate the applicator	<p>May include:</p> <ul style="list-style-type: none"> • select and use correct PPE • selection of an appropriate site for cleaning the applicator • triple rinse the applicator following product information recommendations • through flushing of system

		<ul style="list-style-type: none"> • safe disposal of contaminated washings in an appropriate manner following good practice • safe procedures followed
6.3	Describe the storage requirements for the applicator	<p>May include:</p> <ul style="list-style-type: none"> • de-pressurisation • ensure the sprayer/applicator is clean and dry • inspect for wear or damage • replace any worn or damaged parts • lubricate if required • frost protection measures implemented • store securely • store under cover and out of direct sunlight

Appendix 1 Practical table

151 Operating pedestrian hand held applicators fitted with hydraulic nozzles or rotary atomisers to apply pesticides to land

All criteria must be achieved.

Activity number and description	Achieved
1.1 Describe the legal requirements relating to applying pesticides using hand held pedestrian equipment	
1.2 Describe how to apply pesticides safely using hand held pedestrian equipment following industry best practice	
2.1 Identify risks to the environment	
2.2 Explain how to minimize risks to the environment	
3.1 Read product information	
3.2 Interpret product information	
4.1 Carry out pre use checks to the sprayer/applicator	
4.2 Identify suitable operating pressure and select nozzles according to application requirements	
4.3 Calibrate the sprayer/applicator and record relevant data	
4.4 Measure the area to be treated	
4.5 Calculate the area to be treated	
4.6 Calculate the quantities of pesticide and water required if applicable	
5.1 Measure the required quantities and add to the sprayer/applicator, or attach pesticide container	
5.2 Demonstrate safe and accurate application procedures	
5.3 Carry out all activities protecting human health and the environment	
5.4 Complete a treatment record	
6.1 Explain how to manage surplus pesticide and dispose of waste material	
6.2 Explain how to clean and decontaminate the sprayer/applicator	
6.3 Describe the storage requirements for the sprayer/applicator	

152 Operating Pedestrian Hand Held Applicators Fitted with Hydraulic Nozzles or Rotary Atomisers to apply Pesticides to or Near Water

All criteria must be achieved.

Activity number and description	Achieved
1.1 Describe the legal requirements relating to applying pesticides to or near water using hand held pedestrian equipment	
1.2 Describe how to apply pesticides safely to or near water using hand held pedestrian equipment following industry best practice	

2.1 Identify risks to the environment	
2.2 Explain how to minimize risks to the environment	
3.1 Read product information	
3.2 Interpret product information	
4.1 Carry out pre use checks to the sprayer/applicator	
4.2 Identify suitable operating pressure and select nozzles according to application requirements	
4.3 Calibrate the sprayer/applicator and record relevant data	
4.4 Measure the area to be treated	
4.5 Calculate the area to be treated	
4.6 Calculate the quantities of pesticide and water required, if applicable	
5.1 Measure the required quantities and add to the applicator, or attach pesticide container	
5.2 Demonstrate safe and accurate application procedures	
5.3 Carry out all activities protecting human health and the environment	
5.4 Complete a treatment record	
6.1 Explain how to manage surplus pesticide and dispose of waste material	
6.2 Explain how to clean and decontaminate the sprayer/applicator	
6.3 Describe the storage requirements for the sprayer/applicator	

153 Operating pedestrian hand held applicators to apply pesticide pellets or granules to land

All criteria must be achieved.

Activity number and description	Achieved
1.1 Outline the legal requirements relating to applying pesticide pellets/granules using pedestrian hand held applicators	
1.2 Describe how to apply pesticide pellets/granules using pedestrian hand held applicators following industry best practice	
2.1 Identify risks to the environment	
2.2 Explain how to minimize risks to the environment	
3.1 Read product information	
3.2 Interpret product information	
4.1 Carry out pre-use checks to the applicator	
4.2 Identify settings and adjustments	
4.3 Calibrate the applicator and record relevant data	
4.4 Measure the area to be treated	
4.5 Calculate the area to be treated	
4.6 Calculate the quantities of pesticide required	
5.1 Measure/weigh the required quantities and add to the applicator	
5.2 Demonstrate safe and accurate application procedures	

5.3 Carry out all activities protecting human health and the environment	
5.4 Complete a treatment record	
6.1 State how to recover and store surplus pellets/granules and how to dispose of waste material	
6.2 Explain how to clean and decontaminate the applicator	
6.3 Describe the storage requirements for the applicator	

154 Operating pedestrian hand held applicators to apply pesticide pellets or granules to or near water

All criteria must be achieved.

Activity number and description	Achieved
1.1 Describe the legal requirements relating to applying pesticide pellets/granules to or near water using pedestrian hand held applicators	
1.2 Describe how to apply pesticide pellets/granules to or near water using pedestrian hand held applicators following industry best practice	
2.1 Identify risks to the aquatic environment	
2.2 Explain how to minimise risks to the environment	
3.1 Read product information	
3.2 Interpret product information	
4.1 Carry out pre use checks to the applicator	
4.2 Identify settings and adjustments	
4.3 Calibrate the applicator and record relevant data	
4.4 Measure the area to be treated	
4.5 Calculate the area to be treated	
4.6 Calculate the quantities of pesticide required	
5.1 Measure/weigh the required quantities and add to the applicator	
5.2 Demonstrate safe and accurate application procedures	
5.3 Carry out all activities protecting human health and the environment	
5.4 Complete a treatment record	
6.1 State how to recover and store surplus pellets/granules and how to dispose of waste material	
6.2 Explain how to clean and decontaminate the applicator	
6.3 Describe the storage requirements for the applicator	

155 Installing pesticide plugs in tree stumps

All criteria must be achieved.

Activity number and description	Achieved
1.1 Describe the legal requirements relating to installing pesticide plugs	
1.2 Describe how to install pesticide plugs safely following industry best practice	
2.1 Identify risks to the environment from installing pesticide plugs	
2.2 Explain how to minimize risks to the environment	
3.1 Read product information	
3.2 Interpret product information	
4.1 Carry out pre use checks to the application equipment	
4.2 Measure the diameter of the tree or stump to be treated	
4.3 Calculate the number of plugs require	
5.1 Demonstrate safe and accurate installation procedures	
5.2 Carry out all activities protecting human health and the environment	
5.3 Complete a treatment record	
6.1 State how to deal with unused pesticide plugs and packaging	
6.2 State how to clean application equipment	
6.3 State how to store application equipment	

156 Operating hand held pesticide injection equipment

All criteria must be achieved.

Activity number and description	Achieved
1.1 Describe the legal requirements relating to applying pesticides using injection equipment	
1.2 Describe how to inject pesticides safely following industry best practice	
2.1 Identify risks to the environment	
2.2 Explain how to minimise risks to the environment	
3.1 Read product information	
3.2 Interpret product information	
4.1 Identify and select equipment according to application requirements	
4.2 Carry out pre use checks to the applicator	
4.3 Calibrate the applicator	
4.4 Calculate quantities required	
5.1 Measure the pesticide, mix with water and fill the applicator and/or attach pesticide container	
5.2 Demonstrate safe and accurate injection procedures	
5.3 Carry out all activities protecting human health and the environment	

5.4 Complete a treatment record	
6.1 Explain how to manage surplus pesticide and dispose of waste material	
6.2 Explain how to clean the injection equipment	
6.3 Explain how to store the injection equipment	

157 Operating hand held applicators requiring minimal calibration

All criteria must be achieved.

Activity number and description	Achieved
1.1 Describe the legal requirements relating to applying pesticides using hand held equipment	
1.2 Describe how to apply pesticides safely using hand held equipment following industry best practice	
2.1 Identify risks to the environment	
2.2 Explain how to minimize risks to the environment	
3.1 Read product information	
3.2 Interpret product information	
4.1 Carry out pre use checks to the applicator	
4.2 Identify any controls or components applicable to the applicator	
4.3 Calibrate the applicator and record relevant data	
4.4 Measure and calculate the area/target to be treated	
4.5 Calculate the quantities of pesticide and water required, if applicable	
5.1 Measure the required quantities and add to the applicator, or attach pesticide container	
5.2 Demonstrate safe and accurate application procedures	
5.3 Carry out all activities protecting human health and the environment	
5.4 Complete a treatment record	
6.1 Explain how to manage surplus pesticide and dispose of waste material	
6.2 Explain how to clean and decontaminate the applicator	
6.3 Describe the storage requirements for the applicator	

Appendix 2 Sources of general information

The following documents contain essential information for centres delivering City & Guilds qualifications. To download the documents and to find other useful documents, go to the **Centre Document Library** on www.cityandguilds.com or click on the links below:

Quality Assurance Standards: Centre Handbook

This document is for all approved centres and provides guidance to support their delivery of our qualifications. It includes information on

- Centre quality assurance criteria and monitoring activities
- Administration and assessment systems
- Centre-facing support teams at City & Guilds / ILM
- Centre quality assurance roles and responsibilities.

The Centre Handbook should be used to ensure compliance with the terms and conditions of the Centre Contract.

Quality Assurance Standards: Centre Assessment

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

This document sets out the minimum common quality assurance requirements for our regulated and non-regulated qualifications that feature centre assessed components. Specific guidance will also be included in relevant qualification handbooks and/or assessment documentation.

It incorporates our expectations for centre internal quality assurance and the external quality assurance methods we use to ensure that assessment standards are met and upheld. It also details the range of sanctions that may be put in place when centres do not comply with our requirements, or actions that will be taken to align centre marking/assessment to required standards. Additionally, it provides detailed guidance on the secure and valid administration of centre-assessments.

Access arrangements - When and how applications need to be made to City & Guilds

provides full details of the arrangements that may be made to facilitate access to assessments and qualifications for candidates who are eligible for adjustments in assessment.

The **Centre Document Library** also contains useful information on such things as:

- Conducting examinations
- Registering learners

- Appeals and malpractice

Useful contacts

Please visit the Contact Us section of the City & Guilds website, **Contact us**

About City & Guilds

As the UK's leading vocational education organisation, City & Guilds is leading the talent revolution by inspiring people to unlock their potential and develop their skills. We offer over 500 qualifications across 28 industries through 8500 centres worldwide and award around two million certificates every year. City & Guilds is recognised and respected by employers across the world as a sign of quality and exceptional training.

City & Guilds Group

The City & Guilds Group is a leader in global skills development. Our purpose is to help people, organisations and economies develop their skills for growth. We work with education providers, employers and governments in over 100 countries across the world to help people, businesses and economies grow by shaping skills systems and supporting skills development.

The Group is made up of City & Guilds, ILM, Kineo, The Oxford Group, Gen2, and Intertrain. Together we set the standard for professional and technical education and corporate learning and development around the world.

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

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cityandguildsgroup.com

