

Learning for CPCS

Piling Rig Attendant - A74



Outcomes

Through a combination of targeted training and experience, an individual working as a piling rig attendant will be able to:

Roles and responsibilities	<ul style="list-style-type: none"> Describe the nature of the sector of industry and their role and responsibilities as a piling rig attendant
Preparing for work	<ul style="list-style-type: none"> Name and explain the purpose of principal components of relevant piling rig plant and equipment, the basic construction, and piling sector terminology Conform with manufacturer's requirements equipment and components, industry and company standards e.g. pile schedules, layout drawings etc. and other types of information sources Undertake all pre-use checks of associated/ancillary equipment (where necessary) following manufacturer's guidance Explain the purpose and requirements of working platform certificates Outline their role in setting up and rigging piling rigs and ancillary equipment in readiness for work Set a communication system, and provide and receive signals and instructions to/from the operator and others
Travelling and manoeuvring	<ul style="list-style-type: none"> Explain how piling rigs are configured for travel Explain the procedures and precautions to be taken when guiding rigs to and from the worksite Explain requirements if rigs are being manoeuvred in areas of limited or restricted space Guide a piling rig to a given location including through areas of limited or restricted space
Setting up for work	<ul style="list-style-type: none"> Position a rig at the designated location Assist in configuring the rig for work and provide instructions for the setting of a mast Explain actions required for piling hazards and for underground and overhead services Explain the need for an exclusion zone
Working tasks	<ul style="list-style-type: none"> Ensure piles are accurately installed to specification Comply with and provide signals and instructions Maintain safe working situations including exclusion zones Explain requirements and limitations of lifting operations with piling rig
Shutting down	<ul style="list-style-type: none"> Carry out shut down and securing procedures Outline their role for de-rigging procedures following completion of operations Explain the loading and unloading procedures for machine transporting

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Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> Describe the nature of the sector of industry and their role and responsibilities as a piling rig attendant 	<ul style="list-style-type: none"> Industry type Customer / client needs Sector contribution Role Reporting structures Lifelong skills Working practices Social responsibilities 	<ul style="list-style-type: none"> Communication with colleagues / management / other trades Health and Safety at Work Act Environmental issues Other trades
<ul style="list-style-type: none"> Name and explain the purpose of principal components, the basic construction and piling sector terminology 	<ul style="list-style-type: none"> Differing types Function / applications Power units Hydraulic systems Undercarriage Counterweights Tracks Stability / ground pressure 	<ul style="list-style-type: none"> Boring equipment / augers Slewing arrangements Booms / masts (leaders) Attachments Pile types / methods RCIs / RLIs / safety systems ROPS / FOPS
<ul style="list-style-type: none"> Conform with manufacturer's requirements, industry and company standards e.g. pile schedules, layout drawings and other, types of information sources 	<ul style="list-style-type: none"> Operator's Manual Work Instructions Health and Safety at Work Act PPE Duties charts Codes of Practice Piling specifications Pile Schedules Layout drawings 	<ul style="list-style-type: none"> Site plans/drawings Method statements Lifting requirements and limitations Risk assessments / COSHH Inspection and reporting forms/procedures
<ul style="list-style-type: none"> Undertake all pre-use checks of equipment (where necessary) following manufacturer's guidance 	<ul style="list-style-type: none"> Regular and non-scheduled maintenance procedures 	<ul style="list-style-type: none"> Sequence of pre-use checks Defect reporting
<ul style="list-style-type: none"> Explain the requirements of working platform certificates 	<ul style="list-style-type: none"> Design of platform Installation Authorisation procedures 	<ul style="list-style-type: none"> Regular inspections Alterations and repairs Dissemination of information
<ul style="list-style-type: none"> Outline their role in setting up plant in readiness for work 	<ul style="list-style-type: none"> Handling and storing ancillary equipment specific to the operation Pumps, hoses, pipelines configured for work 	<ul style="list-style-type: none"> Assists with rigging and de-rigging Drive or digging tool assembly Delivery and handling of materials

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Syllabus (continued)

Learning outcome	Training content	
<ul style="list-style-type: none"> Set a communication system, and provide and receive signals and instructions to/from the operator and others 	<ul style="list-style-type: none"> Types of signals Codes of signals Communication / radio protocol 	<ul style="list-style-type: none"> Suitability of communication system Back-up / alternative systems
<ul style="list-style-type: none"> Identify how piling rigs are set for travel 	<ul style="list-style-type: none"> Travel controls Attachments / accessories Travel position 	<ul style="list-style-type: none"> Site travel Visibility Boom / jib positioning Road Traffic Act
<ul style="list-style-type: none"> Explain the procedures and precautions to be taken when guiding rigs to and from the worksite 	<ul style="list-style-type: none"> Travel routes Slopes / inclines Direction of travel Traction / aids Ground conditions 	<ul style="list-style-type: none"> Hazards Working area Environment protection Minimise impacts Traffic management
<ul style="list-style-type: none"> Explain requirements if rigs are being manoeuvred in areas of limited or restricted space 	<ul style="list-style-type: none"> Visibility Limitations of vision Protection of ground/tight turns Overhead height restrictions e.g. cables / bridges / lintels 	<ul style="list-style-type: none"> Proximity to adjacent structures and excavations Slew radius/restrictions
<ul style="list-style-type: none"> Guide a piling rig to a given location including through areas of limited or restricted space 	<ul style="list-style-type: none"> Configuration for travelling Positioning Proximity hazards Operator visibility 	<ul style="list-style-type: none"> Slew/radius restrictions Travel speeds Ground support and conditions Other moving plant
<ul style="list-style-type: none"> Position a rig at the designated position 	<ul style="list-style-type: none"> Rig positioning Maintains exclusion zone Environmental conditions Proximity Hazards Pile details requirements 	<ul style="list-style-type: none"> Counterweight swing Levelling / inclines Pile position markers Ground pressure
<ul style="list-style-type: none"> Assist in configuring the rig for work and provide instructions for the setting of a mast 	<ul style="list-style-type: none"> Required configuration / attachments Mast angles Pile type Depths of work Types of communication 	<ul style="list-style-type: none"> Spoil / environmental requirement Guarding of moving parts Hazards Movement of supporting plant

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Syllabus (continued)

Learning outcome	Training content	
<ul style="list-style-type: none"> • Explain actions required for piling hazards, and underground and overhead services 	<ul style="list-style-type: none"> • Warning / identification systems • Reporting procedures for damage to services • Unexploded ordinance 	<ul style="list-style-type: none"> • Types of typical services • Minimum distances and clearances (GS6) • Permit to dig • Evacuation planning
<ul style="list-style-type: none"> • Explain the need for an exclusion zone 	<ul style="list-style-type: none"> • Plant and vehicle movements • Non-authorised personnel 	<ul style="list-style-type: none"> • Barriers/signage • Alternative routes
<ul style="list-style-type: none"> • Ensure piles are accurately installed to specification 	<ul style="list-style-type: none"> • Types of piles • Ground / soil types specification • Measuring dimension and positioning • Environmental factors 	<ul style="list-style-type: none"> • Maintaining of positioning • Productive cycles of operation • Maintaining correct angle of pile
<ul style="list-style-type: none"> • Comply with signals and instructions 	<ul style="list-style-type: none"> • Methods and types of signals • Methods of verbal instruction • Multiple signalling 	<ul style="list-style-type: none"> • Electronic communication / setting-up • Codes of Practice • Radio protocol
<ul style="list-style-type: none"> • Maintain safe working situations including exclusion zones 	<ul style="list-style-type: none"> • Stability • Visibility • Maintain communication throughout • Underfoot conditions • Guarding of moving parts • Exclusion zones • Working platform condition 	<ul style="list-style-type: none"> • Lighting levels • Plant, people segregation, control of vehicle movements e.g. Ready-mix, precast pile deliveries
<ul style="list-style-type: none"> • Explain lifting requirements and limitations using a piling rig 	<ul style="list-style-type: none"> • Legislation / regulations and industry guidance • Lift plans • Load slinging and lifting • Load handling and securing • Recognising the limitations of the piling rig • Lifting and load-rating charts 	<ul style="list-style-type: none"> • Safe working load of equipment and accessories • Accessing delivery vehicles • Selecting appropriate storage areas

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Syllabus (*continued*)

Learning outcome	Training content	
<ul style="list-style-type: none"> Carry out shut down and securing procedures 	<ul style="list-style-type: none"> Shut down procedures Security Platform condition Positioning for parking 	<ul style="list-style-type: none"> Access and egress Wet ground Minimising obstructions
<ul style="list-style-type: none"> Outline their role for de-rigging procedures following completion of operations 	<ul style="list-style-type: none"> Methods of work/manufacturer's instructions Component removal techniques Under supervision of qualified person 	<ul style="list-style-type: none"> De-rigging sequences Components storage and transportation requirements Sufficient ground/space
<ul style="list-style-type: none"> Explain the loading and unloading procedures for machine transporting 	<ul style="list-style-type: none"> Angle of ramps, access Design/material of ramps Dimensions and SWL of trailer Sufficient working space Firm level ground 	<ul style="list-style-type: none"> Overhead obstructions Traffic Management Loading procedure Preparing rigs for transport

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

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Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> Position of safety during manoeuvring activities 	Positioning of attendant relative to proximity hazards, moving machinery and component etc. position of trapping and the planning of emergency egress routes
<ul style="list-style-type: none"> Ensuring stability of machine during travelling activities 	Responsibility of ensuring that the route to work area is able to support the weight of the rig and is clear of possible voids and underground hazards etc
<ul style="list-style-type: none"> Position of safety during work activities 	Being clear of possible falling debris and materials, and rotating/active parts during piling activities

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"> Novice attendants with no industry or machine experience 	70
<ul style="list-style-type: none"> Novice attendants with some piling experience but no rig experience 	62
<ul style="list-style-type: none"> Attendants with similar but non-piling rig experience e.g. slinging/signalling etc. 	42
<ul style="list-style-type: none"> Attendants with piling rig 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

2 candidates : 1 rig: 1 instructor

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Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none">• Piling rig (driven) that meets current legislation• Suitable attachments and ancillary equipment for piling• Selection of piles• Sufficient area of ground suitable for placing piles to various depths• Working platform plans	<ul style="list-style-type: none">• PUWER 1998 Regulations• LOLER 1998 Regulations• BS 7121 (parts 1, 2 and 3)• HSE GS6• Specifications for types of piling rigs
PLUS	PLUS
<ul style="list-style-type: none">• Suitable PPE• Risk assessment for all areas where training is occurring	<ul style="list-style-type: none">• Suitable room for theory training purposes• Welfare and rest facilities during training

Training attributes

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

- | | |
|--|---|
| <ul style="list-style-type: none">• Piling, construction or related experience• Able to calculate basic formula• Able to record basic details• Understand basic written words | <ul style="list-style-type: none">• Have received site safety and induction training• Possess good eye and hand co-ordination• Have mechanical appreciations• Medically able for the role (including eyesight) |
|--|---|

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

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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 or legislative guidance;

Or

A role, duty or occupation which supports the operation of plant and equipment. This category is defined as a duty of an individual who provides direct support to the piling rig for the installation of piles.

Duties

The piling rig attendant works directly with a given rig and directly supports the piling process by helping prepare the rig for work, guide the rig onto the work platform and into position, maintains an exclusion zone, guides supporting vehicles in to and from the working area, attaches accessories and equipment under the direction of the rig operator, align piles according to given specifications and provides assistance in guiding rigs on to and from transporters