

## Learning Outcomes Contents

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Category Code	Category Description	Version Date
-	Supporting Information	01-Mar-19
A02	Crawler Crane over 10 tonnes	01-Mar-19
A04	Tower Crane	01-Mar-19
A05	Dragline	01-Mar-19
A06	Concrete Pump - Truck Mounted Boom	01-Mar-19
A09	Forward Tipping Dumper	01-Mar-19
A10	Excavator 180° below 5 tonnes	13-May-19
A12	Excavator 180° above 5 tonnes	01-Mar-19
A14	Rough Terrain Masted Forklift	01-Mar-19
A15	Forklift Side-Loader	01-Mar-19
A16	Industrial Forklift Truck	01-Mar-19
A17	Telescopic Handler	01-Mar-19
A18	Reach Truck	01-Mar-19
A19	Grader	01-Mar-19
A20	Hoist	01-Mar-19
A21	Wheeled Loading Shovel	01-Mar-19
A22	Tracked Loading Shovel	01-Mar-19
A23	Skid Steer Loader	01-Mar-19
A24	Motorised Scraper	01-Mar-19
A25	Mobile Elevating Work Platform – Scissor	01-Mar-19
A26	Mobile Elevating Work Platform – Boom	01-Mar-19
A27	Mobile Elevating Work Platform – Mast Climber	01-Mar-19
A30	Piling Rig – Tripod	01-Mar-19
A31	Ride on Roller	01-Mar-19
A32	Soil/Landfill Compactor	01-Mar-19
A33	Agricultural Tractor	01-Mar-19
A34	Crawler – Tractor/Dozer	01-Mar-19
A35	Crawler – Tractor/Side Boom	01-Mar-19
A36	Lorry Loader	01-Mar-19
A37	Trencher	01-Mar-19
A39	Skip Handler	01-Mar-19
A40	Slinger/Signaller	01-Mar-19

## Training attributes

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\*To help candidates in learning the necessary skills for each category, it would be ideal if they possess one or more of the following:

- Construction or related experience
- Driving licence or driving experience
- Able to calculate basic formula
- Able to record basic details
- Understand basic written words
- Have received site safety and induction training
- Possess good eye and hand co-ordination
- Have mechanical appreciation
- Medically able to operate machinery (including eyesight)

**\*Note:** Lack of any of these attributes does not prevent anyone from being trained for this category.

## Training

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### Overview

Training is an important factor for safe and efficient plant and plant-related operations, and is defined as the accumulation of skills and knowledge, in the majority of cases, through instruction and tutorship which forms an integral part of the individual's learning process. Training can be divided into two areas – basic and advanced.

Basic training covers theoretical and practical core principles and understanding, detailed in the learning outcomes. Basic core skills training should follow a defined programme and take place independent of productive work using dedicated equipment and resources.

Advanced training is specific to the machine type and/or work activity and can take place during productive work, but following a managed supervision programme after an assessment that ensures that the learning outcomes are met.

In both cases, selection processes for individuals to undertake training should consider personal attributes, prior experiences and current skill set, following an evaluation of what skills and understanding is required for the task.

Further guidance on selection, training, assessments, competence and lifelong learning can be found with the Strategic Forum Plant Safety Group publication on Competence to Operate Construction plant. This guidance can be downloaded free of charge from [www.cpa.uk.net/sfpg](http://www.cpa.uk.net/sfpg)

## Trainer

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### Trainer

CPCS encourages all those involved in training for the learning process to be qualified and experienced with the category of plant and with teaching and learning methods.

#### Category experience

Those involved in the training themselves should ideally have sufficient experience of the category type or activity and have attained a wide and thorough knowledge of the category, application and activities. They should be competent and certificated by a reputable certification body.

#### Teaching methods

Trainers should be motivated, able to communicate, lead and control ; have undertaken an instructional techniques programme through a reputable organisation, and be experienced and competent in the teaching process. Trainers should work towards achieving learning and development qualifications at level 3 or relevant teaching units available within the Qualification and Credit Framework, such as the preparing to teach in the lifelong learning sector (PTLLS).

## Technical test

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### Overview

The Technical Test has been designed to ensure that, through a combination of training and experience, the training outcomes have been met. During the test, candidates undertake a series of practical activities, based on core operating skills and are verbally questioned on category-related subjects. To be successful candidates need to meet the standards of the test based on manufacturers' requirements, industry good practice and guidance, safe operating techniques; underpinned by the appropriate level of knowledge.

Where an individual is claiming prior training and/or experience on a category of plant or plant operations, their skills and knowledge should be measured against the training outcomes. This should ensure that they are fully prepared for the test. This is particularly crucial in the case of experienced individuals, who may not be aware of or have not applied good practices, and could be unsuccessful on the test.

Refresher training and/or activity-specific practice is highly recommended by CPCS for all experienced individuals prior to attempting the test.

## NVQ / SVQ

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### Overview

The training outcomes, syllabus and technical test have been mapped against the relevant National Occupational Standards (NOS). This ensures a clear pathway to meeting the requirements of National and Scottish Vocational Qualifications (NVQ/SVQ), which are also based on the NOS. NOS are industry-derived statements of competence for a given job role, duty or task.

Achievement of the NVQ or SVQ is required to progress to the competent operator card. Individuals who have met the standards of the technical test are advised to retain documents used in training, as these documents can form valuable evidence for NVQ/SVQ achievement. Making comprehensive entries in the CPCS Plant Operator Logbook during training and subsequent work experience provides further valuable evidence.

Passing the technical test does not necessarily indicate competence, only that an assured level of skill and knowledge has been demonstrated. Applying that skill and knowledge in a wide variety of situations in the workplace, and meet industrial timescales would identify the individual's competence, which the achievement of the NVQ or SVQ authenticates.

The content of NVQ qualifications can be viewed at <http://register.ofqual.gov.uk/Qualification> with SVQ information found at [www.sqa.org.uk](http://www.sqa.org.uk)

### Outcomes

Through a combination of targeted training and experience, an individual with the Crawler crane will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> <li>Undertake all pre-use checks</li> </ul>
<b>Travelling and manoeuvring</b>	<ul style="list-style-type: none"> <li>Configure and ready for travel</li> <li>Travel the crane to an area of work</li> <li>Manoeuvre in confined spaces</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Configure the crane for lifting duties</li> <li>Explain rigging and de-rigging procedures when fitting a lattice-type extension</li> <li>Explain actions required for hazards, underground and overhead services</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Programme / set-up Rated Capacity Indicators (RCI) for lifting duties</li> <li>Lift various loads using the full radius and slewing capabilities of a crane</li> <li>Accurately place loads</li> <li>Change falls of rope on a hook block</li> <li>Minimise the swinging of loads</li> <li>Move loads through machine travel</li> <li>Comply with signals and instructions</li> <li>Maintain safe working situations</li> </ul>
<b>Completing work</b>	<ul style="list-style-type: none"> <li>Prepare the crane in preparation of movement from lifting duties</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> <li>Explain loading and unloading procedures for machine transporting</li> </ul>

### Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Reporting structures</li> <li>Social responsibilities</li> <li>Environmental issues</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues /management / other trades</li> <li>Lifelong skills</li> <li>Health and Safety at Work Act</li> <li>Other trades</li> <li>Working practices</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing Types</li> <li>Functions and applications</li> <li>Power units</li> <li>Hydraulic systems</li> <li>Counterweights</li> <li>Chassis / steering / tyres</li> </ul>	<ul style="list-style-type: none"> <li>Stability</li> <li>Booms / jibs</li> <li>Hoisting gear / ropes</li> <li>Safety systems</li> <li>Slewing arrangements</li> <li>Attachments</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Duties charts</li> <li>Ground loading charts</li> <li>Machine decals</li> <li>Lift plans</li> <li>PPE</li> <li>Inspection and reporting forms / procedures</li> </ul>	<ul style="list-style-type: none"> <li>Codes of Practice</li> <li>Site plans / drawings</li> <li>Lifting requirements and limitations</li> <li>Method statements</li> <li>Risk assessments</li> <li>COSHH</li> <li>Health and Safety at Work Act</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Configure and ready for travel</li> </ul>	<ul style="list-style-type: none"> <li>Driving controls</li> <li>Attachments</li> <li>Security</li> <li>Driving position</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Boom / jib positioning</li> <li>Stowage of accessories</li> </ul>
<ul style="list-style-type: none"> <li>Travel the crane to an area of work</li> </ul>	<ul style="list-style-type: none"> <li>Travel routes</li> <li>Slopes / inclines</li> <li>Direction of travel</li> <li>Hazards</li> </ul>	<ul style="list-style-type: none"> <li>Working area</li> <li>Site route</li> <li>Environment protection / minimise damage</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Manoeuvre in confined spaces</li> </ul>	<ul style="list-style-type: none"> <li>• Visibility</li> <li>• Protection of ground / tight turns</li> <li>• Hazards</li> </ul>	<ul style="list-style-type: none"> <li>• Limitations of vision</li> <li>• Environmental / noise / fumes</li> </ul>
<ul style="list-style-type: none"> <li>• Configure the crane for lifting duties</li> </ul>	<ul style="list-style-type: none"> <li>• Crane positioning</li> <li>• Required configuration (lift plan)</li> <li>• Crane controls</li> <li>• Environmental conditions</li> </ul>	<ul style="list-style-type: none"> <li>• Levelling / inclines</li> <li>• Site markings</li> <li>• Stability / ground pressure</li> <li>• Falls of rope</li> <li>• Hazards</li> <li>• Counterweights</li> </ul>
<ul style="list-style-type: none"> <li>• Explain rigging and de-rigging procedures when fitting a lattice-type extension</li> </ul>	<ul style="list-style-type: none"> <li>• Types of extensions</li> <li>• Procedure</li> <li>• Hazards</li> <li>• Supporting methods</li> </ul>	<ul style="list-style-type: none"> <li>• Storage</li> <li>• Testing / certification</li> <li>• Duties / RCI set-up</li> </ul>
<ul style="list-style-type: none"> <li>• Explain actions required for hazards, underground and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>• Types of typical services</li> <li>• Warning / identification systems</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting procedures for damage to services</li> <li>• Minimum distances and clearances</li> </ul>
<ul style="list-style-type: none"> <li>• Programme / set-up Rated Capacity Indicators (RCI) for lifting duties</li> </ul>	<ul style="list-style-type: none"> <li>• Types of RCI</li> <li>• Regulations / legislation</li> <li>• Principles of operation</li> <li>• Lifting duties</li> </ul>	<ul style="list-style-type: none"> <li>• Function and application of common types</li> <li>• Testing, setting / programming for different duties</li> <li>• Number of falls</li> </ul>
<ul style="list-style-type: none"> <li>• Lift various loads using the full radius and slewing capabilities of a crane</li> </ul>	<ul style="list-style-type: none"> <li>• Duties charts</li> <li>• Lifting accessories and slinging requirements</li> <li>• Lift plans</li> <li>• Lifting controls</li> <li>• Boom deflection</li> <li>• Signalling procedures</li> <li>• Hazards</li> </ul>	<ul style="list-style-type: none"> <li>• Stability</li> <li>• Trial lifts</li> <li>• Load stability / security</li> <li>• Visibility</li> <li>• Environmental conditions</li> <li>• Load swings</li> <li>• Falls of rope</li> </ul>
<ul style="list-style-type: none"> <li>• Accurately place loads</li> </ul>	<ul style="list-style-type: none"> <li>• Ground conditions / hazards</li> <li>• Visibility</li> <li>• Signalling / following instructions</li> </ul>	<ul style="list-style-type: none"> <li>• Stability</li> <li>• Load swings</li> <li>• Out-of-sight lifts</li> <li>• Protection of lifting accessories</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Change falls of rope on a hook block</li> </ul>	<ul style="list-style-type: none"> <li>• Falls of rope</li> <li>• Security</li> <li>• Stability factors</li> </ul>	<ul style="list-style-type: none"> <li>• Procedures</li> <li>• Types of hook block</li> <li>• Duties / RCI set-up</li> </ul>
<ul style="list-style-type: none"> <li>• Minimise the swinging of loads</li> </ul>	<ul style="list-style-type: none"> <li>• Rope length</li> <li>• Techniques</li> <li>• Slew speeds</li> </ul>	<ul style="list-style-type: none"> <li>• Observation / anticipation</li> <li>• Stability</li> </ul>
<ul style="list-style-type: none"> <li>• Move loads through machine travel</li> </ul>	<ul style="list-style-type: none"> <li>• Duties charts</li> <li>• Configuration</li> <li>• Stability</li> <li>• Route / ground condition</li> <li>• Load swing</li> </ul>	<ul style="list-style-type: none"> <li>• Load integrity / security</li> <li>• Visibility</li> <li>• Hazards</li> <li>• Regulations / legislation</li> </ul>
<ul style="list-style-type: none"> <li>• Comply with signals and instructions</li> </ul>	<ul style="list-style-type: none"> <li>• Methods and types of signals</li> <li>• Methods of verbal instruction</li> <li>• Multiple signalling</li> </ul>	<ul style="list-style-type: none"> <li>• Electronic communication / setting-up</li> <li>• Codes of Practice</li> <li>• Radio protocol</li> </ul>
<ul style="list-style-type: none"> <li>• Maintain safe working situations</li> </ul>	<ul style="list-style-type: none"> <li>• Stability</li> <li>• Load swings</li> </ul>	<ul style="list-style-type: none"> <li>• Load security</li> <li>• Hazards</li> </ul>
<ul style="list-style-type: none"> <li>• Prepare the crane in preparation of movement from lifting duties</li> </ul>	<ul style="list-style-type: none"> <li>• Stowage of materials / accessories</li> </ul>	<ul style="list-style-type: none"> <li>• Travel configuration</li> </ul>
<ul style="list-style-type: none"> <li>• Carry out shut down and securing procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Shut down procedures</li> <li>• Security</li> </ul>	<ul style="list-style-type: none"> <li>• Parking and position</li> </ul>
<ul style="list-style-type: none"> <li>• Explain loading and unloading procedures for machine transporting</li> </ul>	<ul style="list-style-type: none"> <li>• Compatibility</li> <li>• Positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Security</li> <li>• Types of transporter</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

### Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>Lift plans / method statements</li> </ul>	<ul style="list-style-type: none"> <li>Lift plan types and requirements and the need for lift planning</li> <li>Adherence to the lift plan as constructed by a competent person</li> </ul>
<ul style="list-style-type: none"> <li>Manoeuvring</li> </ul>	<ul style="list-style-type: none"> <li>Facing the direction of travel and no reversing unless authorised by a nominated vehicle marshaller</li> </ul>

### Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> <li>Novice operators with no industry or machine experience</li> </ul>	70
<ul style="list-style-type: none"> <li>Novice operators with industry experience but no machine experience</li> </ul>	62
<ul style="list-style-type: none"> <li>Operators with unrelated (lifting) machine experience</li> </ul>	42
<ul style="list-style-type: none"> <li>Operators with similar (lifting) machine experience</li> </ul>	28

***To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category***

4 candidates : 2 machines: 1 instructor

### Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• Crawler Crane that meets current legislation</li> <li>• Operator's manual for the machine(s)</li> <li>• Different types of loads</li> <li>• Lifting accessories</li> <li>• Sufficient area of ground suitable for placing loads at various heights and radius</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>• PUWER 1998 Regulations</li> <li>• LOLER 1998 Regulations</li> <li>• HSE GS6</li> <li>• Operator' Manual</li> <li>• Specifications for types of Crawler cranes</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable room for theory training purposes</li> <li>• Welfare and rest facilities during training</li> </ul>

### Category

Category description and types	
<p>CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have varying uses within industry and used with many attachments, for CPCS training and assessment standards, the descriptions reflect basic core use.</p> <p>To identify a machine within this category, a typical crawler would normally have the listed features and be used within the described characteristics.</p>	
Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Tracks mounted chassis</li> <li>• 360 degree rotating upper structure containing the operating position; power, hydraulic and electrical units and winches</li> <li>• Lattice or telescopic multi-sectioned jib</li> <li>• Winch operated lifting metal-stranded hoist rope mounted on pulleys</li> <li>• Hook block suspended by hoist ropes and pulleys and the end of the boom</li> </ul>	<ul style="list-style-type: none"> <li>• Able to travel in forward and reverse and change direction during travel</li> <li>• Can travel and operate on uneven and loose ground and slopes</li> <li>• Lift loads by vertically raising the hook block</li> <li>• Moves and places loads by using a combination of slew and linear motions within the confines of the operating radius, depth and height</li> <li>• Travel with loads suspended from the hook block</li> </ul>

### Outcomes

Through a combination of targeted training and experience, an individual with the Tower crane will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> <li>Explain all relevant documentation</li> <li>Undertake all pre-use checks and place the crane into service</li> <li>Follow and carry out procedures that must be taken to access the structure/base for inspection and maintenance purposes</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Configure the crane for lifting duties</li> <li>Explain the reasons for changing the number of falls of rope</li> <li>Explain action required for hazards and overhead services</li> <li>Explain various types of lifting accessories</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Identify that loads are safe to lift, ensuring load balance, security and integrity</li> <li>Lift various loads using the full radius and slewing capabilities of a crane</li> <li>Accurately place loads</li> <li>Minimise the swinging of loads</li> <li>Move loads through crane travel (where applicable) – Endorsements A &amp; B</li> <li>Comply with signals and instructions</li> <li>Maintain safe working situations</li> <li>Explain how the wind (and other weather conditions) can affect loads being lifted with regards to pedestrian safety on the ground</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>Carry out out-of-service and securing procedures</li> </ul>

### Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Cab hygiene and environmental issues (Endorsements A &amp; B)</li> <li>Social responsibilities</li> <li>Lifelong skills</li> <li>Reporting structures</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Health and Safety at Work Act</li> <li>Environmental issues</li> <li>Other trades</li> <li>Working practices</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing Types</li> <li>Functions and applications</li> <li>Power units / drive systems</li> <li>Electrical systems</li> <li>Stability / bases / mountings</li> <li>Counterweights</li> <li>Jibs / trolleys</li> </ul>	<ul style="list-style-type: none"> <li>Hoisting gear / ropes</li> <li>Construction</li> <li>Erection / dismantling process</li> <li>Safety systems</li> <li>Slewing arrangements</li> <li>Attachments</li> <li>Connection methods (structures)</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Duties Charts</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PPE</li> <li>Codes of Practice</li> <li>Site plans / drawings</li> <li>Lifting requirements and limitations</li> </ul>	<ul style="list-style-type: none"> <li>Lift plans</li> <li>Method statements</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> </ul>
<ul style="list-style-type: none"> <li>Explain all relevant documentation</li> </ul>	<ul style="list-style-type: none"> <li>Test certificates</li> </ul>	<ul style="list-style-type: none"> <li>Thorough examination certificates</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks and place the crane into service</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> <li>Environmental restrictions</li> </ul>	<ul style="list-style-type: none"> <li>Access / egress (to the cab) (Endorsement A &amp; B)</li> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> <li>Personnel exclusion</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Follow and carry out procedures that must be taken to access the structure/base for inspection and maintenance purposes</li> </ul>	<ul style="list-style-type: none"> <li>Accessing</li> <li>Harnessing / Security</li> <li>Retrieval</li> </ul>	<ul style="list-style-type: none"> <li>Authority / approval</li> <li>Working at height</li> </ul>
<ul style="list-style-type: none"> <li>Configure the crane for lifting duties</li> </ul>	<ul style="list-style-type: none"> <li>Required configuration (lift plan)</li> <li>Lift controls</li> </ul>	<ul style="list-style-type: none"> <li>Environmental conditions</li> <li>Site procedures</li> <li>Hazards</li> </ul>
<ul style="list-style-type: none"> <li>Explain reasons for changing the number of falls of rope</li> </ul>	<ul style="list-style-type: none"> <li>Duties</li> <li>Load capacity / line speeds</li> </ul>	<ul style="list-style-type: none"> <li>Limitations</li> <li>Different methods</li> <li>Types</li> </ul>
<ul style="list-style-type: none"> <li>Explain actions required for hazards and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>Types of typical services / hazards</li> <li>Warning / identification systems</li> <li>Reporting procedures for damage to services</li> </ul>	<ul style="list-style-type: none"> <li>Minimum distances and clearances</li> <li>Inter-arcing</li> <li>Motion limiters</li> <li>Multiple crane use / crane co-ordination</li> </ul>
<ul style="list-style-type: none"> <li>Explain various types of lifting accessories</li> </ul>	<ul style="list-style-type: none"> <li>Lifting equipment (crane) capacity</li> <li>Lifting accessory capacity</li> <li>Required type or types</li> <li>Load weight</li> <li>Lifting accessory weight</li> <li>SWL / WLL</li> </ul>	<ul style="list-style-type: none"> <li>Lift plan</li> <li>Additional accessories</li> <li>Load characteristics – loose, bundled, fluid loads etc.</li> <li>Sling angles</li> <li>De-rating</li> </ul>
<ul style="list-style-type: none"> <li>Identify that loads are safe to lift, ensuring load balance, security and integrity</li> </ul>	<ul style="list-style-type: none"> <li>Trial lifts</li> <li>Stability</li> <li>C of G / balance</li> <li>Netting / sheeting</li> </ul>	<ul style="list-style-type: none"> <li>Fluid loads</li> <li>Load surface area</li> <li>Environmental conditions / wind effects</li> </ul>
<ul style="list-style-type: none"> <li>Lift various loads using the full radius and slewing capabilities of a crane</li> </ul>	<ul style="list-style-type: none"> <li>Duties charts</li> <li>Lifting accessories and slinging requirements</li> <li>Lift plans</li> <li>Lifting controls</li> <li>Jib deflection</li> <li>Signalling / following instructions</li> <li>Hazards</li> </ul>	<ul style="list-style-type: none"> <li>Stability</li> <li>Trial lifts</li> <li>Load stability / security</li> <li>Visibility</li> <li>Environmental conditions / wind effects</li> <li>Load swings</li> <li>Falls of rope</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Accurately place loads</li> </ul>	<ul style="list-style-type: none"> <li>• Ground conditions / hazards</li> <li>• Visibility</li> <li>• Stability</li> <li>• Load swings</li> </ul>	<ul style="list-style-type: none"> <li>• Signalling / following instructions</li> <li>• Out-of-sight lifts</li> <li>• Protection of lifting accessories</li> </ul>
<ul style="list-style-type: none"> <li>• Minimise the swinging of loads</li> </ul>	<ul style="list-style-type: none"> <li>• Rope length</li> <li>• Techniques</li> <li>• Observation / anticipation</li> </ul>	<ul style="list-style-type: none"> <li>• Stability</li> <li>• Environmental</li> <li>• Slew speeds</li> </ul>
<ul style="list-style-type: none"> <li>• Move loads through machine travel (where applicable) – Endorsements A &amp; B</li> </ul>	<ul style="list-style-type: none"> <li>• Duties charts</li> <li>• Configuration</li> <li>• Stability</li> <li>• Route / ground condition</li> <li>• Load swing</li> </ul>	<ul style="list-style-type: none"> <li>• Load integrity / security</li> <li>• Visibility</li> <li>• Hazards</li> <li>• Regulations / legislation</li> </ul>
<ul style="list-style-type: none"> <li>• Comply with signals and instructions</li> </ul>	<ul style="list-style-type: none"> <li>• Methods and types of signals</li> <li>• Methods of verbal instruction</li> <li>• Multiple signalling</li> </ul>	<ul style="list-style-type: none"> <li>• Electronic communication / setting-up</li> <li>• Codes of Practice</li> <li>• Radio protocol</li> </ul>
<ul style="list-style-type: none"> <li>• Maintain safe working situations</li> </ul>	<ul style="list-style-type: none"> <li>• Stability</li> <li>• Load swings</li> </ul>	<ul style="list-style-type: none"> <li>• Load security</li> <li>• Hazards</li> </ul>
<ul style="list-style-type: none"> <li>• Explain how the wind (and other weather conditions) can affect loads being lifted with regards to pedestrian safety on the ground</li> </ul>	<ul style="list-style-type: none"> <li>• Load area</li> <li>• Effect on radius</li> <li>• Wind speeds measuring</li> </ul>	<ul style="list-style-type: none"> <li>• Load handling</li> <li>• Hazards</li> </ul>
<ul style="list-style-type: none"> <li>• Carry out out-of-service and securing procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Shut down procedures</li> <li>• Environmental / excessive winds</li> </ul>	<ul style="list-style-type: none"> <li>• Jib positioning / free braking</li> <li>• Security</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

### Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>Tidiness of the work area/good housekeeping (Endorsement C)</li> </ul>	Ensuring that area of operation is organised and of suitable ground so that slips, trips & falls are minimised, and that materials are suitably and safely stored
<ul style="list-style-type: none"> <li>Remote control operation (Endorsement C)</li> </ul>	Isolating of all operating controls when using a remote unit, when carrying out other functions or during rest periods
<ul style="list-style-type: none"> <li>Lift plans / method statements</li> </ul>	Lift plan types and requirements and the need for lift planning Adherence to the lift plan as constructed by a competent person

### Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> <li>Novice operators with no industry or machine experience</li> </ul>	70 (35)*
<ul style="list-style-type: none"> <li>Novice operators with industry experience but no machine experience</li> </ul>	63 (28*)
<ul style="list-style-type: none"> <li>Operators with unrelated (lifting) machine experience</li> </ul>	42 (21)*
<ul style="list-style-type: none"> <li>Operators with similar (lifting) machine experience</li> </ul>	28 (14)*
All candidates must have received the equivalent to 7 hours of site safety and induction training	

***To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category***

4 candidates : 2 machines: 1 instructor (Endorsements A & B)

3 candidates : 1 machine: 1 instructor (Endorsement C)

\* Endorsement C

### Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• Remote or Cab controlled Tower Crane that meets current legislation</li> <li>• Operator's manual for the crane</li> <li>• Different types of loads</li> <li>• Lifting accessories</li> <li>• Sufficient area of ground suitable for placing loads at various heights and radius</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>• PUWER 1998 Regulations</li> <li>• LOLER 1998 Regulations</li> <li>• BS 7121 (parts 1, 2 and 4)</li> <li>• HSE GS6</li> <li>• Operator's Manual</li> <li>• CPA Tower Crane TIN (Technical Improvement Notes) – downloadable from <a href="http://www.cpa.uk.net">www.cpa.uk.net</a></li> <li>• Specifications for types of remote or cab controlled tower cranes</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable room for theory training purposes</li> <li>• Welfare and rest facilities during training</li> </ul>

### Category

#### Category description and types

CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have varying uses within industry, for CPCS training and assessment standards, the descriptions reflect basic core use. Endorsements are sub-categories that reflect the variations for this category by type. This category has three endorsements.

To identify a machine within this category, a typical remote controlled or cab controlled tower crane would normally have the listed features and be used within the described characteristics.

Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Latticed free-standing or secured tower structure (all)</li> <li>• 360 degree rotating top-slewing latticed upper structure containing the operating position; power units and winches (Endorsements A &amp; B)</li> <li>• Winch operated lifting metal-stranded hoist rope mounted on pulleys</li> <li>• Hook block suspended by hoist ropes and pulleys</li> </ul>	<ul style="list-style-type: none"> <li>• Lift loads by vertically raising the hook block</li> <li>• Moves and places loads by using a combination of slew and linear motions within the confines of the operating radius, depth and height</li> <li>• Operated from ground level by remote or pendant control unit (Endorsement C)</li> </ul>

## Endorsements

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### Endorsement characteristics

- **Endorsement A:** Trolley jib – Cab Controlled - lattice jib with radius changing ability by moving a trolley running on the jib. The hook block is vertical with the trolley
- **Endorsement B:** Luffing jib – Cab Controlled - jib with radius changing ability by raising or lowering the jib from horizontal. The hook block is vertical with the end of the jib
- **Endorsement C:** Trolley jib - Remote controlled - lattice jib with radius changing ability by moving a trolley running on the jib. The hook block is vertical with the trolley.

### Outcomes

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Through a combination of targeted training and experience, an individual with the Dragline will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> <li>Undertake all pre-use checks</li> </ul>
<b>Travelling and manoeuvring</b>	<ul style="list-style-type: none"> <li>Configure and set for travel</li> <li>Travel over rough, undulating ground, substantial inclines and level surfaces</li> <li>Manoeuvre in confined spaces</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Configure and set for excavating duties</li> <li>Explain actions required for hazards, underground and overhead services</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Excavate differing types of excavations in various types of ground</li> <li>Place materials into transporting vehicles</li> <li>Adjust the tipping rope for varying materials</li> <li>Explain lifting requirements that affect the operation of a dragline</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> <li>Explain the loading and unloading procedures for machine transporting</li> </ul>

### Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Reporting structures</li> <li>Social responsibilities</li> <li>Lifelong skills</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Health and Safety at Work Act</li> <li>Environmental issues</li> <li>Other trades</li> <li>Working practices</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing Types</li> <li>Function and applications</li> <li>Power units</li> <li>Hydraulic systems</li> <li>Undercarriage</li> <li>Tracks</li> </ul>	<ul style="list-style-type: none"> <li>Jibs / buckets</li> <li>Stability / ground pressure</li> <li>Hoisting gear / ropes</li> <li>Slewing arrangements</li> <li>Safety systems</li> <li>ROPS / FOPS</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Machine decals</li> <li>PPE</li> <li>Codes of Practice</li> <li>Site plans / drawings</li> <li>Health and Safety at Work Act</li> <li>Method statements</li> </ul>	<ul style="list-style-type: none"> <li>Lifting requirements and limitations</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedure</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Configure and set for travel</li> </ul>	<ul style="list-style-type: none"> <li>Travel controls</li> <li>Attachments / accessories</li> </ul>	<ul style="list-style-type: none"> <li>Travel position</li> <li>Site travel</li> <li>Visibility</li> </ul>
<ul style="list-style-type: none"> <li>Travel over rough, undulating ground, substantial inclines and level surfaces</li> </ul>	<ul style="list-style-type: none"> <li>Travel routes</li> <li>Slopes / inclines</li> <li>Direction of travel</li> <li>Traction / aids</li> <li>Ground conditions</li> </ul>	<ul style="list-style-type: none"> <li>Hazards</li> <li>Working area</li> <li>Environment protection / minimise damage</li> </ul>
<ul style="list-style-type: none"> <li>Manoeuvre in confined spaces</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Limitations of vision</li> <li>Protection of ground / tight turns</li> </ul>	<ul style="list-style-type: none"> <li>Environmental / noise / fumes</li> <li>Height restrictions</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Configure and set for excavating duties</li> </ul>	<ul style="list-style-type: none"> <li>• Type of ground</li> <li>• Required specification</li> <li>• Equipment / bucket size / type</li> <li>• Bucket tipping point</li> <li>• Drag clevis position</li> </ul>	<ul style="list-style-type: none"> <li>• Machine positioning</li> <li>• Spoil placing</li> <li>• Site markings</li> <li>• Loading vehicles positioning</li> <li>• Spoil segregation</li> </ul>
<ul style="list-style-type: none"> <li>• Explain actions required for hazards, underground and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>• Types of typical services</li> <li>• Warning / identification systems</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting procedures for damage to services</li> <li>• Minimum distances and clearances</li> </ul>
<ul style="list-style-type: none"> <li>• Excavate differing types of excavations in various types of ground</li> </ul>	<ul style="list-style-type: none"> <li>• Non-complex and complex trenches</li> <li>• Disposal of spoil</li> <li>• Line and parallel pulling</li> <li>• Machine positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Segregation of spoil</li> <li>• Environmental factors</li> <li>• Productive cycles of operation</li> <li>• Measuring levels and centres</li> </ul>
<ul style="list-style-type: none"> <li>• Place materials into transporting vehicles and hoppers</li> </ul>	<ul style="list-style-type: none"> <li>• Machine positioning</li> <li>• Signals / communication</li> <li>• Loading vehicle stability</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum overspill</li> <li>• Cleaning loading area</li> </ul>
<ul style="list-style-type: none"> <li>• Adjust the tipping rope for varying materials</li> </ul>	<ul style="list-style-type: none"> <li>• Preparation</li> <li>• Types of bucket</li> <li>• Security</li> <li>• Manual handling</li> </ul>	<ul style="list-style-type: none"> <li>• Manufacturers' procedures</li> <li>• Clevis positions</li> </ul>
<ul style="list-style-type: none"> <li>• Explain lifting requirements that affect the operation of a dragline</li> </ul>	<ul style="list-style-type: none"> <li>• Legislation and regulations</li> <li>• Inspections</li> </ul>	<ul style="list-style-type: none"> <li>• Lifting and load-rating charts</li> </ul>
<ul style="list-style-type: none"> <li>• Carry out shut down and securing procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Shut down procedures</li> <li>• Security</li> </ul>	<ul style="list-style-type: none"> <li>• Parking and positioning</li> </ul>
<ul style="list-style-type: none"> <li>• Explain the loading and unloading procedures for machine transporting</li> </ul>	<ul style="list-style-type: none"> <li>• Compatibility</li> <li>• Positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Security</li> <li>• Types of transporter</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

### Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>• Manoeuvring</li> </ul>	<ul style="list-style-type: none"> <li>• Facing the direction of travel and no reversing unless authorised by a nominated vehicle marshaller</li> </ul>

### Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
• Novice operators with no industry or machine experience	70
• Novice operators with industry experience but no machine experience	62
• Operators with unrelated (earthmoving) machine experience	42
• Operators with similar (earthmoving) machine experience	28
All candidates must have received the equivalent to 7 hours of site safety and induction training	

***To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category***

4 candidates : 2 machines: 1 instructor

### Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• Dragline that meets current legislation</li> <li>• Operator's manual for the machine(s)</li> <li>• Measuring equipment to ensure levels and centres</li> <li>• Sufficient area of ground suitable for excavating</li> <li>• Slopes, stockpiles of materials</li> <li>• Rear tipping vehicle or trailer for loading into</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>• PUWER 1998 Regulations</li> <li>• LOLER 1998 Regulations</li> <li>• HSE GS6</li> <li>• Operator's Manual</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable room for theory training purposes</li> <li>• Welfare and rest facilities during training</li> </ul>

### Category

Category description and types	
<p>CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have varying uses within industry and used with many attachments, for CPCS training and assessment standards, the descriptions reflect basic core use.</p> <p>To identify a machine within this category, a typical Dragline would normally have the listed features and be used within the described characteristics.</p>	
Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Track mounted chassis</li> <li>• 360 degree rotating upper structure containing the operating position; power, hydraulic and electrical units and winches</li> <li>• Lattice multi-sectioned jib</li> <li>• Winch operated lifting metal-stranded hoist rope mounted on pulleys</li> <li>• Tipping bucket supported by the hoist rope</li> <li>• Pull rope connected to the bucket and lower section of the jib</li> </ul>	<ul style="list-style-type: none"> <li>• Able to travel in forward and reverse and change direction during travel</li> <li>• Can travel and operate on uneven and loose ground and slopes</li> <li>• Carry out excavation and extraction duties in a linear motion using a bucket within the confines of the operating radius, depth and height</li> <li>• Can place materials using a combination of slew and linear motions within the confines of the operating radius, depth and height</li> </ul>

## Outcomes

Through a combination of targeted training and experience, an individual with the Truck mounted boom concrete pump will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> <li>Explain all relevant documentation</li> <li>Undertake all pre-use checks (host vehicle and pumping unit)</li> </ul>
<b>Travelling and manoeuvring</b>	<ul style="list-style-type: none"> <li>Configure and set for travel (site and highway)</li> <li>Travel the vehicle to an area of work</li> <li>Manoeuvre in confined spaces</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Position and configure the vehicle for pumping duties</li> <li>Deploy the outriggers to specification (where applicable)</li> <li>Arrange, anchor and secure all pipes and lines</li> <li>Confirm a given mix is able to be pumped</li> <li>Arrange, use and comply with communication procedures</li> <li>Direct the loading/mixer vehicle to position</li> <li>Explain action required for hazards, underground and overhead services</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Pump and control materials accurately to the desired pour location</li> <li>Explain how blockages occur and give solution methods</li> <li>Maintain safe working situations</li> </ul>
<b>Completing work</b>	<ul style="list-style-type: none"> <li>Complete end-of use cleaning procedures</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> <li>Explain the road traffic requirements</li> </ul>

## Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Communication with colleagues / management / other trades</li> </ul>	<ul style="list-style-type: none"> <li>Lifelong skills</li> <li>Health and Safety at Work Act</li> <li>Environmental issues</li> <li>Other trades</li> <li>Working practices</li> <li>Social responsibilities</li> <li>Reporting structures</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing Types</li> <li>Function and applications</li> <li>Power Hydraulic systems units</li> <li>Chassis / steering / tyres</li> <li>Stability</li> </ul>	<ul style="list-style-type: none"> <li>Booms</li> <li>Pump types</li> <li>Safety systems</li> <li>Slewing arrangements</li> <li>Attachments</li> <li>Remote control units</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Duties Charts</li> <li>Ground loading charts</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PPE</li> <li>Codes of Practice</li> <li>Lift plans</li> </ul>	<ul style="list-style-type: none"> <li>Site plans / drawings</li> <li>Lifting requirements and limitations</li> <li>Method statements</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> </ul>
<ul style="list-style-type: none"> <li>Explain all relevant documentation</li> </ul>	<ul style="list-style-type: none"> <li>Test certificates</li> </ul>	<ul style="list-style-type: none"> <li>Thorough examination certificates</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks (host vehicle and pumping unit)</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Configure and ready for travel (site and highway)</li> </ul>	<ul style="list-style-type: none"> <li>Driving controls</li> <li>Attachments</li> <li>Driving position</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Road Traffic Act</li> <li>Security</li> </ul>
<ul style="list-style-type: none"> <li>Travel the vehicle to an area of work</li> </ul>	<ul style="list-style-type: none"> <li>Driving controls</li> <li>Ground conditions</li> <li>Traction</li> <li>Axle loadings</li> <li>Hazards</li> <li>Working area</li> </ul>	<ul style="list-style-type: none"> <li>Site route</li> <li>Access / egress</li> <li>Environment protection / minimise damage</li> <li>Road travel</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Manoeuvre in confined spaces</li> </ul>	<ul style="list-style-type: none"> <li>• Visibility</li> <li>• Limitations of vision</li> <li>• Height restrictions</li> <li>• Protection of ground / tight turns</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental / noise / fumes</li> <li>• Hazards</li> </ul>
<ul style="list-style-type: none"> <li>• Position and configure the vehicle for pumping duties</li> </ul>	<ul style="list-style-type: none"> <li>• Vehicle positioning</li> <li>• Stability</li> <li>• Required configuration (lift plan)</li> <li>• Boom configuration / routes</li> <li>• Hazards</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental conditions</li> <li>• Boom controls</li> <li>• Levelling / inclines</li> <li>• Site markings</li> <li>• Environmental considerations</li> </ul>
<ul style="list-style-type: none"> <li>• Deploy the outriggers to specification (where applicable)</li> </ul>	<ul style="list-style-type: none"> <li>• Types of outriggers</li> <li>• Support conditions</li> <li>• Bearing pressure</li> <li>• Footprint</li> </ul>	<ul style="list-style-type: none"> <li>• Packing / load spreading</li> <li>• Inclines / uneven ground</li> </ul>
<ul style="list-style-type: none"> <li>• Arrange, anchor and secure all pipes and lines</li> </ul>	<ul style="list-style-type: none"> <li>• Supporting piping / hoses / boom</li> <li>• Anchor types</li> <li>• Anchoring methods</li> </ul>	<ul style="list-style-type: none"> <li>• Securing types and methods</li> <li>• Creating pipelines</li> <li>• Hazards and defects</li> </ul>
<ul style="list-style-type: none"> <li>• Confirm a given mix is able to be pumped</li> </ul>	<ul style="list-style-type: none"> <li>• Principles</li> <li>• Different types of mixes</li> <li>• Specifications</li> </ul>	<ul style="list-style-type: none"> <li>• Uses / applications</li> <li>• Time factors</li> <li>• Hazards</li> </ul>
<ul style="list-style-type: none"> <li>• Arrange, use and comply with communication procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Methods and types of signals</li> <li>• Methods of verbal instruction</li> <li>• Radio protocol</li> </ul>	<ul style="list-style-type: none"> <li>• Electronic communication / setting-up</li> <li>• Codes of Practice</li> </ul>
<ul style="list-style-type: none"> <li>• Direct the loading / mixer vehicle to position</li> </ul>	<ul style="list-style-type: none"> <li>• Signals</li> <li>• Ground conditions</li> <li>• Visibility</li> </ul>	<ul style="list-style-type: none"> <li>• Access / egress routes</li> <li>• Hazards</li> </ul>
<ul style="list-style-type: none"> <li>• Explain actions required for hazards, underground and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>• Types of typical services</li> <li>• Warning / identification systems</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting procedures for damage to services</li> <li>• Minimum distances and clearances</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Pump and control materials accurately to the desired pour location</li> </ul>	<ul style="list-style-type: none"> <li>Flow rates</li> <li>Signalling / communication</li> <li>Noise</li> <li>Visibility</li> </ul>	<ul style="list-style-type: none"> <li>Flow controls</li> <li>Working efficiently</li> <li>Hazards</li> <li>Environmental considerations</li> </ul>
<ul style="list-style-type: none"> <li>Explain how blockages occur and give solution methods</li> </ul>	<ul style="list-style-type: none"> <li>Type of blockages</li> <li>Communication of blockages</li> <li>Shut-down and re-starting methods</li> <li>Cleaning procedures</li> </ul>	<ul style="list-style-type: none"> <li>Cleaning methods</li> <li>Components subject to blockages</li> <li>Hazards</li> <li>Environmental considerations</li> </ul>
<ul style="list-style-type: none"> <li>Maintain safe working situations</li> </ul>	<ul style="list-style-type: none"> <li>Stability</li> <li>Visibility</li> </ul>	<ul style="list-style-type: none"> <li>Pipe / hose security</li> <li>Hazards</li> </ul>
<ul style="list-style-type: none"> <li>Complete end-of use cleaning procedures</li> </ul>	<ul style="list-style-type: none"> <li>Components</li> <li>Cleaning equipment</li> <li>Cleaning area</li> <li>Methods and procedures</li> </ul>	<ul style="list-style-type: none"> <li>Hazards</li> <li>Environmental considerations / waste disposal</li> </ul>
<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> </ul>	<ul style="list-style-type: none"> <li>Shut down procedures</li> <li>Security</li> </ul>	<ul style="list-style-type: none"> <li>Parking and positioning</li> </ul>
<ul style="list-style-type: none"> <li>Explain the road traffic requirements</li> </ul>	<ul style="list-style-type: none"> <li>Transport operator licensing / requirements</li> <li>Driver licensing</li> <li>Documentation</li> <li>Vehicle compliance</li> </ul>	<ul style="list-style-type: none"> <li>Driver training / re-training</li> <li>Axle loadings</li> <li>Accident / incident reporting</li> <li>Hazardous loads</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

## Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>Cleaning procedures / blockages</li> </ul>	<ul style="list-style-type: none"> <li>Planned and controlled use of cleaning balls and compressed air</li> </ul>
<ul style="list-style-type: none"> <li>Lift plans / method statements</li> </ul>	<ul style="list-style-type: none"> <li>Lift plan types and requirements and the need for lift planning</li> <li>Adherence to the lift plan as constructed by a competent person</li> </ul>

## Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> <li>Novice operators with no industry or machine experience</li> </ul>	35
<ul style="list-style-type: none"> <li>Novice operators with industry experience but no machine experience</li> </ul>	28
<ul style="list-style-type: none"> <li>Operators with unrelated (pumping) machine experience</li> </ul>	21
<ul style="list-style-type: none"> <li>Operators with similar (pumping) machine experience</li> </ul>	14
All candidates must have received the equivalent to 7 hours of site safety and induction training	

***To allow effective learning, the listed candidate / machine / instructor ratio  
is the maximum recommended for this category***

4 candidates : 2 machines: 1 instructor

## Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• Boom Concrete pump (truck mounted) that meets current legislation</li> <li>• Operator's manual for the host vehicle and pump</li> <li>• Uneven terrain for travelling and sufficient flat area of ground suitable for work</li> <li>• Structure and works to pump materials</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>• PUWER 1998 Regulations</li> <li>• LOLER 1998 Regulations</li> <li>• HSE GS6</li> <li>• BS 7121 (parts 1, 2 and 3)</li> <li>• Operator's Manual</li> <li>• Specifications for types of concrete pumps</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable room for theory training purposes</li> <li>• Welfare and rest facilities during training</li> </ul>

## Category

Category description and types	
<p>CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have varying uses within industry, for CPCS training and assessment standards, the descriptions reflect basic core use.</p> <p>To identify a machine within this category, a typical truck mounted concrete pump would normally have the listed features and be used within the described characteristics.</p>	
Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Commercial vehicle-based multi-axled chassis containing a forward driving position; power, transmission hydraulic and electrical units</li> <li>• Multi-knuckled foldable boom with attached pipework, hydraulically operated</li> <li>• PTO driven piston type pumping unit with a hopper to externally receive a pumpable material</li> </ul>	<ul style="list-style-type: none"> <li>• Able to travel in forward and reverse and change direction during travel by steering the axles</li> <li>• Travels on hard surfaces with some types having off-road capability</li> <li>• Pumps loads via the hopper and pump through the pipework attached to the extended and slewable boom to the desired pour location</li> </ul>

### Outcomes

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Through a combination of targeted training and experience, an individual with the forward tipping dumper will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> <li>Undertake all pre-use checks</li> </ul>
<b>Travelling and manoeuvring</b>	<ul style="list-style-type: none"> <li>Configure and ready for travel (site and highway)</li> <li>Travel over rough, undulating ground, steep inclines and level surfaces – loaded and unloaded</li> <li>Manoeuvre in confined spaces whilst carrying loads</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Ensure the suitability of the tipping and loading area</li> <li>Explain actions required for hazards, underground and overhead services</li> <li>Position to receive loads</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Comply with loading procedures</li> <li>Ensure load integrity and security</li> <li>Transfer loads to different locations</li> <li>Discharge loads into trenches and over edges</li> </ul>
<b>Completing work</b>	<ul style="list-style-type: none"> <li>Maintain safe and tidy working areas</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> <li>Explain the loading and unloading procedures for machine transporting</li> </ul>

### Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Reporting structures</li> <li>Social responsibilities</li> <li>Environmental issues</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Lifelong skills</li> <li>Health and Safety at Work Act</li> <li>Other trades</li> <li>Working practices</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing Types</li> <li>Functions and applications</li> <li>Power units</li> <li>Hydraulic systems</li> <li>Transmissions</li> <li>Chassis / steering / tyres</li> </ul>	<ul style="list-style-type: none"> <li>Stability / ground pressure</li> <li>Carrying capacities</li> <li>Types of skips</li> <li>Side tipping</li> <li>Attachments</li> <li>ROPS</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PPE</li> <li>Codes of Practice</li> <li>Site plans / drawings</li> </ul>	<ul style="list-style-type: none"> <li>Method statements</li> <li>Load / tare sheets</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Configure and ready for travel (site and highway)</li> </ul>	<ul style="list-style-type: none"> <li>Driving controls</li> <li>Attachments</li> <li>Security</li> <li>Driving position</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Body position</li> <li>Road Traffic Act</li> </ul>
<ul style="list-style-type: none"> <li>Travel over rough, undulating ground, steep inclines and level surfaces – loaded and unloaded</li> </ul>	<ul style="list-style-type: none"> <li>Driving controls</li> <li>Ground conditions</li> <li>Traction / aids</li> <li>Starting / travelling on inclines</li> <li>Hazards</li> <li>Working area</li> </ul>	<ul style="list-style-type: none"> <li>Site travel</li> <li>Stability / C of G</li> <li>Road travel</li> <li>Environment protection / minimise damage</li> </ul>
<ul style="list-style-type: none"> <li>Manoeuvre in confined spaces</li> </ul>	<ul style="list-style-type: none"> <li>Visibility / aids</li> <li>Limitations of vision</li> <li>Articulating chassis requirements</li> <li>Personnel</li> </ul>	<ul style="list-style-type: none"> <li>Protection of ground / tight turns</li> <li>Environmental / noise / fumes</li> <li>Hazards</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Ensure the suitability of the tipping and loading area</li> </ul>	<ul style="list-style-type: none"> <li>Access / egress routes</li> <li>Ground type / condition</li> </ul>	<ul style="list-style-type: none"> <li>Site markings</li> <li>Turning areas</li> <li>Hazards</li> </ul>
<ul style="list-style-type: none"> <li>Explain actions required for hazards, underground and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>Types of typical services</li> <li>Warning / identification systems</li> </ul>	<ul style="list-style-type: none"> <li>Reporting procedures for damage to services</li> <li>Minimum distances and clearances</li> </ul>
<ul style="list-style-type: none"> <li>Position to receive loads</li> </ul>	<ul style="list-style-type: none"> <li>Types of loading vehicles / machines</li> <li>Types / densities of material</li> <li>Stability</li> </ul>	<ul style="list-style-type: none"> <li>Machine suitability</li> <li>Machine capacity</li> <li>Visibility</li> <li>Environmental conditions</li> </ul>
<ul style="list-style-type: none"> <li>Comply with loading procedures</li> </ul>	<ul style="list-style-type: none"> <li>Signalling / following instructions</li> <li>Driver protection</li> <li>Stability</li> <li>Techniques</li> <li>Hazards</li> </ul>	<ul style="list-style-type: none"> <li>Regulations / legislation</li> <li>Carrying capacity</li> <li>Weight distribution</li> <li>Visibility</li> </ul>
<ul style="list-style-type: none"> <li>Ensure load integrity and security</li> </ul>	<ul style="list-style-type: none"> <li>Load types</li> <li>Minimising excess</li> </ul>	<ul style="list-style-type: none"> <li>Projecting loads</li> </ul>
<ul style="list-style-type: none"> <li>Transfer loads to different locations</li> </ul>	<ul style="list-style-type: none"> <li>Travel routes</li> <li>Ground types</li> <li>Haul route procedures</li> <li>Materials / vehicle protection</li> <li>Hazards</li> </ul>	<ul style="list-style-type: none"> <li>Signalling / following instructions</li> <li>Efficiency</li> <li>Visibility</li> <li>Speed limits</li> <li>Environmental conditions</li> </ul>
<ul style="list-style-type: none"> <li>Discharge loads into trenches and over edges</li> </ul>	<ul style="list-style-type: none"> <li>Types of discharge areas</li> <li>Edge and machine protection / wheel stops / spotting logs etc.</li> <li>Ground</li> <li>Stability / C of G (raised skips)</li> <li>Material jams</li> </ul>	<ul style="list-style-type: none"> <li>Discharging on inclines</li> <li>Discharging whilst moving</li> <li>Side discharging</li> <li>Signalling / following instructions</li> <li>Fully emptying skips</li> <li>Visibility</li> <li>Hazards</li> </ul>
<ul style="list-style-type: none"> <li>Maintain safe and tidy working areas</li> </ul>	<ul style="list-style-type: none"> <li>Spoil heap security</li> </ul>	<ul style="list-style-type: none"> <li>Minimising spillage</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> </ul>	<ul style="list-style-type: none"> <li>Skip cleanliness</li> <li>Shut down procedures</li> </ul>	<ul style="list-style-type: none"> <li>Security</li> <li>Parking and positioning</li> </ul>
<ul style="list-style-type: none"> <li>Explain the loading and unloading procedures for machine transporting</li> </ul>	<ul style="list-style-type: none"> <li>Compatibility</li> <li>Positioning</li> </ul>	<ul style="list-style-type: none"> <li>Types of transporter</li> <li>Security</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

### Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>• Travelling on inclines</li> </ul>	<ul style="list-style-type: none"> <li>• Travelling and steering up, down and across inclines</li> </ul>
<ul style="list-style-type: none"> <li>• Stability with raised skips or uneven ground</li> </ul>	<ul style="list-style-type: none"> <li>• Checking ground prior to tipping – tipping skip slowly (weight transfer) – procedure for tipping on inclines, changing centres of gravity</li> </ul>
<ul style="list-style-type: none"> <li>• Excessive travel speeds</li> </ul>	<ul style="list-style-type: none"> <li>• Appropriate speed in proportion to the conditions, particularly when carrying a load</li> <li>• Travel speeds around corners and on uneven ground</li> <li>• Appreciation of centres of gravity</li> <li>• Mandatory wearing of seat belts</li> </ul>

### Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> <li>• Novice operators with no industry or machine experience</li> </ul>	24
<ul style="list-style-type: none"> <li>• Novice operators with industry experience but no machine experience</li> </ul>	16
<ul style="list-style-type: none"> <li>• Operators with unrelated (dumper) machine experience</li> </ul>	14
<ul style="list-style-type: none"> <li>• Operators with similar (dumper) machine experience</li> </ul>	07
All candidates must have received the equivalent to 7 hours of site safety and induction training	

***To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category***

4 candidates : 2 machines: 1 instructor

## Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• Suitable forward tipping dumper that meets current legislation</li> <li>• Operator's manual for the machine(s)</li> <li>• Loading machine</li> <li>• Sufficient area of ground for driving</li> <li>• Slopes and rough terrain</li> <li>• Tipping areas – trenches and edges</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>• PUWER 1998 Regulations</li> <li>• Codes of Practice</li> <li>• HSE GS6</li> <li>• Operator's Manual</li> <li>• Specifications for types of forward tipping dumpers</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable room for theory training purposes</li> <li>• Welfare and rest facilities during training</li> </ul>

## Category

Category description and types	
<p>CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have varying uses within industry and used with some variations, for CPCS training and assessment standards, the descriptions reflect basic core use. Endorsements are sub-categories that reflect the variations for this category by chassis type. This category has two endorsements.</p> <p>To identify a machine within this category, a typical forward tipping dumper would normally have the listed features and be used within the described characteristics.</p>	
Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Chassis with the body, power unit, hydraulic and electrical units</li> <li>• Forward-tipping sided body to carry materials</li> </ul>	<ul style="list-style-type: none"> <li>• Able to travel in forward and reverse and change direction during travel by articulating the chassis, via the steering axles or track drive differential</li> <li>• Can travel on uneven and loose ground and slopes</li> <li>• Receives loads by external means, and transports up to long distances</li> <li>• Deposits the load (in most cases) by raising the body</li> </ul>

## Endorsements

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### Endorsement characteristics

- **Endorsement A:** Wheeled – Articulated two-piece chassis with the front section containing the body and rear section containing the power, hydraulic and electrical units or one-piece chassis with steering axles containing all components
- **Endorsement B:** Tracked – Rigid chassis of reversible, crawler, hydraulically-driven tracks for mobility

## Outcomes

Through a combination of targeted training and experience, an individual with the 180° excavator will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> <li>Undertake all pre-use checks</li> </ul>
<b>Travelling and manoeuvring</b>	<ul style="list-style-type: none"> <li>Configure and ready for site and highway travel</li> <li>Travel over rough, undulating ground, steep inclines and level surfaces</li> <li>Manoeuvre in confined spaces</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Configure and set-up for excavating duties</li> <li>Explain actions required for hazards, underground and overhead services</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Excavate differing types of excavations in various types of ground</li> <li>Place materials into transporting vehicles and hoppers</li> <li>Grade, spread and level ground and materials</li> <li>Attach and remove buckets</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> <li>Explain the loading and unloading procedures for machine transporting</li> </ul>

## Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Reporting structures</li> <li>Social responsibilities</li> <li>Lifelong skills</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Health and Safety at Work Act</li> <li>Environmental issues</li> <li>Other trades</li> <li>Working practices</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing Types</li> <li>Functions and applications</li> <li>Power units</li> <li>Hydraulic systems</li> <li>Transmissions</li> <li>Chassis / steering / brakes</li> </ul>	<ul style="list-style-type: none"> <li>Stability / ground pressure</li> <li>Booms / dipper / buckets</li> <li>Slewing arrangements</li> <li>Attachments</li> <li>Safety systems</li> <li>ROPS / FOPS</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PPE</li> <li>Codes of Practice</li> <li>Site plans / drawings</li> </ul>	<ul style="list-style-type: none"> <li>Method statements</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Configure and ready for site and highway travel</li> </ul>	<ul style="list-style-type: none"> <li>Driving controls</li> <li>Attachments / accessories</li> <li>Travel position</li> </ul>	<ul style="list-style-type: none"> <li>Site travel</li> <li>Visibility</li> <li>Road travel / Road Traffic Act</li> </ul>
<ul style="list-style-type: none"> <li>Travel over rough, undulating ground, steep inclines and level surfaces</li> </ul>	<ul style="list-style-type: none"> <li>Travel routes</li> <li>Slopes / inclines</li> <li>Direction of travel</li> <li>Traction / aids</li> <li>Hazards</li> <li>Ground conditions</li> </ul>	<ul style="list-style-type: none"> <li>Working area</li> <li>Restarting on inclines</li> <li>Environment protection / minimise damage</li> </ul>

## Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Manoeuvre in confined spaces</li> </ul>	<ul style="list-style-type: none"> <li>• Visibility</li> <li>• Limitations of vision</li> <li>• Protection of ground / tight turns</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental / noise / fumes</li> <li>• Height restrictions</li> <li>•</li> </ul>
<ul style="list-style-type: none"> <li>• Configure and set-up for excavating duties</li> </ul>	<ul style="list-style-type: none"> <li>• Type of ground</li> <li>• Required specification</li> <li>• Equipment / bucket size / type</li> <li>• Machine positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Spoil placing</li> <li>• Site markings</li> <li>• Loading vehicles positioning</li> <li>• Spoil segregation</li> </ul>
<ul style="list-style-type: none"> <li>• Explain actions required for hazards, underground and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>• Types of typical services</li> <li>• Warning / identification systems</li> <li>• Reporting procedures for damage to services</li> </ul>	<ul style="list-style-type: none"> <li>• Explain actions required for hazards, underground and overhead services</li> <li>• Minimum distances and clearances</li> </ul>
<ul style="list-style-type: none"> <li>• Excavate differing types of excavations in various types of ground</li> </ul>	<ul style="list-style-type: none"> <li>• Non-complex and complex trenches</li> <li>• Disposal of spoil</li> <li>• Machine positioning</li> <li>• Segregation of spoil</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental factors</li> <li>• Productive cycles of operation</li> <li>• Measuring levels and centres</li> </ul>
<ul style="list-style-type: none"> <li>• Place materials into transporting vehicles and hoppers</li> </ul>	<ul style="list-style-type: none"> <li>• Machine positioning</li> <li>• Signals / communication</li> <li>• Minimum overspill</li> </ul>	<ul style="list-style-type: none"> <li>• Loading vehicle stability</li> <li>• Cleaning loading area</li> </ul>
<ul style="list-style-type: none"> <li>• Grade, spread and level ground and materials</li> </ul>	<ul style="list-style-type: none"> <li>• Specification</li> <li>• Attachments</li> </ul>	<ul style="list-style-type: none"> <li>• Multipurpose / clamshell front buckets</li> </ul>
<ul style="list-style-type: none"> <li>• Attach and remove buckets</li> </ul>	<ul style="list-style-type: none"> <li>• Preparation</li> <li>• Types of bucket</li> <li>• Quick-hitch systems</li> <li>• Security</li> </ul>	<ul style="list-style-type: none"> <li>• Manufacturer's procedures</li> <li>• Manual handling</li> </ul>

## Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> </ul>	<ul style="list-style-type: none"> <li>Shut down procedures</li> <li>Security</li> </ul>	<ul style="list-style-type: none"> <li>Parking and positioning</li> </ul>
<ul style="list-style-type: none"> <li>Explain the loading and unloading procedures for machine transporting</li> </ul>	<ul style="list-style-type: none"> <li>Compatibility</li> <li>Positioning</li> </ul>	<ul style="list-style-type: none"> <li>Security</li> <li>Types of transporter</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

## Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>Quick-hitch bucket systems</li> </ul>	<ul style="list-style-type: none"> <li>Manufacturer's procedures must be strictly adhered to. Security of bucket to be fully checked (physically) prior to use</li> <li>Guidance issued by the Health and Safety Executive (HSE), The Construction Plant-hire Association (CPA) and the Off-highway and Plant Equipment Research Council (OPERC) should be followed and recommended to candidates</li> </ul>

## Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> <li>Novice operators with no industry or machine experience</li> </ul>	70
<ul style="list-style-type: none"> <li>Novice operators with industry experience but no machine experience</li> </ul>	62
<ul style="list-style-type: none"> <li>Operators with unrelated (earthmoving) machine experience</li> </ul>	42
<ul style="list-style-type: none"> <li>Operators with similar (earthmoving) machine experience</li> </ul>	28
All candidates must have received the equivalent to 7 hours of site safety and induction training	

***To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category***

4 candidates : 2 machines: 1 instructor

### Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• Excavator 180° that meets current legislation</li> <li>• Operator's manual for the machine(s)</li> <li>• Replacement buckets for changing purposes</li> <li>• Measuring equipment to ensure trench levels and centres</li> <li>• Sufficient area of ground suitable for excavating</li> <li>• Slopes, stockpiles of materials</li> <li>• Vehicle or trailer for loading into</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>• PUWER 1998 Regulations</li> <li>• LOLER 1998 Regulations</li> <li>• HSE GS6</li> <li>• Operator's Manual</li> <li>• Specifications for types of 180 Excavators</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable room for theory training purposes</li> <li>• Welfare and rest facilities during training</li> </ul>

### Category

#### Category description and types

CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have varying uses within industry and used with many attachments, for CPCS training and assessment standards, the descriptions reflect basic core use.

To identify a machine within this category, a typical 180° Excavator would normally have the listed features and be used within the described characteristics.

Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Multi-axled wheeled chassis (in most cases) containing central operating position, power, transmission, hydraulic and electrical units</li> <li>• Front loader arms with removable front loader bucket, all hydraulically operated</li> <li>• Boom (one-piece) with attached dipper arm and bucket, mounted on a movable (in most cases) carriage, all hydraulically operated</li> <li>• Machine operating weight of up to 5 tonnes</li> </ul>	<ul style="list-style-type: none"> <li>• Able to travel in forward and reverse and change direction during travel with most types having all-wheel drive</li> <li>• Can travel and operate on uneven and loose ground and slopes</li> <li>• Carry out excavation and extraction duties in a linear motion using the front or rear buckets within the confines of the operating radii, depths and heights</li> <li>• Can place materials using a combination of slew and linear motions (rear bucket) or manoeuvring the machine (front loader) within the confines of the operating depth and height</li> </ul>

## Outcomes

Through a combination of targeted training and experience, an individual with the 180<sup>0</sup> excavator will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> <li>Undertake all pre-use checks</li> </ul>
<b>Travelling and manoeuvring</b>	<ul style="list-style-type: none"> <li>Configure and ready for site and highway travel</li> <li>Travel over rough, undulating ground, steep inclines and level surfaces</li> <li>Manoeuvre in confined spaces</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Configure and set-up for excavating duties</li> <li>Explain actions required for hazards, underground and overhead services</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Excavate differing types of excavations in various types of ground</li> <li>Place materials into transporting vehicles and hoppers</li> <li>Grade, spread and level ground and materials</li> <li>Attach and remove buckets</li> <li>Lift, move and place basic slung loads with the rear boom</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> <li>Explain the loading and unloading procedures for machine transporting</li> </ul>

### Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Reporting structures</li> <li>Social responsibilities</li> <li>Environmental issues</li> <li>Working practices</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Lifelong skills</li> <li>Health and Safety at Work Act</li> <li>Other trades</li> <li></li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing Types</li> <li>Functions and applications</li> <li>Power units</li> <li>Hydraulic systems</li> <li>Transmissions</li> <li>Chassis / steering / brakes</li> </ul>	<ul style="list-style-type: none"> <li>Stability / ground pressure</li> <li>Booms / dipper / buckets</li> <li>Slewing arrangements</li> <li>Attachments</li> <li>Safety systems</li> <li>ROPS / FOPS</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PPE</li> <li>Codes of Practice</li> <li>Site plans / drawings</li> </ul>	<ul style="list-style-type: none"> <li>Method statements</li> <li>Lifting requirements and limitations</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Configure and ready for site and highway travel</li> </ul>	<ul style="list-style-type: none"> <li>Driving controls</li> <li>Attachments / accessories</li> <li>Travel position</li> </ul>	<ul style="list-style-type: none"> <li>Site travel</li> <li>Visibility</li> <li>Road travel / Road Traffic Act</li> </ul>
<ul style="list-style-type: none"> <li>Travel over rough, undulating ground, steep inclines and level surfaces</li> </ul>	<ul style="list-style-type: none"> <li>Travel routes</li> <li>Slopes / inclines</li> <li>Direction of travel</li> <li>Traction / aids</li> <li>Working area</li> <li>Restarting on inclines</li> </ul>	<ul style="list-style-type: none"> <li>Ground conditions</li> <li>Hazards</li> <li>Environment protection / minimise damage</li> </ul>
<ul style="list-style-type: none"> <li>Manoeuvre in confined spaces</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Limitations of vision</li> <li>Protection of ground / tight turns</li> </ul>	<ul style="list-style-type: none"> <li>Environmental / noise / fumes</li> <li>Height restrictions</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Configure and set-up for excavating duties</li> </ul>	<ul style="list-style-type: none"> <li>Type of ground</li> <li>Required specification</li> <li>Equipment / bucket size / type</li> <li>Machine positioning</li> </ul>	<ul style="list-style-type: none"> <li>Spoil placing</li> <li>Site markings</li> <li>Loading vehicles positioning</li> <li>Spoil segregation</li> </ul>
<ul style="list-style-type: none"> <li>Explain actions required for hazards, underground and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>Types of typical services</li> <li>Warning / identification systems</li> <li>Reporting procedures for damage to services</li> </ul>	<ul style="list-style-type: none"> <li>Minimum distances and clearances</li> <li>Explain actions required for hazards, underground and overhead services</li> </ul>
<ul style="list-style-type: none"> <li>Excavate differing types of excavations in various types of ground</li> </ul>	<ul style="list-style-type: none"> <li>Non-complex and complex trenches</li> <li>Disposal of spoil</li> <li>Machine positioning</li> <li>Segregation of spoil</li> </ul>	<ul style="list-style-type: none"> <li>Environmental factors</li> <li>Productive cycles of operation</li> <li>Measuring levels and centres</li> </ul>
<ul style="list-style-type: none"> <li>Place materials into transporting vehicles and hoppers</li> </ul>	<ul style="list-style-type: none"> <li>Machine positioning</li> <li>Signals / communication</li> <li>Loading vehicle stability</li> </ul>	<ul style="list-style-type: none"> <li>Minimum overspill</li> <li>Cleaning loading area</li> </ul>
<ul style="list-style-type: none"> <li>Grade, spread and level ground and materials</li> </ul>	<ul style="list-style-type: none"> <li>Specification</li> <li>Attachments</li> </ul>	<ul style="list-style-type: none"> <li>Multipurpose / clamshell front buckets</li> </ul>
<ul style="list-style-type: none"> <li>Attach and remove buckets</li> </ul>	<ul style="list-style-type: none"> <li>Preparation</li> <li>Types of bucket</li> <li>Quick-hitch systems</li> <li>Security</li> </ul>	<ul style="list-style-type: none"> <li>Manual handling</li> <li>Manufacturers' procedures</li> </ul>
<ul style="list-style-type: none"> <li>Lift, move and place basic slung loads with the rear boom</li> </ul>	<ul style="list-style-type: none"> <li>Legislation and regulations</li> <li>Lift planning</li> <li>Machine configuration</li> <li>Stability / ground conditions</li> <li>Lifting accessories and slinging requirements</li> </ul>	<ul style="list-style-type: none"> <li>Hazards</li> <li>Trial lifts</li> <li>Load stability / security</li> <li>Signalling procedures</li> <li>Visibility</li> <li>Environmental conditions</li> <li>Load swings</li> </ul>
<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> </ul>	<ul style="list-style-type: none"> <li>Shut down procedures</li> <li>Parking and positioning</li> </ul>	<ul style="list-style-type: none"> <li>Security</li> </ul>
<ul style="list-style-type: none"> <li>Explain the loading and unloading procedures for machine transporting</li> </ul>	<ul style="list-style-type: none"> <li>Compatibility</li> <li>Positioning</li> </ul>	<ul style="list-style-type: none"> <li>Security</li> <li>Types of transporter</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

## Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>Quick-hitch bucket systems</li> </ul>	<ul style="list-style-type: none"> <li>Manufacturer's procedures must be strictly adhered to</li> <li>Security of bucket to be fully checked prior to use</li> <li>Guidance issued by the Health and Safety Executive (HSE), The Construction Plant-hire Association (CPA) and the Off-highway and Plant Equipment Research Centre (OPERC) should be followed and recommended to candidates</li> </ul>

## Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> <li>Novice operators with no industry or machine experience</li> </ul>	70
<ul style="list-style-type: none"> <li>Novice operators with industry experience but no machine experience</li> </ul>	62
<ul style="list-style-type: none"> <li>Operators with unrelated (earthmoving) machine experience</li> </ul>	42
<ul style="list-style-type: none"> <li>Operators with similar (earthmoving) machine experience</li> </ul>	28
All candidates must have received the equivalent to 7 hours of site safety and induction training	

***To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category***

4 candidates : 2 machines: 1 instructor

### Resources

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Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• Excavator 180 that meets current legislation</li> <li>• Operator's manual for the machine(s)</li> <li>• Replacement buckets for changing purposes</li> <li>• Measuring equipment to ensure trench levels and centres</li> <li>• Sufficient area of ground suitable for excavating</li> <li>• Slopes, stockpiles of materials</li> <li>• Rear tipping vehicle or trailer for loading into</li> <li>• Loads and lifting accessories</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>• PUWER 1998 Regulations</li> <li>• LOLER 1998 Regulations</li> <li>• HSE GS6</li> <li>• Operator's Manual</li> <li>• Specifications for types of 180 excavators</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable room for theory training purposes</li> <li>• Welfare and rest facilities during training</li> </ul>

## Category

### Category description and types

CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have varying uses within industry and used with many attachments, for CPCS training and assessment standards, the descriptions reflect basic core use.

To identify a machine within this category, a typical 180 Excavator would normally have the listed features and be used within the described characteristics.

Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Multi-axled wheeled chassis (in most cases) containing central operating position, power, transmission, hydraulic and electrical units</li> <li>• Front loader arms with removable front loader bucket, all hydraulically operated</li> <li>• Boom (one-piece) with attached dipper arm and bucket, mounted on a movable (in most cases) carriage, all hydraulically operated</li> <li>• Machine operating weight of 5 tonnes and above</li> </ul>	<ul style="list-style-type: none"> <li>• Able to travel in forward and reverse and change direction during travel with most types having all-wheel drive</li> <li>• Can travel and operate on uneven and loose ground and slopes</li> <li>• Carry out excavation and extraction duties in a linear motion using the front or rear buckets within the confines of the operating radii, depths and heights</li> <li>• Can place materials using a combination of slew and linear motions (rear bucket) or manoeuvring the machine (front loader) within the confines of the operating radius, depth and height</li> </ul>

## Outcomes

Through a combination of targeted training and experience, an individual with the rough terrain masted forklift will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> <li>Undertake all pre-use checks</li> <li>Explain need and function of appropriate documentation</li> </ul>
<b>Travelling and manoeuvring</b>	<ul style="list-style-type: none"> <li>Configure and ready for travel</li> <li>Travel over rough, undulating ground, substantial inclines and level surfaces (with and without loads)</li> <li>Manoeuvre in confined spaces (with and without loads)</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Configure and set for lifting and transferring duties</li> <li>Explain actions required for hazards, underground and overhead services</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Lift and remove various loads up to the full working height of the forklift</li> <li>Transfer and place loads accurately at given locations</li> <li>Place and remove loads from a vehicle</li> <li>Maintain safe working situations</li> </ul>
<b>Completing work</b>	<ul style="list-style-type: none"> <li>Maintain safe and tidy working areas</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> <li>Explain the loading and unloading procedures for machine transporting</li> </ul>

### Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Reporting structures</li> <li>Social responsibilities</li> <li>Environmental issues</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Lifelong skills</li> <li>Health and Safety at Work Act</li> <li>Other trades</li> <li>Working practices</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing Types</li> <li>Functions and applications</li> <li>Power units</li> <li>Hydraulic systems</li> <li>Chassis / steering / tyres</li> </ul>	<ul style="list-style-type: none"> <li>Stability</li> <li>Mast functions</li> <li>ROPS / FOPS</li> <li>Counterweights</li> <li>Forks</li> <li>Attachments</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PPE</li> <li>Rating plates</li> <li>Codes of Practice</li> <li>Site plans / drawings</li> </ul>	<ul style="list-style-type: none"> <li>Method statements</li> <li>Lifting requirements and limitations</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Explain need and function of appropriate documentation</li> </ul>	<ul style="list-style-type: none"> <li>Certification</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<ul style="list-style-type: none"> <li>Configure and ready for travel</li> </ul>	<ul style="list-style-type: none"> <li>Driving controls</li> <li>Attachments</li> <li>Driving position</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Road Traffic Act</li> <li>Security</li> </ul>
<ul style="list-style-type: none"> <li>Travel over rough, undulating ground, substantial inclines and level surfaces (with and without loads)</li> </ul>	<ul style="list-style-type: none"> <li>Driving controls</li> <li>Ground conditions</li> <li>Traction / aids</li> <li>Inclines and techniques</li> <li>Hazards</li> </ul>	<ul style="list-style-type: none"> <li>Working area / routes</li> <li>Site and road travel</li> <li>Environment protection / minimise damage</li> <li>Load protection</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Manoeuvre in confined spaces (with and without loads)</li> </ul>	<ul style="list-style-type: none"> <li>• Visibility</li> <li>• Limitations of vision</li> <li>• Environmental / noise / fumes</li> </ul>	<ul style="list-style-type: none"> <li>• Protection of ground / tight turns</li> <li>• Hazards</li> </ul>
<ul style="list-style-type: none"> <li>• Configure and set for lifting and transferring duties</li> </ul>	<ul style="list-style-type: none"> <li>• Positioning / planning</li> <li>• Required configuration</li> <li>• Lifting controls</li> <li>• Machine capacity</li> <li>• De-rating</li> <li>• Load indicators</li> <li>• Load charts</li> </ul>	<ul style="list-style-type: none"> <li>• Load centres / C of G</li> <li>• Environmental conditions</li> <li>• Levelling</li> <li>• Site markings</li> <li>• Fork spacing</li> <li>• Hazards</li> </ul>
<ul style="list-style-type: none"> <li>• Explain actions required for hazards, underground and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>• Types of typical services</li> <li>• Warning/identification systems</li> <li>• Minimum distances and clearances</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting procedures for damage to services</li> </ul>
<ul style="list-style-type: none"> <li>• Lift and remove various loads up to the full working height of the forklift</li> </ul>	<ul style="list-style-type: none"> <li>• Signalling procedures</li> <li>• Techniques</li> <li>• Hazards</li> <li>• Types of loads</li> <li>• Machine stability</li> </ul>	<ul style="list-style-type: none"> <li>• Load stability / security</li> <li>• Visibility</li> <li>• Environmental conditions</li> </ul>
<ul style="list-style-type: none"> <li>• Transfer and place loads accurately at given locations</li> </ul>	<ul style="list-style-type: none"> <li>• Configuration</li> <li>• Ground conditions / hazards</li> <li>• Visibility</li> <li>• Load security / travel position</li> <li>• Stability</li> </ul>	<ul style="list-style-type: none"> <li>• Signalling / following instructions</li> <li>• Loading towers / platforms / racking / stacking</li> <li>• Protection of structures / loads</li> </ul>
<ul style="list-style-type: none"> <li>• Place and remove loads from a vehicle</li> </ul>	<ul style="list-style-type: none"> <li>• Preparation</li> <li>• Types of trailer / transporter</li> <li>• Transporter capacities</li> <li>• Hazards</li> </ul>	<ul style="list-style-type: none"> <li>• Undercutting</li> <li>• Procedures/weight distribution</li> <li>• Materials / vehicle protection</li> <li>• Travel routes</li> </ul>
<ul style="list-style-type: none"> <li>• Maintain safe working situations</li> </ul>	<ul style="list-style-type: none"> <li>• Stability</li> <li>• Load security</li> </ul>	<ul style="list-style-type: none"> <li>• Hazards</li> </ul>
<ul style="list-style-type: none"> <li>• Maintain safe and tidy working areas</li> </ul>	<ul style="list-style-type: none"> <li>• Specification</li> <li>• Stacking</li> </ul>	<ul style="list-style-type: none"> <li>• Load positioning / storage</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> </ul>	<ul style="list-style-type: none"> <li>Shut down procedures</li> <li>Security</li> </ul>	<ul style="list-style-type: none"> <li>Parking and positioning</li> </ul>
<ul style="list-style-type: none"> <li>Explain the loading and unloading procedures for machine transporting</li> </ul>	<ul style="list-style-type: none"> <li>Compatibility</li> <li>Positioning</li> </ul>	<ul style="list-style-type: none"> <li>Types of transporter</li> <li>Security</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

### Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>Stability with raised forks or uneven ground</li> </ul>	<ul style="list-style-type: none"> <li>Checking ground prior to raising loads</li> <li>Travelling and manoeuvring with raised loads</li> </ul>
<ul style="list-style-type: none"> <li>Travel speeds</li> </ul>	<ul style="list-style-type: none"> <li>Appropriate speed in proportion to the conditions, particularly when carrying a load</li> <li>Travel speeds around corners and on uneven ground</li> <li>Appreciation of centres of gravity</li> <li>Mandatory wearing of seat belts</li> </ul>
<ul style="list-style-type: none"> <li>Travelling on inclines</li> </ul>	<ul style="list-style-type: none"> <li>Travelling and steering up, down and across inclines</li> </ul>
<ul style="list-style-type: none"> <li>Weight transfer</li> </ul>	<ul style="list-style-type: none"> <li>Reduced carrying capacity with extending masts</li> </ul>

### Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> <li>Novice operators with no industry or machine experience</li> </ul>	35
<ul style="list-style-type: none"> <li>Novice operators with industry experience but no machine experience</li> </ul>	28
<ul style="list-style-type: none"> <li>Operators with unrelated (forklift) machine experience</li> </ul>	14
<ul style="list-style-type: none"> <li>Operators with similar (forklift) machine experience</li> </ul>	7

All candidates must have received the equivalent to 7 hours of site safety and induction training

***To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category***

3 candidates : 1 machine: 1 instructor

### Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• Suitable masted forklift that meets current legislation</li> <li>• Operator's manual for the machine(s)</li> <li>• Various sized loads, with and without a pallet base</li> <li>• Loading out towers that conform to current legislation</li> <li>• Sufficient area of ground for driving</li> <li>• Slopes and rough terrain</li> <li>• Vehicle / trailer with bed able to accommodate adjacent loads</li> </ul>	<ul style="list-style-type: none"> <li>• PUWER 1998 Regulations</li> <li>• LOLER 1998 Regulations</li> <li>• HSE GS6</li> <li>• ACoP</li> <li>• Operator's Manual</li> <li>• Specifications for types of masted rough terrain forklifts</li> <li>• Copies of various types of load rating charts</li> </ul>
<b>PLUS</b>	<b>PLUS</b>
<ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>• Suitable room for theory training purposes</li> <li>• Welfare and rest facilities during training.</li> </ul>

### Category

#### Category description and types

CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have varying uses within industry and used with many attachments, for CPCS training and assessment standards, the descriptions reflect basic core use.

To identify a machine within this category, a typical rough terrain masted forklift would normally have the listed features and be used within the described characteristics.

Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Wheel mounted multi-axled chassis containing the operating position; power, hydraulic and electrical units and counterweight components</li> <li>• Front-mounted multi-sectioned tilt able mast with raisable fork carriage, all hydraulically operated</li> </ul>	<ul style="list-style-type: none"> <li>• Able to travel in forward and reverse and change direction during travel with most types having all-wheel drive and rear steering</li> <li>• Most types can travel on uneven and loose ground and slopes</li> <li>• Can carry out lifting, transfer and placing duties with loads mounted on forks, from ground level to maximum operating height by raising the fork carriage</li> </ul>

### Outcomes

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Through a combination of targeted training and experience, an individual with the forklift side loader will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> <li>Undertake all pre-use checks</li> <li>Explain need and function of appropriate documentation</li> </ul>
<b>Travelling and manoeuvring</b>	<ul style="list-style-type: none"> <li>Configure and ready for travel</li> <li>Travel to and manoeuvre in confined spaces (with and without loads)</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Configure and set for lifting and transferring duties</li> <li>Explain actions required for hazards, underground and overhead services</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Lift and remove various loads up to the full working height of the forklift</li> <li>Transfer and place loads accurately at given locations</li> <li>Place and remove loads from a vehicle</li> <li>Maintain safe working situations</li> </ul>
<b>Completing work</b>	<ul style="list-style-type: none"> <li>Maintain safe and tidy working areas</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> <li>Explain the loading and unloading procedures for machine transporting</li> </ul>

### Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Reporting structures</li> <li>Social responsibilities</li> <li>Lifelong skills</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Health and Safety at Work Act</li> <li>Environmental issues</li> <li>Other trades</li> <li>Working practices</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing Types</li> <li>Functions and applications</li> <li>Power units</li> <li>Hydraulic systems</li> <li>Chassis / steering / tyres</li> </ul>	<ul style="list-style-type: none"> <li>Stability</li> <li>Mast functions</li> <li>ROPS / FOPS</li> <li>Counterweights</li> <li>Load bed</li> <li>Forks</li> <li>Attachments</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PPE</li> <li>Rating plates</li> <li>Codes of Practice</li> <li>Site plans / drawings</li> </ul>	<ul style="list-style-type: none"> <li>Method statements</li> <li>Lifting requirements and limitations</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Explain need and function of appropriate documentation</li> </ul>	<ul style="list-style-type: none"> <li>Certification</li> </ul>	
<ul style="list-style-type: none"> <li>Configure and ready for travel</li> </ul>	<ul style="list-style-type: none"> <li>Driving controls</li> <li>Attachments</li> <li>Driving position</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Road Traffic Act</li> <li>Security</li> </ul>
<ul style="list-style-type: none"> <li>Travel to and manoeuvre in confined spaces (with and without loads)</li> </ul>	<ul style="list-style-type: none"> <li>Driving controls</li> <li>Ground conditions</li> <li>Traction / aids</li> <li>Inclines and techniques</li> <li>Hazards</li> </ul>	<ul style="list-style-type: none"> <li>Working area / routes</li> <li>Site travel</li> <li>Environment protection / minimise damage</li> <li>Load protection</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Configure and set for lifting and transferring duties</li> </ul>	<ul style="list-style-type: none"> <li>Positioning / planning</li> <li>Required configuration</li> <li>Lifting controls</li> <li>Machine capacity</li> <li>De-rating</li> <li>Load indicators</li> <li>Load charts</li> </ul>	<ul style="list-style-type: none"> <li>Load centres / C of G</li> <li>Environmental conditions</li> <li>Levelling</li> <li>Site markings</li> <li>Fork spacing</li> <li>Hazards</li> </ul>
<ul style="list-style-type: none"> <li>Explain actions required for hazards, underground and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>Types of typical services</li> <li>Reporting procedures for damage to services</li> </ul>	<ul style="list-style-type: none"> <li>Warning / identification systems</li> <li>Minimum distances and clearances</li> </ul>
<ul style="list-style-type: none"> <li>Lift and remove various loads up to the full working height of the forklift</li> </ul>	<ul style="list-style-type: none"> <li>Signalling procedures</li> <li>Techniques</li> <li>Hazards</li> <li>Types of loads</li> <li>Machine stability</li> </ul>	<ul style="list-style-type: none"> <li>Load stability / security</li> <li>Visibility</li> <li>Environmental conditions</li> </ul>
<ul style="list-style-type: none"> <li>Transfer and place loads accurately at given locations</li> </ul>	<ul style="list-style-type: none"> <li>Configuration</li> <li>Ground conditions / hazards</li> <li>Visibility</li> <li>Load and bed capabilities</li> <li>Load security / travel position</li> </ul>	<ul style="list-style-type: none"> <li>Stability</li> <li>Signalling / following instructions</li> <li>Loading towers / platforms / racking/ stacking</li> <li>Protection of structures / loads</li> </ul>
<ul style="list-style-type: none"> <li>Place and remove loads from a vehicle</li> </ul>	<ul style="list-style-type: none"> <li>Preparation</li> <li>Types of trailer / transporter</li> <li>Transporter capacities</li> <li>Hazards</li> </ul>	<ul style="list-style-type: none"> <li>Procedures / weight distribution</li> <li>Undercutting</li> <li>Materials / vehicle protection</li> <li>Travel routes</li> </ul>
<ul style="list-style-type: none"> <li>Maintain safe working situations</li> </ul>	<ul style="list-style-type: none"> <li>Stability</li> <li>Load security</li> </ul>	<ul style="list-style-type: none"> <li>Hazards</li> </ul>
<ul style="list-style-type: none"> <li>Maintain safe and tidy working areas</li> </ul>	<ul style="list-style-type: none"> <li>Specification</li> <li>Stacking</li> </ul>	<ul style="list-style-type: none"> <li>Load positioning / storage</li> </ul>
<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> </ul>	<ul style="list-style-type: none"> <li>Shut down procedures</li> <li>Security</li> </ul>	<ul style="list-style-type: none"> <li>Parking and positioning</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Explain the loading and unloading procedures for machine transporting</li> </ul>	<ul style="list-style-type: none"> <li>• Compatibility</li> <li>• Positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Types of transporter</li> <li>• Security</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

### Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>Travel speeds</li> </ul>	<ul style="list-style-type: none"> <li>Appropriate speed in proportion to the conditions, particularly when carrying a load. Travel speeds around corners and on uneven ground. Appreciation of centres of gravity. Mandatory wearing of seat belts</li> </ul>
<ul style="list-style-type: none"> <li>Travelling on inclines</li> </ul>	<ul style="list-style-type: none"> <li>Understanding of travelling and steering up, down and across inclines</li> </ul>
<ul style="list-style-type: none"> <li>Weight transfer</li> </ul>	<ul style="list-style-type: none"> <li>Reduced carrying capacity with extending masts</li> </ul>

### Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> <li>Novice operators with no industry or machine experience</li> </ul>	35
<ul style="list-style-type: none"> <li>Novice operators with industry experience but no machine experience</li> </ul>	28
<ul style="list-style-type: none"> <li>Operators with unrelated (forklift) machine experience</li> </ul>	14
<ul style="list-style-type: none"> <li>Operators with similar (forklift) machine experience</li> </ul>	7
All candidates must have received the equivalent to 7 hours of site safety and induction training	

***To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category***

3 candidates : 1 machine: 1 instructor

### Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• Suitable side-loader forklift that meets current legislation</li> <li>• Operator's manual for the machine(s)</li> <li>• Various sized loads, with and without a pallet base</li> <li>• Loading out towers / platforms or racking that conforms to current legislation</li> <li>• Sufficient area of ground for driving</li> <li>• Vehicle / trailer with bed able to accommodate adjacent loads</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>• PUWER 1998 Regulations</li> <li>• LOLER 1998 Regulations</li> <li>• HSE GS6</li> <li>• ACOP</li> <li>• Operator's Manual</li> <li>• Specifications for types of side-loader type forklifts</li> <li>• Copies of various types of load rating charts</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable room for theory training purposes</li> <li>• Welfare and rest facilities during training</li> </ul>

### Category

#### Category description and types

CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have varying uses within industry and used with many attachments, for CPCS training and assessment standards, the descriptions reflect basic core use.

To identify a machine within this category, a typical side-loader forklift would normally have the listed features and be used within the described characteristics.

Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Wheel mounted multi-axled chassis containing an offset operating position; power, hydraulic and electrical units and counterweight components</li> <li>• Side-mounted multi-sectioned tilt able mast with raisable fork carriage, all hydraulically operated</li> <li>• Load bed with mast centrally located</li> </ul>	<ul style="list-style-type: none"> <li>• Able to travel in forward and reverse and change direction during travel with most types having all-wheel or rear steering</li> <li>• Limited to travelling on smooth surfaces and some incline-driving capability</li> <li>• Can carry out lifting, transfer and placing duties with loads mounted on forks or bed, from ground level to maximum operating height by raising the carriage</li> </ul>

### Outcomes

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Through a combination of targeted training and experience, an individual with the industrial forklift truck will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> <li>Undertake all pre-use checks</li> <li>Explain need and function of appropriate documentation</li> </ul>
<b>Travelling and manoeuvring</b>	<ul style="list-style-type: none"> <li>Configure and ready for travel</li> <li>Travel to and manoeuvre in confined spaces (with and without loads)</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Configure and set for lifting and transferring duties</li> <li>Explain actions required for hazards, underground and overhead services</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Lift and remove various loads up to the full working height of the forklift</li> <li>Transfer and place loads accurately at given locations</li> <li>Place and remove loads from a vehicle</li> <li>Maintain safe working situations</li> </ul>
<b>Completing work</b>	<ul style="list-style-type: none"> <li>Maintain safe and tidy working areas</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> <li>Explain the loading and unloading procedures for machine transporting</li> </ul>

### Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Communication with colleagues / management / other trades</li> </ul>	<ul style="list-style-type: none"> <li>Reporting structures</li> <li>Social responsibilities</li> <li>Lifelong skills</li> <li>Health and Safety at Work Act</li> <li>Environmental issues</li> <li>Other trades</li> <li>Working practices</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing types</li> <li>Functions and applications</li> <li>Power units</li> <li>Hydraulic systems</li> <li>Chassis / steering / tyres</li> </ul>	<ul style="list-style-type: none"> <li>Stability</li> <li>Mast functions</li> <li>ROPS / FOPS</li> <li>Counterweights</li> <li>Forks</li> <li>Attachments</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PPE</li> <li>Rating plates</li> <li>Codes of Practice</li> <li>Site plans / drawings</li> </ul>	<ul style="list-style-type: none"> <li>Method statements</li> <li>Lifting requirements and limitations</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Explain need and function of appropriate documentation</li> </ul>	<ul style="list-style-type: none"> <li>Certification</li> </ul>	
<ul style="list-style-type: none"> <li>Configure and ready for travel</li> </ul>	<ul style="list-style-type: none"> <li>Driving controls</li> <li>Attachments</li> <li>Driving position</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Road Traffic Act</li> <li>Security</li> </ul>
<ul style="list-style-type: none"> <li>Travel to and manoeuvre in confined spaces (with and without loads)</li> </ul>	<ul style="list-style-type: none"> <li>Driving controls</li> <li>Ground conditions</li> <li>Traction / aids</li> <li>Inclines and techniques</li> <li>Hazards</li> </ul>	<ul style="list-style-type: none"> <li>Environment protection / minimise damage</li> <li>Load protection</li> <li>Working area / routes</li> <li>Site travel</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Configure and set for lifting and transferring duties</li> </ul>	<ul style="list-style-type: none"> <li>• Positioning / planning</li> <li>• Required configuration</li> <li>• Lifting controls</li> <li>• Machine capacity</li> <li>• De-rating</li> <li>• Load indicators</li> <li>• Load charts</li> </ul>	<ul style="list-style-type: none"> <li>• Load centres / C of G</li> <li>• Environmental conditions</li> <li>• Levelling</li> <li>• Site markings</li> <li>• Fork spacing</li> <li>• Hazards</li> </ul>
<ul style="list-style-type: none"> <li>• Explain actions required for hazards, underground and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>• Types of typical services</li> <li>• Warning / identification systems</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting procedures for damage to services</li> <li>• Minimum distances and clearances</li> </ul>
<ul style="list-style-type: none"> <li>• Lift and remove various loads up to the full working height of the forklift</li> </ul>	<ul style="list-style-type: none"> <li>• Signalling procedures</li> <li>• Techniques</li> <li>• Hazards</li> <li>• Types of loads</li> <li>• Visibility</li> </ul>	<ul style="list-style-type: none"> <li>• Machine stability</li> <li>• Load stability / security</li> <li>• Environmental conditions</li> </ul>
<ul style="list-style-type: none"> <li>• Transfer and place loads accurately at given locations</li> </ul>	<ul style="list-style-type: none"> <li>• Configuration</li> <li>• Ground conditions / hazards</li> <li>• Visibility</li> <li>• Load security / travel position</li> <li>• Stability</li> </ul>	<ul style="list-style-type: none"> <li>• Signalling / following instructions</li> <li>• Loading towers / platforms / racking / stacking</li> <li>• Protection of structures / loads</li> </ul>
<ul style="list-style-type: none"> <li>• Place and remove loads from a vehicle</li> </ul>	<ul style="list-style-type: none"> <li>• Preparation</li> <li>• Types of trailer / transporter</li> <li>• Transporter capacities</li> <li>• Hazards</li> </ul>	<ul style="list-style-type: none"> <li>• Procedures / weight distribution</li> <li>• Undercutting</li> <li>• Materials / vehicle protection</li> <li>• Travel routes</li> </ul>
<ul style="list-style-type: none"> <li>• Maintain safe working situations</li> </ul>	<ul style="list-style-type: none"> <li>• Stability</li> <li>• Load security</li> </ul>	<ul style="list-style-type: none"> <li>• Hazards</li> </ul>
<ul style="list-style-type: none"> <li>• Maintain safe and tidy working areas</li> </ul>	<ul style="list-style-type: none"> <li>• Specification</li> <li>• Load positioning / storage</li> </ul>	<ul style="list-style-type: none"> <li>• Stacking</li> </ul>
<ul style="list-style-type: none"> <li>• Carry out shut down and securing procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Shut down procedures</li> <li>• Security</li> </ul>	<ul style="list-style-type: none"> <li>• Parking and positioning</li> </ul>
<ul style="list-style-type: none"> <li>• Explain the loading and unloading procedures for machine transporting</li> </ul>	<ul style="list-style-type: none"> <li>• Compatibility</li> <li>• Positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Types of transporter</li> <li>• Security</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

### Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>Travel speeds</li> </ul>	<ul style="list-style-type: none"> <li>Appropriate speed in proportion to the conditions, particularly when carrying a load. Travel speeds around corners and on uneven ground. Appreciation of centres of gravity. Mandatory wearing of seat belts</li> </ul>
<ul style="list-style-type: none"> <li>Travelling on inclines</li> </ul>	<ul style="list-style-type: none"> <li>Understanding of travelling and steering up, down and across inclines</li> </ul>
<ul style="list-style-type: none"> <li>Weight transfer</li> </ul>	<ul style="list-style-type: none"> <li>Reduced carrying capacity with extending masts</li> </ul>

### Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> <li>Novice operators with no industry or machine experience</li> </ul>	35
<ul style="list-style-type: none"> <li>Novice operators with industry experience but no machine experience</li> </ul>	28
<ul style="list-style-type: none"> <li>Operators with unrelated (forklift) machine experience</li> </ul>	14
<ul style="list-style-type: none"> <li>Operators with similar (forklift) machine experience</li> </ul>	7
All candidates must have received the equivalent to 7 hours of site safety and induction training	

***To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category***

3 candidates : 1 machine: 1 instructor

### Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• Suitable industrial counterbalanced forklift that meets current legislation</li> <li>• Operator's manual for the forklift</li> <li>• Various sized loads, with and without a pallet base</li> <li>• Loading out towers / platforms or racking that conforms to current legislation</li> <li>• Sufficient area of ground for driving</li> <li>• Vehicle / trailer with bed able to accommodate adjacent loads</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>• PUWER 1998 Regulations</li> <li>• LOLER 1998 Regulations</li> <li>• HSE GS6</li> <li>• ACOP</li> <li>• Operator's Manual</li> <li>• Specifications for types of industrial type forklifts</li> <li>• Copies of various types of load rating charts</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable room for theory training purposes</li> <li>• Welfare and rest facilities during training</li> </ul>

### Category

Category description and types	
<p>CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have varying uses within industry and used with many attachments, for CPCS training and assessment standards, the descriptions reflect basic core use.</p> <p>To identify a machine within this category, a typical industrial forklift would normally have the listed features and be used within the described characteristics.</p>	
Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Wheel mounted multi-axled chassis containing a central operating position; power, hydraulic and electrical units and counterweight components</li> <li>• Front-mounted multi-sectioned tilt able mast with raisable fork carriage, all hydraulically operated</li> </ul>	<ul style="list-style-type: none"> <li>• Able to travel in forward and reverse and change direction during travel with most types having rear steering</li> <li>• Limited to travelling on smooth surfaces and some incline-driving capability</li> <li>• Can carry out lifting, transfer and placing duties with loads mounted on forks, from ground level to maximum operating height by raising the carriage</li> </ul>

### Outcomes

Through a combination of targeted training and experience, an individual with the telescopic handler will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> <li>Undertake all pre-use checks</li> <li>Explain the need and function of appropriate documentation</li> </ul>
<b>Travelling and manoeuvring</b>	<ul style="list-style-type: none"> <li>Configure and ready for travel (site and highway)</li> <li>Travel over level surfaces with and without loads and, where applicable, on rough, undulating ground and inclines. (excluding suspended loads)</li> <li>Manoeuvre in confined spaces with and without loads (including suspended loads for endorsement E)</li> <li>Follow given signals and instructions when travelling and manoeuvring with and without loads (including suspended loads for endorsement E)</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Configure and set for all lifting, loading and transferring duties</li> <li>Attach and remove attachments, including forks, for the movement of units loads</li> <li>Attach and remove attachments and accessories for the movement of suspended loads</li> <li>Explain actions required for proximity hazards Inc. underground and overhead services</li> <li>Follow given signals and instructions during work activities</li> </ul>
<b>Working tasks (Fork use)</b>	<ul style="list-style-type: none"> <li>Lift and remove various loads up to full extension and working height of the tele-handler</li> <li>Transfer and place loads accurately at given locations</li> <li>Place and remove loads from a vehicle</li> <li>Maintain safe working situations</li> </ul>

### Outcomes (Continued)

<b>Working tasks (Suspended Loads)</b>	<ul style="list-style-type: none"> <li>• Lift and remove various loads up to full extension and working height of the telehandler</li> <li>• Transfer and place loads accurately at given locations</li> <li>• Place and remove loads from a vehicle</li> <li>• Maintain safe working situations</li> <li>• Determine the requirements for the lifting and transferring of suspended loads</li> <li>• Establish and comply with given signals and instructions</li> <li>• Lift various suspended loads from given locations inc. vehicle bed and at height</li> <li>• Travel with and place various suspended loads at given locations inc. a vehicle bed and at height</li> <li>• Minimise the swinging of loads during travel</li> <li>• List different types of lifting accessories and attachments compatible with telescopic handlers and suspended loads</li> <li>• Explain the correct and incorrect methods for attaching suspended loads to the machine</li> <li>• Explain how stability is affected by travelling with a raised boom and a suspended load (both regular and irregular)</li> <li>• Explain visibility issues and restrictions and with suspended loads</li> <li>• Place loads out of sight of the operator</li> <li>• Maintain safe working situations</li> </ul>
<b>Completing work</b>	<ul style="list-style-type: none"> <li>• Maintain safe and tidy working areas</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>• Carry out shut down and securing procedures</li> <li>• Explain the loading and unloading procedures for machine transporting</li> </ul>

**Note:** Due to a level of incidents involving telescopic handlers, particularly with the movement of suspended loads, the Strategic Forum for Construction Plant Safety Group have produced a document titled 'Good Practice Guide to the Safe Use of Telehandlers in Construction' and a supplementary 'Good Practice Guide for the Lifting and Travelling with Suspended Loads using Telehandlers'.

It is essential that those both planning and conducting training and assessment activities are conversant with the content of each document and that training activities reflect all good practices contained therein.

Both documents are free to download from [www.cpa.uk.net/sfpsg/](http://www.cpa.uk.net/sfpsg/)

### Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Reporting structures</li> <li>Lifelong skills</li> <li>Working practices</li> <li>Social responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Health and Safety at Work Act</li> <li>Environmental issues</li> <li>Other trades</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing types</li> <li>Functions and applications</li> <li>Power units</li> <li>Hydraulic systems</li> <li>ROPS / FOPS</li> <li>Chassis / steering / tyres Inc. pressures / ply rating and importance of replacement with same</li> </ul>	<ul style="list-style-type: none"> <li>Stability</li> <li>Booms</li> <li>Forks</li> <li>Safety / stability systems</li> <li>Counterweights</li> <li>Attachments and accessories</li> <li>Access systems</li> <li>Safe load indicator equipment</li> <li></li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PUWER/LOLER</li> <li>PPE</li> <li>Rating plates</li> <li>Codes of Practice</li> <li>Site plans / drawings</li> </ul>	<ul style="list-style-type: none"> <li>Method statements</li> <li>Lift plans</li> <li>Lifting requirements and limitations</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting requirements, daily weekly though examination, both for equipment and accessories</li> <li>Duty charts/Load charts</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Explain need and function of appropriate documentation</li> </ul>	<ul style="list-style-type: none"> <li>Certification</li> <li>Thorough examination (machine and accessories)</li> </ul>	<ul style="list-style-type: none"> <li>Relevant site-related documentation</li> <li>Pre- use checks/inspections</li> </ul>
<ul style="list-style-type: none"> <li>Configure and ready for travel (site and highway)</li> </ul>	<ul style="list-style-type: none"> <li>Driving controls</li> <li>Attachments</li> <li>Driving position</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Road Traffic Act</li> <li>Security of attachments</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Travel over level surfaces with and without loads and, where applicable, on rough, undulating ground and inclines.</li> </ul>	<ul style="list-style-type: none"> <li>Driving controls</li> <li>Ground conditions</li> <li>Traction / aids</li> <li>Inclines and techniques</li> <li>Hazards</li> <li>Travel speeds</li> </ul>	<ul style="list-style-type: none"> <li>Working area / routes</li> <li>Site and road travel</li> <li>Environment protection / minimise damage</li> <li>Load protection</li> <li>Stability/centres of gravity</li> <li>Load swing and impact on equipment</li> </ul>
<ul style="list-style-type: none"> <li>Manoeuvre in confined spaces with and without loads</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Limitations of vision</li> <li>Steering options</li> <li>Proximity hazards</li> </ul>	<ul style="list-style-type: none"> <li>Protection of ground / tight turns</li> <li>Environmental / noise / fumes</li> </ul>
<ul style="list-style-type: none"> <li>Follow given signals and instructions when travelling and manoeuvring with and without loads</li> </ul>	<ul style="list-style-type: none"> <li>Code of signals (hand)</li> <li>Signaller location</li> <li>Visibility</li> </ul>	<ul style="list-style-type: none"> <li>Communication types and limitations</li> <li>Radio set-up</li> <li>Radio protocols</li> </ul>
<ul style="list-style-type: none"> <li>Configure and ready for all lifting, loading and transferring duties</li> </ul>	<ul style="list-style-type: none"> <li>Best method for safe load movement</li> <li>Positioning / planning</li> <li>Required configuration</li> <li>Lifting controls</li> <li>Machine capacity</li> <li>De-rating</li> <li>Load Moment Indicators</li> <li>Load charts</li> </ul>	<ul style="list-style-type: none"> <li>Load centres / C of G</li> <li>Environmental conditions</li> <li>Levelling</li> <li>Site markings</li> <li>Fork spacing</li> <li>Hazards</li> <li>Load weights</li> </ul>
<ul style="list-style-type: none"> <li>Attach and remove attachments, including forks, for the movement of unit loads</li> </ul>	<ul style="list-style-type: none"> <li>Attachment types and Function</li> <li>Preparation procedures</li> <li>Attaching and removal procedures</li> <li>Storage requirements</li> <li>Machine configuration and positioning</li> </ul>	<ul style="list-style-type: none"> <li>Manual handling</li> <li>Using assistance</li> <li>Securing requirements and essential pre-use checks</li> <li>Post-fitting checks</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Attach and remove attachments and accessories for the movement of suspended loads</li> </ul>	<ul style="list-style-type: none"> <li>• Attachment types</li> <li>• Preparation procedures</li> <li>• Attaching and removal procedures</li> <li>• Storage requirements</li> <li>• Machine configuration and positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Manual handling</li> <li>• Using assistance</li> <li>• Securing requirements and essential checks that need to be made</li> <li>• Post-fitting checks</li> </ul>
<ul style="list-style-type: none"> <li>• Explain actions required for proximity hazards, including underground and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>• Types of typical services</li> <li>• Warning / identification systems</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting procedures for damage to services</li> <li>• Minimum distances and clearance</li> </ul>
<ul style="list-style-type: none"> <li>• Follow given signals and instructions during work activities</li> </ul>	<ul style="list-style-type: none"> <li>• Code of signals (hand)</li> <li>• Signaller location</li> <li>• visibility</li> </ul>	<ul style="list-style-type: none"> <li>• Communication types and limitations</li> <li>• Radio set-up</li> <li>• Radio protocols</li> </ul>
<ul style="list-style-type: none"> <li>• Lift and remove various loads up to full extension and working height of the tele-handler</li> </ul>	<ul style="list-style-type: none"> <li>• Signalling procedures</li> <li>• Techniques</li> <li>• Hazards</li> <li>• Types of loads</li> <li>• Machine stability</li> </ul>	<ul style="list-style-type: none"> <li>• Load stability / security</li> <li>• Slewing facility</li> <li>• Visibility</li> <li>• Environmental conditions</li> <li>• Following instructions</li> </ul>
<ul style="list-style-type: none"> <li>• Transfer and place loads accurately at given locations</li> </ul>	<ul style="list-style-type: none"> <li>• Configuration</li> <li>• Ground conditions / hazards</li> <li>• Visibility</li> <li>• Load security / travel position</li> <li>• Signalling / following instructions</li> </ul>	<ul style="list-style-type: none"> <li>• Stability</li> <li>• Loading towers / platforms / racking / stacking</li> <li>• Protection of structures / loads</li> <li>• Overhead obstructions</li> </ul>
<ul style="list-style-type: none"> <li>• Place and remove loads from a vehicle</li> </ul>	<ul style="list-style-type: none"> <li>• Preparation</li> <li>• Types of trailer / transporter</li> <li>• Transporter capacities</li> <li>• Hazards</li> </ul>	<ul style="list-style-type: none"> <li>• Procedures / weight distribution</li> <li>• Materials / vehicle protection</li> <li>• Undercutting</li> <li>• Travel routes</li> </ul>
<ul style="list-style-type: none"> <li>• Maintain safe working situations</li> </ul>	<ul style="list-style-type: none"> <li>• Stability</li> <li>• Load security</li> </ul>	<ul style="list-style-type: none"> <li>• Hazards</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Determine the requirements for the lifting and transferring of suspended loads</li> </ul>	<ul style="list-style-type: none"> <li>Best method for safe load movement</li> <li>Lift plans</li> <li>Required authority</li> <li>Guidance and regulations</li> <li>Load charts</li> <li>Environmental conditions</li> <li>Machine suitability</li> <li>Codes of practice</li> </ul>	<ul style="list-style-type: none"> <li>Load types</li> <li>Attachments/accessories Inc. limitations and design use</li> <li>Working area</li> <li>Identification of proximity hazards</li> <li>RCI/LMI settings</li> </ul>
<ul style="list-style-type: none"> <li>Establish and comply with given signals and instructions</li> </ul>	<ul style="list-style-type: none"> <li>Signalling methods</li> <li>Types of hand signals</li> <li>Hand signal compatibility</li> <li>Verbal instructions</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Multiple signalling</li> <li>Radio protocol</li> <li>Codes of practice</li> </ul>
<ul style="list-style-type: none"> <li>Lift various suspended loads from given locations</li> </ul>	<ul style="list-style-type: none"> <li>Load charts</li> <li>Stability</li> <li>Trial lifts</li> <li>Ground conditions</li> <li>Lifting controls</li> <li>RCI/LMI information</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Environmental conditions</li> <li>Load stability/security</li> <li>De-rating requirements</li> <li>Following instructions</li> </ul>
<ul style="list-style-type: none"> <li>Travel with and place various suspended loads at given locations</li> </ul>	<ul style="list-style-type: none"> <li>Effects of swinging loads</li> <li>De-rating of slung loads</li> <li>Condition of travel routes</li> <li>Load size</li> </ul>	<ul style="list-style-type: none"> <li>Travel configuration</li> <li>Proximity hazards</li> <li>Regulations/guidance</li> <li>Environmental conditions</li> </ul>
<ul style="list-style-type: none"> <li>Minimise the swinging of loads during travel</li> </ul>	<ul style="list-style-type: none"> <li>Travel routes</li> <li>Accessory types</li> <li>Poor/uneven ground</li> <li>Slopes/inclines</li> <li>Effects of swinging loads</li> </ul>	<ul style="list-style-type: none"> <li>Travel speeds</li> <li>Stability</li> <li>Observation/anticipation</li> <li>Load characteristics</li> </ul>
<ul style="list-style-type: none"> <li>List different types of lifting accessories and attachments compatible with suspended loads and telescopic handlers</li> </ul>	<ul style="list-style-type: none"> <li>Function</li> <li>Application</li> <li>Load weight</li> <li>SWL/WLL</li> <li>De-rating</li> </ul>	<ul style="list-style-type: none"> <li>Load characteristics (loose/bundled/fluid etc.)</li> <li>Accessory compatibility</li> <li>Slings angles</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Explain the correct and incorrect methods for attaching suspended loads to the machine</li> </ul>	<ul style="list-style-type: none"> <li>• Accessory types</li> <li>• Accessory characteristics</li> <li>• Function of accessory components</li> <li>• Load and lifting accessory protection</li> <li>• Load lifting points</li> <li>• Out-of-balance loads</li> </ul>	<ul style="list-style-type: none"> <li>• Requirements of regulations and guidance</li> <li>• SWL/WLL</li> <li>• Correct attaching and slinging methods</li> <li>• Incorrect attaching and slinging methods</li> <li>• Effects of incorrect methods of attachments</li> </ul>
<ul style="list-style-type: none"> <li>• Explain how stability is affected by travelling with both a raised boom and a suspended load</li> </ul>	<ul style="list-style-type: none"> <li>• Centres of gravity</li> <li>• Swinging loads</li> <li>• Environmental factors</li> </ul>	<ul style="list-style-type: none"> <li>• Ground conditions</li> <li>• Slopes/inclines</li> <li>• Travel speeds</li> </ul>
<ul style="list-style-type: none"> <li>• Explain visibility issues and restrictions with suspended loads</li> </ul>	<ul style="list-style-type: none"> <li>• Load size</li> <li>• Load swing</li> <li>• Carrying height of load</li> <li>• Maintaining vision with slinger/signallers</li> </ul>	<ul style="list-style-type: none"> <li>• Direction of travel</li> <li>• Assistance for travelling</li> <li>• Typical proximity hazards</li> <li>• Ground type/terrain</li> </ul>
<ul style="list-style-type: none"> <li>• Place loads out of sight of the operator</li> </ul>	<ul style="list-style-type: none"> <li>• Communication/signalling</li> <li>• Signaller positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Stability</li> <li>• Proximity hazards</li> </ul>
<ul style="list-style-type: none"> <li>• Maintain safe working situations</li> </ul>	<ul style="list-style-type: none"> <li>• Stability</li> <li>• Load security</li> </ul>	<ul style="list-style-type: none"> <li>• Hazards</li> </ul>
<ul style="list-style-type: none"> <li>• Maintain safe and tidy working areas</li> </ul>	<ul style="list-style-type: none"> <li>• Specification</li> <li>• Stacking</li> </ul>	<ul style="list-style-type: none"> <li>• Load positioning / storage</li> </ul>
<ul style="list-style-type: none"> <li>• Carry out shut down and securing procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Shut down procedures</li> <li>• Security</li> </ul>	<ul style="list-style-type: none"> <li>• Parking and positioning</li> </ul>
<ul style="list-style-type: none"> <li>• Explain the loading and unloading procedures for machine transporting</li> </ul>	<ul style="list-style-type: none"> <li>• Compatibility</li> <li>• Positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Types of transporter</li> <li>• Security</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

### Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>Quick-hitch systems</li> </ul>	<ul style="list-style-type: none"> <li>Manufacturer's procedures must be strictly adhered to. Security of attachments to be fully checked prior to use</li> </ul>
<ul style="list-style-type: none"> <li>Stability with a raised boom on uneven ground</li> </ul>	<ul style="list-style-type: none"> <li>Checking ground suitability prior to raising loads. Travelling and manoeuvring with raised loads. Appreciation of centres of gravity</li> </ul>
<ul style="list-style-type: none"> <li>Manoeuvring and reversing</li> </ul>	<ul style="list-style-type: none"> <li>Reversing procedures and tele-handlers danger areas of limited or no vision Inc. blind spots and vision aids</li> </ul>
<ul style="list-style-type: none"> <li>Lift plans / Method statements</li> </ul>	<ul style="list-style-type: none"> <li>Lift plan types and requirements and the need for lift planning, particularly where suspended loads are involved. Adherence to the lift plan as constructed by a competent person</li> </ul>
<ul style="list-style-type: none"> <li>Suspended loads during travel</li> </ul>	<ul style="list-style-type: none"> <li>The effects and consequences of load swing when travelling with a suspended load, particularly on inclines and windy weather Inc. knowledge of wind speed limits</li> </ul>
<ul style="list-style-type: none"> <li>Suspended loads and proximity hazards</li> </ul>	<ul style="list-style-type: none"> <li>Issues relating to travelling with raised boom and operator's limitation of vision when travelling with raised boom and suspended large area loads</li> </ul>
<ul style="list-style-type: none"> <li>Proximity of the slinger/signaller</li> </ul>	<ul style="list-style-type: none"> <li>Ensuring that the slinger/signaller is clear of the machine's path during travel at all times, maintaining full vision of the s/s and stopping immediately if sight of them is lost</li> </ul>

### Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> <li>Novice operators with no industry or machine experience</li> </ul>	35 (49*)
<ul style="list-style-type: none"> <li>Novice operators with industry experience but no machine experience</li> </ul>	28 (42*)
<ul style="list-style-type: none"> <li>Operators with unrelated (forklift) machine experience</li> </ul>	21 (27*)
<ul style="list-style-type: none"> <li>Operators with similar (forklift) machine experience</li> </ul>	14 (21*)
All candidates must have received the equivalent to 7 hours of site safety and induction training	

***To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category***

2 candidates : 1 machine: 1 instructor

***\* Includes training for endorsement E.***

### Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• Suitable telescopic handler that meets current legislation</li> <li>• Operator's manual for the machine(s)</li> <li>• Various sized loads, with and without a pallet base</li> <li>• Loading out towers that conform to current legislation</li> <li>• Sufficient area of ground for driving</li> <li>• Slopes and rough terrain</li> <li>• Vehicle / trailer with bed able to accommodate adjacent loads</li> <li>• Suitable lifting attachments for operation with suspended loads</li> </ul>	<ul style="list-style-type: none"> <li>• PUWER 1998 Regulations</li> <li>• LOLER 1998 Regulations</li> <li>• HSE GS6</li> <li>• ACOP L117</li> <li>• Operator's Manual</li> <li>• Specifications for types of telescopic handlers</li> <li>• Copies of various types of load rating charts</li> <li>• Strategic Forum Construction Plant Safety Group – Safe use of Telehandlers (<a href="http://www.cpa.uk.net">www.cpa.uk.net</a>)</li> </ul>
<b>PLUS</b>	<b>PLUS</b>
<ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>• Suitable room for theory training purposes</li> <li>• Welfare and rest facilities during training</li> </ul>

### Training attributes

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• Construction or related experience</li> <li>• Driving licence or driving experience</li> <li>• Able to calculate basic formula</li> <li>• Able to record basic details</li> <li>• Understand basic written words</li> </ul>	<ul style="list-style-type: none"> <li>• Have received site safety and induction training</li> <li>• Possess good eye and hand co-ordination</li> <li>• Have mechanical appreciation</li> </ul>

### Fitness for work

The Strategic Forum for Construction Plant Safety Group has been working in conjunction with the Health and Safety Executive, UK Contractors Group, Constructing Better Health, occupational health providers and others to draw up new guidance aimed specifically at the management of medical fitness issues for persons operating plant. The Good Practice Guide is downloadable free of charge from [www.cpa.uk.net/sfpsg/#medicalfitness](http://www.cpa.uk.net/sfpsg/#medicalfitness)

### Category

#### Category description and types

CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have varying uses within industry and used with many attachments, for CPCS training and assessment standards, the descriptions reflect basic core use. Endorsements are sub-categories that reflect the variations for this category by chassis type. This category has five endorsements.

To identify a machine within this category, a typical telescopic handler would normally have the listed features and be used within the described characteristics.

Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Multi axled wheeled chassis containing a side-mounted operating position; power, hydraulic and electrical units, and counterweight components</li> <li>• Extending multi-sectioned boom with a tilting carriage allowing attachments to be fitted, all hydraulically operated</li> </ul>	<ul style="list-style-type: none"> <li>• Able to travel in forward and reverse and change direction during travel with most types having all-wheel steering and drive</li> <li>• Most types can travel on uneven and loose ground and slopes</li> <li>• Can carry out lifting, transfer and placing duties with loads mounted on forks, from ground level to maximum operating height and reach by raising and extending the boom</li> <li>• Can carry out lifting, transfer and placing duties with loads suspended from the carriage and connected to the machine using a lifting accessory</li> </ul>

### Endorsements

#### Endorsement characteristics

- **Endorsement A:** Industrial Telescopic – Restricted (mainly) to hard-surface use, with operating heights up to 5 metres
- **Endorsement B:** Up to 9 metres – multi terrain with operating height limited to 9 metres and usually non-stabiliser equipped
- **Endorsement C:** All sizes excluding 360 slew – multi terrain with operating height unlimited and equipped with front-located stabilisers
- **Endorsement E:** Suspended Loads (non-rough terrain) - the carrying of loads suspended from a variety of lifting accessories or suitable attachment, on level and even surfaces

## Outcomes

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Through a combination of targeted training and experience, an individual with the reach truck will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> <li>Undertake all pre-use checks</li> <li>Explain need and function of appropriate documentation</li> </ul>
<b>Travelling and manoeuvring</b>	<ul style="list-style-type: none"> <li>Configure and set for travel</li> <li>Travel to and manoeuvre in confined spaces (with and without loads)</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Configure and ready for lifting and transferring duties</li> <li>Explain actions required for hazards, underground and overhead services</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Lift and remove various loads up to the full working height of the forklift</li> <li>Transfer and place loads accurately at given locations</li> <li>Place and remove loads from a vehicle</li> <li>Maintain safe working situations</li> </ul>
<b>Completing work</b>	<ul style="list-style-type: none"> <li>Maintain safe and tidy working areas</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> <li>Explain the loading and unloading procedures for machine transporting</li> </ul>

## Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Reporting structures</li> <li>Lifelong skills</li> <li>Working practices</li> <li>Social responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Health and Safety at Work Act</li> <li>Environmental issues</li> <li>Other trades</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing types</li> <li>Functions and applications</li> <li>Power units</li> <li>Hydraulic systems</li> <li>ROPS / FOPS</li> <li></li> </ul>	<ul style="list-style-type: none"> <li>Stability</li> <li>Mast functions</li> <li>Forks</li> <li>Counterweights</li> <li>Chassis / steering / tyres</li> <li>Attachments</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PPE</li> <li>Rating Plates</li> <li>Codes of Practice</li> <li>Site plans / drawings</li> </ul>	<ul style="list-style-type: none"> <li>Method statements</li> <li>Lifting requirements and limitations</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Explain need and function of appropriate documentation</li> </ul>	<ul style="list-style-type: none"> <li>Certification</li> </ul>	
<ul style="list-style-type: none"> <li>Configure and set for travel</li> </ul>	<ul style="list-style-type: none"> <li>Driving controls</li> <li>Attachments</li> <li>Driving position</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Road Traffic Act</li> <li>Security</li> </ul>
<ul style="list-style-type: none"> <li>Travel to and manoeuvre in confined spaces (with and without loads)</li> </ul>	<ul style="list-style-type: none"> <li>Driving controls</li> <li>Ground conditions</li> <li>Traction / aids</li> <li>Inclines and techniques</li> <li>Working area / routes</li> </ul>	<ul style="list-style-type: none"> <li>Site travel</li> <li>Hazards</li> <li>Environment protection / minimise damage</li> <li>Load protection</li> </ul>

## Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Configure and ready for lifting and transferring duties</li> </ul>	<ul style="list-style-type: none"> <li>• Positioning / planning</li> <li>• Required configuration</li> <li>• Lifting controls</li> <li>• Machine capacity</li> <li>• De-rating</li> <li>• Load indicators</li> <li>• Load charts</li> </ul>	<ul style="list-style-type: none"> <li>• Load centres / C of G</li> <li>• Environmental conditions</li> <li>• Levelling</li> <li>• Site markings</li> <li>• Fork spacing</li> <li>• Hazards</li> </ul>
<ul style="list-style-type: none"> <li>• Explain actions required for hazards, underground and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting procedures for damage to services</li> <li>• Warning / identification systems</li> </ul>	<ul style="list-style-type: none"> <li>• Types of typical services</li> <li>• Minimum distances and clearances</li> </ul>
<ul style="list-style-type: none"> <li>• Lift and remove various loads up to the full working height of the forklift</li> </ul>	<ul style="list-style-type: none"> <li>• Signalling procedures</li> <li>• Techniques</li> <li>• Hazards</li> <li>• Types of loads</li> <li>• Visibility</li> </ul>	<ul style="list-style-type: none"> <li>• Load stability / security</li> <li>• Machine stability / mast reach</li> <li>• Environmental conditions</li> </ul>
<ul style="list-style-type: none"> <li>• Transfer and place loads accurately at given locations</li> </ul>	<ul style="list-style-type: none"> <li>• Configuration</li> <li>• Ground conditions / hazards</li> <li>• Visibility</li> <li>• Load security / travel position</li> <li>• Stability</li> </ul>	<ul style="list-style-type: none"> <li>• Signalling / following instructions</li> <li>• Loading towers / platforms / racking / stacking</li> <li>• Protection of structures / loads</li> </ul>
<ul style="list-style-type: none"> <li>• Place and remove loads from a vehicle</li> </ul>	<ul style="list-style-type: none"> <li>• Preparation</li> <li>• Types of trailer / transporter</li> <li>• Transporter capacities</li> <li>• Hazards</li> </ul>	<ul style="list-style-type: none"> <li>• Procedures / weight distribution</li> <li>• Materials / vehicle protection</li> <li>• Travel routes</li> <li>• Undercutting</li> </ul>
<ul style="list-style-type: none"> <li>• Maintain safe working situations</li> </ul>	<ul style="list-style-type: none"> <li>• Stability</li> <li>• Load security</li> </ul>	<ul style="list-style-type: none"> <li>• Hazards</li> </ul>
<ul style="list-style-type: none"> <li>• Maintain safe and tidy working areas</li> </ul>	<ul style="list-style-type: none"> <li>• Specification</li> <li>• Load positioning / storage</li> </ul>	<ul style="list-style-type: none"> <li>• Stacking</li> </ul>
<ul style="list-style-type: none"> <li>• Carry out shut down and securing procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Shut down procedures</li> <li>• Security</li> </ul>	<ul style="list-style-type: none"> <li>• Parking and positioning</li> </ul>
<ul style="list-style-type: none"> <li>• Explain the loading and unloading procedures for machine transporting</li> </ul>	<ul style="list-style-type: none"> <li>• Compatibility</li> <li>• Positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Types of transporter</li> <li>• Security</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

## Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>Travel speeds</li> </ul>	<ul style="list-style-type: none"> <li>Appropriate speed in proportion to the conditions, particularly when carrying a load. Travel speeds around corners and on uneven ground. Appreciation of centres of gravity. Mandatory wearing of seat belts</li> </ul>
<ul style="list-style-type: none"> <li>Travelling on inclines</li> </ul>	<ul style="list-style-type: none"> <li>Understanding of travelling and steering up, down and across inclines</li> </ul>
<ul style="list-style-type: none"> <li>Weight transfer</li> </ul>	<ul style="list-style-type: none"> <li>Reduced carrying capacity with extending masts</li> </ul>

## Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> <li>Novice operators with no industry or machine experience</li> </ul>	35
<ul style="list-style-type: none"> <li>Novice operators with industry experience but no machine experience</li> </ul>	28
<ul style="list-style-type: none"> <li>Operators with unrelated (forklift) machine experience</li> </ul>	14
<ul style="list-style-type: none"> <li>Operators with similar (forklift) machine experience</li> </ul>	7
All candidates must have received the equivalent to 7 hours of site safety and induction training	

***To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category***

3 candidates : 1 machine: 1 instructor

## Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• Suitable reach truck that meets current legislation</li> <li>• Operator's manual for the machine(s)</li> <li>• Various sized loads, with and without a pallet base</li> <li>• Loading out towers / platforms or racking that conforms to current legislation</li> <li>• Sufficient area of ground for driving</li> <li>• Vehicle / trailer with bed able to accommodate adjacent loads</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>• PUWER 1998 Regulations</li> <li>• LOLER 1998 Regulations</li> <li>• HSE GS6</li> <li>• ACOP</li> <li>• Operator's Manual</li> <li>• Specifications for types of industrial type forklifts</li> <li>• Copies of various types of load rating charts</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable room for theory training purposes</li> <li>• Welfare and rest facilities during training.</li> </ul>

## Category

Category description and types	
<p>CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have varying uses within industry and used with many attachments, for CPCS training and assessment standards, the descriptions reflect basic core use.</p> <p>To identify a machine within this category, a typical reach truck would normally have the listed features and be used within the described characteristics.</p>	
Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Wheel mounted multi-axled chassis containing an offset operating position; power, hydraulic and electrical units and counterweight components</li> <li>• Front-mounted multi-sectioned tiltable and extendable mast with raisable fork carriage, all hydraulically operated</li> <li>• Chassis frame with load-carrying capacity</li> </ul>	<ul style="list-style-type: none"> <li>• Able to travel in forward and reverse and change direction during travel with most types having rear steering</li> <li>• Limited to travelling on smooth surfaces and some incline-driving capability</li> <li>• Can carry out lifting, transfer and placing duties with loads mounted on forks or bed, from ground level to maximum operating height by raising the carriage</li> </ul>

## Outcomes

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Through a combination of targeted training and experience, an individual with the grader will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> <li>Undertake all pre-use checks</li> </ul>
<b>Travelling and manoeuvring</b>	<ul style="list-style-type: none"> <li>Configure and set for site travel</li> <li>Travel over rough, undulating ground and level surfaces</li> <li>Manoeuvre in confined spaces</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Configure and set for general grading and side-casting duties</li> <li>Configure and set for high bank work</li> <li>Explain actions required for hazards, underground and overhead services</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Grade, spread and level ground and materials</li> <li>Produce even finishes</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> <li>Explain the loading and unloading procedures for machine transporting</li> </ul>

## Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Reporting structures</li> <li>Lifelong skills</li> <li>Working practices</li> <li>Social responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Health and Safety at Work Act</li> <li>Environmental issues</li> <li>Other trades</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing types</li> <li>Functions and applications</li> <li>Power units</li> <li>Hydraulic systems</li> <li>Transmissions</li> <li>Chassis / wheels</li> </ul>	<ul style="list-style-type: none"> <li>Stability / ground pressure</li> <li>Mouldboards</li> <li>Steering systems</li> <li>Attachments</li> <li>Safety systems</li> <li>ROPS / FOPS</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PPE</li> <li>Codes of Practice</li> <li>Site plans / drawings</li> </ul>	<ul style="list-style-type: none"> <li>Method statements</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Configure and set for site travel</li> </ul>	<ul style="list-style-type: none"> <li>Steering controls</li> <li>Attachments / accessories</li> <li>Travel position</li> </ul>	<ul style="list-style-type: none"> <li>Site travel</li> <li>Visibility</li> <li>Road travel / Road Traffic Act</li> </ul>
<ul style="list-style-type: none"> <li>Travel over rough, undulating ground and level surfaces</li> </ul>	<ul style="list-style-type: none"> <li>Travel routes</li> <li>Slopes / inclines</li> <li>Direction of travel</li> <li>Traction</li> <li>Ground conditions</li> </ul>	<ul style="list-style-type: none"> <li>Hazards</li> <li>Working area</li> <li>Environment protection / minimise damage</li> </ul>
<ul style="list-style-type: none"> <li>Manoeuvre in confined spaces</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Limitations of vision</li> <li>Hazards</li> <li>Height restrictions</li> </ul>	<ul style="list-style-type: none"> <li>Environmental / noise / fumes</li> <li>Protection of ground / tight turns</li> </ul>

## Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Configure and set for general grading and side-casting duties</li> </ul>	<ul style="list-style-type: none"> <li>• Type of ground</li> <li>• Required specification</li> <li>• Mouldboard size / type</li> </ul>	<ul style="list-style-type: none"> <li>• Machine positioning</li> <li>• Spoil placing</li> <li>• Mouldboard set-up</li> <li>• Spoil segregation</li> </ul>
<ul style="list-style-type: none"> <li>• Configure and set for high bank work</li> </ul>	<ul style="list-style-type: none"> <li>• Mouldboard angles</li> <li>• Required specification</li> <li>• Mouldboard controls</li> </ul>	<ul style="list-style-type: none"> <li>• Spoil placing</li> <li>• Visibility</li> <li>• Site markings</li> </ul>
<ul style="list-style-type: none"> <li>• Explain actions required for hazards, underground and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>• Types of typical services</li> <li>• Reporting procedures for damage to services</li> </ul>	<ul style="list-style-type: none"> <li>• Warning / identification systems</li> <li>• Minimum distances and clearances</li> </ul>
<ul style="list-style-type: none"> <li>• Grade, spread and level ground and materials</li> </ul>	<ul style="list-style-type: none"> <li>• Types of materials</li> <li>• Spoil placing</li> <li>• Machine positioning</li> <li>• Angles of repose</li> <li>• Working on inclines</li> <li>• Traction</li> <li>• Working speeds</li> <li>• Cleaning working area</li> <li>• Stability</li> <li>• Other vehicles</li> <li>• Mouldboard angles</li> </ul>	<ul style="list-style-type: none"> <li>• Steering</li> <li>• Environmental factors</li> <li>• Feathering</li> <li>• Productive cycles of operation</li> <li>• Measuring depths and lines</li> <li>• Side-casting, spreading and windrow techniques (side-reaching, straddling etc.)</li> </ul>
<ul style="list-style-type: none"> <li>• Produce even finishes</li> </ul>	<ul style="list-style-type: none"> <li>• Required specification</li> <li>• Working speeds</li> </ul>	<ul style="list-style-type: none"> <li>• Mouldboard angles</li> <li>• Steering</li> </ul>
<ul style="list-style-type: none"> <li>• Carry out shut down and securing procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Shut down procedures</li> <li>• Security</li> </ul>	<ul style="list-style-type: none"> <li>• Parking and positioning</li> </ul>
<ul style="list-style-type: none"> <li>• Explain the loading and unloading procedures for machine transporting</li> </ul>	<ul style="list-style-type: none"> <li>• Compatibility</li> <li>• Positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Security</li> <li>• Types of transporter</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

## Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>• Visibility prior to and during reversing</li> </ul>	<ul style="list-style-type: none"> <li>• Constant and full visibility before and during manoeuvring and types of visibility aids and their limitations and weaknesses</li> </ul>

## Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> <li>• Novice operators with no industry or machine experience</li> </ul>	70
<ul style="list-style-type: none"> <li>• Novice operators with industry experience but no machine experience</li> </ul>	62
<ul style="list-style-type: none"> <li>• Operators with unrelated (earthmoving) machine experience</li> </ul>	42
<ul style="list-style-type: none"> <li>• Operators with similar (earthmoving) machine experience</li> </ul>	28
All candidates must have received the equivalent to 7 hours of site safety and induction training	

***To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category***

4 candidates : 2 machine: 1 instructor

## Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• Grader that meets current legislation</li> <li>• Operator's manual for the machine(s)</li> <li>• Sufficient area of ground suitable for grading</li> <li>• Stockpiles of materials</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>• PUWER 1998 Regulations</li> <li>• HSE GS6</li> <li>• Operator's Manual</li> <li>• Specifications for types of graders</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable room for theory training purposes</li> <li>• Welfare and rest facilities during training.</li> </ul>

## Category

### Category description and types

CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have varying uses within industry and used with many attachments, for CPCS training and assessment standards, the descriptions reflect basic core use.

To identify a machine within this category, a typical grader would normally have the listed features and be used within the described characteristics.

Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Multi-axled chassis containing a centrally mounted operating position, power, transmission, hydraulic and electrical units</li> <li>• Front steering system with axle-angle capability</li> <li>• Centrally mounted fully adjustable and removable mouldboard, hydraulically operated</li> </ul>	<ul style="list-style-type: none"> <li>• Able to travel in forward and reverse and change direction during travel steering the front wheels</li> <li>• Can travel and operate on uneven and loose ground and slopes</li> <li>• Carry out grading and forming duties in a linear motion using mouldboard within the confines of the operating depth and height</li> <li>• Can carry out ground-ripping duties with rear-mounted tines (optional)</li> </ul>

## Outcomes

Through a combination of targeted training and experience, an individual with the hoist will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as an equipment operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name the types of hoists, and explain the purpose of the principal components, basic construction, controls and terminology of each</li> <li>Conform with manufacturer's requirements as per the operator's manual, other types of information sources and relevant regulations and guidance</li> <li>Explain hoist working limitations</li> <li>Carry out all pre-use checks</li> <li>Undertake running checks, including gates and safety devices, before placing into service</li> <li>Check the stability, systems and alignment and ensure the hoist is safe to use</li> <li>Check that hoist-way protection is in position before use</li> <li>Check the capacity of the hoist will accommodate expected loads, equipment and/or passengers</li> <li>Carry out full emergency lowering and evacuation procedure (Endorsements B &amp; D)</li> <li>Explain precautions to be taken for overhead services and other proximity hazards</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Prepare the hoist for the required load(s) and/or passengers</li> <li>Identify suitability and integrity of loads for transporting and compatibility with the cage</li> <li>Load and unload a range of materials using suitable handling methods for each load type</li> <li>Explain the loading and unloading procedures for varying types of loads</li> <li>Explain the procedures and actions to be taken when transporting people (Endorsements B &amp; D)</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Operate the hoist to the end of travel and to various landing levels, both loaded and unloaded</li> <li>Comply with signals and instructions</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>Place the hoist in an out-of-service condition, isolate and secure</li> </ul>

## Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as an equipment operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Reporting structures</li> <li>Lifelong skills</li> <li>Social responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Health and Safety at Work Act</li> <li>Environmental issues</li> <li>Other trades</li> </ul>
<ul style="list-style-type: none"> <li>Name the types of hoists, and explain the purpose of principal components, the basic construction, controls and terminology of each</li> </ul>	<ul style="list-style-type: none"> <li>Differing types</li> <li>Functions and applications</li> <li>Power units</li> <li>Lifting / lowering systems</li> <li>Platforms</li> </ul>	<ul style="list-style-type: none"> <li>Stability / base ground pressure</li> <li>Erection procedures</li> <li>Safety systems</li> <li>Environmental factors</li> <li>Positioning</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's manual, other types of information source and relevant regulations and guidance</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PPE</li> <li>Codes of Practice</li> <li>Site plans / drawings</li> </ul>	<ul style="list-style-type: none"> <li>Method statements</li> <li>Harnessing</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> </ul>
<ul style="list-style-type: none"> <li>Explain hoist working limitations</li> </ul>	<ul style="list-style-type: none"> <li>Types</li> <li>Speeds</li> <li>Load capacities</li> </ul>	<ul style="list-style-type: none"> <li>Types of loads</li> <li>Environmental factors</li> <li>High wind speeds</li> </ul>
<ul style="list-style-type: none"> <li>Carry out all pre-use checks</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Undertake running checks, including gates and safety devices, before placing into service</li> </ul>	<ul style="list-style-type: none"> <li>Types and frequency of checks</li> <li>Limits of service</li> <li>Specification</li> <li>Access / visibility</li> </ul>	<ul style="list-style-type: none"> <li>Types of safety devices</li> <li>Methods / procedures</li> <li>Functional operation against specifications</li> <li>Hazards</li> <li>Purpose of all checks</li> </ul>
<ul style="list-style-type: none"> <li>Check the stability, systems and alignment and ensure the hoist is safe to use</li> </ul>	<ul style="list-style-type: none"> <li>Specification</li> <li>Hazards</li> <li>Stability / methods</li> <li>Security / segregation</li> <li>Methods of checks e.g. visual, audible, feel etc.</li> </ul>	<ul style="list-style-type: none"> <li>Base / ground / supports</li> <li>Securing methods / mechanisms</li> <li>Tools / equipment</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Check that hoist-way protection is in position before use</li> </ul>	<ul style="list-style-type: none"> <li>Types</li> <li>Specification</li> <li>Access / visibility</li> </ul>	<ul style="list-style-type: none"> <li>Methods / procedures</li> <li>Hazards</li> <li>Purpose of hoist-way checks</li> </ul>
<ul style="list-style-type: none"> <li>Check the capacity of the hoist will accommodate expected loads, equipment and/or passengers</li> </ul>	<ul style="list-style-type: none"> <li>Specification / load ratings</li> <li>Estimating loads</li> <li>Typical loads for each type</li> </ul>	<ul style="list-style-type: none"> <li>Load charts / documents</li> <li>Notices / decals</li> <li>Loading equipment</li> </ul>
<ul style="list-style-type: none"> <li>Carry out full emergency lowering and evacuation procedures (Endorsements B &amp; D)</li> </ul>	<ul style="list-style-type: none"> <li>Procedures</li> <li>Planning</li> <li>Egress and other hazards</li> <li>Working at height</li> <li>Communication</li> </ul>	<ul style="list-style-type: none"> <li>Methods of evacuation</li> <li>Notification procedures/reporting</li> </ul>
<ul style="list-style-type: none"> <li>Explain precautions to be taken for overhead services and other proximity hazards</li> </ul>	<ul style="list-style-type: none"> <li>Types of typical services (electrical / electronic etc.)</li> <li>Minimum distances and clearances</li> </ul>	<ul style="list-style-type: none"> <li>Reporting procedures for damage to services</li> </ul>
<ul style="list-style-type: none"> <li>Prepare the hoist for the required load(s) and/or passengers</li> </ul>	<ul style="list-style-type: none"> <li>Load capacity</li> <li>Destinations</li> <li>Observation</li> <li>Loading sequences</li> </ul>	<ul style="list-style-type: none"> <li>Load distribution</li> <li>Access / egress</li> <li>Passenger / load security positioning</li> </ul>
<ul style="list-style-type: none"> <li>Identify suitability and integrity of loads for transporting and compatibility with the cage</li> </ul>	<ul style="list-style-type: none"> <li>Specifications</li> <li>Typical types of loads</li> <li>Load sizes</li> <li>Nature of load for transporting e.g. fluid, loose etc.</li> <li>Cage loadings and maximum weights</li> </ul>	<ul style="list-style-type: none"> <li>Legislation</li> <li>Hazards</li> <li>Load storage</li> <li>Estimating load weights</li> </ul>
<ul style="list-style-type: none"> <li>Load and unload a range of materials using suitable handling methods for each load type</li> </ul>	<ul style="list-style-type: none"> <li>Handling techniques</li> <li>Nature of load for handling e.g. weight, shape, size,</li> <li>Specific/specialist PPE for handling loads</li> <li>Additional load</li> <li>Load positioning in platform,</li> <li>Weight distribution</li> <li>Sequence of loading multiple loads</li> </ul>	<ul style="list-style-type: none"> <li>Limitations of manual handling of loads</li> <li>Types of and using loading devices</li> <li>Weight of loading devices</li> <li>Slips, trips and falls</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Explain the loading and unloading procedures for varying types of loads</li> </ul>	<ul style="list-style-type: none"> <li>• Methods of movement</li> <li>• Lifting equipment/loading devices</li> <li>• Typical types of loads</li> <li>• Fluid loads</li> <li>• Load security</li> </ul>	<ul style="list-style-type: none"> <li>• Weights, shapes and sizes</li> <li>• Slips trips and falls</li> <li>• Cage load ratings</li> <li>• Weight distribution</li> </ul>
<ul style="list-style-type: none"> <li>• Explain the procedures and actions to be taken when transporting people (endorsements B &amp; D)</li> </ul>	<ul style="list-style-type: none"> <li>• Instructions/relaying of information</li> <li>• Entry and exit procedures</li> <li>• Emergency procedures</li> <li>• Mixing of passengers and loads</li> <li>• Slips, trips and falls</li> </ul>	<ul style="list-style-type: none"> <li>• Positioning of passengers</li> <li>• Checks to ensure passengers comfortable with being at height/in an enclosed area</li> <li>• Cage carrying capability / maximum numbers for transporting</li> </ul>
<ul style="list-style-type: none"> <li>• Operate the hoist to the end of travel and to various landing levels, both loaded and unloaded</li> </ul>	<ul style="list-style-type: none"> <li>• Controls</li> <li>• Visibility</li> <li>• Hazards</li> <li>• Observation</li> <li>• Signalling / Communication</li> </ul>	<ul style="list-style-type: none"> <li>• Emergency procedures</li> <li>• Communication (with passengers)</li> <li>• Environmental considerations</li> </ul>
<ul style="list-style-type: none"> <li>• Comply with signals and instructions</li> </ul>	<ul style="list-style-type: none"> <li>• Types</li> <li>• Responding</li> </ul>	<ul style="list-style-type: none"> <li>• Methods</li> </ul>
<ul style="list-style-type: none"> <li>• Place the hoist in an out-of-service condition, isolate and secure</li> </ul>	<ul style="list-style-type: none"> <li>• Shut down procedures</li> <li>• Security</li> </ul>	<ul style="list-style-type: none"> <li>• Parking and positioning</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

## Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>Stability</li> </ul>	<ul style="list-style-type: none"> <li>Manufacturers' guidance followed with regards to ensuring hoist-way is to specification and clear of hazards</li> </ul>
<ul style="list-style-type: none"> <li>Familiarisation</li> </ul>	<ul style="list-style-type: none"> <li>The need to be fully familiarised with each machine make and/or model type before operating any hoist</li> </ul>
<ul style="list-style-type: none"> <li>Transporting long objects</li> </ul>	<ul style="list-style-type: none"> <li>Correct procedures for the carrying of long objects in the cage and the potential risks where objects extrude beyond the cage boundary.</li> </ul>
<ul style="list-style-type: none"> <li>Carrying of passengers (goods hoists)</li> </ul>	<ul style="list-style-type: none"> <li>That no passengers (including the operator) can travel in the cage of a goods only hoist – entry only for the purposes of loading/unloading</li> </ul>
<ul style="list-style-type: none"> <li>Carrying of passengers (approved types)</li> </ul>	<ul style="list-style-type: none"> <li>Procedures and protocols of carrying passengers including instructions to be given to passengers for positioning and emergencies</li> </ul>
<ul style="list-style-type: none"> <li>Overloading</li> </ul>	<ul style="list-style-type: none"> <li>That factors such as additional equipment, loading devices, uneven weight distribution etc. which can easily overload the cage</li> </ul>
<ul style="list-style-type: none"> <li>Emergency lowering</li> </ul>	<ul style="list-style-type: none"> <li>That the procedures must be known before placing into service and if enacting an emergency, ensure that the nearest landing level is used (Endorsements B &amp; D only)</li> </ul>

## Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> <li>Novice operators with no industry or machine experience</li> </ul>	21
<ul style="list-style-type: none"> <li>Novice operators with industry experience but no machine experience</li> </ul>	14
<ul style="list-style-type: none"> <li>Operators with unrelated (access) machine experience</li> </ul>	14
<ul style="list-style-type: none"> <li>Operators with similar (access) machine experience</li> </ul>	7
All candidates must have received the equivalent to 7 hours of site safety and induction training	

***To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category***

4 candidates : 1 machine: 1 instructor

## Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• Hoist that meets current legislation (thorough examination, fit for purpose etc.)</li> <li>• Operator's manual for the machine(s)</li> <li>• Various and varying loads</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>• BS 7212</li> <li>• PUWER 1998 Regulations</li> <li>• LOLER 1998 Regulations</li> <li>• HSE GS6</li> <li>• Operator's Manual</li> <li>• Specifications for types of hoists</li> <li>• Energy utility Networks – Look up, look out</li> <li>• EN12158, EN12159 &amp; PR/EN16719</li> <li>• Industry-derived guidance (<a href="http://www.cpa.uk.net">www.cpa.uk.net</a>)</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable room for theory training purposes</li> <li>• Welfare and rest facilities during training</li> </ul>

## Category

### Category description and types

CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have varying uses within industry and used with many attachments, for CPCS training and assessment standards, the descriptions reflect basic core use. Endorsements are sub-categories that reflect the variations for this category by chassis type. This category has four endorsements.

To identify a machine within this category, a typical hoist would normally have the listed features and be used within the described characteristics.

Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Load carrying platform or cage running vertically (or near to) on a pre-constructed temporary mast (hoist-way)</li> <li>• Platform will be partially or fully enclosed</li> <li>• The hoist may be free-standing or fixed to a structure</li> </ul>	<ul style="list-style-type: none"> <li>• A temporary lifting machine serving landing levels on sites of engineering and construction with a platform, cage or other load carrying device, which is guided and operated by a dedicated authorised operator (<i>source BS 7212</i>)</li> <li>• Transports loads and/or passengers vertically or near vertically to one or more landing points adjacent or within a structure (<b>Note:</b> Work cannot be undertaken from the platform)</li> </ul>

## Endorsements

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### Endorsement characteristics

- **Endorsement A:** Rack and pinion goods – platform contains the power unit with the operating controls located at a ground station, and can only transport goods
- **Endorsement B:** Passenger / goods combined – platform contains the power unit and operating controls and can transport a combination of goods and/or passengers
- **Endorsement C:** Rope operated goods – platform suspended by a hoist rope winched by an external power unit for which can be an inclined unit, and can only transport goods
- **Endorsement D:** Transport platform – usually partially opened platform with overhead fall protection (FOPS) and contains the power unit and operating controls on using a rack and pinion single or twin masts, and can transport a combination of goods and/or passengers

**Note:** A description of the various types of hoist and their construction are contained within PR/EN16719

### Outcomes

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Through a combination of targeted training and experience, an individual with the wheeled loading shovel will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> <li>Undertake all pre-use checks</li> </ul>
<b>Travelling and manoeuvring</b>	<ul style="list-style-type: none"> <li>Configure and set for site and highway travel</li> <li>Travel over rough, undulating ground, substantial inclines and level surfaces; laden and unladen</li> <li>Manoeuvre in confined spaces</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Configure and set for extraction and loading duties</li> <li>Explain actions required for hazards, underground and overhead services</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Extract differing types of materials from stockpiles and other sources</li> <li>Form stockpiles of segregated materials and construct (temporary) ramps</li> <li>Sort and place materials into transporting vehicles and hoppers</li> <li>Spread and level ground and materials</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> <li>Explain the loading and unloading procedures for machine transporting</li> </ul>

### Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Reporting structures</li> <li>Lifelong skills</li> <li>Working practices</li> <li>Social responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Health and Safety at Work Act</li> <li>Environmental issues</li> <li>Other trades</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing types</li> <li>Functions and applications</li> <li>Power units</li> <li>Hydraulic systems</li> <li>Transmissions</li> <li>Buckets</li> </ul>	<ul style="list-style-type: none"> <li>Chassis / steering / brakes</li> <li>Stability / ground pressure</li> <li>Attachments</li> <li>Safety systems</li> <li>ROPS / FOPS</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PPE</li> <li>Codes of Practice</li> <li>Site plans / drawings</li> </ul>	<ul style="list-style-type: none"> <li>Method statements</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Configure and set for highway and site travel</li> </ul>	<ul style="list-style-type: none"> <li>Driving controls</li> <li>Attachments / accessories</li> <li>Travel position</li> </ul>	<ul style="list-style-type: none"> <li>Site travel</li> <li>Visibility</li> <li>Road travel / Road Traffic Act</li> </ul>
<ul style="list-style-type: none"> <li>Travel over rough, undulating ground, substantial inclines and level surfaces; laden and unladen</li> </ul>	<ul style="list-style-type: none"> <li>Travel routes</li> <li>Slopes / inclines</li> <li>Direction of travel</li> <li>Traction / aids</li> <li>Ground conditions</li> <li>Hazards</li> </ul>	<ul style="list-style-type: none"> <li>Working area</li> <li>Restarting on inclines</li> <li>Load integrity</li> <li>Environment protection / minimise damage</li> </ul>
<ul style="list-style-type: none"> <li>Manoeuvre in confined spaces</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Limitations of vision</li> <li>Protection of ground / tight turns</li> </ul>	<ul style="list-style-type: none"> <li>Environmental / noise / fumes</li> <li>Height restrictions</li> <li></li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Configure and set for extraction and loading duties</li> </ul>	<ul style="list-style-type: none"> <li>• Type of ground</li> <li>• Required specification</li> <li>• Equipment / bucket size / type</li> <li>• Spoil segregation</li> </ul>	<ul style="list-style-type: none"> <li>• Machine positioning</li> <li>• Spoil placing</li> <li>• Site markings</li> <li>• Loading vehicles positioning</li> </ul>
<ul style="list-style-type: none"> <li>• Explain actions required for hazards, underground and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>• Types of typical services</li> <li>• Warning / identification systems</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting procedures for damage to services</li> <li>• Minimum distances and clearances</li> </ul>
<ul style="list-style-type: none"> <li>• Extract differing types of materials from stockpiles and other sources</li> </ul>	<ul style="list-style-type: none"> <li>• Types of materials</li> <li>• Machine positioning</li> <li>• Traction / aids</li> <li>• Face extraction methods</li> <li>• Productive cycles of operation</li> </ul>	<ul style="list-style-type: none"> <li>• Hazards in working area</li> <li>• Environmental factors</li> <li>• Stability</li> <li>• Face / stockpile integrity</li> </ul>
<ul style="list-style-type: none"> <li>• Form stockpiles of segregated materials and construct (temporary) ramps</li> </ul>	<ul style="list-style-type: none"> <li>• Types of materials</li> <li>• Spoil placing</li> <li>• Angles of repose</li> <li>• Productive cycles of operation</li> </ul>	<ul style="list-style-type: none"> <li>• Cleaning working area</li> <li>• Stability</li> <li>• Ramp incline</li> <li>• Ramp integrity and consolidation</li> </ul>
<ul style="list-style-type: none"> <li>• Sort and place materials into transporting vehicles and hoppers</li> </ul>	<ul style="list-style-type: none"> <li>• Types of materials</li> <li>• Machine positioning</li> <li>• Signals / communication</li> <li>• Load / material documentation</li> <li>• Material densities</li> <li>• Stability</li> </ul>	<ul style="list-style-type: none"> <li>• Loading vehicle stability and compatibility</li> <li>• Minimum overspill</li> <li>• Cleaning loading area</li> <li>• Productive cycles of operation</li> </ul>
<ul style="list-style-type: none"> <li>• Spread and level ground and materials</li> </ul>	<ul style="list-style-type: none"> <li>• Specification</li> <li>• Attachments</li> <li>• Environmental factors</li> </ul>	<ul style="list-style-type: none"> <li>• Multipurpose / clamshell front buckets</li> </ul>
<ul style="list-style-type: none"> <li>• Carry out shut down and securing procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Shut down procedures</li> <li>• Security</li> </ul>	<ul style="list-style-type: none"> <li>• Parking and positioning</li> </ul>
<ul style="list-style-type: none"> <li>• Explain the loading and unloading procedures for machine transporting</li> </ul>	<ul style="list-style-type: none"> <li>• Compatibility</li> <li>• Positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Security</li> <li>• Types of transporter</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

### Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>• Visibility prior to and during reversing</li> </ul>	<ul style="list-style-type: none"> <li>• Constant and full visibility before and during manoeuvring and types of visibility aids and their limitations and weaknesses</li> </ul>
<ul style="list-style-type: none"> <li>• Stability of the machine</li> </ul>	<ul style="list-style-type: none"> <li>• High centre of gravity with loaded buckets – buckets to be kept low at all times (except for working)</li> </ul>
<ul style="list-style-type: none"> <li>• Quick-hitch systems</li> </ul>	<ul style="list-style-type: none"> <li>• Manufacturer's procedures must be strictly adhered to. Security of attachments to be fully checked prior to use</li> </ul>

### Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> <li>• Novice operators with no industry or machine experience</li> </ul>	35
<ul style="list-style-type: none"> <li>• Novice operators with industry experience but no machine experience</li> </ul>	28
<ul style="list-style-type: none"> <li>• Operators with unrelated (shovel) machine experience</li> </ul>	14
<ul style="list-style-type: none"> <li>• Operators with similar (shovel) machine experience</li> </ul>	7
All candidates must have received the equivalent to 7 hours of site safety and induction training	

***To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category***

4 candidates : 2 machine: 1 instructor

## Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• Wheeled loading shovel that meets current legislation</li> <li>• Operator's manual for the machine(s)</li> <li>• Sufficient area of ground suitable for extracting</li> <li>• Slopes, stockpiles of materials</li> <li>• Rear tipping vehicle or trailer for loading into</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>• PUWER 1998 Regulations</li> <li>• HSE GS6</li> <li>• Operator's Manual</li> <li>• Specifications for types of wheeled loading shovels</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable room for theory training purposes</li> <li>• Welfare and rest facilities during training.</li> </ul>

## Category

Category description and types	
<p>CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have varying uses within industry and used with many attachments, for CPCS training and assessment standards, the descriptions reflect basic core use.</p> <p>To identify a machine within this category, a typical wheeled loading shovel would normally have the listed features and be used within the described characteristics.</p>	
Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Multi-axled wheeled articulated (in most cases) chassis containing a centrally mounted operating position, power, transmission, hydraulic and electrical units</li> <li>• Front loader arms located mounted on the front section of the machine with a rotating and removable front loader bucket, all hydraulically operated</li> </ul>	<ul style="list-style-type: none"> <li>• Able to travel in forward and reverse and change direction during travel with most types having all-wheel drive</li> <li>• Can travel and operate on uneven and loose ground and slopes</li> <li>• Carry out extraction duties in a linear motion using the front bucket within the confines of the operating depth and height</li> <li>• Can place materials by manoeuvring the machine within the confines of the operating depth and height</li> </ul>

## Outcomes

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Through a combination of targeted training and experience, an individual with the tracked loading shovel will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> <li>Undertake all pre-use checks</li> </ul>
<b>Travelling and manoeuvring</b>	<ul style="list-style-type: none"> <li>Configure and set for site travel</li> <li>Travel over rough, undulating ground, substantial inclines and level surfaces; laden and unladen</li> <li>Manoeuvre in confined spaces</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Configure and set for excavating and loading duties</li> <li>Explain actions required for hazards, underground and overhead services</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Excavate differing types of excavations in various types of ground</li> <li>Form stockpiles of segregated materials and construct ramps</li> <li>Sort and place materials into transporting vehicles and hoppers</li> <li>Grade, spread and level ground and materials</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> <li>Explain the loading and unloading procedures for machine transporting</li> </ul>

### Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Reporting structures</li> <li>Lifelong skills</li> <li>Working practices</li> <li>Social responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Health and Safety at Work Act</li> <li>Environmental issues</li> <li>Other trades</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing types</li> <li>Functions and applications</li> <li>Power units</li> <li>Hydraulic systems</li> <li>Transmissions</li> <li>Chassis / tracks</li> </ul>	<ul style="list-style-type: none"> <li>Stability / ground pressure</li> <li>Buckets</li> <li>Attachments</li> <li>Safety systems</li> <li>ROPS / FOPS</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PPE</li> <li>Codes of Practice</li> <li>Site plans / drawings</li> </ul>	<ul style="list-style-type: none"> <li>Method statements</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Configure and set for site travel</li> </ul>	<ul style="list-style-type: none"> <li>Steering controls</li> <li>Attachments / accessories</li> <li>Travel position</li> </ul>	<ul style="list-style-type: none"> <li>Site travel</li> <li>Visibility</li> <li>Road travel / Road Traffic Act</li> </ul>
<ul style="list-style-type: none"> <li>Travel over rough, undulating ground, substantial inclines and level surfaces; laden and unladen</li> </ul>	<ul style="list-style-type: none"> <li>Travel routes</li> <li>Slopes / inclines</li> <li>Direction of travel</li> <li>Traction</li> <li>Ground conditions</li> <li>Hazards</li> </ul>	<ul style="list-style-type: none"> <li>Working area</li> <li>Restarting on inclines</li> <li>Load integrity</li> <li>Environment protection / minimise damage</li> </ul>
<ul style="list-style-type: none"> <li>Manoeuvre in confined spaces</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Limitations of vision</li> <li>Protection of ground / tight turns</li> </ul>	<ul style="list-style-type: none"> <li>Environmental / noise / fumes</li> <li>Height restrictions</li> <li></li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Configure and set for excavating and loading duties</li> </ul>	<ul style="list-style-type: none"> <li>Type of ground</li> <li>Required specification</li> <li>Equipment / bucket size / type</li> <li>Spoil segregation</li> </ul>	<ul style="list-style-type: none"> <li>Machine positioning</li> <li>Spoil placing</li> <li>Site markings</li> <li>Loading vehicles positioning</li> </ul>
<ul style="list-style-type: none"> <li>Explain actions required for hazards, underground and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>Types of typical services</li> <li>Warning / identification systems</li> </ul>	<ul style="list-style-type: none"> <li>Reporting procedures for damage to services</li> <li>Minimum distances and clearances</li> </ul>
<ul style="list-style-type: none"> <li>Excavate differing types of excavations in various types of ground</li> </ul>	<ul style="list-style-type: none"> <li>Types of excavations</li> <li>Face excavations / extractions</li> <li>Disposal / storing of spoil</li> <li>Machine positioning</li> </ul>	<ul style="list-style-type: none"> <li>Segregation of spoil</li> <li>Environmental factors</li> <li>Productive cycles of operation</li> <li>Measuring levels and centres</li> </ul>
<ul style="list-style-type: none"> <li>Form stockpiles of segregated materials and construct ramps</li> </ul>	<ul style="list-style-type: none"> <li>Types of materials</li> <li>Spoil placing</li> <li>Angles of repose</li> <li>Productive cycles of operation</li> </ul>	<ul style="list-style-type: none"> <li>Cleaning working area</li> <li>Stability</li> <li>Ramp incline</li> <li>Ramp integrity and consolidation</li> </ul>
<ul style="list-style-type: none"> <li>Sort and place materials into transporting vehicles and hoppers</li> </ul>	<ul style="list-style-type: none"> <li>Types of materials</li> <li>Machine positioning</li> <li>Signals / communication</li> <li>Load / material documentation</li> <li>Stability</li> </ul>	<ul style="list-style-type: none"> <li>Material densities</li> <li>Minimum overspill</li> <li>Cleaning loading area</li> <li>Productive cycles of operation</li> <li>Loading vehicle stability and compatibility</li> </ul>
<ul style="list-style-type: none"> <li>Grade, spread and level ground and materials</li> </ul>	<ul style="list-style-type: none"> <li>Specification</li> <li>Attachments</li> <li>Environmental factors</li> </ul>	<ul style="list-style-type: none"> <li>Multipurpose / clamshell front buckets</li> </ul>
<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> </ul>	<ul style="list-style-type: none"> <li>Shut down procedures</li> <li>Security</li> </ul>	<ul style="list-style-type: none"> <li>Parking and positioning</li> </ul>
<ul style="list-style-type: none"> <li>Explain the loading and unloading procedures for machine transporting</li> </ul>	<ul style="list-style-type: none"> <li>Compatibility</li> <li>Positioning</li> </ul>	<ul style="list-style-type: none"> <li>Security</li> <li>Types of transporter</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

## Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>• Visibility prior to and during reversing</li> </ul>	<ul style="list-style-type: none"> <li>• Constant and full visibility before and during manoeuvring and types of visibility aids and their limitations and weaknesses</li> </ul>
<ul style="list-style-type: none"> <li>• Stability of the machine</li> </ul>	<ul style="list-style-type: none"> <li>• High centre of gravity with loaded buckets – buckets to be kept low at all times (except for working)</li> </ul>

## Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> <li>• Novice operators with no industry or machine experience</li> </ul>	70
<ul style="list-style-type: none"> <li>• Novice operators with industry experience but no machine experience</li> </ul>	62
<ul style="list-style-type: none"> <li>• Operators with unrelated (earthmoving) machine experience</li> </ul>	42
<ul style="list-style-type: none"> <li>• Operators with similar (earthmoving) machine experience</li> </ul>	28
All candidates must have received the equivalent to 7 hours of site safety and induction training	

***To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category***

4 candidates : 2 machine: 1 instructor

## Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>Tracked loading shovel that meets current legislation</li> <li>Operator's manual for the machine(s)</li> <li>Sufficient area of ground suitable for excavating</li> <li>Slopes, stockpiles of materials</li> <li>Rear tipping vehicle or trailer for loading into</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>Suitable PPE</li> <li>Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>PUWER 1998 Regulations</li> <li>HSE GS6</li> <li>Operator's Manual</li> <li>Specifications for types of tracked loading shovels</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>Suitable room for theory training purposes</li> <li>Welfare and rest facilities during training.</li> </ul>

## Category

Category description and types	
<p>CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have varying uses within industry and used with many attachments, for CPCS training and assessment standards, the descriptions reflect basic core use.</p> <p>To identify a machine within this category, a typical tracked loading shovel would normally have the listed features and be used within the described characteristics.</p>	
Category features	Category characteristics
<ul style="list-style-type: none"> <li>Tracked chassis containing a centrally mounted operating position, power, transmission, hydraulic and electrical units</li> <li>Front loader arms with a rotating and removable front loader bucket, all hydraulically operated</li> </ul>	<ul style="list-style-type: none"> <li>Able to travel in forward and reverse and change direction during travel by track speed differential</li> <li>Can travel and operate on uneven and loose ground and slopes</li> <li>Carry out excavation and extraction duties in a linear motion using the front bucket within the confines of the operating depth and height</li> <li>Can place materials by manoeuvring the machine within the confines of the operating depth and height</li> </ul>

## Outcomes

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Through a combination of targeted training and experience, an individual with the skid steer loader will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> <li>Undertake all pre-use checks</li> </ul>
<b>Travelling and manoeuvring</b>	<ul style="list-style-type: none"> <li>Configure and set for site travel</li> <li>Travel over rough, undulating ground, substantial inclines and level surfaces; laden and unladen</li> <li>Manoeuvre in confined spaces</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Configure and set for extraction and loading duties</li> <li>Explain actions required for hazards, underground and overhead services</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Extract differing types of materials from stockpiles and other sources</li> <li>Form stockpiles of segregated materials and construct (temporary) ramps</li> <li>Sort and place materials into transporting vehicles and hoppers</li> <li>Backfill, spread and level ground and materials</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> <li>Explain the loading and unloading procedures for machine transporting</li> </ul>

### Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Reporting structures</li> <li>Lifelong skills</li> <li>Working practices</li> <li>Social responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Health and Safety at Work Act</li> <li>Environmental issues</li> <li>Other trades</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing types</li> <li>Functions and applications</li> <li>Power units</li> <li>Hydraulic systems</li> <li>Chassis / steering / brakes</li> </ul>	<ul style="list-style-type: none"> <li>Stability / ground pressure</li> <li>Buckets</li> <li>Attachments</li> <li>Safety systems</li> <li>ROPS / FOPS</li> <li>Transmissions</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PPE</li> <li>Codes of Practice</li> <li>Site plans / drawings</li> </ul>	<ul style="list-style-type: none"> <li>Method statements</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Configure and set for site travel</li> </ul>	<ul style="list-style-type: none"> <li>Travel controls</li> <li>Attachments / accessories</li> <li>Travel position</li> </ul>	<ul style="list-style-type: none"> <li>Site travel</li> <li>Visibility</li> <li>Road travel / Road Traffic Act</li> </ul>
<ul style="list-style-type: none"> <li>Travel over rough, undulating ground, substantial inclines and level surfaces; laden and unladen</li> </ul>	<ul style="list-style-type: none"> <li>Travel routes</li> <li>Slopes / inclines</li> <li>Direction of travel</li> <li>Traction / aids</li> <li>Ground conditions</li> <li>Hazards</li> </ul>	<ul style="list-style-type: none"> <li>Working area</li> <li>Restarting on inclines</li> <li>Load integrity</li> <li>Environment protection / minimise damage</li> </ul>
<ul style="list-style-type: none"> <li>Manoeuvre in confined spaces</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Limitations of vision</li> <li>Protection of ground / tight turns</li> </ul>	<ul style="list-style-type: none"> <li>Environmental / noise / fumes</li> <li>Height restrictions</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Configure and set for extraction and loading duties</li> </ul>	<ul style="list-style-type: none"> <li>• Type of ground</li> <li>• Required specification</li> <li>• Equipment / bucket size / type</li> <li>• Spoil segregation</li> </ul>	<ul style="list-style-type: none"> <li>• Machine positioning</li> <li>• Spoil placing</li> <li>• Site markings</li> <li>• Loading vehicles positioning</li> </ul>
<ul style="list-style-type: none"> <li>• Explain actions required for hazards, underground and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>• Types of typical services</li> <li>• Warning / identification systems</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting procedures for damage to services</li> <li>• Minimum distances and clearances</li> </ul>
<ul style="list-style-type: none"> <li>• Extract differing types of materials from stockpiles and other sources</li> </ul>	<ul style="list-style-type: none"> <li>• Types of materials</li> <li>• Machine positioning</li> <li>• Traction / aids</li> <li>• Extraction methods</li> <li>• Productive cycles of operation</li> </ul>	<ul style="list-style-type: none"> <li>• Hazards in working area</li> <li>• Environmental factors</li> <li>• Stability</li> <li>• Face / stockpile integrity</li> </ul>
<ul style="list-style-type: none"> <li>• Form stockpiles of segregated materials and construct (temporary) ramps</li> </ul>	<ul style="list-style-type: none"> <li>• Types of materials</li> <li>• Spoil placing</li> <li>• Angles of repose</li> <li>• Productive cycles of operation</li> </ul>	<ul style="list-style-type: none"> <li>• Cleaning working area</li> <li>• Stability</li> <li>• Ramp integrity and consolidation</li> <li>• Ramp incline</li> </ul>
<ul style="list-style-type: none"> <li>• Sort and place materials into transporting vehicles and hoppers</li> </ul>	<ul style="list-style-type: none"> <li>• Types of materials</li> <li>• Machine positioning</li> <li>• Signals / communication</li> <li>• Load / material documentation</li> <li>• Material densities</li> </ul>	<ul style="list-style-type: none"> <li>• Loading vehicle stability and compatibility</li> <li>• Minimum overspill</li> <li>• Cleaning loading area</li> <li>• Productive cycles of operation</li> <li>• Stability</li> </ul>
<ul style="list-style-type: none"> <li>• Backfill, spread and level ground and materials</li> </ul>	<ul style="list-style-type: none"> <li>• Specification</li> <li>• Attachments</li> <li>• Environmental factors</li> </ul>	<ul style="list-style-type: none"> <li>• Multipurpose / clamshell front buckets</li> </ul>
<ul style="list-style-type: none"> <li>• Carry out shut down and securing procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Shut down procedures</li> <li>• Security</li> </ul>	<ul style="list-style-type: none"> <li>• Parking and positioning</li> </ul>
<ul style="list-style-type: none"> <li>• Explain the loading and unloading procedures for machine transporting</li> </ul>	<ul style="list-style-type: none"> <li>• Compatibility</li> <li>• Positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Security</li> <li>• Types of transporter</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

## Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>• Visibility prior to and during reversing</li> </ul>	<ul style="list-style-type: none"> <li>• Constant and full visibility before and during manoeuvring and types of visibility aids and their limitations and weaknesses</li> </ul>
<ul style="list-style-type: none"> <li>• Stability of the machine</li> </ul>	<ul style="list-style-type: none"> <li>• Particularly relevant to wheeled types, short wheelbase and width combined with high centre of gravity with loaded buckets – buckets to be kept low at all times (except for working)</li> </ul>

## Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> <li>• Novice operators with no industry or machine experience</li> </ul>	35
<ul style="list-style-type: none"> <li>• Novice operators with industry experience but no machine experience</li> </ul>	28
<ul style="list-style-type: none"> <li>• Operators with unrelated (shovel) machine experience</li> </ul>	14
<ul style="list-style-type: none"> <li>• Operators with similar (shovel) machine experience</li> </ul>	7
All candidates must have received the equivalent to 7 hours of site safety and induction training	

***To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category***

4 candidates : 2 machine: 1 instructor

## Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• Skid steer loader that meets current legislation</li> <li>• Operator's manual for the machine(s)</li> <li>• Sufficient area of ground suitable for extracting</li> <li>• Slopes, stockpiles of materials</li> <li>• Vehicle or trailer for loading into</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>• PUWER 1998 Regulations</li> <li>• HSE GS6</li> <li>• Operator's Manual</li> <li>• Specifications for types of skid steer loaders</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable room for theory training purposes</li> <li>• Welfare and rest facilities during training.</li> </ul>

## Category

### Category description and types

CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have varying uses within industry and used with many attachments, for CPCS training and assessment standards, the descriptions reflect basic core use.

To identify a machine within this category, a typical skid steer loader would normally have the listed features and be used within the described characteristics.

Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Wheeled or tracked chassis containing a centrally mounted operating position, power, transmission, hydraulic and electrical units</li> <li>• Front loader arms with a rotating and removable front loader bucket, all hydraulically operated</li> </ul>	<ul style="list-style-type: none"> <li>• Able to travel in forward and reverse and change direction during travel by track or wheel speed differentia</li> <li>• Can travel and operate on uneven and loose ground and slopes</li> <li>• Carry out extraction duties in a linear motion using the front bucket within the confines of the operating depth and height</li> <li>• Can place materials using by manoeuvring the machine within the confines of the operating depth and height</li> </ul>

## Outcomes

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Through a combination of targeted training and experience, an individual with the motorised scraper will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> <li>Undertake all pre-use checks</li> </ul>
<b>Travelling and manoeuvring</b>	<ul style="list-style-type: none"> <li>Configure and set for travel</li> <li>Travel over rough, undulating ground, substantial inclines and level surfaces – loaded and unloaded</li> <li>Manoeuvre in confined spaces whilst carrying loads</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Ensure the suitability of the loading and depositing area</li> <li>Explain actions required for hazards, underground and overhead services</li> <li>Position and set to load and deposit materials / ground</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Excavate various types of ground</li> <li>Transfer and deposit loads to different locations</li> <li>Form stockpiles of material</li> <li>Grade, spread and level ground and materials</li> <li>Explain push-loading techniques</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> <li>Explain the loading and unloading procedures for machine transporting</li> </ul>

### Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Reporting structures</li> <li>Lifelong skills</li> <li>Working practices</li> <li>Social responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Health and Safety at Work Act</li> <li>Environmental issues</li> <li>Other trades</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing types</li> <li>Functions and applications</li> <li>Power units</li> <li>Hydraulic systems</li> <li>Transmissions</li> <li>Chassis / steering / tyres</li> </ul>	<ul style="list-style-type: none"> <li>Stability / ground pressure</li> <li>Carrying capacities</li> <li>Types of bowls / ejector / elevator systems</li> <li>Attachments</li> <li>ROPS / FOPS</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PPE</li> <li>Codes of Practice</li> </ul>	<ul style="list-style-type: none"> <li>Method statements</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> <li>Site plans / drawings</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Configure and set for travel</li> </ul>	<ul style="list-style-type: none"> <li>Driving controls</li> <li>Attachments</li> <li>Security</li> <li>Driving position</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Bowl position</li> <li>Road Traffic Act</li> </ul>
<ul style="list-style-type: none"> <li>Travel over rough, undulating ground, substantial inclines and level surfaces – loaded and unloaded</li> </ul>	<ul style="list-style-type: none"> <li>Driving controls</li> <li>Ground conditions</li> <li>Traction / aids</li> <li>Visibility</li> <li>Hazards</li> </ul>	<ul style="list-style-type: none"> <li>Inclines / starting on inclines</li> <li>Environment protection / minimise damage</li> <li>Working area</li> </ul>
<ul style="list-style-type: none"> <li>Ensure the suitability of the loading and depositing area</li> </ul>	<ul style="list-style-type: none"> <li>Access / egress routes</li> <li>Ground type / condition</li> <li>Hazards</li> </ul>	<ul style="list-style-type: none"> <li>Site markings</li> <li>Turning areas</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Explain actions required for hazards, underground and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>• Types of typical services</li> <li>• Reporting procedures for damage to services</li> </ul>	<ul style="list-style-type: none"> <li>• Warning / identification systems</li> <li>• Minimum distances and clearances</li> </ul>
<ul style="list-style-type: none"> <li>• Position and set to load and deposit materials / ground</li> </ul>	<ul style="list-style-type: none"> <li>• Specification</li> <li>• Types of ground</li> <li>• Machine suitability</li> <li>• Access / egress</li> <li>• Machine capacity</li> </ul>	<ul style="list-style-type: none"> <li>• Stability</li> <li>• Bowl / scraper settings</li> <li>• Visibility</li> <li>• Environmental conditions</li> </ul>
<ul style="list-style-type: none"> <li>• Excavate various types of ground</li> </ul>	<ul style="list-style-type: none"> <li>• Scraping controls</li> <li>• Speeds</li> <li>• Lengths and depths</li> <li>• Traction</li> <li>• Techniques / methods</li> <li>• Feathering</li> <li>• Load distribution</li> </ul>	<ul style="list-style-type: none"> <li>• Productive cycles of operation</li> <li>• Hazards</li> <li>• Measuring levels and centres</li> <li>• Environmental considerations</li> </ul>
<ul style="list-style-type: none"> <li>• Transfer and deposit loads to different locations</li> </ul>	<ul style="list-style-type: none"> <li>• Travel routes</li> <li>• Ground types</li> <li>• Haul route procedures</li> <li>• Materials / vehicle protection</li> <li>• Carrying capacities</li> <li>• Speed limits</li> </ul>	<ul style="list-style-type: none"> <li>• Hazards</li> <li>• Signalling / following instructions</li> <li>• Efficiency</li> <li>• Visibility</li> <li>• Environmental conditions</li> </ul>
<ul style="list-style-type: none"> <li>• Form stockpiles of material</li> </ul>	<ul style="list-style-type: none"> <li>• Discharge areas</li> <li>• Specification</li> <li>• Ground conditions / ramps</li> <li>• Techniques / methods</li> <li>• Material jams</li> </ul>	<ul style="list-style-type: none"> <li>• Discharging on inclines</li> <li>• Fully emptying bowls</li> <li>• Visibility</li> <li>• Signalling / following instructions</li> </ul>
<ul style="list-style-type: none"> <li>• Grade, spread and level ground and materials</li> </ul>	<ul style="list-style-type: none"> <li>• Discharge areas</li> <li>• Specification</li> </ul>	<ul style="list-style-type: none"> <li>• Minimising spillage</li> </ul>
<ul style="list-style-type: none"> <li>• Explain push-loading techniques</li> </ul>	<ul style="list-style-type: none"> <li>• Pusher types</li> <li>• Scraper / pusher compatibility</li> </ul>	<ul style="list-style-type: none"> <li>• Signalling procedures</li> <li>• Techniques</li> <li>• Hazards</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> </ul>	<ul style="list-style-type: none"> <li>Bowl cleanliness</li> <li>Shut down procedures</li> </ul>	<ul style="list-style-type: none"> <li>Security</li> <li>Parking and positioning</li> </ul>
<ul style="list-style-type: none"> <li>Explain the loading and unloading procedures for machine transporting</li> </ul>	<ul style="list-style-type: none"> <li>Compatibility</li> <li>Positioning</li> </ul>	<ul style="list-style-type: none"> <li>Types of transporter</li> <li>Security</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

### Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>Reversing procedures</li> </ul>	<ul style="list-style-type: none"> <li>All reversing and safety aids to be fully functional – use of signaller mandatory on most working areas</li> </ul>

### Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> <li>Novice operators with no industry or machine experience</li> </ul>	70
<ul style="list-style-type: none"> <li>Novice operators with industry experience but no machine experience</li> </ul>	62
<ul style="list-style-type: none"> <li>Operators with unrelated (earthmoving) machine experience</li> </ul>	42
<ul style="list-style-type: none"> <li>Operators with similar (earthmoving) machine experience</li> </ul>	28
All candidates must have received the equivalent to 7 hours of site safety and induction training	

***To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category***

4 candidates : 2 machine: 1 instructor

## Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• Suitable motorised scraper that meets current legislation</li> <li>• Operator's manual for the machine(s)</li> <li>• Sufficient area of ground for driving / manoeuvring and excavating</li> <li>• Slopes and rough terrain</li> <li>• Load depositing areas</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>• PUWER 1998 Regulations</li> <li>• HSE GS6</li> <li>• Operator's Manual</li> <li>• Specifications for types of motorised scrapers</li> <li>• <b>PLUS</b></li> </ul> <p>Suitable room for theory training purposes</p> <ul style="list-style-type: none"> <li>• Welfare and rest facilities during training.</li> </ul>

## Category

### Category description and types

CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have varying uses within industry and used with many attachments, for CPCS training and assessment standards, the descriptions reflect basic core use.

To identify a machine within this category, a typical motorised scraper would normally have the listed features and be used within the described characteristics.

Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Articulated multi-axled two-piece chassis</li> <li>• The front section contains the driving position; power, hydraulic and electrical units</li> <li>• The rear section containing the bowl, scraping and ejector mechanisms</li> <li>• Dual engine units have an additional power and transmission unit in the rear section</li> </ul>	<ul style="list-style-type: none"> <li>• Able to travel in forward and reverse and change direction during travel by articulating the chassis</li> <li>• Can travel and operate on uneven and loose ground and slopes</li> <li>• Excavates materials by scraping the material to depth and storing the material in the bowl</li> <li>• Deposits the load whilst moving by the ejecting mechanism</li> </ul>

## Outcomes

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Through a combination of targeted training and experience, an individual with the MEWP - scissor will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as an access operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> <li>Undertake all pre-use checks</li> <li>Check emergency lowering functions</li> </ul>
<b>Travelling and manoeuvring</b>	<ul style="list-style-type: none"> <li>Configure and set for site travel</li> <li>Travel over level surfaces and inclines</li> <li>Explain travel procedures and precautions over rough terrain and inclines</li> <li>Manoeuvre in confined spaces</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Configure and set for accessing duties</li> <li>Position the platform to access a work position</li> <li>Explain actions required for hazards, underground and overhead services</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Access working points up to full operating height</li> <li>Travel with a raised platform (where applicable)</li> <li>Employ extension units</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> <li>Explain the loading and unloading procedures for machine transporting</li> </ul>

## Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as an access operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Role</li> <li>Reporting structures</li> <li>Lifelong skills</li> <li>Social responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Health and Safety at Work Act</li> <li>Environmental issues</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing types</li> <li>Functions and applications</li> <li>Power units</li> <li>Hydraulic systems</li> <li>Drive systems</li> <li>Chassis / wheels / tyres</li> </ul>	<ul style="list-style-type: none"> <li>Stability / ground pressure</li> <li>Outriggers</li> <li>Attachments / extensions</li> <li>Safety systems / isolators</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PPE / harnessing</li> <li>Codes of Practice</li> <li>Site plans / drawings</li> </ul>	<ul style="list-style-type: none"> <li>Method statements</li> <li>Certification</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Check emergency lowering functions</li> </ul>	<ul style="list-style-type: none"> <li>Types</li> <li>Procedure</li> </ul>	<ul style="list-style-type: none"> <li>Security and hazards</li> </ul>
<ul style="list-style-type: none"> <li>Configure and set for site travel</li> </ul>	<ul style="list-style-type: none"> <li>Steering controls</li> <li>Attachments / accessories</li> <li>Travel position</li> </ul>	<ul style="list-style-type: none"> <li>Site travel</li> <li>Visibility</li> <li>Road Traffic Act</li> </ul>
<ul style="list-style-type: none"> <li>Travel over level surfaces and inclines</li> </ul>	<ul style="list-style-type: none"> <li>Travel routes</li> <li>Slopes / inclines</li> <li>Direction of travel</li> <li>Traction</li> <li>Hazards</li> </ul>	<ul style="list-style-type: none"> <li>Working area</li> <li>Ground conditions</li> <li>Personnel integrity</li> <li>Environment protection / minimise damage</li> </ul>
<ul style="list-style-type: none"> <li>Explain travel procedures and precautions over rough terrain and inclines</li> </ul>	<ul style="list-style-type: none"> <li>Machine capability</li> <li>Routes</li> <li>Stability</li> <li>Ground clearance</li> </ul>	<ul style="list-style-type: none"> <li>Traction</li> <li>Environment protection / minimise damage</li> </ul>

## Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Manoeuvre in confined spaces</li> </ul>	<ul style="list-style-type: none"> <li>• Visibility</li> <li>• Limitations of vision</li> <li>• Hazards</li> <li>• Height restrictions</li> </ul>	<ul style="list-style-type: none"> <li>• Protection of ground / surface / tight turns</li> <li>• Environmental / noise / fumes</li> </ul>
<ul style="list-style-type: none"> <li>• Configure and set for accessing duties</li> </ul>	<ul style="list-style-type: none"> <li>• Machine capability</li> <li>• Required specification</li> <li>• Height</li> </ul>	<ul style="list-style-type: none"> <li>• Platform loadings</li> <li>• Tools / equipment security</li> <li>• Personnel security</li> </ul>
<ul style="list-style-type: none"> <li>• Position the platform to access a work position</li> </ul>	<ul style="list-style-type: none"> <li>• Machine positioning</li> <li>• Ground</li> <li>• Hazards</li> <li>• Stability</li> </ul>	<ul style="list-style-type: none"> <li>• Working area segregation</li> <li>• Signalling</li> </ul>
<ul style="list-style-type: none"> <li>• Explain actions required for hazards, underground and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>• Types of typical services</li> <li>• Reporting procedures for damage to services</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum distances and clearances</li> <li>• Warning / identification systems</li> </ul>
<ul style="list-style-type: none"> <li>• Access working points up to full operating height</li> </ul>	<ul style="list-style-type: none"> <li>• Hazards</li> <li>• Raising / lowering controls</li> <li>• Stability</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental / noise / fumes</li> <li>• Environmental / weather conditions</li> </ul>
<ul style="list-style-type: none"> <li>• Travel with a raised platform (where applicable)</li> </ul>	<ul style="list-style-type: none"> <li>• Machine capability</li> <li>• Travel route</li> <li>• Hazards</li> <li>• Travel surface</li> <li>• Travel controls</li> </ul>	<ul style="list-style-type: none"> <li>• Travel route segregation</li> <li>• Visibility</li> <li>• Direction of travel / steering</li> </ul>
<ul style="list-style-type: none"> <li>• Employ extension units</li> </ul>	<ul style="list-style-type: none"> <li>• Types</li> <li>• Hazards</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental factors</li> </ul>
<ul style="list-style-type: none"> <li>• Carry out shut down and securing procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Shut down procedures</li> <li>• Security</li> </ul>	<ul style="list-style-type: none"> <li>• Parking and positioning</li> </ul>
<ul style="list-style-type: none"> <li>• Explain the loading and unloading procedures for machine transporting</li> </ul>	<ul style="list-style-type: none"> <li>• Compatibility</li> <li>• Positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Security</li> <li>• Types of transporter</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

## Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>Stability</li> </ul>	<ul style="list-style-type: none"> <li>Manufacturer's guidance followed with regards to working and travelling at height</li> </ul>
<ul style="list-style-type: none"> <li>Fall arrest equipment</li> </ul>	<ul style="list-style-type: none"> <li>Selection of the correct type following a comprehensive risk assessment of the activity and MEWP type</li> </ul>

## Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> <li>Novice operators with no industry or machine experience</li> </ul>	14
<ul style="list-style-type: none"> <li>Novice operators with industry experience but no machine experience</li> </ul>	14
<ul style="list-style-type: none"> <li>Operators with unrelated (access) machine experience</li> </ul>	7
<ul style="list-style-type: none"> <li>Operators with similar (access) machine experience</li> </ul>	7
All candidates must have received the equivalent to 7 hours of site safety and induction training	

***To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category***

3 candidates : 1 machine: 1 instructor

## Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• MEWP scissor that meets current legislation</li> <li>• Operator's manual for the machine(s)</li> <li>• Sufficient area of ground suitable for travelling and manoeuvring</li> <li>• Structures for accessing</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Harnessing (if required)</li> <li>• Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>• PUWER 1998 Regulations</li> <li>• LOLER 1998 Regulations</li> <li>• HSE GS6</li> <li>• Operator's Manual</li> <li>• Specifications for types of MEWP scissors</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable room for theory training purposes</li> <li>• Welfare and rest facilities during training.</li> </ul>

## Category

Category description and types	
<p>CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have varying uses within industry and used with many attachments, for CPCS training and assessment standards, the descriptions reflect basic core use.</p> <p>To identify a machine within this category, a typical MEWP scissor would normally have the listed features and be used within the described characteristics.</p>	
Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Chassis containing a power unit; drive, hydraulic and electrical units</li> <li>• Hydraulically operated vertically raisable platform</li> </ul>	<ul style="list-style-type: none"> <li>• Able to travel in forward and reverse and change direction during travel by steering from the operating platform</li> <li>• Mostly used on smooth surfaces but some units can travel and operate on uneven and loose ground and slopes</li> <li>• Raisable platform allows work to be carried out at height from the platform</li> </ul>

## Outcomes

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Through a combination of targeted training and experience, an individual with the MEWP - boom will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as an access operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> <li>Undertake all pre-use checks</li> <li>Check emergency lowering functions</li> </ul>
<b>Travelling and manoeuvring</b>	<ul style="list-style-type: none"> <li>Configure and set for site travel</li> <li>Travel over level surfaces (all types) and uneven terrain (self-propelled units only)</li> <li>Explain travel procedures and precautions on inclines</li> <li>Manoeuvre in confined spaces</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Configure and set for accessing duties</li> <li>Position the platform to access a work position</li> <li>Explain actions required for hazards, underground and overhead services</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Access working points up to full operating height and reach</li> <li>Travel with a raised platform (relevant endorsement)</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> </ul>

## Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as an access operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Reporting structures</li> <li>Lifelong skills</li> <li>Social responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Health and Safety at Work Act</li> <li>Environmental issues</li> <li>Other trades</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing types</li> <li>Host vehicles / chassis</li> <li>Functions and applications</li> <li>Power units</li> <li>Hydraulic systems</li> <li>Chassis / wheels / tyres</li> </ul>	<ul style="list-style-type: none"> <li>Stability / ground pressure</li> <li>Drive systems</li> <li>Outriggers</li> <li>Safety systems / isolators</li> <li>Attachments</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PPE / harnessing</li> <li>Codes of Practice</li> <li>Site plans / drawings</li> </ul>	<ul style="list-style-type: none"> <li>Method statements</li> <li>Certification</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Check emergency lowering functions</li> </ul>	<ul style="list-style-type: none"> <li>Types</li> <li>Procedure</li> </ul>	<ul style="list-style-type: none"> <li>Security and hazards</li> </ul>
<ul style="list-style-type: none"> <li>Configure and set for site travel</li> </ul>	<ul style="list-style-type: none"> <li>Steering / driving controls</li> <li>Attachments / accessories</li> <li>Visibility</li> </ul>	<ul style="list-style-type: none"> <li>Travel position</li> <li>Site travel</li> <li>Road travel / Road Traffic Act</li> </ul>
<ul style="list-style-type: none"> <li>Travel over level surfaces (all types) and uneven terrain (self-propelled units only)</li> </ul>	<ul style="list-style-type: none"> <li>Travel routes</li> <li>Traction</li> <li>Ground conditions</li> <li>Hazards</li> <li>Ground clearance</li> </ul>	<ul style="list-style-type: none"> <li>Stability</li> <li>Working area</li> <li>Personnel integrity</li> <li>Environment protection / minimise damage</li> </ul>

## Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Explain travel procedures and precautions on inclines</li> </ul>	<ul style="list-style-type: none"> <li>• Machine capability</li> <li>• Routes</li> <li>• Stability</li> <li>• Ground clearance</li> </ul>	<ul style="list-style-type: none"> <li>• Traction / grip</li> <li>• Environment protection / minimise damage</li> </ul>
<ul style="list-style-type: none"> <li>• Manoeuvre in confined spaces</li> </ul>	<ul style="list-style-type: none"> <li>• Visibility</li> <li>• Limitations of vision</li> <li>• Hazards</li> <li>• Height restrictions</li> </ul>	<ul style="list-style-type: none"> <li>• Protection of ground / surface / tight turns</li> <li>• Environmental / noise / fumes</li> </ul>
<ul style="list-style-type: none"> <li>• Configure and set for accessing duties</li> </ul>	<ul style="list-style-type: none"> <li>• Machine capability</li> <li>• Required specification</li> <li>• Height</li> <li>• Platform loadings</li> </ul>	<ul style="list-style-type: none"> <li>• Personnel security</li> <li>• Tools / equipment security</li> <li>• Working ranges</li> </ul>
<ul style="list-style-type: none"> <li>• Position the platform to access a work position</li> </ul>	<ul style="list-style-type: none"> <li>• Machine positioning</li> <li>• Ground</li> <li>• Stabiliser footprint</li> <li>• Hazards</li> </ul>	<ul style="list-style-type: none"> <li>• Stability</li> <li>• Working area segregation</li> <li>• Signalling</li> </ul>
<ul style="list-style-type: none"> <li>• Explain actions required for hazards, underground and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>• Types of typical services</li> <li>• Reporting procedures for damage to services</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum distances and clearances</li> <li>• Warning / identification systems</li> </ul>
<ul style="list-style-type: none"> <li>• Access working points up to full operating height and reach</li> </ul>	<ul style="list-style-type: none"> <li>• Hazards</li> <li>• Raising / lowering / extension controls</li> <li>• Stability</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental / noise / fumes</li> <li>• Environmental / weather conditions</li> </ul>
<ul style="list-style-type: none"> <li>• Travel with a raised platform (relevant endorsement)</li> </ul>	<ul style="list-style-type: none"> <li>• Machine capability</li> <li>• Travel route</li> <li>• Hazards</li> <li>• Travel surface</li> <li>• Visibility</li> </ul>	<ul style="list-style-type: none"> <li>• Travel route segregation</li> <li>• Travel controls</li> <li>• Direction of travel / steering</li> </ul>
<ul style="list-style-type: none"> <li>• Carry out shut down and securing procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Shut down procedures</li> <li>• Security</li> </ul>	<ul style="list-style-type: none"> <li>• Parking and positioning</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

## Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>Stability</li> </ul>	<ul style="list-style-type: none"> <li>Manufacturer's guidance followed with regards to working and travelling at height</li> </ul>
<ul style="list-style-type: none"> <li>Fall arrest equipment</li> </ul>	<ul style="list-style-type: none"> <li>Selection of the correct type following a comprehensive risk assessment of the activity and MEWP type</li> </ul>

## Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> <li>Novice operators with no industry or machine experience</li> </ul>	14
<ul style="list-style-type: none"> <li>Novice operators with industry experience but no machine experience</li> </ul>	14
<ul style="list-style-type: none"> <li>Operators with unrelated (access) machine experience</li> </ul>	7
All candidates must have received the equivalent to 7 hours of site safety and induction training	

***To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category***

3 candidates : 1 machine: 1 instructor

## Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• MEWP boom that meets current legislation</li> <li>• Operator's manual for the machine(s)</li> <li>• Sufficient area of ground suitable for travelling and manoeuvring</li> <li>• Structures for accessing</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Harnessing (if required)</li> </ul> <p>Risk assessment for all areas where training is occurring</p>	<ul style="list-style-type: none"> <li>• PUWER 1998 Regulations</li> <li>• LOLER 1998 Regulations</li> <li>• HSE GS6</li> <li>• Operator's Manual</li> <li>• Specifications for types of MEWP booms</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable room for theory training purposes</li> <li>• Welfare and rest facilities during training.</li> </ul>

## Category

### Category description and types

CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have varying uses within industry and used with many attachments, for CPCS training and assessment standards, the descriptions reflect basic core use. Endorsements are sub-categories that reflect the variations for this category by chassis type. This category has two endorsements.

To identify a machine within this category, a typical MEWP boom would normally have the listed features and be used within the described characteristics

Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Multi-axled (or tracked) chassis containing a power unit; drive, hydraulic and electrical units</li> <li>• Hydraulically operated raisable and extendable boom with a platform mounted on a slew ring</li> </ul>	<ul style="list-style-type: none"> <li>• Able to travel in forward and reverse and change direction during travel by steering the wheels (or track speed differential)</li> <li>• Mostly used on smooth surfaces but some units can travel and operate on uneven and loose ground and slopes</li> <li>• Accessing capabilities with the platform by raising and/or extending and slewing the boom</li> </ul>

## Endorsements

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### Endorsement characteristics

- **Endorsement A:** Vehicle mounted – requires host vehicle (van, truck or trailer) and equipped with outriggers. Usually restricted to static work
- **Endorsement B:** Self-propelled – purpose built chassis and can travel (for most variants) with a raised platform

## Outcomes

Through a combination of targeted training and experience, an individual with the MEWP – mast climber will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> <li>Check the stability, alignment and safety before use</li> <li>Check that platform protection is in position before use</li> <li>Check that all gates and safety devices function according to specification</li> <li>Check the capacity of the mast climber will accommodate expected loads and/or passengers</li> <li>Undertake all pre-use checks and running checks</li> <li>Check emergency lowering functions</li> <li>Explain precautions to be taken for overhead services and other hazards</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Load and unload materials following manual handling requirements</li> <li>Prepare the platform for the required load(s) and/or passengers</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Operate the mast climber to the limits of operation both loaded and unloaded</li> <li>Comply with signals and instructions</li> <li>Explain mast climber working limitations</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>Place the mast climber in an out-of-service condition, isolate and secure</li> </ul>

## Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Reporting structures</li> <li>Lifelong skills</li> <li>Social responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Health and Safety at Work Act</li> <li>Environmental issues</li> <li>Other trades</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing types</li> <li>Functions and applications</li> <li>Power units</li> <li>Lifting / lowering mechanisms</li> <li>Platforms</li> </ul>	<ul style="list-style-type: none"> <li>Positioning</li> <li>Stability / base ground pressure</li> <li>Erection procedures</li> <li>Safety systems</li> <li>Environmental factors</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PPE</li> <li>Codes of Practice</li> <li>Site plans / drawings</li> </ul>	<ul style="list-style-type: none"> <li>Method statements</li> <li>Harnessing</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> </ul>
<ul style="list-style-type: none"> <li>Check the stability, alignment and safety before use</li> </ul>	<ul style="list-style-type: none"> <li>Specification</li> <li>Hazards</li> <li>Stability / methods</li> <li>Tools / equipment</li> </ul>	<ul style="list-style-type: none"> <li>Base / ground / supports</li> <li>Security / segregation</li> <li>Securing methods / mechanisms</li> </ul>
<ul style="list-style-type: none"> <li>Check that platform protection is in position before use</li> </ul>	<ul style="list-style-type: none"> <li>Types</li> <li>Specification</li> <li>Access / visibility</li> </ul>	<ul style="list-style-type: none"> <li>Methods / procedures</li> <li>Hazards</li> </ul>
<ul style="list-style-type: none"> <li>Check that all gates and safety devices function according to specification</li> </ul>	<ul style="list-style-type: none"> <li>Types</li> <li>Specification</li> <li>Functions</li> </ul>	<ul style="list-style-type: none"> <li>Access / visibility</li> <li>Methods / procedures</li> <li>Hazards</li> </ul>
<ul style="list-style-type: none"> <li>Check the capacity of the mast climber will accommodate expected loads and/or passengers</li> </ul>	<ul style="list-style-type: none"> <li>Specification / load ratings</li> <li>Notices / decals</li> </ul>	<ul style="list-style-type: none"> <li>Load charts / documents</li> <li>Estimating loads</li> </ul>

## Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Undertake all pre-use and running checks</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Check emergency lowering functions</li> </ul>	<ul style="list-style-type: none"> <li>Types</li> <li>Procedure</li> </ul>	<ul style="list-style-type: none"> <li>Security and hazards</li> </ul>
<ul style="list-style-type: none"> <li>Explain precautions to be taken for overhead services and other hazards</li> </ul>	<ul style="list-style-type: none"> <li>Types of typical services (electrical / electronic etc.)</li> <li>Minimum distances and clearances</li> </ul>	<ul style="list-style-type: none"> <li>Reporting procedures for damage to services</li> </ul>
<ul style="list-style-type: none"> <li>Load and unload materials following manual handling requirements</li> </ul>	<ul style="list-style-type: none"> <li>Specifications</li> <li>Typical types of loads</li> <li>Load sizes</li> <li>Techniques</li> </ul>	<ul style="list-style-type: none"> <li>Legislation</li> <li>Hazards</li> <li>Load storage</li> </ul>
<ul style="list-style-type: none"> <li>Prepare the platform for the required load(s) and/or passengers</li> </ul>	<ul style="list-style-type: none"> <li>Load capacity</li> <li>Destinations</li> <li>Observation</li> <li>Loading sequences</li> </ul>	<ul style="list-style-type: none"> <li>Load distribution</li> <li>Access / egress</li> <li>Passenger / load security positioning</li> </ul>
<ul style="list-style-type: none"> <li>Operate the mast climber to the limits of operation both loaded and unloaded</li> </ul>	<ul style="list-style-type: none"> <li>Controls</li> <li>Visibility</li> <li>Hazards</li> <li>Observation</li> <li>Signalling / Communication</li> </ul>	<ul style="list-style-type: none"> <li>Emergency procedures</li> <li>Communication (with passengers)</li> <li>Environmental considerations</li> </ul>
<ul style="list-style-type: none"> <li>Comply with signals and instructions</li> </ul>	<ul style="list-style-type: none"> <li>Types</li> <li>Responding</li> </ul>	<ul style="list-style-type: none"> <li>Methods</li> </ul>
<ul style="list-style-type: none"> <li>Explain mast climber working limitations</li> </ul>	<ul style="list-style-type: none"> <li>Types</li> <li>Speeds</li> <li>Load capacities</li> </ul>	<ul style="list-style-type: none"> <li>Types of loads</li> <li>Environmental factors</li> </ul>
<ul style="list-style-type: none"> <li>Place the mast climber in an out-of-service condition, isolate and secure</li> </ul>	<ul style="list-style-type: none"> <li>Shut down procedures</li> <li>Security</li> </ul>	<ul style="list-style-type: none"> <li>Parking and positioning</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

## Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>Stability</li> </ul>	<ul style="list-style-type: none"> <li>Manufacturers' guidance followed with regards to ensuring hoist-way is to specification and clear of hazards</li> </ul>

## Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> <li>Novice operators with no industry or machine experience</li> </ul>	14
<ul style="list-style-type: none"> <li>Novice operators with industry experience but no machine experience</li> </ul>	14
<ul style="list-style-type: none"> <li>Operators with unrelated (access) machine experience</li> </ul>	7
<ul style="list-style-type: none"> <li>Operators with similar (access) machine experience</li> </ul>	7
All candidates must have received the equivalent to 7 hours of site safety and induction training	

***To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category***

3 candidates : 2 machine: 1 instructor

## Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• Mast climber that meets current legislation</li> <li>• Operator's manual for the machine(s)</li> <li>• Various and varying loads</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Harnessing</li> <li>• Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>• PUWER 1998 Regulations</li> <li>• LOLER 1998 Regulations</li> <li>• HSE GS6</li> <li>• Operator's Manual</li> <li>• Specifications for types of mast climbers</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable room for theory training purposes</li> <li>• Welfare and rest facilities during training.</li> </ul>

## Category

### Category description and types

CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have varying uses within industry and used with many attachments, for CPCS training and assessment standards, the descriptions reflect basic core use.

To identify a machine within this category, a typical MEWP mast climber would normally have the listed features and be used within the described characteristics.

Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Load carrying platform running vertically (or near to) on a pre-constructed temporary tower or towers (hoist-way)</li> <li>• Platform will be partially or fully enclosed</li> <li>• The tower may be free-standing or fixed to a structure</li> </ul>	<ul style="list-style-type: none"> <li>• Transports loads and/or passengers vertically or near vertically to one or more landing points adjacent or within a structure (note: work can be undertaken from the platform)</li> </ul>

## Outcomes

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Through a combination of targeted training and experience, an individual with the piling rig will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>
<b>Preparing equipment</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Undertake all pre-use checks</li> <li>Position, configure and set for driven and bored works</li> <li>Explain actions required for hazards, underground and overhead services</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Accurately form bored piles to completion</li> <li>Comply with signals and instructions</li> <li>Maintain safe working situations</li> <li>Explain lifting requirements and limitations using a tripod piling rig</li> </ul>
<b>Completing work</b>	<ul style="list-style-type: none"> <li>Carry out shut down procedures</li> <li>De-rig the tripod and prepare for movement</li> </ul>

### Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Reporting structures</li> <li>Lifelong skills</li> <li>Working practices</li> <li>Social responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Health and Safety at Work Act</li> <li>Environmental issues</li> <li>Other trades</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing types</li> <li>Functions and applications</li> <li>Power units</li> <li>Stability / ground pressure</li> </ul>	<ul style="list-style-type: none"> <li>Winching systems</li> <li>Piling equipment / attachments</li> <li>Lifting attachments</li> <li>Safety systems</li> <li>Pile types</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Manufacturer's information</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PPE</li> <li>Codes of Practice</li> <li>Piling specifications</li> </ul>	<ul style="list-style-type: none"> <li>Method statements</li> <li>Lifting requirements and limitations</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> <li>Site plans / drawings</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Position, configure and set for driven and bored works</li> </ul>	<ul style="list-style-type: none"> <li>Rig positioning</li> <li>Required configuration / attachments</li> <li>Boring settings / equipment</li> <li>Winching systems</li> <li>Hazards</li> </ul>	<ul style="list-style-type: none"> <li>Environmental conditions</li> <li>Counterweights</li> <li>Stability / ground pressure</li> <li>Levelling / inclines</li> <li>Site markings</li> <li>Falls of rope</li> </ul>
<ul style="list-style-type: none"> <li>Explain actions required for hazards, underground and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>Types of typical services</li> <li>Warning / identification systems</li> </ul>	<ul style="list-style-type: none"> <li>Reporting procedures for damage to services</li> <li>Minimum distances and clearance</li> </ul>

## Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Accurately form bored piles to completion</li> </ul>	<ul style="list-style-type: none"> <li>• Types of piles</li> <li>• Ground / soil types</li> <li>• Specification</li> <li>• Measuring for pile positioning</li> <li>• Environmental factors</li> </ul>	<ul style="list-style-type: none"> <li>• Maintaining stability and positioning</li> <li>• Productive cycles of operation</li> <li>• Maintaining vertical piles</li> </ul>
<ul style="list-style-type: none"> <li>• Comply with signals and instructions</li> </ul>	<ul style="list-style-type: none"> <li>• Methods and types of signals</li> <li>• Methods of verbal instruction</li> <li>• Multiple signalling</li> </ul>	<ul style="list-style-type: none"> <li>• Electronic communication / setting-up</li> <li>• Codes of Practice</li> <li>• Radio protocol</li> </ul>
<ul style="list-style-type: none"> <li>• Maintain safe working situations</li> </ul>	<ul style="list-style-type: none"> <li>• Stability</li> <li>• Noise / vibration</li> <li>• Visibility</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental</li> <li>• Hazards</li> </ul>
<ul style="list-style-type: none"> <li>• Explain lifting requirements and limitations using a tripod piling rig</li> </ul>	<ul style="list-style-type: none"> <li>• Legislation and regulations</li> <li>• Load connecting</li> </ul>	<ul style="list-style-type: none"> <li>• Load securing</li> <li>• Lifting and load-rating charts</li> </ul>
<ul style="list-style-type: none"> <li>• Carry out shut down procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Shut down procedures</li> <li>• Site conditions</li> </ul>	<ul style="list-style-type: none"> <li>• Cleaning area and equipment</li> </ul>
<ul style="list-style-type: none"> <li>• De-rig the tripod and prepare for movement</li> </ul>	<ul style="list-style-type: none"> <li>• Transporting</li> <li>• Egress arrangements</li> <li>• Security</li> <li>• Manual handling</li> </ul>	<ul style="list-style-type: none"> <li>• De-rigging procedures</li> <li>• Stowage of materials / accessories</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

## Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>• Manual handling</li> </ul>	<ul style="list-style-type: none"> <li>• Correct procedure during transportation and rigging / de-rigging</li> </ul>

## Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> <li>• Novice operators with no industry or machine experience</li> </ul>	28
<ul style="list-style-type: none"> <li>• Novice operators with industry experience but no machine experience</li> </ul>	21
<ul style="list-style-type: none"> <li>• Operators with unrelated (piling) machine experience</li> </ul>	14
<ul style="list-style-type: none"> <li>• Operators with similar (piling) machine experience</li> </ul>	7

All candidates must have received the equivalent to 7 hours of site safety and induction training

***To allow effective learning, the listed candidate / machine / instructor ratio  
is the maximum recommended for this category***

3 candidates : 1 machine: 1 instructor

## Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• Piling rig (tripod) that meets current legislation</li> <li>• Suitable attachments for bored piling</li> <li>• Winching support unit</li> <li>• Selection of supporting temporary casings</li> <li>• Concrete supply</li> <li>• Sufficient area of ground suitable for placing piles to various depths</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>• PUWER 1998 Regulations</li> <li>• LOLER 1998 Regulations</li> <li>• HSE GS6</li> <li>• BS 7121 (parts 1, 2 and 3)</li> <li>• Operator's Manual</li> <li>• Specifications for types of piling rigs</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable room for theory training purposes</li> <li>• Welfare and rest facilities during training.</li> </ul>

## Category

### Category description and types

CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have varying uses within industry and used with many attachments, for CPCS training and assessment standards, the descriptions reflect basic core use.

To identify a machine within this category, a typical driven piling rig would normally have the listed features and be used within the described characteristics.

Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Tripod support unit</li> <li>• Winching unit powered by internal combustion, electric or pneumatic systems</li> <li>• Winch operated lifting metal-stranded hoist rope mounted on pulleys</li> <li>• Percussive attachment suspended by hoist rope at the top of the tripod</li> </ul>	<ul style="list-style-type: none"> <li>• Can work on uneven and loose ground and slopes, and confined areas or with difficult access</li> <li>• Positions and forms small piles by percussive methods</li> </ul>

## Outcomes

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Through a combination of targeted training and experience, an individual with the ride on roller will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> <li>Undertake all pre-use checks</li> </ul>
<b>Travelling and manoeuvring</b>	<ul style="list-style-type: none"> <li>Configure and set for site travel</li> <li>Travel over rough, undulating ground, substantial inclines and level surfaces</li> <li>Manoeuvre in confined spaces</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Configure and set for compacting duties</li> <li>Explain actions required for hazards, underground and overhead services</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Compact loose granular materials to specification</li> <li>Compact in straight lines and around radii</li> <li>Compact supported and unsupported edges</li> <li>Explain the principles, requirements and techniques of good compaction</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> <li>Explain the loading and unloading procedures for machine transporting</li> </ul>

## Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Reporting structures</li> <li>Lifelong skills</li> <li>Working practices</li> <li>Social responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Health and Safety at Work Act</li> <li>Environmental issues</li> <li>Other trades</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing types</li> <li>Functions and applications</li> <li>Power units</li> <li>Hydraulic systems</li> <li>Chassis / drums / wheels</li> </ul>	<ul style="list-style-type: none"> <li>Drive units</li> <li>Stability / ground pressure</li> <li>Vibratory systems</li> <li>Attachments</li> <li>Safety systems</li> <li>ROPS / FOPS</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PPE</li> <li>Codes of Practice</li> <li>Site plans / drawings</li> <li>Method statements</li> </ul>	<ul style="list-style-type: none"> <li>Landfill / waste sector special requirements</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Configure and set for site travel</li> </ul>	<ul style="list-style-type: none"> <li>Steering controls</li> <li>Attachments / accessories</li> </ul>	<ul style="list-style-type: none"> <li>Travel position</li> <li>Site travel</li> <li>Visibility</li> </ul>
<ul style="list-style-type: none"> <li>Travel over rough, undulating ground, substantial inclines and level surfaces</li> </ul>	<ul style="list-style-type: none"> <li>Travel routes</li> <li>Slopes / inclines</li> <li>Direction of travel</li> <li>Traction</li> <li>Ground / surface conditions</li> </ul>	<ul style="list-style-type: none"> <li>Hazards</li> <li>Working area</li> <li>Travel speeds</li> <li>Environment protection / minimise damage</li> </ul>
<ul style="list-style-type: none"> <li>Manoeuvre in confined spaces</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Limitations of vision</li> <li>Protection of ground / tight turns</li> </ul>	<ul style="list-style-type: none"> <li>Environmental / noise / fumes</li> <li>Height restrictions</li> </ul>

## Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Configure and set for compacting duties</li> </ul>	<ul style="list-style-type: none"> <li>• Type, nature and amount of materials</li> <li>• Required specification</li> <li>• Machine compatibility / size</li> <li>• Services / groundworks / buildings</li> </ul>	<ul style="list-style-type: none"> <li>• Machine positioning</li> <li>• Area of work preparation</li> <li>• Sprinkler / scraper bar settings</li> <li>• Site markings</li> <li>• Work segregation / signing</li> <li>• Environmental issues</li> </ul>
<ul style="list-style-type: none"> <li>• Explain actions required for hazards, underground and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>• Types of typical hazards</li> <li>• Reporting procedures for damage to services</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum distances and clearances</li> <li>• Warning / identification systems</li> </ul>
<ul style="list-style-type: none"> <li>• Compact loose granular materials to specification</li> </ul>	<ul style="list-style-type: none"> <li>• Required specification</li> <li>• Techniques</li> <li>• Communication</li> <li>• Starting / finishing</li> <li>• Machine positioning</li> <li>• Steering</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental factors</li> <li>• Work speeds</li> <li>• Productive cycles of operation</li> <li>• Services / surface / proximity protection</li> </ul>
<ul style="list-style-type: none"> <li>• Compact in straight lines and around radii</li> </ul>	<ul style="list-style-type: none"> <li>• Required specification</li> <li>• Techniques</li> <li>• Starting / finishing</li> <li>• Scuffing</li> <li>• Machine positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Steering</li> <li>• Work speeds</li> <li>• Productive cycles of operation</li> <li>• Services / surface / proximity protection</li> </ul>
<ul style="list-style-type: none"> <li>• Compact supported and unsupported edges</li> </ul>	<ul style="list-style-type: none"> <li>• Required specification</li> <li>• Techniques</li> <li>• Starting / finishing</li> <li>• Stability</li> <li>• Machine positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Steering</li> <li>• Work speeds</li> <li>• Productive cycles of operation</li> <li>• Services / surface / proximity protection</li> </ul>
<ul style="list-style-type: none"> <li>• Explain the principles, requirements and techniques of good compaction</li> </ul>	<ul style="list-style-type: none"> <li>• Principles</li> <li>• Air voids</li> <li>• Compaction passes</li> <li>• Hot / cold rolling</li> <li>• Overlapping / staggering</li> <li>• Cambers / crossfalls / inclines</li> <li>• Densities</li> </ul>	<ul style="list-style-type: none"> <li>• Nature of different materials</li> <li>• Surface / sub-base construction</li> <li>• Material requirements</li> <li>• Static / dynamic compaction</li> <li>• Environmental issues</li> <li>• Moisture</li> </ul>

## Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> </ul>	<ul style="list-style-type: none"> <li>Shut down procedures</li> <li>Security</li> </ul>	<ul style="list-style-type: none"> <li>Parking and positioning</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

## Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>• Visibility prior to and during reversing</li> </ul>	<ul style="list-style-type: none"> <li>• Constant and full visibility before and during manoeuvring; types of visibility aids and their limitations and weaknesses</li> </ul>

## Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> <li>• Novice operators with no industry or machine experience</li> </ul>	28
<ul style="list-style-type: none"> <li>• Novice operators with industry experience but no machine experience</li> </ul>	21
<ul style="list-style-type: none"> <li>• Operators with unrelated (compacting) machine experience</li> </ul>	14
<ul style="list-style-type: none"> <li>• Operators with similar (compacting) machine experience</li> </ul>	7
All candidates must have received the equivalent to 7 hours of site safety and induction training	

***To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category***

4 candidates : 2 machines: 1 instructor

## Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• Ride-on roller that meets current legislation</li> <li>• Operator's manual for the machine(s)</li> <li>• Sufficient area of ground suitable for compacting, with straight runs and radii and supported/unsupported edges</li> <li>• Materials to compact</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>• PUWER 1998 Regulations</li> <li>• HSE GS6</li> <li>• Operator's Manual</li> <li>• Specifications for types of ride-on rollers</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable room for theory training purposes</li> <li>• Welfare and rest facilities during training.</li> </ul>

## Category

### Category description and types

CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have varying uses within industry and used with many attachments, for CPCS training and assessment standards, the descriptions reflect basic core use.

To identify a machine within this category, a typical ride-on roller would normally have the listed features and be used within the described characteristics.

Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Articulated chassis supported by two steel compacting drums (some units have rear pneumatic tyres) containing a centrally mounted operating position, power, transmission, hydraulic and electrical units on the rear half</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>• Rigid chassis supported by three compacting drums containing a centrally mounted operating position, power, transmission, hydraulic and electrical units</li> <li>• Smooth steel-wheeled split drums on the front</li> </ul>	<ul style="list-style-type: none"> <li>• Able to travel in forward and reverse and change direction during travel by articulating the chassis or turning the front drum</li> <li>• Compact a variety of soils, hot and cold granular materials</li> </ul>

## Outcomes

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Through a combination of targeted training and experience, an individual with the soil/landfill compactor will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> <li>Undertake all pre-use checks</li> </ul>
<b>Travelling and manoeuvring</b>	<ul style="list-style-type: none"> <li>Configure and set for site travel</li> <li>Travel over rough, undulating ground, substantial inclines and level surfaces</li> <li>Manoeuvre in confined spaces</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Configure and set for spreading duties</li> <li>Explain actions required for hazards, underground and overhead services</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Spread and compact various discharged waste-type materials to specification</li> <li>Explain the principles of compaction and the requirements and techniques of waste-material compaction</li> </ul>
<b>Completing work</b>	<ul style="list-style-type: none"> <li>Spread and level soils for covering purposes</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> <li>Explain the loading and unloading procedures for machine transporting</li> </ul>

### Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Reporting structures</li> <li>Lifelong skills</li> <li>Working practices</li> <li>Social responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Health and Safety at Work Act</li> <li>Environmental issues</li> <li>Other trades</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing types</li> <li>Functions and applications</li> <li>Power units</li> <li>Hydraulic systems</li> <li>Transmissions</li> <li>Chassis / wheels</li> </ul>	<ul style="list-style-type: none"> <li>Stability / ground pressure</li> <li>Blades</li> <li>Machine protection</li> <li>Safety systems</li> <li>Attachments</li> <li>ROPS / FOPS</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PPE</li> <li>Codes of Practice</li> <li>Site plans / drawings</li> </ul>	<ul style="list-style-type: none"> <li>Method statements</li> <li>Landfill / waste sector special requirements</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Configure and set for site travel</li> </ul>	<ul style="list-style-type: none"> <li>Steering controls</li> <li>Attachments / accessories</li> </ul>	<ul style="list-style-type: none"> <li>Travel position</li> <li>Site travel</li> <li>Visibility</li> </ul>
<ul style="list-style-type: none"> <li>Travel over rough, undulating ground, substantial inclines and level surfaces</li> </ul>	<ul style="list-style-type: none"> <li>Travel routes</li> <li>Slopes / inclines</li> <li>Direction of travel</li> <li>Traction</li> <li>Ground / surface conditions</li> </ul>	<ul style="list-style-type: none"> <li>Hazards</li> <li>Working area</li> <li>Load integrity</li> <li>Environment protection / minimise damage</li> </ul>
<ul style="list-style-type: none"> <li>Manoeuvre in confined spaces</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Limitations of vision</li> <li>Protection of ground / tight turns</li> </ul>	<ul style="list-style-type: none"> <li>Environmental / noise / fumes</li> <li>Height restrictions</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Configure and set for spreading duties</li> </ul>	<ul style="list-style-type: none"> <li>• Type, nature and amount of materials</li> <li>• Required specification</li> <li>• Blade size / type</li> </ul>	<ul style="list-style-type: none"> <li>• Site markings</li> <li>• Machine positioning</li> <li>• Material placing</li> <li>•</li> </ul>
<ul style="list-style-type: none"> <li>• Explain actions required for hazards, underground and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>• Types of typical hazards</li> <li>• Reporting procedures for damage to services</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum distances and clearances</li> <li>• Warning / identification systems</li> </ul>
<ul style="list-style-type: none"> <li>• Spread and compact various discharged waste-type materials to specification</li> </ul>	<ul style="list-style-type: none"> <li>• Required specification</li> <li>• Techniques</li> <li>• Working on inclines</li> <li>• Communication</li> <li>• Machine positioning</li> <li>• Material segregation</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental factors</li> <li>• Angles of repose</li> <li>• Productive cycles of operation</li> <li>• Layering</li> <li>• Machine protection</li> </ul>
<ul style="list-style-type: none"> <li>• Explain the principles of compaction and the requirements and techniques of waste-material compaction</li> </ul>	<ul style="list-style-type: none"> <li>• Principles</li> <li>• Air voids</li> <li>• Compaction passes</li> <li>• Densities</li> <li>• Environmental issues</li> </ul>	<ul style="list-style-type: none"> <li>• Nature of different materials</li> <li>• Material requirements</li> <li>• Static / dynamic compaction</li> </ul>
<ul style="list-style-type: none"> <li>• Spread and level soils for covering purposes</li> </ul>	<ul style="list-style-type: none"> <li>• Types of materials</li> <li>• Soil placing</li> <li>• Specification</li> <li>• Cleaning working area</li> </ul>	<ul style="list-style-type: none"> <li>• Working on inclines</li> <li>• Consolidating working area</li> <li>• Environmental factors</li> </ul>
<ul style="list-style-type: none"> <li>• Carry out shut down and securing procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Shut down procedures</li> <li>• Security</li> </ul>	<ul style="list-style-type: none"> <li>• Parking and positioning</li> </ul>
<ul style="list-style-type: none"> <li>• Explain the loading and unloading procedures for machine transporting</li> </ul>	<ul style="list-style-type: none"> <li>• Compatibility</li> <li>• Positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Security</li> <li>• Types of transporter</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

## Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>• Visibility prior to and during reversing</li> </ul>	<ul style="list-style-type: none"> <li>• Constant and full visibility before and during manoeuvring; types of visibility aids and their limitations and weaknesses</li> </ul>

## Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> <li>• Novice operators with no industry or machine experience</li> </ul>	35
<ul style="list-style-type: none"> <li>• Novice operators with industry experience but no machine experience</li> </ul>	28
<ul style="list-style-type: none"> <li>• Operators with unrelated (earthmoving) machine experience</li> </ul>	21
<ul style="list-style-type: none"> <li>• Operators with similar (earthmoving) machine experience</li> </ul>	14
All candidates must have received the equivalent to 7 hours of site safety and induction training	

***To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category***

4 candidates : 2 machines: 1 instructor

## Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• Soil/landfill compactor that meets current legislation</li> <li>• Operator's manual for the machine(s)</li> <li>• Sufficient area of ground suitable for compacting</li> <li>• Slopes and materials to compact</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>• PUWER 1998 Regulations</li> <li>• HSE GS6</li> <li>• Operator's Manual</li> <li>• Specifications for types of soil/landfill compactors</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable room for theory training purposes</li> <li>• Welfare and rest facilities during training.</li> </ul>

## Category

### Category description and types

CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have varying uses within industry and used with many attachments, for CPCS training and assessment standards, the descriptions reflect basic core use.

To identify a machine within this category, a typical soil/landfill compactor would normally have the listed features and be used within the described characteristics.

Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Multi-axled articulated chassis containing a centrally mounted operating position, power, transmission, hydraulic and electrical units on the rear half</li> <li>• Side-mounted arms located on the undercarriage with a raisable and removable multi-positional (in most cases) front blade, hydraulically operated</li> </ul>	<ul style="list-style-type: none"> <li>• Multi-axled articulated chassis containing a centrally mounted operating position, power, transmission, hydraulic and electrical units on the rear half</li> <li>• Side-mounted arms located on the undercarriage with a raisable and removable multi-positional (in most cases) front blade, hydraulically operated</li> </ul>

## Outcomes

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Through a combination of targeted training and experience, an individual with the agricultural tractor will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> <li>Undertake all pre-use checks</li> </ul>
<b>Travelling and manoeuvring</b>	<ul style="list-style-type: none"> <li>Configure and ready for site and highway travel</li> <li>Travel over rough, undulating ground, substantial inclines and level surfaces with mounted and trailed implements</li> <li>Manoeuvre in confined spaces with trailed and mounted implements</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Attach and set trailed implements ready for work</li> <li>Attach and set mounted implements ready for work</li> <li>Attach and set power take-off drives ready for work</li> <li>Explain actions required for hazards, underground and overhead services</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Operate a mounted or power-driven implement</li> </ul>
<b>Completing work</b>	<ul style="list-style-type: none"> <li>Remove and store trailed and mounted implements</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> <li>Explain the loading and unloading procedures for machine transporting</li> </ul>

## Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Reporting structures</li> <li>Lifelong skills</li> <li>Working practices</li> <li>Social responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Health and Safety at Work Act</li> <li>Environmental issues</li> <li>Other trades</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing types</li> <li>Functions and applications</li> <li>Power units</li> <li>Hydraulic systems</li> <li>Transmissions</li> <li>ROPS / FOPS</li> </ul>	<ul style="list-style-type: none"> <li>Chassis / steering / brakes</li> <li>Stability ground pressure</li> <li>Safety systems</li> <li>Slewing arrangements</li> <li>Attachments</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PPE</li> <li>Codes of Practice</li> </ul>	<ul style="list-style-type: none"> <li>Site plans / drawings</li> <li>Method statements</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Configure and ready for site and highway travel</li> </ul>	<ul style="list-style-type: none"> <li>Driving controls</li> <li>Attachments / accessories</li> <li>Travel position</li> </ul>	<ul style="list-style-type: none"> <li>Site travel</li> <li>Visibility</li> <li>Road travel / Road Traffic Act</li> </ul>
<ul style="list-style-type: none"> <li>Travel over rough, undulating ground, substantial inclines and level surfaces with mounted and trailed implements</li> </ul>	<ul style="list-style-type: none"> <li>Travel routes</li> <li>Slopes / inclines</li> <li>Direction of travel</li> <li>Traction / aids</li> <li>Ground conditions</li> </ul>	<ul style="list-style-type: none"> <li>Hazards</li> <li>Working area</li> <li>Restarting on inclines</li> <li>Environment protection / minimise damage</li> </ul>
<ul style="list-style-type: none"> <li>Manoeuvre in confined spaces with trailed and mounted implements</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Limitations of vision</li> <li>Protection of ground / tight turns</li> </ul>	<ul style="list-style-type: none"> <li>Environmental / noise / fumes</li> <li>Height restrictions</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Attach and set trailed implements ready for work</li> </ul>	<ul style="list-style-type: none"> <li>• Implement types</li> <li>• Implement / tractor compatibility</li> <li>• Hitch controls</li> <li>• Drawbar types / hitch types</li> <li>• Hazards</li> </ul>	<ul style="list-style-type: none"> <li>• Connecting procedures</li> <li>• Implement stability and security</li> <li>• Securing procedures</li> <li>• Road travel / Road Traffic Act</li> </ul>
<ul style="list-style-type: none"> <li>• Attach and set mounted implements ready for work</li> </ul>	<ul style="list-style-type: none"> <li>• Implement types</li> <li>• Implement / tractor compatibility</li> <li>• Lift arms controls</li> <li>• Hitch types / 3-point system</li> <li>• Connecting procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Securing procedures</li> <li>• Levelling procedures</li> <li>• Implement stability and security</li> <li>• Hazards</li> <li>• Road travel / Road Traffic Act</li> </ul>
<ul style="list-style-type: none"> <li>• Attach and set power take-off drives ready for work</li> </ul>	<ul style="list-style-type: none"> <li>• PTO types and speeds</li> <li>• Implement / tractor compatibility</li> <li>• PTO controls</li> <li>• Guarding</li> <li>• Starting / stopping procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Connecting procedures</li> <li>• Implement stability and security</li> <li>• Hazards</li> <li>• Road travel / Road Traffic Act</li> <li>• Securing procedures</li> </ul>
<ul style="list-style-type: none"> <li>• Explain actions required for hazards, underground and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>• Types of typical services</li> <li>• Warning / identification systems</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting procedures for damage to services</li> <li>• Minimum distances and clearances</li> </ul>
<ul style="list-style-type: none"> <li>• Operate a mounted or power-driven implement</li> </ul>	<ul style="list-style-type: none"> <li>• Operating controls</li> <li>• Working area</li> <li>• Working procedures and efficiency</li> </ul>	<ul style="list-style-type: none"> <li>• Hazards</li> <li>• Environment protection / noise</li> </ul>
<ul style="list-style-type: none"> <li>• Remove and store trailed and mounted implements</li> </ul>	<ul style="list-style-type: none"> <li>• Implement positioning</li> <li>• Removing / disconnecting procedures</li> <li>• Implement protection</li> </ul>	<ul style="list-style-type: none"> <li>• Implement stability and security</li> <li>• Environmental protection</li> </ul>
<ul style="list-style-type: none"> <li>• Carry out shut down and securing procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Shut down procedures</li> <li>• Security</li> </ul>	<ul style="list-style-type: none"> <li>• Parking and positioning</li> </ul>
<ul style="list-style-type: none"> <li>• Explain the loading and unloading procedures for machine transporting</li> </ul>	<ul style="list-style-type: none"> <li>• Compatibility</li> <li>• Positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Security</li> <li>• Types of transporter</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

## Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>Power take-off (PTO) systems</li> </ul>	<ul style="list-style-type: none"> <li>Manufacturer's procedures must be strictly adhered to. Full security of the driving shaft to the tractor and implement and all guarding in place and secure before operations</li> </ul>

## Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> <li>Novice operators with no industry or machine experience</li> </ul>	28
<ul style="list-style-type: none"> <li>Novice operators with industry experience but no machine experience</li> </ul>	21
<ul style="list-style-type: none"> <li>Operators with unrelated (tractor) machine experience</li> </ul>	14
<ul style="list-style-type: none"> <li>Operators with similar (tractor) machine experience</li> </ul>	7
All candidates must have received the equivalent to 7 hours of site safety and induction training	

***To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category***

4 candidates : 2 machines: 1 instructor

## Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• Agricultural type tractor that meets current legislation</li> <li>• Operator's manual for the machine(s)</li> <li>• Compatible trailed, mounted and PTO driven implements</li> <li>• Sufficient area of ground suitable for driving and manoeuvring</li> <li>• Slopes and rough terrain</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>• PUWER 1998 Regulations</li> <li>• HSE GS6</li> <li>• Operator's Manual</li> <li>• Specifications for types of agricultural tractors</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable room for theory training purposes</li> <li>• Welfare and rest facilities during training.</li> </ul>

## Category

Category description and types	
<p>CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have varying uses within industry and used with many attachments, for CPCS training and assessment standards, the descriptions reflect basic core use.</p> <p>To identify a machine within this category, a typical agricultural tractor would normally have the listed features and be used within the described characteristics.</p>	
Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Multi-axled wheeled chassis (in most cases) containing central operating position, power, transmission, hydraulic and electrical units</li> <li>• Rear-mounted hitch arms all hydraulically operated</li> <li>• Rear-positioned PTO drive system</li> <li>• Rear-mounted drawbar / trailer hitch facility</li> </ul>	<ul style="list-style-type: none"> <li>• Able to travel in forward and reverse and change direction during travel with most types having all-wheel drive</li> <li>• Can travel and operate on uneven and loose ground and slopes</li> <li>• Carry out work using a multitude of trailed or mounted implements</li> <li>• Can provide power to attached or non-attached implements or equipment by the PTO and hydraulic system</li> </ul>

## Outcomes

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Through a combination of targeted training and experience, an individual with the crawler dozer will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> <li>Undertake all pre-use checks</li> </ul>
<b>Travelling and manoeuvring</b>	<ul style="list-style-type: none"> <li>Configure and set for site travel</li> <li>Travel over rough, undulating ground, substantial inclines and level surfaces</li> <li>Manoeuvre in confined spaces</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Configure and set for excavating duties</li> <li>Explain actions required for hazards, underground and overhead services</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Excavate differing types of excavations in various types of ground</li> <li>Construct ramps and form and shape stockpiles</li> <li>Grade, spread and level ground and materials</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> <li>Explain the loading and unloading procedures for machine transporting</li> </ul>

## Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Reporting structures</li> <li>Lifelong skills</li> <li>Working practices</li> <li>Social responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Health and Safety at Work Act</li> <li>Environmental issues</li> <li>Other trades</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing types</li> <li>Functions and applications</li> <li>Power units</li> <li>Hydraulic systems</li> <li>Transmissions</li> <li>Chassis / tracks</li> </ul>	<ul style="list-style-type: none"> <li>Stability / ground pressure</li> <li>Blades</li> <li>Attachments</li> <li>Safety systems</li> <li>ROPS / FOPS</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PPE</li> <li>Codes of Practice</li> </ul>	<ul style="list-style-type: none"> <li>Site plans / drawings</li> <li>Method statements</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Configure and set for site travel</li> </ul>	<ul style="list-style-type: none"> <li>Steering controls</li> <li>Attachments / accessories</li> <li>Travel position</li> </ul>	<ul style="list-style-type: none"> <li>Site travel</li> <li>Visibility</li> <li>Road travel / Road Traffic Act</li> </ul>
<ul style="list-style-type: none"> <li>Travel over rough, undulating ground, substantial inclines and level surfaces</li> </ul>	<ul style="list-style-type: none"> <li>Travel routes</li> <li>Slopes / inclines</li> <li>Direction of travel</li> <li>Traction</li> <li>Ground conditions</li> </ul>	<ul style="list-style-type: none"> <li>Hazards</li> <li>Working area</li> <li>Environment protection / minimise damage</li> </ul>
<ul style="list-style-type: none"> <li>Manoeuvre in confined spaces</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Limitations of vision</li> <li>Protection of ground / tight turns</li> </ul>	<ul style="list-style-type: none"> <li>Environmental / noise / fumes</li> <li>Height restrictions</li> <li>Hazards</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Configure and set for excavating duties</li> </ul>	<ul style="list-style-type: none"> <li>• Type of ground</li> <li>• Required specification</li> <li>• Blade size / type</li> <li>• Machine positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Spoil placing</li> <li>• Site markings</li> <li>• Spoil segregation</li> </ul>
<ul style="list-style-type: none"> <li>• Explain actions required for hazards, underground and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting procedures for damage to services</li> <li>• Warning / identification systems</li> </ul>	<ul style="list-style-type: none"> <li>• Types of typical services</li> <li>• Minimum distances and clearances</li> </ul>
<ul style="list-style-type: none"> <li>• Excavate differing types of excavations in various types of ground</li> </ul>	<ul style="list-style-type: none"> <li>• Types of excavations</li> <li>• Disposal / storing of spoil</li> <li>• Feathering</li> <li>• Blade angles</li> <li>• Working speeds</li> <li>• Machine positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Segregation of spoil</li> <li>• Environmental factors</li> <li>• Angles of repose</li> <li>• Productive cycles of operation</li> <li>• Measuring levels and centres</li> </ul>
<ul style="list-style-type: none"> <li>• Construct ramps and form and shape stockpiles</li> </ul>	<ul style="list-style-type: none"> <li>• Types of materials</li> <li>• Spoil placing</li> <li>• Angles of repose</li> <li>• Working on inclines</li> <li>• Blade angles</li> </ul>	<ul style="list-style-type: none"> <li>• Cleaning working area</li> <li>• Stability</li> <li>• Ramp incline</li> <li>• Ramp integrity and consolidation</li> </ul>
<ul style="list-style-type: none"> <li>• Grade, spread and level ground and materials</li> </ul>	<ul style="list-style-type: none"> <li>• Specification</li> <li>• Attachments</li> <li>• Working speeds</li> <li>• Side-casting, spreading and windrow techniques</li> </ul>	<ul style="list-style-type: none"> <li>• Productive cycles of operation</li> <li>• Environmental factors</li> </ul>
<ul style="list-style-type: none"> <li>• Carry out shut down and securing procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Shut down procedures</li> <li>• Parking and positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Security</li> </ul>
<ul style="list-style-type: none"> <li>• Explain the loading and unloading procedures for machine transporting</li> </ul>	<ul style="list-style-type: none"> <li>• Compatibility</li> <li>• Positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Security</li> <li>• Types of transporter</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

## Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>• Visibility prior to and during reversing</li> </ul>	<ul style="list-style-type: none"> <li>• Constant and full visibility before and during manoeuvring and types of visibility aids and their limitations and weaknesses</li> </ul>

## Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
• Novice operators with no industry or machine experience	70
• Novice operators with industry experience but no machine experience	62
• Operators with unrelated (earthmoving) machine experience	42
• Operators with similar (earthmoving) machine experience	28
All candidates must have received the equivalent to 7 hours of site safety and induction training	

***To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category***

4 candidates : 2 machines: 1 instructor

## Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• Crawler dozer that meets current legislation</li> <li>• Operator's manual for the machine(s)</li> <li>• Sufficient area of ground suitable for excavating</li> <li>• Slopes, stockpiles of materials</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>• PUWER 1998 Regulations</li> <li>• HSE GS6</li> <li>• Operator's Manual</li> <li>• Specifications for types of crawler dozers</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable room for theory training purposes</li> <li>• Welfare and rest facilities during training.</li> </ul>

## Category

### Category description and types

CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have varying uses within industry, for CPCS training and assessment standards, the descriptions reflect basic core use.

To identify a machine within this category, a typical crawler-tractor/dozer would normally have the listed features and be used within the described characteristics.

Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Chassis containing a centrally mounted operating position, power, transmission, hydraulic and electrical units</li> <li>• Linked undercarriage with tracked drive system</li> <li>• Side-mounted arms located on the undercarriage with a raisable and removable multi-positional (in most cases) front blade, hydraulically operated</li> </ul>	<ul style="list-style-type: none"> <li>• Able to travel in forward and reverse and change direction during travel by track speed differential</li> <li>• Can travel and operate on uneven and loose ground and slopes</li> <li>• Carry out excavation and extraction duties in a linear motion using the front blade within the confines of the operating depth and height</li> <li>• Carry out forming duties in a linear motion using the front blade within the confines of the operating depth and height</li> </ul>

## Outcomes

Through a combination of targeted training and experience, an individual with the side boom will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> <li>Undertake all pre-use checks</li> </ul>
<b>Travelling and manoeuvring</b>	<ul style="list-style-type: none"> <li>Configure and set for site travel</li> <li>Travel over rough, undulating ground, substantial inclines and level surfaces</li> <li>Manoeuvre in confined spaces</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Configure and set for lifting duties</li> <li>Explain rigging and de-rigging procedures</li> <li>Explain actions required for hazards, underground and overhead services</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Programme / set-up Rated Capacity Indicators for lifting duties</li> <li>Lift various loads using full radius capabilities</li> <li>Accurately place loads</li> <li>Minimise the swinging of loads</li> <li>Move loads through machine travel</li> <li>Comply with signals and instructions</li> <li>Maintain safe working situations</li> </ul>
<b>Completing work</b>	<ul style="list-style-type: none"> <li>Prepare the side-boom in preparation of movement post-lifting duties</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> <li>Explain the loading and unloading procedures for machine transporting</li> </ul>

### Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Reporting structures</li> <li>Lifelong skills</li> <li>Working practices</li> <li>Social responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Health and Safety at Work Act</li> <li>Environmental issues</li> <li>Other trades</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing types</li> <li>Functions and applications</li> <li>Power units</li> <li>Hydraulic systems</li> <li>Transmissions</li> <li>Chassis / tracks</li> </ul>	<ul style="list-style-type: none"> <li>Stability / ground pressure</li> <li>Booms / jibs</li> <li>Hoisting gear / ropes</li> <li>Safety systems</li> <li>ROPS / FOPS</li> <li>Attachments</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PPE</li> <li>Codes of Practice</li> <li>Site plans / drawings</li> <li>Method statements</li> </ul>	<ul style="list-style-type: none"> <li>Lifting requirements and limitations</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> <li>Lift plans</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Configure and set for site travel</li> </ul>	<ul style="list-style-type: none"> <li>Steering controls</li> <li>Attachments / accessories</li> <li>Travel position</li> <li>Site travel</li> </ul>	<ul style="list-style-type: none"> <li>Boom / jib positioning</li> <li>Visibility</li> <li>Road Traffic Act</li> <li>Stowage of accessories</li> </ul>
<ul style="list-style-type: none"> <li>Travel over rough, undulating ground, substantial inclines and level surfaces</li> </ul>	<ul style="list-style-type: none"> <li>Travel routes</li> <li>Slopes / inclines</li> <li>Direction of travel</li> <li>Traction</li> <li>Ground conditions</li> </ul>	<ul style="list-style-type: none"> <li>Hazards</li> <li>Working area</li> <li>Environment protection / minimise damage</li> </ul>
<ul style="list-style-type: none"> <li>Manoeuvre in confined spaces</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Limitations of vision</li> <li>Protection of ground / tight turns</li> </ul>	<ul style="list-style-type: none"> <li>Environmental / noise / fumes</li> <li>Height restrictions</li> <li>Hazards</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Configure and set for lifting duties</li> </ul>	<ul style="list-style-type: none"> <li>• Positioning</li> <li>• Required configuration (lift plan)</li> <li>• Lift controls</li> <li>• Environmental conditions</li> <li>• Hazards</li> </ul>	<ul style="list-style-type: none"> <li>• Counterweights</li> <li>• Levelling / inclines</li> <li>• Site markings</li> <li>• Stability / ground pressure</li> <li>• Falls of rope</li> </ul>
<ul style="list-style-type: none"> <li>• Explain rigging and de-rigging procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Types of extensions</li> <li>• Procedures</li> <li>• Hazards</li> <li>• Supporting methods</li> </ul>	<ul style="list-style-type: none"> <li>• Storage</li> <li>• Testing / certification</li> <li>• Duties / RCI set-up</li> </ul>
<ul style="list-style-type: none"> <li>• Explain actions required for hazards, underground and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>• Types of typical services</li> <li>• Warning / identification systems</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting procedures for damage to services</li> <li>• Minimum distances and clearances</li> </ul>
<ul style="list-style-type: none"> <li>• Programme / set-up Rated Capacity Indicators for lifting duties</li> </ul>	<ul style="list-style-type: none"> <li>• Types of RCI</li> <li>• Regulations / legislation</li> <li>• Principles of operation</li> <li>• Lifting duties</li> <li>• Number of falls</li> </ul>	<ul style="list-style-type: none"> <li>• Function and application of common types</li> <li>• Testing, setting / programming for different duties</li> </ul>
<ul style="list-style-type: none"> <li>• Lift various loads using full radius capabilities</li> </ul>	<ul style="list-style-type: none"> <li>• Duties charts</li> <li>• Lifting accessories and slinging requirements</li> <li>• Lift plans</li> <li>• Lifting controls</li> <li>• Boom deflection</li> <li>• Signalling procedures</li> <li>• Stability / counterweight</li> </ul>	<ul style="list-style-type: none"> <li>• Hazards</li> <li>• Trial lifts</li> <li>• Load stability / security</li> <li>• Tandem lifting</li> <li>• Visibility</li> <li>• Environmental conditions</li> <li>• Load swings</li> <li>• Falls of rope</li> </ul>
<ul style="list-style-type: none"> <li>• Accurately place loads</li> </ul>	<ul style="list-style-type: none"> <li>• Ground conditions / hazards</li> <li>• Visibility</li> <li>• Stability</li> <li>• Load swings</li> </ul>	<ul style="list-style-type: none"> <li>• Signalling / following instructions</li> <li>• Out-of-sight lifts</li> <li>• Protection of lifting accessories</li> </ul>
<ul style="list-style-type: none"> <li>• Minimise the swinging of loads</li> </ul>	<ul style="list-style-type: none"> <li>• Rope length</li> <li>• Techniques</li> <li>• Slew speeds</li> </ul>	<ul style="list-style-type: none"> <li>• Observation / anticipation</li> <li>• Stability</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Move loads through machine travel</li> </ul>	<ul style="list-style-type: none"> <li>• Duties charts</li> <li>• Configuration</li> <li>• Stability</li> <li>• Route / ground condition</li> <li>• Load integrity / security</li> </ul>	<ul style="list-style-type: none"> <li>• Load swing</li> <li>• Visibility</li> <li>• Hazards</li> <li>• Regulations / legislation</li> </ul>
<ul style="list-style-type: none"> <li>• Comply with signals and instructions</li> </ul>	<ul style="list-style-type: none"> <li>• Methods and types of signals</li> <li>• Methods of verbal instruction</li> <li>• Multiple signalling</li> </ul>	<ul style="list-style-type: none"> <li>• Electronic communication / setting-up</li> <li>• Codes of Practice</li> <li>• Radio protocol</li> </ul>
<ul style="list-style-type: none"> <li>• Maintain safe working situations</li> </ul>	<ul style="list-style-type: none"> <li>• Stability</li> <li>• Load swings</li> </ul>	<ul style="list-style-type: none"> <li>• Load security</li> <li>• Hazards</li> </ul>
<ul style="list-style-type: none"> <li>• Prepare the side-boom in preparation of movement post-lifting duties</li> </ul>	<ul style="list-style-type: none"> <li>• Stowage of materials / accessories</li> </ul>	<ul style="list-style-type: none"> <li>• Travel configuration</li> </ul>
<ul style="list-style-type: none"> <li>• Carry out shut down and securing procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Shut down procedures</li> <li>• Parking and positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Security</li> </ul>
<ul style="list-style-type: none"> <li>• Explain the loading and unloading procedures for machine transporting</li> </ul>	<ul style="list-style-type: none"> <li>• Compatibility</li> <li>• Positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Security</li> <li>• Types of transporter</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

### Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>Lift plans / method statements</li> </ul>	<ul style="list-style-type: none"> <li>Lift plan types and requirements and the need for lift planning. Adherence to the lift plan as constructed by a competent person</li> </ul>

### Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> <li>Novice operators with no industry or machine experience</li> </ul>	35
<ul style="list-style-type: none"> <li>Novice operators with industry experience but no machine experience</li> </ul>	28
<ul style="list-style-type: none"> <li>Operators with unrelated (lifting) machine experience</li> </ul>	21
<ul style="list-style-type: none"> <li>Operators with similar (lifting) machine experience</li> </ul>	14
All candidates must have received the equivalent to 7 hours of site safety and induction training	

***To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category***

4 candidates : 2 machines: 1 instructor

## Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• Side boom that meets current legislation</li> <li>• Operator's manual for the crane</li> <li>• Different types of loads</li> <li>• Lifting accessories</li> <li>• Sufficient area of ground suitable for placing loads at various heights and radius</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>• PUWER 1998 Regulations</li> <li>• LOLER 1998 Regulations</li> <li>• HSE GS6</li> <li>• BS 7121 (parts 1, 2 and 3)</li> <li>• Operator's Manual</li> <li>• Specifications for types of side booms</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable room for theory training purposes</li> <li>• Welfare and rest facilities during training.</li> </ul>

## Category

Category description and types	
<p>CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design</p> <p>To identify a machine within this category, a typical crawler-tractor/side-boom would normally have the listed features and be used within the described characteristics.</p>	
Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Chassis containing a centrally mounted operating position, power, transmission, hydraulic and electrical units</li> <li>• Linked undercarriage with tracked drive system</li> <li>• Raisable side-mounted non-slewing 'A' framed lifting boom, hydraulically operated</li> <li>• Winch operated lifting metal-stranded hoist rope mounted on pulleys</li> <li>• Hook block suspended by hoist ropes and pulleys and the end of the boom</li> </ul>	<ul style="list-style-type: none"> <li>• Able to travel in forward and reverse and change direction during travel by track speed differentia</li> <li>• Can travel and operate on uneven and loose ground and slopes</li> <li>• Lift loads by vertically raising the hook block</li> <li>• Places loads within the confines of the operating radius, depth and height</li> <li>• Travel with loads suspended from the hook block</li> </ul>

## Outcomes

Through a combination of targeted training and experience, an individual with the lorry loader will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> <li>Explain all relevant documentation</li> <li>Undertake all pre-use checks on the host vehicle and loader crane</li> </ul>
<b>Travelling and manoeuvring</b>	<ul style="list-style-type: none"> <li>Configure the vehicle and loader crane ready for travel</li> <li>Travel the vehicle to an area of work</li> <li>Manoeuvre in confined spaces</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Position and configure the vehicle and loader crane for lifting duties</li> <li>Deploy the stabilisers to specification</li> <li>Explain action required for hazards, underground and overhead services</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Programme / set-up and/or comply with Rated Capacity Indicators or Load Moment Indicators for lifting duties</li> <li>Identify weights and centres of gravity of loads</li> <li>Lift various loads using the full radius and slewing capabilities of the loader crane</li> <li>Place loads accurately at designated positions including on/into and from the vehicle</li> <li>Explain the use of, types and fitting of boom extensions</li> <li>Minimise the swinging of loads</li> <li>Secure loads on or in the vehicle</li> <li>Explain different types of lifting accessories compatible with loader crane use</li> <li>Maintain safe working situations</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> </ul>

## Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Reporting structures</li> <li>Lifelong skills</li> <li>Working practices</li> <li>Social responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Health and Safety at Work Act</li> <li>Environmental issues</li> <li>Other trades</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing types</li> <li>Functions and applications</li> <li>Power units</li> <li>Hydraulic systems</li> <li>Chassis / steering / tyres</li> </ul>	<ul style="list-style-type: none"> <li>Stability</li> <li>Booms / jibs / extensions</li> <li>Transmissions</li> <li>Safety systems</li> <li>Slewing arrangements</li> <li>Attachments / extensions</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Duties / load rating plates and charts</li> <li>Ground loading charts</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PPE</li> <li>Codes of Practice</li> <li>Lift plans</li> </ul>	<ul style="list-style-type: none"> <li>Site plans / drawings</li> <li>Method statements</li> <li>Lifting requirements / limitations / restrictions of lorry loaders</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> </ul>
<ul style="list-style-type: none"> <li>Explain all relevant documentation</li> </ul>	<ul style="list-style-type: none"> <li>Test certificates</li> </ul>	<ul style="list-style-type: none"> <li>Thorough examination certificates</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks on the host vehicle and loader crane</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Configure the vehicle and loader crane ready for travel</li> </ul>	<ul style="list-style-type: none"> <li>Driving controls</li> <li>Attachments</li> <li>Security</li> <li>Driving position</li> </ul>	<ul style="list-style-type: none"> <li>Travel configuration</li> <li>Visibility</li> <li>Road Traffic Act</li> </ul>

## Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Travel the vehicle to an area of work</li> </ul>	<ul style="list-style-type: none"> <li>Driving controls</li> <li>Ground conditions</li> <li>Traction</li> <li>Axle loadings</li> <li>Hazards</li> </ul>	<ul style="list-style-type: none"> <li>Working area</li> <li>Site route</li> <li>Environment protection / minimise damage</li> <li>Road travel</li> </ul>
<ul style="list-style-type: none"> <li>Manoeuvre in confined spaces</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Limitations of vision</li> <li>Height restrictions</li> <li>Hazards</li> </ul>	<ul style="list-style-type: none"> <li>Protection of ground / tight turns</li> <li>Environmental / noise / fumes</li> </ul>
<ul style="list-style-type: none"> <li>Position and configure the vehicle and loader crane for lifting duties</li> </ul>	<ul style="list-style-type: none"> <li>Vehicle positioning</li> <li>Required configuration (lift plan)</li> <li>Environmental conditions</li> </ul>	<ul style="list-style-type: none"> <li>Crane controls</li> <li>Levelling / inclines</li> <li>Hazards</li> </ul>
<ul style="list-style-type: none"> <li>Deploy the stabilisers to specification</li> </ul>	<ul style="list-style-type: none"> <li>Types of stabilisers</li> <li>Support conditions</li> <li>Bearing pressure</li> </ul>	<ul style="list-style-type: none"> <li>Packing / load spreading</li> <li>Footprint</li> <li>Inclines / uneven ground</li> </ul>
<ul style="list-style-type: none"> <li>Explain action required for hazards, underground and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>Types of typical services</li> <li>Warning / identification systems</li> </ul>	<ul style="list-style-type: none"> <li>Reporting procedures for damage to services</li> <li>Minimum distances and clearances</li> </ul>
<ul style="list-style-type: none"> <li>Programme / set-up and/or comply with Rated Capacity Indicators or Load Moment Indicators for lifting duties</li> </ul>	<ul style="list-style-type: none"> <li>Types of RCI / LMI</li> <li>Regulations / legislation</li> <li>Principles of operation</li> <li>Lifting duties</li> </ul>	<ul style="list-style-type: none"> <li>Function and application of common types</li> <li>Testing, setting / programming for different duties</li> </ul>
<ul style="list-style-type: none"> <li>Identify weights and centres of gravity of loads</li> </ul>	<ul style="list-style-type: none"> <li>Load / material types</li> <li>Centre of gravity</li> <li>Load integrity</li> <li>Load density and shapes</li> </ul>	<ul style="list-style-type: none"> <li>Moisture content</li> <li>Information sheets / load markings</li> </ul>

## Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Lift various loads using the full radius and slewing capabilities of the loader crane</li> </ul>	<ul style="list-style-type: none"> <li>Duties / load charts</li> <li>Lifting accessories, buckets and grabs</li> <li>Lift plans</li> <li>Lifting controls</li> <li>Operator positioning</li> <li>Signalling procedures</li> <li>Hazards</li> </ul>	<ul style="list-style-type: none"> <li>Vehicle stability</li> <li>Trial lifts</li> <li>Load stability / security</li> <li>Visibility</li> <li>Environmental conditions</li> <li>Load swings</li> <li>Boom deflection</li> </ul>
<ul style="list-style-type: none"> <li>Place loads accurately at designated positions and on/into and from the vehicle</li> </ul>	<ul style="list-style-type: none"> <li>Ground conditions / hazards</li> <li>Visibility</li> <li>Weight distribution</li> <li>Stability</li> <li>Lift Complexity</li> </ul>	<ul style="list-style-type: none"> <li>Signalling / following instructions</li> <li>Load swings</li> <li>Protection of lifting accessories</li> <li>Appointed Person/lift planning</li> </ul>
<ul style="list-style-type: none"> <li>Explain the use of, types and fitting of boom extensions</li> </ul>	<ul style="list-style-type: none"> <li>Types and applications</li> <li>Attaching procedures</li> </ul>	<ul style="list-style-type: none"> <li>Duties / RCI set-up</li> </ul>
<ul style="list-style-type: none"> <li>Minimise the swinging of loads</li> </ul>	<ul style="list-style-type: none"> <li>Accessories</li> <li>Techniques</li> <li>Slew speeds</li> </ul>	<ul style="list-style-type: none"> <li>Observation / anticipation</li> <li>Stability</li> </ul>
<ul style="list-style-type: none"> <li>Secure loads on or in the vehicle</li> </ul>	<ul style="list-style-type: none"> <li>Weight distribution</li> <li>Stability</li> <li>Securing / restraining gear</li> </ul>	<ul style="list-style-type: none"> <li>Securing procedures</li> <li>Road Traffic Act</li> <li>Visibility</li> <li>Hazards</li> </ul>
<ul style="list-style-type: none"> <li>Explain different types of lifting accessories compatible with loader crane use</li> </ul>	<ul style="list-style-type: none"> <li>Types of accessories</li> <li>Uses</li> <li>Limitation of different types</li> </ul>	<ul style="list-style-type: none"> <li>Certification</li> <li>Pre-use checks</li> <li>Slings training</li> </ul>
<ul style="list-style-type: none"> <li>Maintain safe working situations</li> </ul>	<ul style="list-style-type: none"> <li>Stability</li> <li>Load security</li> </ul>	<ul style="list-style-type: none"> <li>Hazards</li> </ul>
<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> </ul>	<ul style="list-style-type: none"> <li>Shut down procedures</li> <li>Parking and positioning</li> </ul>	<ul style="list-style-type: none"> <li>Security</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

## Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>Lift Plans / Method statements</li> </ul>	<ul style="list-style-type: none"> <li>Lift plan types and requirements and the need for lift planning. Adherence to the lift plan as constructed by a competent person</li> </ul>
<ul style="list-style-type: none"> <li>Stabilisers</li> </ul>	<ul style="list-style-type: none"> <li>Security of stabilisers when travelling and full extension of stabilisers during lifting duties</li> </ul>
<ul style="list-style-type: none"> <li>Height Indicators</li> </ul>	<ul style="list-style-type: none"> <li>Use, legal requirements and locations of height indicators</li> </ul>

## Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> <li>Novice operators with no industry or machine experience</li> </ul>	35
<ul style="list-style-type: none"> <li>Novice operators with industry experience but no machine experience</li> </ul>	28
<ul style="list-style-type: none"> <li>Operators with unrelated (lifting) machine experience</li> </ul>	21
<ul style="list-style-type: none"> <li>Operators with similar (lifting) machine experience</li> </ul>	7
All candidates must have received the equivalent to 7 hours of site safety and induction training	

***To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category***

4 candidates : 2 machines: 1 instructor

## Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• Host vehicle and loader crane that meet current legislation</li> <li>• Operator's manual for the vehicle and crane</li> <li>• Different types of loads</li> <li>• Lifting accessories</li> <li>• Sufficient area of ground suitable for placing loads at various heights and radius</li> <li>• Boom extension</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>• PUWER 1998 Regulations</li> <li>• LOLER 1998 Regulations</li> <li>• HSE GS6</li> <li>• BS 7121 (parts 1, 2 and 4)</li> <li>• Operator's Manual</li> <li>• Specifications for types of lorry loader cranes</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable room for theory training purposes</li> <li>• Welfare and rest facilities during training</li> </ul>

## Category

### Category description and types

CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have varying uses within industry, for CPCS training and assessment standards, the descriptions reflect basic core use. Endorsements are sub-categories that reflect the variations for this category by duties. This category has three endorsements.

To identify a machine within this category, a typical lorry loader would normally have the listed features and be used within the described characteristics.

Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Multi-axled host light or heavy commercial vehicle chassis containing a driving cab, power, hydraulic and electrical units, and load-carrying bed</li> <li>• Rotating multi-sectioned boom, all hydraulically operated</li> <li>• Side mounted controls or loader-mounted operator position, some with remote operation ability</li> <li>• Hook block or other attachment at the end of the boom</li> <li>• Extendable sections to increase operating radius</li> <li>• Chassis mounted stabilisers at each side</li> </ul>	<ul style="list-style-type: none"> <li>• Able to travel in forward and reverse and change direction during travel by steering the front axle</li> <li>• Travels on hard surfaces with some types having limited off-road capability</li> <li>• Lift loads by raising the boom through an arc</li> <li>• Moves and places loads by using a combination of slew and boom raising / lowering motions within the confines of the operating radius, depth and height</li> <li>• Restricted (by legislation) to loading or unloading goods etc. to and from the host</li> </ul>

vehicle bed

## Endorsements

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Endorsement features	Endorsement characteristics
<ul style="list-style-type: none"><li>• <b>Endorsement A:</b> Hook – loads connected to boom mounted hook via lifting accessories</li><li>• <b>Endorsement B:</b> Clamshell Bucket – boom mounted bucket to load / unload loose materials / soils / aggregates etc.</li><li>• <b>Endorsement C:</b> Hydraulic Clamp – boom mounted clamp to load / unload solid loads i.e. brick stacks</li></ul>	

## Outcomes

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Through a combination of targeted training and experience, an individual with the trencher will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> <li>Undertake all pre-use checks</li> </ul>
<b>Travelling and manoeuvring</b>	<ul style="list-style-type: none"> <li>Configure and set for travel</li> <li>Travel over rough, undulating ground, substantial inclines and level surfaces</li> <li>Manoeuvre in confined spaces</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Configure and set for excavating duties</li> <li>Explain actions required for hazards, underground and overhead services</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Produce cut trenches in various types of ground</li> <li>Produce consistent depths of cut in level and uneven ground</li> <li>Cut trenches up and down inclines</li> <li>Explain techniques for radius cutting</li> <li>Place materials into transporting vehicles</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> <li>Explain the loading and unloading procedures for machine transporting</li> </ul>

## Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Reporting structures</li> <li>Lifelong skills</li> <li>Working practices</li> <li>Social responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Health and Safety at Work Act</li> <li>Environmental issues</li> <li>Other trades</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing types</li> <li>Functions and applications</li> <li>Power units</li> <li>Hydraulic systems</li> <li>Undercarriage / chassis / transmissions</li> <li>Steering systems</li> </ul>	<ul style="list-style-type: none"> <li>Stability / ground pressure</li> <li>Cutting units</li> <li>Spoil discharging arrangements</li> <li>Safety systems</li> <li>ROPS / FOPS</li> <li>Attachments</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PPE</li> <li>Codes of Practice</li> </ul>	<ul style="list-style-type: none"> <li>Method statements</li> <li>Site plans / drawings</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Configure and set for travel</li> </ul>	<ul style="list-style-type: none"> <li>Travel controls</li> <li>Attachments / accessories</li> </ul>	<ul style="list-style-type: none"> <li>Travel position</li> <li>Site travel</li> <li>Visibility</li> </ul>
<ul style="list-style-type: none"> <li>Travel over rough, undulating ground, substantial inclines and level surfaces</li> </ul>	<ul style="list-style-type: none"> <li>Travel routes</li> <li>Slopes / inclines</li> <li>Direction of travel</li> <li>Ground conditions</li> </ul>	<ul style="list-style-type: none"> <li>Hazards</li> <li>Working area</li> <li>Environment protection / minimise damage</li> </ul>
<ul style="list-style-type: none"> <li>Manoeuvre in confined spaces</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Limitations of vision</li> <li>Protection of ground / tight turns</li> </ul>	<ul style="list-style-type: none"> <li>Environmental / noise / fumes</li> <li>Height restrictions</li> <li></li> </ul>

## Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Configure and set for excavating duties</li> </ul>	<ul style="list-style-type: none"> <li>• Type of ground / stability</li> <li>• Required specification</li> <li>• Equipment / wheel size / type</li> <li>• Machine positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Spoil placing</li> <li>• Site markings</li> <li>• Loading vehicles positioning</li> <li>• Spoil segregation</li> </ul>
<ul style="list-style-type: none"> <li>• Explain actions required for hazards, underground and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>• Warning / identification systems</li> <li>• Minimum distances and clearances</li> </ul>	<ul style="list-style-type: none"> <li>• Types of typical services</li> <li>• Reporting procedures for damage to services</li> </ul>
<ul style="list-style-type: none"> <li>• Produce cut trenches in various types of ground</li> </ul>	<ul style="list-style-type: none"> <li>• Specification</li> <li>• Soil types</li> <li>• Disposal of spoil</li> <li>• Cutting speeds</li> <li>• Machine positioning</li> <li>• Spoil discharging</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental factors</li> <li>• Productive cycles of operation</li> <li>• Measuring depths and centres</li> </ul>
<ul style="list-style-type: none"> <li>• Produce consistent depths of cut in level and uneven ground</li> </ul>	<ul style="list-style-type: none"> <li>• Terrain preparation</li> <li>• Cutting speeds</li> <li>• Steering controls</li> </ul>	<ul style="list-style-type: none"> <li>• Measuring depths and centres</li> <li>• Levelling</li> </ul>
<ul style="list-style-type: none"> <li>• Cut trenches up and down inclines</li> </ul>	<ul style="list-style-type: none"> <li>• Ground markings</li> <li>• Techniques</li> <li>• Stability</li> </ul>	<ul style="list-style-type: none"> <li>• Machine adjustment / levelling</li> <li>• Spoil discharging</li> </ul>
<ul style="list-style-type: none"> <li>• Explain techniques for radius cutting</li> </ul>	<ul style="list-style-type: none"> <li>• Specification</li> <li>• Lengths of cut</li> </ul>	<ul style="list-style-type: none"> <li>• Machine positioning</li> </ul>
<ul style="list-style-type: none"> <li>• Place materials into transporting vehicles</li> </ul>	<ul style="list-style-type: none"> <li>• Machine positioning</li> <li>• Signals / communication</li> <li>• Loading vehicle stability</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum overspill</li> <li>• Cleaning loading area</li> </ul>
<ul style="list-style-type: none"> <li>• Carry out shut down and securing procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Shut down procedures</li> <li>• Security</li> </ul>	<ul style="list-style-type: none"> <li>• Parking and positioning</li> </ul>
<ul style="list-style-type: none"> <li>• Explain the loading and unloading procedures for machine transporting</li> </ul>	<ul style="list-style-type: none"> <li>• Compatibility</li> <li>• Positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Security</li> <li>• Types of transporter</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

## Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
• Novice operators with no industry or machine experience	28
• Novice operators with industry experience but no machine experience	21
• Operators with unrelated (earthmoving) machine experience	14
• Operators with similar (earthmoving) machine experience	7
All candidates must have received the equivalent to 7 hours of site safety and induction training	

*To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category*

4 candidates : 2 machines: 1 instructor

## Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• Trencher that meets current legislation</li> <li>• Operator's manual for the trencher</li> <li>• Measuring equipment to ensure levels and centres</li> <li>• Sufficient area of ground suitable for excavating</li> <li>• Slopes</li> <li>• Vehicle or trailer for loading into</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>• PUWER 1998 Regulations</li> <li>• HSE GS6</li> <li>• Operator's Manual</li> <li>• Specifications for types of trenchers</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable room for theory training purposes</li> <li>• Welfare and rest facilities during training</li> </ul>

## Category

### Category description and types

CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. For CPCS training and assessment standards, the descriptions reflect basic core use.

To identify a machine within this category, a typical trencher would normally have the listed features and be used within the described characteristics.

Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Multi-axled wheeled or tracked chassis containing operating position, power, hydraulic and electrical units</li> <li>• Wheeled or chain driven rotating excavating unit with cutting components</li> <li>• Conveyor system to side-cast or load excavated material</li> </ul>	<ul style="list-style-type: none"> <li>• Able to travel in forward and reverse and change direction during travel with most wheeled types having all-wheel drive and steering</li> <li>• Can travel and operate on uneven and loose ground and slopes</li> <li>• Carry out excavation duties in a linear motion using the wheel mounted or chain cutting components within the confines of the operating depth</li> </ul>

## Outcomes

Through a combination of targeted training and experience, an individual with the skip handler will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> <li>Undertake all pre-use checks</li> </ul>
<b>Travelling and manoeuvring</b>	<ul style="list-style-type: none"> <li>Configure and set for travel (site and highway)</li> <li>Travel over undulating ground and level surfaces – loaded and unloaded</li> <li>Manoeuvre in confined spaces whilst carrying loads</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Ensure the suitability of the tipping and loading area</li> <li>Explain actions required for hazards, underground and overhead services</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Position the vehicle to pick up and place skip / containers, including areas having height restrictions</li> <li>Retrieve and place skips or containers of various sizes and weights</li> <li>Deposit loads from a skip or container</li> <li>Transfer loads to different locations</li> <li>Carry out procedures for travel to ensure load integrity and security during travel</li> <li>Position the vehicle to pick up and place skip / containers, including areas having height restrictions</li> </ul>
<b>Completing work</b>	<ul style="list-style-type: none"> <li>Ensure deposited skips or bodies are left in a safe manner</li> </ul>
<b>Shutting down</b>	<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> <li>Explain the Road Traffic Act requirements</li> </ul>

## Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Reporting structures</li> <li>Lifelong skills</li> <li>Working practices</li> <li>Social responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Health and Safety at Work Act</li> <li>Environmental issues</li> <li>Other trades</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Differing types</li> <li>Functions and applications</li> <li>Power units</li> <li>Hydraulic systems</li> <li>Transmissions</li> <li>Chassis / steering / tyres</li> </ul>	<ul style="list-style-type: none"> <li>Stability / ground pressure</li> <li>Carrying capacities</li> <li>Types of bodies</li> <li>Attachments</li> <li>ROPS / FOPS</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PPE</li> <li>Codes of Practice</li> <li>Site plans / drawings</li> </ul>	<ul style="list-style-type: none"> <li>Method statements</li> <li>Load / tare sheets</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks</li> </ul>	<ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>	<ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>
<ul style="list-style-type: none"> <li>Configure and set for travel (site and highway)</li> </ul>	<ul style="list-style-type: none"> <li>Driving controls</li> <li>Attachments</li> <li>Security</li> <li>Driving position</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Body position</li> <li>Road Traffic Act</li> </ul>
<ul style="list-style-type: none"> <li>Travel over undulating ground and level surfaces – loaded and unloaded</li> </ul>	<ul style="list-style-type: none"> <li>Driving controls</li> <li>Ground conditions</li> <li>Traction / aids</li> <li>Road travel</li> <li>Hazards</li> </ul>	<ul style="list-style-type: none"> <li>Working area</li> <li>Site travel</li> <li>Environment protection / minimise damage</li> </ul>
<ul style="list-style-type: none"> <li>Manoeuvre in confined spaces whilst carrying loads</li> </ul>	<ul style="list-style-type: none"> <li>Visibility / aids</li> <li>Limitations of vision</li> <li>Protection of ground / tight turns</li> </ul>	<ul style="list-style-type: none"> <li>Personnel</li> <li>Environmental / noise / fumes</li> <li>Hazards</li> </ul>

## Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Ensure the suitability of the tipping and loading area</li> </ul>	<ul style="list-style-type: none"> <li>• Access / egress routes</li> <li>• Ground type / condition</li> <li>• Site markings</li> </ul>	<ul style="list-style-type: none"> <li>• Turning areas</li> <li>• Hazards</li> </ul>
<ul style="list-style-type: none"> <li>• Explain actions required for hazards, underground and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>• Types of typical services</li> <li>• Warning / identification system</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting procedures for damage to services</li> <li>• Minimum distances and clearances</li> </ul>
<ul style="list-style-type: none"> <li>• Position the vehicle to pick up and place skip / containers, including areas having height restrictions</li> </ul>	<ul style="list-style-type: none"> <li>• Reversing procedures</li> <li>• Visibility</li> <li>• Ground conditions</li> <li>• Skip / body positions</li> </ul>	<ul style="list-style-type: none"> <li>• Signalling / following instructions</li> <li>• Environmental conditions</li> <li>• Hazards / heights</li> </ul>
<ul style="list-style-type: none"> <li>• Retrieve and place skips or containers of various sizes and weights</li> </ul>	<ul style="list-style-type: none"> <li>• Signalling / following instructions</li> <li>• Vehicle suitability</li> <li>• Stability / SWL</li> <li>• Lifting equipment capability</li> <li>• Techniques</li> <li>• Regulations / legislation</li> </ul>	<ul style="list-style-type: none"> <li>• Carrying capacity / axle loadings</li> <li>• Securing procedures</li> <li>• Estimating loads</li> <li>• Visibility</li> <li>• Hazards</li> <li>• Weight distribution</li> </ul>
<ul style="list-style-type: none"> <li>• Deposit loads from a skip or container</li> </ul>	<ul style="list-style-type: none"> <li>• Discharge area</li> <li>• Ground conditions</li> <li>• Stability (raised skips / container)</li> <li>• Fully emptying skips / container</li> <li>• Visibility</li> <li>• Signalling / following instructions</li> <li>• Hazards / heights</li> </ul>	<ul style="list-style-type: none"> <li>• Techniques</li> <li>• Material jams</li> <li>• Discharging on inclines</li> <li>• Discharging whilst moving</li> <li>• Materials / vehicle protection</li> <li>• Environmental considerations</li> <li>• Minimising spillage</li> </ul>
<ul style="list-style-type: none"> <li>• Transfer loads to different locations</li> </ul>	<ul style="list-style-type: none"> <li>• Travel routes / planning</li> <li>• Ground types</li> <li>• Haul route procedures</li> <li>• Visibility</li> <li>• Hazards</li> </ul>	<ul style="list-style-type: none"> <li>• Efficiency</li> <li>• Speed limits</li> <li>• Projecting loads</li> <li>• Environmental conditions</li> <li>• Road Traffic Act</li> </ul>

## Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Carry out procedures for travel to ensure load integrity and security during travel</li> </ul>	<ul style="list-style-type: none"> <li>Skip / container securing / locking procedures</li> <li>Netting / sheeting</li> <li>Doors / lids securing</li> <li>Material types / factors</li> </ul>	<ul style="list-style-type: none"> <li>Working at height</li> <li>Hazards</li> <li>Environmental considerations</li> </ul>
<ul style="list-style-type: none"> <li>Ensure deposited skips or bodies are left in a safe manner</li> </ul>	<ul style="list-style-type: none"> <li>Positioning / hazards</li> <li>Ground conditions</li> <li>Load security / integrity</li> <li>Road Traffic Act</li> </ul>	<ul style="list-style-type: none"> <li>Signing / lighting</li> <li>Environmental considerations</li> </ul>
<ul style="list-style-type: none"> <li>Carry out shut down and securing procedures</li> </ul>	<ul style="list-style-type: none"> <li>Shut down procedures</li> <li>Security</li> </ul>	<ul style="list-style-type: none"> <li>Parking and positioning</li> </ul>
<ul style="list-style-type: none"> <li>Explain the Road Traffic Act requirements</li> </ul>	<ul style="list-style-type: none"> <li>Transport Operator licensing / requirements</li> <li>Driver Licensing</li> <li>Documentation</li> <li>Vehicle Compliance</li> <li>Axle loadings</li> </ul>	<ul style="list-style-type: none"> <li>Driver training / re-training</li> <li>Accident / incident reporting</li> <li>Hazardous loads</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

## Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>Reversing procedures</li> </ul>	<ul style="list-style-type: none"> <li>All reversing and safety aids to be fully functional – use of signaller mandatory on most working areas</li> </ul>
<ul style="list-style-type: none"> <li>Stability with raised skips / containers or uneven ground</li> </ul>	<ul style="list-style-type: none"> <li>Checking ground prior to tipping – tipping skips / containers slowly (weight transfer)</li> </ul>
<ul style="list-style-type: none"> <li>Working at height</li> </ul>	<ul style="list-style-type: none"> <li>Safe access requirements when netting, sheeting and securing loads for transport</li> </ul>

## Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> <li>Novice operators with no industry or (commercial) machine experience</li> </ul>	28
<ul style="list-style-type: none"> <li>Novice operators with industry experience but no (commercial) machine experience</li> </ul>	21
<ul style="list-style-type: none"> <li>Operators with unrelated (commercial / transporting) machine experience</li> </ul>	14
<ul style="list-style-type: none"> <li>Operators with similar (commercial / transporting) machine experience</li> </ul>	7
All candidates must have received the equivalent to 7 hours of site safety and induction training	

***To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category***

4 candidates : 2 machines: 1 instructor

## Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>• Suitable skip handler that meets current legislation</li> <li>• Operator's manual for the host vehicle and lifting unit</li> <li>• Loading machine</li> <li>• Sufficient area of ground for driving / manoeuvring</li> <li>• Uneven terrain</li> <li>• Skip / body placing and tipping areas</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable PPE</li> <li>• Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>• PUWER 1998 Regulations</li> <li>• LOLER 1998 Regulations</li> <li>• Work at Height Regulations 2003</li> <li>• Road Traffic Act</li> <li>• HSE GS6</li> <li>• Operator's Manual</li> <li>• Specifications for types of skip handler / host vehicles</li> </ul> <p><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Suitable room for theory training purposes</li> <li>• Welfare and rest facilities during training.</li> </ul>

## Category

Category description and types	
<p>CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have some variations, for CPCS training and assessment standards, the descriptions reflect basic core use.</p> <p>To identify a machine within this category, a typical skip handler would normally have the listed features and be used within the described characteristics.</p>	
Category features	Category characteristics
<ul style="list-style-type: none"> <li>• Commercial vehicle-based multi-axled chassis containing a forward driving position; power, transmission, hydraulic and electrical units</li> <li>• Hydraulic lifting arm or arms able to lift and chassis-mountable skips or bodies</li> <li>• Chain link connection between a 'U' frame lifting arm and skip that lifts and places the skip on the vehicle bed</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>• Single hooked lifting arm connecting directly to the body and draws the body on chassis mounted rollers onto the chassis</li> </ul>	<ul style="list-style-type: none"> <li>• Able to travel in forward and reverse and change direction during travel by steering the front axles</li> <li>• Can travel on uneven and loose ground and slopes</li> <li>• Lifts, transports and deposits loads contained within a skip or body</li> <li>• Can deposit a load by raising the body / tilting the skip</li> </ul>

## Outcomes

Through a combination of targeted training and experience, a slinger/signaller will be able to:

<b>Roles and responsibilities</b>	<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a slinger/signaller</li> </ul>
<b>Preparing for work</b>	<ul style="list-style-type: none"> <li>Name and explain the purpose of differing types of lifting equipment and lifting accessories, basic construction, uses and applications, characteristics and terminology</li> <li>Conform with manufacturer's requirements as per technical data, other types of information source and relevant regulations and legislation</li> <li>Interpret and extract information on all relevant documentation</li> <li>Undertake all pre-use checks on non-specialist lifting accessories (relevant to the endorsement) and identify non-serviceable items</li> <li>Identify specialist lifting accessories relevant to the endorsement</li> <li>Explain when additional skills and knowledge for lifting operations may be required</li> <li>Explain procedures for placing non-serviceable items out-of-service</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Confirm methods of communication with the machine operator</li> <li>Identify centres of gravity and establish weights of loads</li> <li>Prepare and ready the area of operation and maintain exclusion zones</li> <li>Choose the relevant lifting accessory for a given load</li> <li>Explain actions required for hazards including underground and overhead services</li> </ul>
<b>Working tasks</b>	<ul style="list-style-type: none"> <li>Secure and detach various types of load to the requisite lifting point using the relevant lifting accessory and procedures</li> <li>Ensure load balance, security and integrity</li> <li>Guide and control the movement of loads to different types of location</li> <li>Explain the importance and locations of positions of safety for a slinger and other personnel</li> <li>Accurately place loads</li> <li>Use and comply with a range of communication procedures</li> <li>Provide directions where the machine operator cannot observe the full path of the load</li> <li>Maintain safe working situations</li> </ul>
<b>Working tasks (pick and carry duties)</b>	<ul style="list-style-type: none"> <li>Assess and confirm that the area for machine movement is suitable for manoeuvring activities and contains suitable locations to undertake marshalling duties (endorsements A, D and E)</li> <li>Control loads during pick-and-carry duties (endorsements A, D and E)</li> </ul>
<b>Completing work</b>	<ul style="list-style-type: none"> <li>Carry out out-of-service and securing procedures</li> </ul>

## Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a slinger/signaller</li> </ul>	<ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Reporting structures</li> <li>Lifelong skills</li> <li>Working practices</li> <li>Social responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Health and Safety at Work Act</li> <li>Environmental issues</li> <li>Other trades</li> </ul>
<ul style="list-style-type: none"> <li>Name and explain the purpose of differing types of lifting equipment and lifting accessories, basic construction, uses and applications, characteristics and terminology</li> </ul>	<ul style="list-style-type: none"> <li>Types of lifting equipment/ lifting equipment</li> <li>Types of accessories including specialist and non-specialist</li> <li>Construction / materials</li> <li>Applications</li> </ul>	<ul style="list-style-type: none"> <li>Functions</li> <li>Definitions</li> <li>Uses</li> <li>Specialist accessories</li> <li>Terminology</li> <li>SWL / WLL (Inc. differences between)</li> </ul>
<ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per technical data, other types of information source and relevant regulations and legislation</li> </ul>	<ul style="list-style-type: none"> <li>Manuals / information sheets</li> <li>Duties charts</li> <li>Decals</li> <li>Health and Safety at Work Act</li> <li>PPE</li> <li>Site plans / drawings</li> </ul>	<ul style="list-style-type: none"> <li>Method statements</li> <li>Lifting requirements and limitations</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> <li>Lift plans</li> <li>Codes of Practice</li> </ul>
<ul style="list-style-type: none"> <li>Interpret and extract information on all relevant documentation</li> </ul>	<ul style="list-style-type: none"> <li>Test certificates</li> <li>Thorough examination certificates</li> </ul>	<ul style="list-style-type: none"> <li>Load / tare sheets</li> <li>Duties charts</li> </ul>
<ul style="list-style-type: none"> <li>Undertake all pre-use checks on non-specialist lifting equipment (relevant to the endorsement) and identify non-serviceable accessories</li> </ul>	<ul style="list-style-type: none"> <li>Types of damage / defects</li> <li>Sequence of pre-use checks</li> </ul>	<ul style="list-style-type: none"> <li>Procedures</li> <li>In-service and out-of-service markings</li> </ul>
<ul style="list-style-type: none"> <li>Identify specialist lifting accessories relevant to the endorsement</li> </ul>	<ul style="list-style-type: none"> <li>Types</li> <li>Application and use</li> <li>Information sources for use</li> <li>Manual handling requirements</li> <li>Weights/centres of gravity</li> </ul>	<ul style="list-style-type: none"> <li>Specialist checks</li> <li>Attaching/detaching procedures</li> <li>Adjustments/setting up</li> <li>Additional training requirements</li> <li>Storage procedures</li> </ul>

## Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Explain when additional skills and knowledge for lifting operations may be required</li> </ul>	<ul style="list-style-type: none"> <li>Changes in the lift plan</li> <li>Environmental effects</li> <li>New working area</li> <li>Changes or addition of team members</li> </ul>	<ul style="list-style-type: none"> <li>New types of accessories</li> <li>Different types of lifting equipment</li> <li>Changes to site/working area requirements</li> </ul>
<ul style="list-style-type: none"> <li>Explain procedures for placing non-serviceable items out-of-service</li> </ul>	<ul style="list-style-type: none"> <li>Defect reporting</li> <li>Storage of defective items</li> </ul>	<ul style="list-style-type: none"> <li>Disposing of defective items</li> </ul>
<ul style="list-style-type: none"> <li>Confirm methods of communication with the machine operator</li> </ul>	<ul style="list-style-type: none"> <li>Methods and types of signals</li> <li>Methods of verbal instruction</li> </ul>	<ul style="list-style-type: none"> <li>Multiple signalling</li> <li>Codes of Practice</li> </ul>
<ul style="list-style-type: none"> <li>Identify centres of gravity and weights of loads</li> </ul>	<ul style="list-style-type: none"> <li>Load types</li> <li>Centre of gravity</li> <li>Load integrity</li> <li>Load density and shapes</li> </ul>	<ul style="list-style-type: none"> <li>Calculations</li> <li>Moisture contents</li> <li>Information sheets / load markings</li> </ul>
<ul style="list-style-type: none"> <li>Prepare and ready the area of operation and maintain exclusion zones</li> </ul>	<ul style="list-style-type: none"> <li>Required configuration (lift plan)</li> <li>Judging heights and distances</li> <li>Signage/barriers, pedestrian walkways and other moving plant/vehicles</li> </ul>	<ul style="list-style-type: none"> <li>Environmental conditions</li> <li>Hazards</li> <li>Site procedures</li> <li>Personnel identification</li> </ul>
<ul style="list-style-type: none"> <li>Choose the relevant lifting accessory for a given load</li> </ul>	<ul style="list-style-type: none"> <li>Lifting equipment (lifting equipment) capacity</li> <li>Lifting accessory capacity</li> <li>Required type or types</li> <li>Load weight</li> <li>Lifting accessory weight</li> <li>SWL / WLL</li> </ul>	<ul style="list-style-type: none"> <li>Lift plan</li> <li>Additional accessories</li> <li>Load characteristics – loose, bundled, fluid loads etc.</li> <li>Sling angles</li> <li>De-rating</li> </ul>
<ul style="list-style-type: none"> <li>Explain actions required for hazards including underground and overhead services</li> </ul>	<ul style="list-style-type: none"> <li>Types of typical services / hazards</li> <li>Warning / identification systems</li> <li>Reporting procedures for damage to services</li> </ul>	<ul style="list-style-type: none"> <li>Minimum distances and clearances</li> <li>Multiple lifting equipment use / lifting equipment co-ordination</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Secure and detach various types of load to the requisite lifting hook using the relevant lifting accessory and procedures</li> </ul>	<ul style="list-style-type: none"> <li>Lifting accessory</li> <li>SWL / WLL</li> <li>Load type</li> <li>Load characteristics</li> <li>Slings procedures</li> <li>Load protection</li> </ul>	<ul style="list-style-type: none"> <li>Load lifting points</li> <li>Lifting accessory protection</li> <li>Retrieval of accessories after placing</li> <li>Environmental factors</li> </ul>
<ul style="list-style-type: none"> <li>Ensure load balance, security and integrity</li> </ul>	<ul style="list-style-type: none"> <li>Trial lifts</li> <li>Stability</li> <li>C of G / balance</li> <li>Netting / sheeting</li> </ul>	<ul style="list-style-type: none"> <li>Fluid loads</li> <li>Load surface area</li> <li>Environmental conditions / wind effects</li> </ul>
<ul style="list-style-type: none"> <li>Guide and control the movement of loads to different types of location</li> </ul>	<ul style="list-style-type: none"> <li>Route</li> <li>Visibility</li> <li>Other personnel / public areas</li> <li>Causes of load swing</li> <li>Areas of trapping</li> <li>Load tethering options</li> </ul>	<ul style="list-style-type: none"> <li>Hand line requirements</li> <li>Attaching hand lines</li> <li>Communication</li> <li>Hazards</li> <li>Risks of slips, trips and falls</li> <li>Environmental considerations</li> </ul>
<ul style="list-style-type: none"> <li>Explain the importance and locations of positions of safety for a slinger and other personnel</li> </ul>	<ul style="list-style-type: none"> <li>Work area layout</li> <li>Types of vehicle/plant in work area</li> <li>Clearances and crush zones</li> </ul>	<ul style="list-style-type: none"> <li>Pedestrian segregation/demarcation</li> <li>Refuges</li> <li>Actions for poor light/darkness</li> </ul>
<ul style="list-style-type: none"> <li>Use and comply with a range of communication procedures</li> </ul>	<ul style="list-style-type: none"> <li>Methods and types of signals</li> <li>Signaller identification</li> <li>Methods of verbal instruction</li> </ul>	<ul style="list-style-type: none"> <li>Electronic communication / setting-up</li> <li>Multiple signalling</li> <li>Codes of Practice</li> <li>Radio protocol</li> </ul>
<ul style="list-style-type: none"> <li>Use and comply with a range of communication procedures</li> </ul>	<ul style="list-style-type: none"> <li>Methods and types of signals</li> <li>Signaller identification</li> <li>Methods of verbal instruction</li> </ul>	<ul style="list-style-type: none"> <li>Electronic communication / setting-up</li> <li>Multiple signalling</li> <li>Codes of Practice</li> <li>Radio protocol</li> </ul>
<ul style="list-style-type: none"> <li>Provide directions where the machine operator cannot observe the full path of the load</li> </ul>	<ul style="list-style-type: none"> <li>Effective communication procedures and methods</li> <li>Access and egress to the load lifting/landing areas</li> </ul>	<ul style="list-style-type: none"> <li>Requirements for additional signallers</li> <li>Working at height requirements</li> </ul>
<ul style="list-style-type: none"> <li>Maintain safe working situations</li> </ul>	<ul style="list-style-type: none"> <li>Load stability / security</li> <li>Lifting equipment stability</li> </ul>	<ul style="list-style-type: none"> <li>Hazards</li> </ul>

### Syllabus *(continued)*

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Assess and confirm that the area for machine movement is suitable for manoeuvring activities and contains suitable locations to undertake marshalling duties</li> </ul>	<ul style="list-style-type: none"> <li>Traffic management plan/risk assessment</li> <li>Proximity hazards</li> <li>Access/egress routes</li> <li>Ground conditions</li> <li>Traffic plan requirements</li> <li>Marshalling locations</li> </ul>	<ul style="list-style-type: none"> <li>Emergency procedures</li> <li>Risks of slips, trips and falls</li> <li>Crush zones</li> <li>Vehicle /plant size and manoeuvrability relative to the work area</li> <li>Reversing distances/minimising reversing</li> </ul>
<ul style="list-style-type: none"> <li>Control loads during pick-and-carry duties (endorsements A, D and E)</li> </ul>	<ul style="list-style-type: none"> <li>Additional communication procedures with lifting equipment operator</li> <li>Travel routes and inclines</li> <li>Ground type and conditions</li> <li>Load swings</li> <li>Wind effects/sail areas</li> </ul>	<ul style="list-style-type: none"> <li>Handline/tethering requirements</li> <li>Clearances between machine and load handler</li> <li>Visibility limitations of lifting equipment operator</li> <li>Use of additional personnel</li> </ul>
<ul style="list-style-type: none"> <li>Carry out out-of-service, storing and securing procedures</li> </ul>	<ul style="list-style-type: none"> <li>Cleaning and protecting accessories</li> <li>Manual handling</li> <li>Storage procedures</li> </ul>	<ul style="list-style-type: none"> <li>Damage checking</li> <li>Security</li> <li>Documentation</li> </ul>

**Note:** The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

### Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> <li>Lift plans / method statements</li> </ul>	Lift plan types and requirements and the need for lift planning, particularly where travelling with suspended loads is involved. Adherence to the lift plan as constructed by a competent person
<ul style="list-style-type: none"> <li>Tidiness of the work area/good housekeeping</li> </ul>	Ensuring that area of operation is organised and of suitable ground so that slips, trips & falls are minimised, and that materials are suitably and safely stored
<ul style="list-style-type: none"> <li>Controlling loads under pick and carry duties</li> </ul>	Ensuring the travel route minimises the risk of slips, trips and falls and keeping well clear of the moving path of the machine whilst keeping in full vision of the machine operator and
<ul style="list-style-type: none"> <li>Stability of machines with raised boom on uneven ground</li> </ul>	Checking ground suitability prior to raising loads. Travelling and manoeuvring with raised loads. Appreciation of centres of gravity
<ul style="list-style-type: none"> <li>Attaching and detaching loads to and from non-hoist rope equipment</li> </ul>	Confirmation with machine operator in being safe to undertake work whilst in close proximity to boom/dipper components e.g. tele handlers, excavators etc. and risks of unintentional component movement (raising/lowering/sideways)
<ul style="list-style-type: none"> <li>Suspended loads and proximity hazards</li> </ul>	Issues relating to travelling with raised boom, an operator's limitation of vision when travelling with raised boom and suspended large area loads
<ul style="list-style-type: none"> <li>Suspended loads during travel</li> </ul>	The effects and consequences of load swing when travelling with a suspended load, particularly on inclines and windy weather Inc. knowledge of wind speed limits/sail effect etc.
<ul style="list-style-type: none"> <li>Out-of-sight (Inc. below ground level) load lifting and placing</li> </ul>	Implementing of procedures for effective communication when lifting or placing loads in confined areas, areas out-of-sight of the machine operator such as below ground level load lifting and placing

## Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
• Novices with no industry or lifting experience	28
• Novices with industry experience but no lifting experience	21
• Individuals with some lifting experience	7
All candidates must have received the equivalent to 7 hours of site safety and induction training	

*To allow effective learning, the listed candidate / machine / instructor ratio  
is the maximum recommended for this category*

4 candidates : 1 machine: 1 instructor

## Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> <li>Lifting equipment with competent operator</li> <li>Different types of loads</li> <li>Lifting accessories</li> <li>Information sources</li> <li>Sufficient area of ground suitable for placing loads at various heights and radius</li> </ul>	<ul style="list-style-type: none"> <li>PUWER 1998 Regulations</li> <li>LOLER 1998 Regulations</li> <li>BS 7121 (all parts)</li> <li>HSE GS6</li> <li>Specifications books for lifting equipment (lifting equipment) and lifting accessories</li> </ul>
<b>PLUS</b>	<b>PLUS</b>
<ul style="list-style-type: none"> <li>Suitable PPE</li> <li>Risk assessment for all areas where training is occurring</li> </ul>	<ul style="list-style-type: none"> <li>Suitable room for theory training purposes</li> <li>Welfare and rest facilities during training</li> </ul>

## Category

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### Category description and types

This category is defined as a duty of an individual who, as part of a lifting team, attaches and secures loads using non-specialist lifting accessories, signals the movement for suspended loads and guides them to an agreed destination, and leaves the load in a safe condition.

### Duties

**Slinging** means the ability to safely connect and secure various types of loads to a lifting hook using the relevant lifting accessory and procedures.

**Signalling** means the ability to convey information to the lifting equipment operator and others involved in the lift using one or more of manual, hand and verbal instructions.

### Endorsement characteristics

**Endorsement A** - All types – all duties: Ability to undertake the role with a range of common types of lifting equipment including pick-and carry duties

**Endorsement B** - All types – static duties: Ability to undertake the role with a range of common types of static duty lifting equipment

**Endorsement C** - Knuckle boom static only: Ability to undertake the role only with static lifting equipment of this type

**Endorsement D** – Excavator only: Ability to undertake the role only with earthmoving-type excavators which have lifting duties capability, and includes pick-and-carry duties

**Endorsement E** - Lift truck only: Ability to undertake the role only with masted -type lift trucks and variable reach trucks (such as telescopic handlers) which have suspended load lifting duties capability and includes pick-and-carry.

**Note:** For CPCS purposes, the definition of non-specialist lifting accessories is defined as equipment that uses chain, wire or fibre material as part of the equipment's components used for the lifting of common types of construction site materials and/or equipment.