



## **Level 2 NVQ Diploma in Directional Drilling Operations (Construction)**

### **Qualification Specification**

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## Introduction

The ProQual Level 2 NVQ Diploma in Directional Drilling Operations (Construction) qualification provides a nationally recognised qualification for those working in the construction and the built environment sector, who may be involved in drilling holes for the installation of pipes, conduits and cables where open cut techniques cannot be used. It is designed to assess occupational competence in the workplace where candidates are required to demonstrate skills and knowledge to a level required in the construction industry.

The awarding body for this qualification is ProQual Awarding Body ([www.proqualab.com](http://www.proqualab.com)) and the regulatory body is the Office of Qualifications and Examinations Regulation (Ofqual); It is also endorsed by the sector body for construction - CITB.

The qualification has been accredited onto the Regulated Qualifications Framework (RQF) and is published on Ofqual's Register of Qualifications.

## Qualification Profile

### Level 2 NVQ Diploma in Directional Drilling Operations (Construction)

Qualification title	<b>ProQual Level 2 NVQ Diploma in Directional Drilling Operations (Construction)</b>
Ofqual qualification number	603/0363/3
Level	2
Total Qualification Time	600-690 hours (234-470 GLH)
Assessment	Pass or fail Internally assessed and verified by centre staff External quality assurance by ProQual verifiers
Qualification start date	29/08/16
Qualification end date	

## Entry Requirements

There are no formal entry requirements for this qualification.

Centres should carry out an **initial assessment** of candidate skills and knowledge to identify any gaps and help plan the assessment.

## Qualification Structure

To achieve the qualification candidates must complete the three Mandatory units, plus the Mandatory/Optional Units from one of the pathways.

- Pathway 1: Driller
- Pathway 2: Fluid Operative
- Pathway 3: Drilling Rig Erector
- Pathway 4: Guidance Operative

**CITB references and credit values are provided in this document for information only.**

Mandatory units for all Pathways (this information is also included in the Pathway details from page 5).

Mandatory Units			<i>CITB references provided for information only</i>
Unit Ref.	Title	Level	<i>CITB Unit Ref.</i>
<b>H/615/2740</b>	Contributing to the specified drilling programme in the workplace	2	<i>D9</i>
<b>M/508/6537</b>	Conforming to general health, safety and welfare in the workplace	1	<i>641</i>
<b>T/508/6538</b>	Confirming to productive working practices in the workplace	2	<i>642</i>

## Pathway 1: Driller

Mandatory Units			<i>CITB references provided for information only</i>
Unit Ref.	Title	Level	<i>CITB Unit Ref.</i>
H/615/2740	Contributing to the specified drilling programme in the workplace	2	D9
M/508/6537	Conforming to general health, safety and welfare in the workplace	1	641
T/508/6538	Confirming to productive working practices in the workplace	2	642
K/615/2741	Drilling and completing holes to the drilling specification programme in the workplace	2	D14
T/615/2743	Carrying out checks and/or basic maintenance on plant or machinery in the workplace	2	299

## Pathway 2: Fluid Operative

Mandatory Units			<i>CITB references provided for information only</i>
Unit Ref.	Title	Level	<i>CITB Unit Ref.</i>
H/615/2740	Contributing to the specified drilling programme in the workplace	2	D9
M/508/6537	Conforming to general health, safety and welfare in the workplace	1	641
T/508/6538	Confirming to productive working practices in the workplace	2	642
D/615/0114	Carrying out mud, slurry or fluid plant operations in the workplace	2	233
F/615/2745	Operating drilling rigs to construct and form in the workplace	2	390Cv2

### Pathway 3: Drilling Rig Erector

Mandatory Units			<i>CITB references provided for information only</i>
Unit Ref.	Title	Level	<i>CITB Unit Ref.</i>
H/615/2740	Contributing to the specified drilling programme in the workplace	2	<i>D9</i>
M/508/6537	Conforming to general health, safety and welfare in the workplace	1	<i>641</i>
T/508/6538	Confirming to productive working practices in the workplace	2	<i>642</i>
F/508/6588	Erecting and dismantling plant – cranes and rigs – in the workplace	2	<i>404v2</i>
F/615/2745	Operating drilling rigs to construct and form in the workplace	2	<i>390Cv2</i>

### Pathway 4: Guidance Operative

Mandatory Units			<i>CITB references provided for information only</i>
Unit Ref.	Title	Level	<i>CITB Unit Ref.</i>
H/615/2740	Contributing to the specified drilling programme in the workplace	2	<i>D9</i>
M/508/6537	Conforming to general health, safety and welfare in the workplace	1	<i>641</i>
T/5087/6538	Confirming to productive working practices in the workplace	2	<i>642</i>
L/615/2747	Operating guidance systems to form bored, driven or drilled holes in the workplace	2	<i>D19</i>
F/615/2745	Operating drilling rigs to construct and form in the workplace	2	<i>390Cv2</i>

## Centre Requirements

Centres must be approved to offer this qualification. If your centre is not approved please complete and submit form **ProQual Additional Qualification Approval Application**.

### Staff

Staff delivering this qualification must be appropriately qualified and/or occupationally competent.

### Assessors/Internal Quality Assurance

Assessors for each unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Assessors and internal quality assurance verifiers for competence-based units or qualifications will normally need to hold appropriate assessor or internal quality assurance qualifications.

## Support for Candidates

Materials produced by centres to support candidates should:

- enable them to track their achievements as they progress through the learning outcomes and assessment criteria;
- provide information on where ProQual's policies and procedures can be viewed;
- provide a means of enabling Internal and External Quality Assurance staff to authenticate evidence

## Links to National Standards / NOS mapping

National Occupational Standards (NOS) are owned by a Sector Skills Council or Standard Setting Body and they describe the skills, knowledge and understanding needed to undertake a particular task or job at different levels of competence.

The structure and units of this qualification are based on NOS for the construction sector developed by CITB.

## Assessment

This qualification is competence-based, candidates must demonstrate the level of competence described in the units. Assessment is the process of measuring a candidate's skill, knowledge and understanding against the standards set in the qualification.

The qualifications must be assessed in a work environment and in accordance with the Construction Skills' Consolidated Assessment Strategy for Construction and the Built Environment, and it must be internally assessed by an appropriately experienced and qualified assessor.

Each candidate is required to produce a portfolio of evidence which demonstrates their achievement of all of the learning outcomes and assessment criteria for each unit.

- Evidence can include:
- observation report by assessor
  - assignments/projects/reports
  - professional discussion
  - witness testimony
  - candidate product
  - worksheets
  - record of oral and written questioning
  - Recognition of Prior Learning

**Learning outcomes** set out what a candidate is expected to know, understand or be able to do.

**Assessment criteria** specify the standard a candidate must meet to show the learning outcome has been achieved.

Learning outcomes and assessment criteria can be found from page 10.

## Internal Quality Assurance

An internal quality assurance verifier confirms that assessment decisions made in centres are made by competent and qualified assessors, that they are the result of sound and fair assessment practice and that they are recorded accurately and appropriately.



## Adjustments to Assessment

Adjustments to standard assessment arrangements are made on the individual needs of candidates. ProQual's Reasonable Adjustments Policy and Special Consideration Policy sets out the steps to follow when implementing reasonable adjustments and special considerations and the service that ProQual provides for some of these arrangements.

Centres should contact ProQual for further information or queries about the contents of the policy.

## Results Enquiries and Appeals

All enquiries relating to assessment or other decisions should be dealt with by centres, with reference to ProQual's Enquiries and Appeals Procedures.

## Certification

Candidates who achieve the requirements for this qualification will be awarded:

- A certificate listing all units achieved, and
- A certificate giving the full qualification title -

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### Claiming certificates

Centres may claim certificates for candidates who have been registered with ProQual and who have successfully achieved the qualification. All certificates will be issued to the centre for successful candidates.

### Unit certificates

If a candidate does not achieve all of the units required for a qualification, the centre may claim a unit certificate for the candidate which will list all of the units achieved.

### Replacement certificates

If a replacement certificate is required a request must be made to ProQual in writing. Replacement certificates are labelled as such and are only provided when the claim has been authenticated. Refer to the Fee Schedule for details of charges for replacement certificates.

# Learning Outcomes and Assessment Criteria

## Unit H/615/2740

### Contributing to the Specified Drilling Programme in the Workplace

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
<p>1 Interpret the given information and the work programme when contributing to the specified drilling programme.</p>	<p>1.1 Interpret information and instructions accurately in relation to the work programme from drawings, instructions, method statements, specifications, schedules and manufacturer’s information.</p> <p>1.2 Refer to and agree any departures from information and instructions with the authorised person.</p> <p>1.3 State the approved procedures and practices relevant to the operations, work activity and workplace environment, relating to:</p> <ul style="list-style-type: none"> <li>- organisational</li> <li>- regulatory</li> <li>- emergency</li> <li>- operational.</li> </ul> <p>1.4 Describe different types of information and instructions in relation to the specified work activity including drawings, instructions, specifications, method statements, schedules and manufacturer’s information.</p> <p>1.5 Assess and communicate the impact that the pending work activity will have on the personnel and property in accordance with organisational procedures.</p>
<p>2 Prepare for the work when contributing to the specified drilling programme.</p>	<p>2.1 Carry out preparation work using appropriate and agreed work methods, technical information and instructions when preparing for the specified drilling programme in accordance with approved procedures and practices.</p> <p>2.2 Confirm resources appropriate to contributing to the specified drilling programme are available and ready for use in accordance with the work</p>

**Learning Outcome - The learner will:**

**Assessment Criterion - The learner can:**

- requirement and approved procedures and practices, in relation to:
- materials, components and fixings
  - machinery, tools and equipment.
- 2.3 Describe the different types of materials, components, tools and equipment relevant to the work activity, in relation to:
- drilling rigs
  - hand and/or powered tools, machinery and ancillary equipment.
- 3 Maintain safe working practices when contributing to the specified drilling programme.
- 3.1 Use personal protective equipment (PPE) safely to carry out the work in accordance with approved procedures and practices and in compliance with current statutory requirements when contributing to the specified drilling programme.
- 3.2 Describe their responsibilities under the current health and safety statutory regulations whilst working:
- in the workplace, below ground level, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.
- 3.3 Demonstrate that safety is not compromised and further clarification is sought if any information is unclear.
- 3.4 Record and report any defects and deficiencies to the appropriate authorised person, in accordance with the organisational and operational procedures.
- 3.5 Identify potential hazards and/or adverse conditions that could affect the work and agree a suitable action with the appropriate person(s).
- 3.6 Outline potential hazards and/or adverse conditions that could impact on the work activity.

**Learning Outcome - The learner will:**

**Assessment Criterion - The learner can:**

	3.7	Refer any problems and/or conditions outside their level of responsibility arising from information, resources and methods of work to the appropriate authorised person.
4	4.1	Protect the work and its surrounding area from damage.
	4.2	Minimise damage and maintain a clean work space.
	4.3	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.
	4.4	Dispose of waste in accordance with legislation.
	4.5	State why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.
5	5.1	Prepare resources to the given requirements and work instructions, using appropriate communication methods and in accordance with the specified work programme, agreed standards and approved procedures and practices to form bored and/or driven holes, and/or specialist works.
	5.2	Describe the standards, work methods and different communication methods relevant to preparing for and forming a hole in accordance with approved procedures and practices in relation to one or more of the following drilling methods: <ul style="list-style-type: none"><li>- cable percussive</li><li>- rotary</li><li>- rotary percussive</li><li>- dynamic sampling</li></ul>
	5.3	Safely use and store hand tools, machinery and ancillary equipment relevant to the work activity

**Learning Outcome - The learner will:**

**Assessment Criterion - The learner can:**

and in accordance with approved procedures and practices.

- 5.4 Work effectively as an individual and/or as part of a team when contributing to the specified drilling programme.
- 5.5 State the needs of other occupations and how to communicate within a team when contributing to the specified drilling programme.
- 5.6 Describe how to care for the tools, machinery and equipment used when contributing to the specified drilling programme.
- 5.7 Maintain records in accordance with operational and organisational requirements when contributing to the specified drilling programme.

## Unit M/508/6537 Conforming to General Health, Safety and Welfare in the Workplace

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
<p>1 Comply with all workplace health, safety and welfare legislation requirements.</p>	<p>1.1 Comply with information from workplace inductions and any health, safety and welfare briefings attended relevant to the occupational area.</p> <p>1.2 Use health and safety control equipment safely to carry out the activity in accordance with legislation and organisational requirements.</p> <p>1.3 Comply with statutory requirements, safety notices and warning notices displayed within the workplace and/or on equipment.</p> <p>1.4 State why and when health and safety control equipment, identified by the principles of protection, should be used relating to types, purpose and limitations of each type, the work situation, occupational use and the general work environment, in relation to:</p> <ul style="list-style-type: none"> <li>– collective protective measures</li> <li>– personal protective equipment (PPE)</li> <li>– respiratory protective equipment (RPE)</li> <li>– local exhaust ventilation (LEV).</li> </ul> <p>1.5 State how the health and safety control equipment relevant to the work should be used in accordance with the given instructions.</p> <p>1.6 State which types of health, safety and welfare legislation, notices and warning signs are relevant to the occupational area and associated equipment.</p> <p>1.7 State why health, safety and welfare legislation, notices and warning signs are relevant to the occupational area.</p> <p>1.8 State how to comply with control measures that have been identified by risk assessments and safe systems of work.</p>
<p>2 Recognise hazards associated with the workplace that have not been previously controlled</p>	<p>2.1 Report any hazards created by changing circumstances within the workplace in accordance with organisational procedures.</p>

**Learning Outcome - The learner will:****Assessment Criterion - The learner can:**

and report them in accordance with organisational procedures.

- 2.2 List typical hazards associated with the work environment and occupational area in relation to resources, substances, asbestos, equipment, obstructions, storage, services and work activities.
- 2.3 List the current Health and Safety Executive top ten safety risks.
- 2.4 List the current Health and Safety Executive top five health risks.
- 2.5 State how changing circumstances within the workplace could cause hazards.
- 2.6 State the methods used for reporting changed circumstances, hazards and incidents in the workplace.

3 Comply with organisational policies and procedures to contribute to health, safety and welfare.

- 3.1 Interpret and comply with given instructions to maintain safe systems of work and quality working practices.
- 3.2 Contribute to discussions by offering/providing feedback relating to health, safety and welfare.
- 3.3 Contribute to the maintenance of workplace welfare facilities in accordance with workplace welfare procedures.
- 3.4 Safely store health and safety control equipment in accordance with given instructions.
- 3.5 Dispose of waste and/or consumable items in accordance with legislation.
- 3.6 State the organisational policies and procedures for health, safety and welfare, in relation to:
  - dealing with accidents and emergencies associated with the work and environment
  - methods of receiving or sourcing information
  - reporting
  - stopping work
  - evacuation
  - fire risks and safe exit procedures
  - consultation and feedback.

**Learning Outcome - The learner will:**

**Assessment Criterion - The learner can:**

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|---|-----|---|
|   | 3.7 | State the appropriate types of fire extinguishers relevant to the work.   |
|   | 3.8 | State how and when the different types of fire extinguishers are used in accordance with legislation and official guidance.   |
| 4 |     | Work responsibly to contribute to workplace health, safety and welfare whilst carrying out work in the relevant occupational area.  |
|   | 4.1 | Demonstrate behaviour which shows personal responsibility for general workplace health, safety and welfare.   |
|   | 4.2 | State how personal behaviour demonstrates responsibility for general workplace health, safety and welfare, in relation to: <ul style="list-style-type: none"><li>– recognising when to stop work in the face of serious and imminent danger to self and/or others</li><li>– contributing to discussions and providing feedback</li><li>– reporting changed circumstances and incidents in the workplace</li><li>– complying with the environmental requirements of the workplace.</li></ul> |
|   | 4.3 | Give examples of how the behaviour and actions of individuals could affect others within the workplace.   |
| 5 |     | Comply with and support all organisational security arrangements and approved procedures.   |
|   | 5.1 | Provide appropriate support for security arrangements in accordance with approved procedures: <ul style="list-style-type: none"><li>– during the working day</li><li>– on completion of the day's work</li><li>– for unauthorised personnel (other operatives and the general public)</li><li>– for theft.</li></ul>  |
|   | 5.2 | State how security arrangements are implemented in relation to the workplace, the general public, site personnel and resources.   |



## Unit T/508/6538 Conforming to Productive Working Practices in the Workplace

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
1 Communicate with others to establish productive work practices.	1.1 Communicate in an appropriate manner with line management, colleagues and/or customers to ensure that work is carried out productively.  1.2 Describe the different methods of communicating with line management, colleagues and customers.  1.3 Describe how to use different methods of communication to ensure that the work carried out is productive.
2 Follow organisational procedures to plan the sequence of work.	2.1 Interpret relevant information from organisational procedures in order to plan the sequence of work.  2.2 Plan the sequence of work, using appropriate resources, in accordance with organisational procedures to ensure work is completed productively.  2.3 Describe how organisational procedures are applied to ensure work is planned and carried out productively, in relation to: <ul style="list-style-type: none"> <li>– using resources for own and other’s work requirements</li> <li>– allocating appropriate work to employees</li> <li>– organising the work sequence</li> <li>– reducing carbon emissions.</li> </ul> 2.4 Describe how to contribute to zero/low carbon work outcomes within the built environment.
3 Maintain relevant records in accordance with the organisational procedures.	3.1 Complete relevant documentation according to the occupation as required by the organisation.  3.2 Describe how to complete and maintain documentation in accordance with organisational procedures, in relation to: <ul style="list-style-type: none"> <li>– job cards</li> <li>– worksheets</li> <li>– material/resource lists</li> <li>– time sheets.</li> </ul> 3.3 Explain the reasons for ensuring documentation is completed clearly and within given timescales.

**Learning Outcome - The learner will:**

**Assessment Criterion - The learner can:**

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|---|--|-----|--|
| 4 | Maintain good working relationships when conforming to productive working practices. | 4.1 | Carry out work productively, to the agreed specification, in conjunction with line management, colleagues, customers and/or other relevant people involved in the work to maintain good working relationships.                                   |
|   |  | 4.2 | Apply the principles of equality and diversity and respect the needs of individuals when communicating and working with others.  |
|   |  | 4.3 | Describe how to maintain good working relationships, in relation to: <ul style="list-style-type: none"><li>– individuals</li><li>– customer and operative</li><li>– operative and line management</li><li>– own and other occupations.</li></ul> |
|   |  | 4.4 | Describe why it is important to work effectively with line management, colleagues and customers.   |
|   |  | 4.5 | Describe how working relationships could have an effect on productive working.   |
|   |  | 4.6 | Describe how to apply principles of equality and diversity when communicating and working with others.   |

## Unit K/615/2741

# Drilling and Completing Holes to the Drilling Specification Programme in the Workplace

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
1 Interpret the given information relating to the work when drilling and completing holes to the drilling specification programme.	1.1 Interpret and extract information from the drilling specification, plans, drawings, sketches, symbols and manufacturers' information.
	1.2 State the approved procedures and practices relevant to the operations, work activity and workplace environment, relating to: <ul style="list-style-type: none"><li>- organisational</li><li>- regulatory</li><li>- emergency</li><li>- operational.</li></ul>
	1.3 Describe different types of information, their source and how they are interpreted in relation to plans, drawings, sketches, symbols, terminology and manufacturers' information.
	1.4 Describe the content of the drilling specification for the work to be carried out.
	1.5 State the manufacturer's recommendations in relation to: <ul style="list-style-type: none"><li>- positioning and stabilising the drilling equipment</li><li>- drill rig operations.</li></ul>
2 Determine the position of the hole(s) when drilling and completing holes to the drilling specification programme.	2.1 Determine the position of the hole(s) in compliance with the specification and in accordance with operational requirements.
	2.2 Check that the drilling specification is accurate and appropriate to the designated area and drilling requirement.
	2.3 Describe the correlation of plans with datum points.
	2.4 Check site conditions thoroughly in accordance with approved procedures and practices and report any variations to the appropriate person.

**Learning Outcome - The learner will:**

**Assessment Criterion - The learner can:**

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|---|---|--|
| 3 | Maintain safe working practices when drilling and completing holes to the drilling specification programme. | 2.5 Describe site conditions that could require a modification to the drilling specification.  |
|   |   | 2.6 Describe how to determine the position and inclination of the hole(s) when using methods to measure, mark out and set out holes.   |
|   |   | 2.7 Promptly clarify any ambiguities in the drilling specification with the appropriate person(s).   |
|   |   | 2.8 Describe the effects of any errors in the positioning of the hole(s) and the acceptable tolerance limits for setting out holes.  |
|   | 3.1   | Use personal protective equipment (PPE) to carry out work safely and efficiently in accordance with approved procedures and practices, and in compliance with current statutory requirements when drilling and completing holes to the drilling specification programme.                                 |
|   | 3.2   | Comply with risk and/or COSHH assessments to avoid hazards when drilling and completing holes to the drilling specification programme.   |
|   | 3.3   | Explain why and when personal protective equipment (PPE) should be used, relating to drilling and completing holes to the drilling specification programme, and the types, purpose and limitations of each type.   |
|   | 3.4   | Describe their responsibilities under the current health and safety statutory requirements, whilst working:<br><br>- in the workplace, below ground level, at height, with tools and equipment, with materials and substances, with movement of materials and by manual handling and mechanical lifting. |
|   | 3.5   | Safely use and store hand tools and/or portable power tools, machinery and ancillary equipment.  |
|   | 3.6   | Describe how to care for tools and equipment used when drilling and completing holes to the drilling specification programme.  |

**Learning Outcome - The learner will:**

**Assessment Criterion - The learner can:**

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|---|--|--|
| 4 | Position and orientate the drilling rig to drill and complete holes to the drilling specification programme. | 3.7 Recognise adverse ground conditions and take appropriate action in accordance with operational requirements.   |
|   |  | 3.8 Describe the potential dangers and effects of adverse environmental, site and ground conditions when: <ul style="list-style-type: none"><li>- determining the position of the hole(s)</li><li>- positioning and stabilising the drilling equipment</li><li>- drilling the hole(s).</li></ul>                                       |
|   |  | 3.9 Refer any problems and/or conditions outside their level of responsibility to the appropriate authorised person.   |
|   |  | 4.1 Check that the ground location and conditions for the drilling work is suitable and stable for the positioning and orientation of the rig.   |
|   |  | 4.2 Accurately position and stabilise the drilling rig at the specified location of the hole in compliance with the specification, and in accordance with approved procedures and practices.   |
|   |  | 4.3 Describe how to check that the ground conditions for the drilling work is suitable and stable for the position and orientation of the drilling rig.  |
|   |  | 4.4 Set the drill accurately at the specified inclination and direction in compliance with the drilling specification.   |
|   |  | 4.5 Describe the types and uses of devices for measuring the angle and direction of drilling.  |
| 5 | Drill holes to the drilling specification programme.   | 5.1 Drill holes in the ground to the required depths and angles as specified in the drilling specification using all or any of the following standard or specialist items: <ul style="list-style-type: none"><li>- tripod</li><li>- cable percussion</li><li>- rotary</li><li>- dynamic sampling</li><li>- rotary percussive</li></ul> |

**Learning Outcome - The learner will:**

**Assessment Criterion - The learner can:**

- vibration.
- 5.2 Describe the different types of drilling action and varying feed requirement.
- 5.3 Describe the different types of tools and equipment and the different types of techniques and procedures used when drilling holes to the drilling specification.
- 5.4 Check gauges, monitoring and warning devices, constantly and accurately, and take prompt appropriate action when required.
- 5.5 Describe the drilling equipment gauges, monitoring and warning devices used when drilling holes to the drilling specification and explain why they should be constantly checked for accuracy.
- 5.6 Identify, isolate and immobilise any faulty drilling equipment and components and report faults to the appropriate person.
- 5.7 Describe the wear, tolerance and clearance requirements in relation to all in-hole drilling equipment.
- 5.8 Identify and record in the driller's log any changes in the condition and strata of the hole.
- 6 Minimise the risk of damage to the work, surrounding area, environment and equipment when drilling and completing holes to the drilling specification programme.
  - 6.1 Protect the work and its surrounding area from damage.
  - 6.2 Minimise damage and maintain a clean work space.
  - 6.3 Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.
  - 6.4 Dispose of waste and carry out flushing activities in accordance with approved procedures and practices.

**Learning Outcome - The learner will:**

**Assessment Criterion - The learner can:**

- |   |   |     |  |
|---|---|-----|--|
| 7 | Complete the hole(s) to the drilling specification programme. | 6.5 | State why the disposal of waste should be carried out in relation to the work.   |
|   |   | 6.6 | Describe the actions and equipment that are required to efficiently remove cuttings.   |
|   |   | 7.1 | Demonstrate and confirm that the hole(s) is completed to the required specification, operation is concluded and plant/equipment is shut-down in accordance with instructions and operational requirements. |
|   |   | 7.2 | Describe the methods used to verify that a drilled hole meets the required specification.  |
|   |   | 7.3 | Describe how to identify and deal with any faults and defects in plant and equipment.  |
|   |   | 7.4 | Describe the documentation required and how it should be completed following completion of the work.   |
|   |   | 7.5 | State the given instructions for completing and handing over the work site.  |
|   |   | 7.6 | Maintain records of the work carried out in accordance with organisational procedures and requirements.  |

## Unit T/615/2743

# Carrying Out Checks and/or Basic Maintenance on Plant or Machinery in the Workplace

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
1 Work safely at all times when carrying out checks and/or basic maintenance on plant or machinery.	<p>1.1 Comply with current legislation, Approved Codes of Practice and organisational procedures.</p> <p>1.2 Use personal protective equipment (PPE) safely to carry out the activity in accordance with legislation and organisational requirements when carrying out checks and/or basic maintenance on plant or machinery.</p> <p>1.3 Explain why and when personal protective equipment (PPE) should be used, relating to the carrying out of checks and/or basic maintenance on plant or machinery, and the types, purpose and limitations of each type.</p> <p>1.4 Safely use, store and secure hand tools and ancillary equipment.</p>
2 Know how to comply with relevant health and safety legislation and official guidance when carrying out checks and/or basic maintenance on plant or machinery.	<p>2.1 Describe their responsibilities under current legislation and official guidance whilst working: – in the workplace, below ground level, at height, with tools, plant or machinery and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.</p> <p>2.2 Describe the reasons for devising and complying with risk and COSHH assessments and how this can encourage safe working practices.</p> <p>2.3 Describe the organisational security procedures for tools, equipment and personal belongings.</p> <p>2.4 State what the accident reporting procedures are and who is responsible for making reports.</p>



Learning Outcome - The learner will:	Assessment Criterion - The learner can:
<p>3 Follow the relevant maintenance schedules for the required work when carrying out checks and/or basic maintenance on plant or machinery.</p>	<p>2.5 State how hazards and emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related hazards.</p> <p>3.1 Interpret and extract information from specifications, schedules, organisational procedures and manufacturers' information relating to the work being carried out.</p> <p>3.2 State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.</p> <p>3.3 Describe different types of checks and maintenance information, their source and how they are interpreted in relation to: – specifications, schedules, manufacturers' information and organisational procedures.</p> <p>3.4 Describe the organisational procedures to solve problems with the information and why it is important they are followed.</p>
<p>4 Carry out checks and/or basic maintenance activities within the limits of their personal authority in the specified sequence and agreed time scale.</p>	<p>4.1 Demonstrate the following work skills when carrying out checks and/or basic maintenance on plant or machinery: – replenishing, replacing, applying, lubricating, cleaning and securing.</p> <p>4.2 Carry out operator checks and/or basic maintenance tasks on standard or specialised plant or machinery to given working instructions as directed by the employer/ supervisor or authorised person.</p> <p>4.3 Describe how to follow maintenance authorisation, apply safe work practices, follow procedures, report problems and establish the authority and responsibility needed to: – clean and prepare areas and components for maintenance</p>

**Learning Outcome - The learner will:****Assessment Criterion - The learner can:**

		<ul style="list-style-type: none"> <li>– replenish fuels, lubricants, fluids and coolants</li> <li>– replace parts</li> <li>– recycle components</li> <li>– fit fastening systems, pins, bolts, nuts, washers and consumable items</li> <li>– complete functional checks in accordance with equipment operating and care and control procedures</li> <li>– complete reports and records</li> <li>– use hand tools and ancillary equipment.</li> </ul>
		4.4 Complete the checks and/or basic maintenance activities within the estimated allocated time and to the required standards and accuracy.
		4.5 State the needs of other occupations and how to communicate within a team when carrying out checks and/or basic maintenance on plant or machinery.
		4.6 Describe how maintain the tools and equipment used when carrying out checks and/or basic maintenance on plant or machinery.
5	Report any instances where the maintenance activities cannot be fully met or where there are identified defects outside the planned schedule when carrying out checks and/or basic maintenance on plant or machinery.	5.1 Report problems and defects beyond their area of responsibility.
		5.2 Describe the different ways that problems with maintenance procedures and problems associated with resources can be reported.
6	Complete relevant maintenance records accurately and pass them on to the appropriate person when carrying out checks and/or basic maintenance on plant or machinery.	6.1 Record and report maintenance tasks in accordance with organisational procedures and manufacturer's requirements.
		6.2 State the procedure to complete checks and maintenance records and what the reporting lines and procedures are within the organisation.
7	Dispose of waste materials in accordance with safe working	7.1 Protect the work and its surrounding area from damage.

**Learning Outcome - The learner will:****Assessment Criterion - The learner can:**

practices and approved procedures when carrying out checks and/or basic maintenance on plant or machinery.

- 7.2 Minimise damage and maintain a clean work space.
- 7.3 Dispose of waste in accordance with legislation.
- 7.4 Describe what the waste disposal procedures are, and how and why the disposal of waste should be carried out safely and how it is achieved.

## Unit D/615/0114

### Carrying Out Mud, Slurry or Fluid Plant Operations in the Workplace

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
<p>1 Interpret the given information relating to the work and resources when carrying out mud, slurry or fluid plant operations.</p>	<p>1.1 Interpret and extract information from drawings, instructions, method statements, specifications, schedules and manufacturers' information.</p> <p>1.2 Comply with information and/or instructions derived from risk assessments and method statement.</p> <p>1.3 State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.</p> <p>1.4 Describe different types of information, their source and how they are interpreted in relation to: – drawings, instructions, specifications, method statements, schedules and manufacturers' information.</p>
<p>2 Know how to comply with relevant legislation and official guidance when carrying out mud, slurry or fluid plant operations.</p>	<p>2.1 Describe their responsibilities under current legislation and official guidance whilst working: – in the workplace, below ground level, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.</p> <p>2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.</p> <p>2.3 State what the accident reporting procedures are and who is responsible for making reports.</p>
<p>3 Maintain safe working practices when carrying out mud, slurry or fluid plant operations.</p>	<p>3.1 Use personal protective equipment (PPE) safely to carry out the activity in accordance with legislation and organisational requirements when carrying out mud, slurry or fluid plant operations.</p>

**Learning Outcome - The learner will:**

**Assessment Criterion - The learner can:**

- |   |  |     |  |
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| 4 | Select the required quantity and quality of resources for the methods of work to carrying out mud, slurry or fluid plant operations. | 3.2 | Explain why and when personal protective equipment (PPE) should be used, relating to carrying out mud, slurry or fluid plant operations and the types, purpose and limitations of each type.     |
|   |  | 3.3 | State how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related hazards.   |
|   |  | 4.1 | Describe the characteristics, quality, uses, limitations and defects associated with the resources in relation to:<br>– mud, slurry or fluid plant<br>– hand and/or powered tools and equipment. |
|   |  | 4.2 | Select resources associated with own work in relation to materials, components, fixings, tools, plant and ancillary equipment.   |
|   |  | 4.3 | State how the resources should be used correctly, how problems associated with the resources are reported and how the organisational procedures are used.  |
|   |  | 4.4 | Outline potential hazards associated with the resources and method of work.  |
|   |  | 4.5 | Describe how to calculate quantity, length, area and wastage associated with the method/procedure to carry out mud, slurry or fluid plant operations.  |
| 5 | Minimise the risk of damage to the work and surrounding area when carrying out mud, slurry or fluid plant operations.                | 5.1 | Protect the work and its surrounding area from damage.   |
|   |  | 5.2 | Minimise damage and maintain a clean work space.   |
|   |  | 5.3 | Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, others involved with the work and adverse weather conditions.                |
|   |  | 5.4 | Dispose of waste in accordance with legislation.   |

**Learning Outcome - The learner will:**

**Assessment Criterion - The learner can:**

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|   | 5.5 | State why the disposal of waste should be carried out in relation to the work.   |
| 6 | 6.1 | Demonstrate completion of the work within the allocated time.  |
|   | 6.2 | State the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"><li>– types of progress charts, timetables and estimated times</li><li>– organisational procedures for reporting circumstances which will affect the work programme.</li></ul>  |
| 7 | 7.1 | Demonstrate the following work skills when carrying out mud, slurry or fluid plant operations: <ul style="list-style-type: none"><li>– preparing, setting up, connecting, checking, maintaining, mixing, monitoring, testing, pumping, cleaning, adjusting, and recording.</li></ul>   |
|   | 7.2 | Install, operate and maintain mud, slurry or fluid plant to given working instructions in one of the following operations: <ul style="list-style-type: none"><li>– piling</li><li>– tunnelling</li><li>– drilling.</li></ul>   |
|   | 7.3 | Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to: <ul style="list-style-type: none"><li>– prepare the area allocated for the plant and ancillary equipment</li><li>– set up, assemble and check the integrity of plant and ancillary equipment, including the connection of hoses, valves and items of plant for delivery, extraction, recycling and disposal of mud, slurry or fluids</li><li>– mix mud, slurry or fluids in accordance with manufacturer’s recommendations</li><li>– monitor the pumping process and make appropriate adjustments in order to maintain operational efficiency</li><li>– test the viscosity and density of the mud, slurry or fluid</li><li>– complete records of the process</li></ul> |

**Learning Outcome - The learner will:**

**Assessment Criterion - The learner can:**

– use hand tools, power tools, plant and ancillary equipment.

- 7.4 Safely use and store hand tools, plant and ancillary equipment.
- 7.5 State the needs of other occupations and how to communicate within a team when carrying out mud, slurry or fluid plant operations.
- 7.6 Describe how to maintain the tools, plant and equipment used when carrying out mud, slurry or fluid plant operations.

## Unit F/615/2745

### Operating drilling rigs to construct and form in the workplace

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
1 Interpret the given information relating to the use of drilling rigs to carry out constructing and forming operations.	1.1 Interpret and extract relevant information from drawings, specifications, schedules, risk assessments and manufacturers' information. 1.2 Comply with information and/or instructions derived from risk assessments and method statements. 1.3 Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented. 1.4 Describe different types of information, their source and how they are interpreted in relation to: – drawings, specifications, schedules, method statements, risk assessments, manufacturers' information and current regulations governing the operation of drilling rigs for construction and formation work.
2 Organise with others the sequence and operation in which constructing and forming operations using drilling rigs are to be carried out.	2.1 Organise the work according to given information or instructions. 2.2 Describe how to communicate ideas between team members. 2.3 Organise and communicate with team members and other associated occupations. 2.4 Describe how to organise resources prior to and during drilling operations.
3 Know how to comply with relevant legislation and official guidance when carrying out constructing and forming operations using drilling rigs.	3.1 Describe their responsibilities regarding potential accidents, health hazards and the environment whilst working: – in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage



**Learning Outcome - The learner will:**

**Assessment Criterion - The learner can:**

- of materials and by manual handling and mechanical lifting.
- 3.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.
- 3.3 Explain what the accident reporting procedures are and who is responsible for making reports.
- 4 Maintain safe and healthy working practices when carrying out constructing and forming operations using drilling rigs.
- 4.1 Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with legislation and organisational requirements during drilling operations.
- 4.2 Demonstrate compliance with given information and relevant legislation when carrying out constructing and forming operations using drilling rigs in relation to two or more of the following:
- safe use and storage of plant or machinery
  - safe use and storage of tools and equipment
  - specific risks to health.
- 4.3 Explain why and when health and safety control equipment, identified by the principles of prevention, should be used, relating to drilling rig use, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to:
- collective protective measures
  - personal protective equipment (PPE)
  - respiratory protective equipment (RPE)
  - local exhaust ventilation (LEV).
- 4.4 Describe how the relevant health and safety control equipment should be used in accordance with the given working instructions.
- 4.5 Describe how emergencies should be responded to in accordance with organisational authorisation

**Learning Outcome - The learner will:**

**Assessment Criterion - The learner can:**

- and personal skills when involved with fires, spillages, injuries and other task-related activities.
- 5 Request and select the required quantity and quality of resources to carry out constructing and forming operations using drilling rigs.
- 5.1 Request and select resources associated with drilling rigs in relation to consumables, materials, tools, ancillary equipment and/or accessories.
- 5.2 Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources, and how they should be used correctly, relating to:
- consumables, lubricants and fuels
  - attachments and aids for drilling
  - hand tools, ancillary equipment and/or accessories.
- 5.3 Describe how the resources should be used correctly and how problems associated with the resources are reported.
- 5.4 Explain why the organisational procedures have been developed and how they are used for the selection of required resources.
- 5.5 Describe any potential hazards associated with the resources and methods of work.
- 5.6 Describe how to identify weight, quantity, length and area associated with the method/procedures to carry out the drilling work.
- 6 Minimise the risk of damage to the work and surrounding area when constructing and forming using drilling rigs.
- 6.1 Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.
- 6.2 Prevent damage and maintain a clean work space.
- 6.3 Dispose of waste in accordance with current legislation.
- 6.4 Describe how to protect work from damage and the purpose of protection in relation to general

**Learning Outcome - The learner will:**

**Assessment Criterion - The learner can:**

		workplace activities, other occupations and adverse weather conditions.
	6.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.
7	Complete the work within the allocated time when constructing and forming using drilling rigs.	7.1 Demonstrate completion of the work within the allocated time. 7.2 Describe the purpose of the work programme and describe why deadlines should be kept in relation to: – types of progress charts, timetables and estimated times – organisational procedures for reporting circumstances which will affect the work programme.
8	Comply with the given contract information to operate drilling rigs to construct and form to the required specification.	8.1 Demonstrate the following work skills when preparing for and constructing and forming materials using drilling rigs: – checking, adjusting, communicating, manoeuvring, positioning, constructing and forming. 8.2 Use and maintain hand tools, ancillary equipment and/or accessories. 8.3 Operate drilling rigs to construct and form to given working instructions. 8.4 Shut down and secure drilling rigs. 8.5 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish authority needed to rectify, to: – identify the characteristics of the drilling rigs used for construction and formation operations

**Learning Outcome - The learner will:**

**Assessment Criterion - The learner can:**

- carry out function checks for the construction and formation operation
  - identify the area of the construction and formation work
  - identify geological, environmental and material changes and report
  - prepare, set up and adjust for operational requirements
  - carry out pre-operational checks for obstructions, stability, safety and security of the work and surrounding area
- 8.6 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish authority needed to rectify, to:
- check to avoid damage to structures and utilities service apparatus
  - carry out construction and formation operations
  - recognise and determine when specific skills and knowledge are required and report accordingly
  - complete construction and formation work
  - be on the public highway
  - shut down and secure the drilling rig
  - use hand tools, ancillary equipment and accessories.
- 8.7 Describe the needs of other occupations and how to effectively communicate within a team when carrying out drilling operations.
- 8.8 Describe how to maintain the plant and machinery, hand tools, ancillary equipment and/or accessories used to carry out drilling operations.

## Unit F/508/6588

### Erecting and dismantling plant - cranes and rigs - in the workplace

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
1 Interpret the given information relating to erecting and dismantling plant.	<p>1.1 Interpret and extract relevant information from drawings, specifications, schedules, risk assessments and manufacturers' information.</p> <p>1.2 Comply with information and/or instructions derived from risk assessments and method statements.</p> <p>1.3 Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.</p> <p>1.4 Describe different types of information, their source and how they are interpreted in relation to: – drawings, specifications, schedules, method statements, risk assessments and manufacturers' information.</p>
2 Organise with others the sequence and operation in which erecting and dismantling operations are to be carried out.	<p>2.1 Organise the work according to given information or instructions.</p> <p>2.2 Describe how to communicate ideas between team members.</p> <p>2.3 Organise and communicate with team members and other associated occupations.</p> <p>2.4 Describe how to organise resources prior to and during erecting and dismantling operations.</p>
3 Know how to comply with relevant legislation and official guidance when erecting and dismantling plant.	<p>3.1 Describe their responsibilities regarding potential accidents, health hazards and the environment whilst working: – in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.</p>

**Learning Outcome - The learner will:**

**Assessment Criterion - The learner can:**

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| 4 | Maintain safe and healthy working practices when carrying out erecting and dismantling of plant. | 3.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.  |
|   |  | 3.3 Explain what the accident reporting procedures are and who is responsible for making reports.  |
|   |  | 4.1 Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with legislation and organisational requirements during erecting and dismantling operations.  |
|   |  | 4.2 Demonstrate compliance with given information and relevant legislation when carrying out erecting and dismantling of plant in relation to two or more of the following: <ul style="list-style-type: none"><li>– safe use and storage of plant</li><li>– safe use and storage of tools and equipment</li><li>– safe use of access equipment</li><li>– specific risks to health.</li></ul>   |
|   |  | 4.3 Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to erecting and dismantling plant, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"><li>– collective protective measures</li><li>– personal protective equipment (PPE)</li><li>– respiratory protective equipment (RPE)</li><li>– local exhaust ventilation (LEV).</li></ul> |
|   |  | 4.4 Describe how the relevant health and safety control equipment should be used in accordance with the given working instructions.  |
|   |  | 4.5 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.   |

**Learning Outcome - The learner will:**

**Assessment Criterion - The learner can:**

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| 5 | Request and select the required quantity and quality of resources to carry out erecting and dismantling of plant. | 5.1 | Request and select resources associated with the work in relation to consumables, materials, attachments, tools, and ancillary equipment.  |
|   |   | 5.2 | Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources, and how they should be used correctly, relating to:<br>– plant<br>– hand and/or powered tools and equipment. |
|   |   | 5.3 | Describe how the resources should be used correctly and how problems associated with the resources are reported.   |
|   |   | 5.4 | Explain why the organisational procedures have been developed and how they are used for the selection of required resources.   |
|   |   | 5.5 | Describe any potential hazards associated with the resources and methods of work.  |
|   |   | 5.6 | Describe how to identify weight, pressure, quantity, length and area associated with the method/procedures to carry out the work.  |
| 6 | Minimise the risk of damage to the work and surrounding area when erecting and dismantling plant.                 | 6.1 | Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.   |
|   |   | 6.2 | Prevent damage and maintain a clean work space.  |
|   |   | 6.3 | Dispose of waste in accordance with current legislation.   |
|   |   | 6.4 | Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.  |
|   |   | 6.5 | Explain why the disposal of waste should be carried out safely in accordance with environmental  |

**Learning Outcome - The learner will:**

**Assessment Criterion - The learner can:**

responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.

7 Complete the work within the allocated time when erecting and dismantling plant.

7.1 Demonstrate completion of the work within the allocated time.

7.2 Describe the purpose of the work programme and describe why deadlines should be kept in relation to:  
– types of progress charts, timetables and estimated times  
– organisational procedures for reporting circumstances which will affect the work programme.

8 Comply with the given contract information to erect and dismantle plant to the required specification.

8.1 Demonstrate the following work skills when erecting and dismantling plant:  
– unloading, loading, siting, measuring, marking out, laying out, aligning, fitting, positioning, connecting, configuring, dismantling, removing, adjusting, securing, checking and inspecting.

8.2 Use and maintain hand tools, portable power tools, ancillary equipment and machinery.

8.3 Prepare, erect and dismantle plant to given working instructions of one or more of the following:  
– mobile crane  
– mobile tower crane  
– crawler crane  
– self-erect equipment  
– drilling rig  
– piling rig  
– demolition rig.

8.4 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish authority needed to rectify, to:  
– erect and dismantle one or more of the following: mobile crane, mobile tower crane, crawler crane, self-



**Learning Outcome - The learner will:**

**Assessment Criterion - The learner can:**

erect equipment, drilling rig, piling rig and demolition rig

- consider ground conditions and work area
- fit, fasten and secure equipment
- dismantle and remove equipment
- recognise the requirements for controlling, directing and guiding the movement and operations of plant and machinery

8.5 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish authority needed to rectify, to:

- identify valid certification for maintenance, inspection and thorough examination
- recognise and determine when specific skills and knowledge are required and report accordingly
- complete function checks
- use access equipment
- use hand tools, power tools, plant and equipment
- record and report.

8.6 Describe the needs of other occupations and how to effectively communicate within a team when preparing for and erecting and dismantling plant.

8.7 Describe how to maintain the hand tools, portable power tools, plant and ancillary equipment used to erect and dismantle plant.

## Unit L/615/2747

# Operating Guidance Systems to Form Bored, Driven or Drilled Holes in the Workplace

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
1 Interpret the given information relating to the work and resources when operating guidance systems to form holes.	1.1 Interpret and confirm information relating to the work and resources from drawings, instructions, specifications, schedules, method statements and manufacturers' information.  1.2 State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources that will affect the work programme and how they are implemented.  1.3 Comply with information and/or instructions derived from risk assessments.  1.4 Describe different types of information, their source and how they are interpreted in relation to: – drawings, instructions, specifications, schedules, risk assessments and manufacturers' information.
2 Comply with relevant legislation and official guidance when operating guidance systems to form holes.	2.1 Describe their responsibilities under current legislation and official guidance whilst working: – in the workplace, below ground level, at height, with tools and equipment, with materials and substances, with movement of materials and by manual handling and mechanical lifting.  2.2 Comply with the relevant current legislation and official guidance to carry out the work.  2.3 Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.  2.4 State what the accident reporting procedures are and who is responsible for making reports.

**Learning Outcome - The learner will:**

**Assessment Criterion - The learner can:**

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|---|--|-----|--|
| 3 | Maintain safe working practices when operating guidance systems to form holes.   | 3.1 | Use personal protective equipment (PPE) safely to carry out the activity in accordance with legislation and organisational requirements when operating guidance systems to form holes.   |
|   |  | 3.2 | Explain why, when and how personal protective equipment (PPE) should be used, relating to operating guidance systems to form holes.  |
|   |  | 3.3 | State how to identify and respond to emergencies in accordance with the methods of work, manufacturers' technical information, statutory regulations and official guidance when involved with fires, spillages, injuries and other task-related hazards. |
| 4 | Select the required quantity and quality of resources for the methods of work to operate guidance systems to form holes. | 4.1 | Describe the characteristics, quality, uses, limitations, defects and how defects should be rectified associated with the resources in relation to:<br>– guidance systems<br>– standard and/or specialist tools and equipment.                           |
|   |  | 4.2 | Select resources associated with own work in relation to materials, components, fixings, tools and equipment.  |
|   |  | 4.3 | State how the resources should be used correctly, how problems associated with the resources are reported, why organisational procedures are developed and how they are used.  |
|   |  | 4.4 | Outline potential hazards associated with the resources and methods of work and how they could be overcome.  |
|   |  | 4.5 | Describe how to calculate quantity, length, area and wastage associated with the method/procedure to operate guidance systems to form holes.   |

**Learning Outcome - The learner will:**

**Assessment Criterion - The learner can:**

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|---|---|-----|--|
| 5 | Minimise the risk of damage to the work and surrounding area when operating guidance systems to form holes.         | 5.1 | Protect the work and its surrounding area from damage.   |
|   |   | 5.2 | Minimise damage to the work and surrounding area.  |
|   |   | 5.3 | Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.  |
|   |   | 5.4 | Dispose of waste in accordance with legislation.   |
|   |   | 5.5 | State why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.  |
| 6 | Complete the work within the allocated time when operating guidance systems to form holes.                          | 6.1 | State the purpose of the work programme and explain why deadlines should be kept in relation to:<br>– progress charts, timetables and estimated times<br>– organisational procedures for reporting circumstances which will affect the work programme.                     |
| 7 | Comply with the given contract information to operate guidance systems to form holes to the required specification. | 7.1 | Demonstrate the following work skills when operating guidance systems to form holes:<br>– measuring, marking out, setting up, connecting, calibrating, locating, marking, recording and recovering.  |
|   |   | 7.2 | Operate guidance systems to bore, drive or drill holes to given contractor's working instructions and in accordance with the contract specification and programme, relating to one or more of the following:<br>- walk over<br>- wire lined<br>- magnetic guidance system. |

**Learning Outcome - The learner will:**

**Assessment Criterion - The learner can:**

- 7.3 Describe how to apply safe work practices, follow procedures, report problems and establish authority needed to rectify, to:
- operate the following guidance systems:
    - walk over
    - wire lined
    - magnetic guidance systems
  - use hand tools and ancillary equipment.
- 7.4 Safely use and store hand tools and/or portable power tools and ancillary equipment associated with operating guidance systems to form holes.
- 7.5 State the needs of other occupations and how to communicate within a team when operating guidance systems to form holes.
- 7.6 Organise and carry out work to the sequence as agreed with the other occupations involved.
- 7.7 Describe how to maintain the hand tools and/or portable power tools, plant and ancillary equipment used when operating guidance systems to form holes.



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