National Occupational Standards

Sector: Building and Construction
Occupation: Excavation Plant Supervisor
MQF Level: 4

⚠️ National Occupational Standards do not replace any licenses or permissions required to operate certain machinery or to work in certain positions.

Units:

- EXC41. Supervise and carry out health and safety requirements in the workplace
- ECX33. Operate portable powered plant and equipment in the workplace
- EXC42. Instruct and direct manual excavation of ground and surfaces to form holes and trenches
- EXC43. Carry out secondary dimensional control for excavation operations
- EXC44. Monitor and contribute to the progress of work operations
- EXC45. Operate mobile plant equipment to excavate ground and various materials
EXC41- Supervise and carry out health and safety requirements in the workplace

This unit lists the knowledge and skills required by a person holding this position to carry out and supervise safe work activities in compliance with health and safety activities.

Upon completion of this unit, the persons carrying out this work will possess the necessary knowledge and skills to carry out, maintain, and supervise health and safety procedures which ensure that their actions and that of their subordinates do not create health and safety risks to others.

Performance Criteria

The candidate must have the necessary knowledge and skills to:
1. Carry out and supervise safe working practices in accordance with the workplace health and safety regulations
2. Identify potential hazards arising from work practices and take the necessary corrective actions
3. Follow the correct procedures in the event of hazards injury or ill health
4. Allocate appropriate and sufficient equipment and resources to meet work and statutory requirements
5. Carry out, monitor and supervise health and safety welfare and security within the operational work environment

Required Knowledge

The Level 4 Excavation plant supervisor must know and explain:
1. Their roles and responsibilities under the Health and Safety Act as amended by Act XXX11 of 2007 or as per most current legislation
2. Health concerns associated within the workplace and safe practices when carrying out work activities
3. The organisational policies and procedures regarding legislation, official guidance, instruction, and information which needs to be complied with
4. The importance of co-operating with their employer on matters related to health and safety to safeguard their own wellbeing and those affected by their work activities
5. The requirements for fulfilling the duties of appointed persons in terms of Workplace (First Aid) regulations LN 11/2002 or any recent amendments
6. The potential hazards in the workplace such as: electricity and other utility services, hazardous and non-hazardous substances, waste materials, working at height, work equipment, fire risks, other occupational work activities, manual handling, proximity hazards, changing weather conditions, and third party hazards
7. Methods of allocating equipment and resources relating to - protective clothing and equipment, welfare facilities, storage and security of materials, tools and equipment,
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<td>Personal responsibility for behaviour of health, safety and welfare on site and the consideration of others</td>
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<td>9.</td>
<td>Reasons for promoting a positive health and safety culture in the workplace</td>
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<td>10.</td>
<td>The effect of any toxic or hazardous materials detected on site to be used and what precautions need to be taken</td>
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<td>11.</td>
<td>The risks to health within a construction environment - substances hazardous to health – drugs and alcohol, chemicals, solvents etc</td>
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<td>12.</td>
<td>The importance of correct storage of combustibles and chemicals on site</td>
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<td>13.</td>
<td>How to use methods and techniques to identify and recommend opportunities to improve health and safety in the workplace</td>
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<td>14.</td>
<td>The importance of working around mobile plant and equipment on site, keeping safe distances away from working machinery (exclusion zones)</td>
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<td>15.</td>
<td>The importance of reporting accidents and near misses</td>
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<td>16.</td>
<td>Personal responsibility for behaviour of health safety and welfare on site and the consideration of others</td>
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<td>17.</td>
<td>The arrangements for maintaining security on site and in the workplace e.g. storage of materials, components, tools, plant and equipment</td>
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<td>18.</td>
<td>Procedures for dealing with accidents and emergencies associated with the workplace and environment</td>
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<td>19.</td>
<td>Reasons for regularly checking operational health safety and welfare in the operational work environment</td>
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<td>20.</td>
<td>Methods and techniques for checking team members health and safety requirements and their health and safety duties in the workplace e.g. welfare facilities, work equipment and resources, hazards and risk control procedures</td>
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<td>21.</td>
<td>The different arrangements used for checking security and operational arrangements in the workplace for workers, visitors, unauthorised personnel, public.</td>
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<td>22.</td>
<td>Different methods of reporting and communicating any team performance health, safety and welfare issues</td>
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<td>23.</td>
<td>Organisational requirements, systems and procedures for, checking and maintaining health, safety and welfare in the workplace</td>
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### Required Skills

The Level 4 Excavation plant supervisor must be able to:

1. Comply with their individual duties and legal obligations under the Health and Safety Act XXXV11 of 2000 or as per most current legislation
2. Work according to health and safety regulations and other relevant regulations that apply to the work requirements
3. Comply with and ensure safe working practices in accordance with organisational procedures
4. Recognise and address any hazards and hazardous materials associated with workplace activities and how changing circumstances could increase those hazards
5. Report any hazards and risks and changing circumstances in accordance with organisational procedures
6. Carry out and ensure any actions to deal with any changing circumstances to maintain health, safety and welfare in the workplace
7. Report and address near misses and accidents in accordance with organisational and statutory requirements
8. Recognise emergency situations and report and act in accordance with organisational and statutory requirements
9. Make and ensure arrangements for health, safety and welfare requirements in the workplace
10. Make full use of Personal Protective Equipment (PPE) and RPE (where necessary) to carry out work duties
11. Arrange and allocate Personal Protective Equipment (PPE) and RPE (where necessary) for team members to carry out work duties
12. Arrange and allocate resources and facilities for team members in the workplace
13. Carry out work and make provision to protect work areas from damage
14. Demonstrate good personal behaviour for workplace health, safety and welfare
15. Comply with and ensure the security arrangements and procedures are observed and followed when working on site
16. Comply with and ensure that the organisational health, safety and welfare procedures are observed and followed when working on site
17. Comply with and supervise organizational procedures for safely working with mobile plant and equipment
EXC33 - Operate portable powered plant and equipment in the workplace

This unit lists the knowledge and skills required by a person holding this position to carry out activities in operating powered plant and equipment in the workplace. Upon completion of this unit the persons carrying out this work will possess the necessary knowledge and skills to prepare, position and set up the portable powered plant, tools and equipment for work, carry out pre and post use functional checks and operate, use and control the tools and equipment in accordance with work requirements and organisational procedures.

Performance Criteria

The candidate must have the necessary knowledge and skills to:

1. Interpret given information relating to the requirements for setting up and using powered plant and equipment and portable power tools
2. Carry out safe working practices
3. Select portable powered plant and equipment, power source, fuels lubricants and consumables
4. Set up and operate portable powered plant, tools and equipment to carry out various work activities

Required Knowledge

The Level 4 Excavation Plant Supervisor must know and explain:

1. The types of information applicable to the operation and use of powered plant and equipment, portable power tools, operating instruction manuals, safety literature, risk assessments and organisational instructions
2. The health and safety requirements associated with using powered plant and equipment and portable power tools - e.g. different power sources and attachments
3. The protective clothing and equipment to be worn (PPE and RPE) when using powered plant and portable power tools
4. The safety checks that need to be carried out on portable power tools prior to connecting to supply source
5. The actions to be taken if powered plant equipment and power tools are found to be faulty or defective
6. The different types of powered plant, portable plant and attachments and how they are prepared and set up for use
7. The requirements for supply lines, routing, position, lengths of cables, hoses
8. Methods and requirements for fitting drill bits, tooling, and attachments
9. Methods and safety requirements for the fitting of abrasive wheels
10. Operating procedures for starting and stopping different power sources - engines; pneumatic, hydraulic, electrical and cordless powered tools and equipment
11. The necessary precautions to be taken to prevent injury when using hand held portable power tools
12. Basic maintenance requirements to items of powered plant and equipment
13. Different types of fuels, lubricants and coolants used on powered plant and equipment
14. The purpose and reason for identifying, selecting and using the correct item of powered plant and equipment/portable power tool to carry out the work requirements

**Required Skills**

The Level 4 Excavation Plant Supervisor must be able to:

1. Interpret and obtain information for the safe use and operation of powered plant and equipment
2. Conform with information acquired from manufacturers’ machine operator manuals, risk assessments, organisational instructions and procedures and risk assessments related to the work being undertaken
3. Use the correct PPE and RPE when operating plant, equipment and portable power tools
4. Carry out functional and safety checks of plant equipment and portable power tools and equipment prior to use
5. Report faults and defects with plant and equipment in accordance with organisational procedures
6. Select, prepare and set up powered plant and equipment and their associated cables, hoses, tooling for work activities cables/hoses, tooling for operation;
7. Select, prepare and set up portable power tools and their associated tooling and attachments in accordance with manufacturer’s instructions and recommendations to carry out work activities
8. Remove and fit abrasive wheels and discs, securing accessories and tool attachments
9. Carry out pre and post start checks on powered plant equipment and portable power tools
10. Operate powered plant and equipment and portable power tools safely to carry out work activities
11. Replenish fuels, lubricants and fluids in accordance with operating and maintenance requirements
12. Carry out basic maintenance to plant equipment, portable power tools and attachments
13. Comply with manufacturers’ and organisational instructions and procedures for maintaining portable, powered plant, tools and equipment
EXC42- Instruct and direct manual excavation of ground and surfaces to form holes and trenches

This unit lists the knowledge and skills required by a person holding this position to carry out activities in excavating ground and materials by manually forming holes and trenches.

Upon completion of this unit the persons carrying out this work will possess the necessary skills and knowledge to ensure that procedure are correctly followed to excavate holes and trenches (manual digging) safely including digging around utility services in accordance with work requirements and organisational procedures.

Performance Criteria

The candidate must have the necessary knowledge and skills to:

1. Interpret given information relating to the excavation work
2. Ensure that safe working practices are adopted
3. Select resources, tools and equipment for the manual excavation of holes and trenches
4. Ensure safe storage and handling of materials and equipment
5. Supervise excavations by manual methods
6. Conform to organisational instructions to carry out work efficiently and to specification

Required Knowledge

The Level 4 Excavation plant supervisor must know and explain:

1. The different types of organisational information --, method statements, risk assessments, oral and written instructions, procedures, specifications, good industry practice
2. The organisation’s rectifying and reporting procedures for inaccurate information
3. The organisational information extracted from: method statements, risk assessments, instructions, procedures, permits, for the control and the support of excavations
4. Own and others’ responsibilities under current legislation and organisational requirements whilst working: on site, above and below ground level, with materials, substances, tools and equipment.
5. The purpose and reason for health and safety equipment and the reasons why and when it needs to be used – personal protective equipment (PPE) and respiratory protective equipment (RPE)
6. The potential hazards and risks associated with carrying out manual excavation work, - working at ground and below ground level, temporary works areas, confined and restricted spaces and the appropriate action to be taken
7. Organizational procedures for responding to emergencies - fire, spillages, injuries and other work-related hazards and emergencies
8. The different types of tools and, equipment required to carry out the excavation work – hand tools, portable power tools and ancillary equipment
9. Procedures for checking and maintaining tools and equipment to carry out excavation activities
10. The reasons for and how to protect the work area from damage e.g. – erecting barriers, sheeting, netting and warning notices for workplace occupational activities, proximity hazards and varying weather conditions

11. How resources should be used efficiently and how problems associated with them are reported

12. How to calculate basic measurement – quantity, length, depth, area, marking out, and wastage associated with the methods to excavate manually

13. How to identify and locate utility services and protect them

14. How to excavate ground structures manually and avoid damage to service apparatus and sub-structures

15. The different types of hand tools, portable power tools and equipment for the excavation work to be carried out

16. Methods for positioning securing and removing excavation supports

17. Reasons for disposing of and storing excavated materials for re-use

18. The needs of other occupations and the importance of communications with colleagues, subordinates, team members and other occupations when carrying out manual excavating activities

19. How the methods of work are applied to enable the work to be carried out efficiently and productively to specification

20. Procedures for dealing with problems which could affect the work programme

**Required Skills**

The Level 4 Excavation plant supervisor must be able to:

1. Interpret and obtain appropriate information from method statements, risk assessments, drawings, organisational procedures, instructions, specification, good industry practice

2. Instruct team members to ensure work conforms with information from method statements, risk assessments, organisational procedures, specifications, instructions, permits, good industry practice

3. Report any inaccuracies with information to the appropriate person

4. Follow organisational requirements for current legislation and official guidance

5. Monitor the use of health and safety control equipment, tools and equipment and access equipment in accordance with organisational procedures

6. Ensure the use PPE, RPE equipment by all team members to carry out manual excavation activities

7. Ensure that the work area and surroundings are protected and monitor the work to install/erect physical barriers to assist and carry out safe excavation activities

8. Monitor the installation and removal of excavation safety and support equipment

9. Ensure proper checking, usage and maintenance of hand tools, portable power tools, pedestrian plant and ancillary equipment

10. Prepare, measure and mark out areas of ground for excavation activities

11. Ensure that all team members work safely in confined and restricted spaces

12. Abide by organisational emergency response procedures -fire, spillages, injuries and other
13. Direct the excavation of holes and trenches and finish to specification using hand tools, portable power tools, pedestrian plant and ancillary equipment
14. Monitor work activities and carry out visual inspections of holes, trenches and excavations
15. Work with, and in the vicinity of, plant machinery, equipment and vehicles
16. Monitor proper handling and removal of materials and components safely and their storage and disposal for waste and re-use
17. Ensure a clean and tidy work area
18. Report any problems or hazards associated with the excavation activities that may affect the work programme in accordance with organisational instructions.
19. Communicate with colleagues, subordinates, supervisor and line manager to carry out efficient and productive working practices
20. Ensure that the excavation work area is secured during and on completion of work activities
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EXC43. Carry out secondary dimensional control for excavation operations

This unit lists the knowledge and skills needed by a person holding this position to carry out activities in carrying out secondary dimensional control activities.

On completion of this unit the persons carrying out this work will possess the necessary skills and knowledge to use tools and ancillary equipment to measure, mark out, check and transfer levels in accordance with work requirements and procedures.

Performance Criteria

The candidate must have the necessary knowledge and skills to:

1. Interpret given information relating to dimensional control
2. Adopt and ensure health and safety work practices
3. Select the required resources for the methods of work
4. Use and maintain hand tool and ancillary equipment
5. Transfer and check alignments and levels
6. Observe, measure and mark dimensional controls, reference points, alignments and profiles accurately
7. Mark and locate services and sub-structures in the workplace
8. Maintain the safety and security of services and sub-structures in the workplace

Required Knowledge

The Level 4 Excavation plant supervisor must know and explain:

1. The different types of organisational information –, method statements, risk assessments instructions, procedures, specifications, drawings, sketches
2. The organisational information extracted from, drawings, sketches method statements, risk assessments, procedures
3. The organisational procedures for rectifying and reporting any inaccuracies with given information.
4. The importance of understanding site clearance methods and procedures prior to commencement of excavation work such as soil removal and any permit requirements for the removal of trees
5. Own responsibilities under current legislation and organisational requirements whilst working on site
6. The purpose of health and safety equipment and the reasons for why and when it needs to be used – for collective measures, Personal Protective equipment (PPE) Respiratory Equipment (RPE).
7. The potential risk and hazards associated with working in or near excavations - obstructions, site personnel mobile plant and equipment, traffic routes, ground conditions, weather conditions, and third party hazards
8. The types of resources to be used – tools and ancillary equipment, levelling and setting out equipment
9. How the resources should be used and how any problems/defects associated with them are dealt with
10. How to protect levelling and setting out equipment
11. The use of hand tools measuring and marking equipment
12. How to Set out secondary dimensional control equipment
13. Measuring and setting out procedures – transferring datum lines, transferring levels, positioning and securing secondary control points where necessary or when working with land surveyors.
14. The types of components used for setting out – wooden pegs, timber profiles, string lines, sand – lines, spray paint, or the like.
15. Types and uses of architect/engineer’s reference points - line and level control points
16. Uses and checks for calibration of measuring devices – measuring tapes, spirit levels, optical gauges or the like.
17. Importance of maintaining setting-out components and protecting them from damage during excavation activities
18. How to utilise secondary dimensional levelling and setting out equipment to work to- line level, depth, height, angles, area, distance
19. Methods of calculating, height depth, angles, length and area associated with the setting out for secondary dimensional control for excavation works
20. Methods of estimating and measuring techniques for bulk materials – bucket loads truck loads
21. Importance of team work and communication during the dimensional control and excavation works process
22. The needs of other occupations associated with protection and safety of the site and surroundings
23. The organisational requirements for reporting problems which may affect the work operation

**Required Skills**

The Level 4 Excavation plant supervisor must be able to:

1. Interpret and obtain appropriate information from method statements, risk assessments, instructions, procedures drawings, sketches
2. Comply with and instruct according to organisational procedures for rectifying and reporting inaccuracies with supplied information
3. Comply with and instruct according to information and procedures taken from risk assessments, method statements, current legislation and organisational procedures
4. Select, use, and ensure appropriate PPE, RPE equipment for carrying out site activities for peers and subordinates
5. Ensure the use health and safety equipment correctly and safely
6. Select and use tools and ancillary equipment for secondary dimensional control and ensure
7. Ensure areas are protected and maintained to avoid damage from work activities
8. Communicate and work with other work colleagues, subordinates, supervisors line managers other occupations
9. Identify, locate, and explain reference points (datums)
10. Check tools, equipment, ancillary equipment and measuring levelling and setting out equipment for serviceability
11. Use tools and equipment to install and maintain dimensional control and levelling and setting out equipment
12. Ensure compliance with organisational procedures for protecting levelling and setting out equipment
13. Transfer alignments and levels within the plant operators’ requirements (sand lines, string lines etc)
14. Check for errors arising from the transfer of alignments and levels, use of wrong alignments and levels, measurement calculations
15. Ensure that the work area is set out for alignment and level control
16. Report problems within own authority and organisational procedures which may affect the work production schedule
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**EXC44. Monitor and contribute to the progress of work operations**

This unit lists the knowledge and skills required by a person holding this position to contribute to the safe, efficient and effective control of resources and ensure work activities and operations are in accordance with organisational requirements.

Upon completion of this unit the persons carrying out this work will possess the skills to co-ordinate and organise work activities and operations in accordance with organisational instructions and procedures.

**Performance Criteria**

The candidate must have the necessary knowledge and skills to:

1. Organise work activities to comply with instructions and the work programme
2. Organise work activities and work areas to minimise health and safety hazards and risks
3. Organise resources for work activities and check they are available for use
4. Co–ordinate and communicate work activities with relevant personnel and work requirements
5. Identify and initiate corrective actions where operational requirements are not met
6. Organise, check and store materials, components and equipment efficiently to minimise wastage
7. Execute to completion work activities in accordance with organisational procedures and agreed timescales

**Required Knowledge**

The Level 4 Excavation Plant supervisor must know and explain:

1. The organisational approved policies, procedures information, instructions and practices relative to the contract, work processes and activities
2. The details for relating to contracts and who will be informed and affected by the work programme
3. The organisation’s rectifying and reporting procedures of inappropriate/inaccurate information
4. Their personal responsibilities under health and safety, environmental statutory requirements to colleagues, subordinates, visitors and members of the public associated with the work activities
5. How to organise and co-ordinate work with other work activities and operations
6. The methods of communication and terminology used for the work activities within the workplace
7. The methods and procedures used in the organisation for obtaining, exchanging, reporting and recording information
8. The methods used for monitoring the work programme and the sequence of work operations
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<td>9.</td>
<td>Methods for identifying, planning, preparing, organising and obtaining sufficient resources for the work activities</td>
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<td>10.</td>
<td>The purpose of health and safety equipment and reasons for why and when it needs to be used for collective protective measures, Personal Protective Equipment (PPE), Respiratory Equipment (RPE)</td>
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<td>11.</td>
<td>Procedures for informing relevant personnel of situations, practices or circumstances that could or may be hazardous to the workplace or environment</td>
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<td>12.</td>
<td>How to protect the workplace, surrounding area and services from damage</td>
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<td>13.</td>
<td>The special site requirements relating to the work operations - site access, egress, existing utility services, operational area conditions, transport routes, security and waste disposal requirements</td>
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<td>14.</td>
<td>How to organise and co-ordinate the workplace and resources so that conditions are safe and tidy.</td>
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<td>15.</td>
<td>The organisational procedures for safe storage and security of resources</td>
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<td>16.</td>
<td>Organisational lines and methods of effective communication</td>
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<td>The limits of one’s own responsibility within their organisation</td>
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<td>18.</td>
<td>The methods for suggesting how work processes and/or activities can be improved</td>
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<td>19.</td>
<td>The reason for planning, organising and scheduling work activities</td>
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<td>The work procedures, operational standards and efficiency targets</td>
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**Required Skills**

The Level 4 Excavation plant supervisor must be able to:

1. Co-ordinate and/or organise the work activities to comply with organisational policies, procedures and statutory requirements
2. Pass on information to relevant personnel
3. Interpret the work programme and its requirements
4. Interpret method statements, risk assessments, work procedures and methods of work for activities to be carried out
5. Communicate work arrangements to the relevant personnel as applicable to commencement date, timescale and completion date
6. Record information to comply with organisational requirements for arrangements for work to be carried out, commencement and finish of contract
7. Communicate with site personnel and establish work programmes, methods and sequences of work
8. Co-ordinate and agree work programmes with other occupations applicable to work operational requirements
9. Plan own workload to meet the requirements of other occupations and the programme of work
10. Record information on resources requested and obtained
11. Use organisational systems to control resources to maintain site tidiness and dispose of waste in accordance with organisational and statutory requirements
12. Comply with the lines and methods of communication used by employees, their peers and immediate supervisors in accordance with organisational procedures and instructions
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<td>13.</td>
<td>Identify, record and pass on information on any special considerations to persons who could be affected</td>
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<td>14.</td>
<td>Use relevant organisational procedures to record any identified special site requirements</td>
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<td>15.</td>
<td>Identify, plan and co-ordinate relevant site storage and security arrangements in accordance with organisational procedures</td>
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<td>16.</td>
<td>Comply with organisational recording arrangements for storage and efficient use of materials, components and security operations</td>
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<td>17.</td>
<td>Comply with organisational reporting and recording procedures against changes in normal programme requirements</td>
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<td>18.</td>
<td>Comply with organisational procedures for suggesting improvements to work processes and methods</td>
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<td>19.</td>
<td>Carry out regular checks on the storage of materials, components and equipment</td>
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EXC45. Operate mobile plant equipment to excavate ground and various materials

This unit lists the knowledge and skills needed by a person holding this position to carry out Mobile Plant Operator activities in to excavate, face, ground and loose materials in the workplace.

Upon completion of this unit the persons carrying out this work will possess the necessary knowledge and skills to operate wheeled and tracked loading shovels to extract, excavate, segregate loose materials, form stockpiles, remove materials from stockpiles and load and unload materials in accordance with work requirements and organisational procedures.

Performance Criteria

The candidate must have the necessary knowledge and skills to:

1. Interpret given information and instruct and direct subordinates accordingly for the use of mobile plant equipment to carry out excavation operations and the removal of loose materials.
2. Ensure safe working practices are carried out by oneself and co workers.
3. Select materials, tools and equipment for mobile plant, and instruct and direct subordinates accordingly, to carry out excavation activities and the separation of materials.
4. Prepare, set up and operate Mobile Plant for carrying out excavation and the removal of loose materials activities.
5. Shut down mobile plant and equipment.
6. Conform to organisational instructions and procedures and instruct and direct subordinates accordingly, to reduce the risk of damage in the workplace and surrounding areas.
7. Conform to organisational procedures and instruct and direct subordinates accordingly, to carry out the work efficiently, productively and to specification.

Required Knowledge

The Level 4 Excavation plant supervisor must know and explain:

1. The different types of information sources- method statements, risk assessments oral and written information, drawings, specifications, manufacturers information operator handbooks.
2. The organisation’s rectifying and reporting procedures of inappropriate/inaccurate information.
3. One’s own, and subordinates’ responsibilities under current legislation and organisational requirements whilst working: below ground level, at height, with attachments tools and equipment.
4. The organisational security procedures for Plant machinery, attachments, tools and equipment.
5. The importance of understanding site clearance methods and procedures prior to commencement of excavation work such as soil removal and any permit requirements for removal of trees and other necessary permits.
6. The purpose of Health and Safety Equipment and reasons for why and when it needs to be used – for collective and individual protective measures,
7. The different types of Personal Protective Equipment (PPE) and Respiratory Protective Equipment (RPE)
8. Hazards and potential hazards associated with underground and overhead services
9. Preparing, configuring and setting up the machine for site and highway travel, extraction, excavation, loading and unloading duties
10. Factors which may affect the operation of the machine – ground and overhead hazards, terrain variation, weather conditions
11. How to travel laden and unladen with the machine on level, rough and undulating ground and inclines
12. Bucket position(s) to adopt when travelling
13. Different types of materials – earth, soil, sand, rock and stone, and the need for segregation during the extraction and excavation process
14. Methods and techniques for operating close to ground works and buildings
15. Machine stability considerations for varying activities
16. Safety considerations when working within temporary works – shoring equipment and retaining equipment
17. Types and uses of levelling and setting out devices to assist with the excavation and extraction activities
18. Methods and safety considerations when excavating from high banks (90 degree to face, no undercutting from ground level
19. Methods of forming stockpiles and the dangers involved when travelling up and down ramps
20. Methods of backfilling spreading and contouring materials
21. Methods and techniques for loading vehicles from excavations and stockpiles
22. The type of attachments that will be required to carry out extracting and excavation work, standard and non-standard buckets, multi-purpose clamshell front buckets and their limitations.
23. The procedures for setting up and configuring the applicable machine for site and/or highway travel
24. The reasons for carrying out basic operator maintenance and adjustments
25. The replenishment and application procedures for fuels, coolants and lubricants
26. How to protect the workplace, surrounding area and services from damage whilst carrying out extraction, excavation and separation of materials
27. How to ensure work is carried out to productively and meets the required specification
28. The reasons for shutting down and securing the relevant machine on completion of work

Required Skills

The Level 4 Excavation plant supervisor must be able to:

1. Interpret and obtain appropriate information from method statements, risk assessments, drawings, organisational procedures, specifications, manufacturers information, operator handbooks
2. Ensure compliance with organisational procedures for rectifying and reporting inaccuracies with
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supplied information
3. Ensure compliance with information and procedures taken from risk assessments, method statements and organisational procedures
4. Select, direct and ensure the use of relevant PPE and/or RPE for machine extraction and excavation duties
5. Ensure the safe use of health and safety control equipment
6. Ensure checks are carried out on ground conditions, proximity hazards prior to undertaking extraction excavation and segregation activities
7. Ensure areas are protected to avoid and minimise damage from work activities
8. Communicate with other work colleagues, line management and other occupations prior to, during and throughout the extraction and excavation work process
9. Carry out pre-operational checks on the plant machine
10. Prepare and set up the plant machine for extraction and excavation duties
11. Operate the plant machine to form stockpiles of separated materials and construct ramps
12. Operate the machine to extract different types of materials from stockpiles
13. Operate the machine laden and unladen over varying types of ground and in different ground conditions.
14. Operate and manoeuvre the machine in confined spaces
15. Grade spread and level ground and different types of spoil and materials to specification
16. Extract and excavate materials in accordance with the specification
17. Load and place materials from stockpiles into vehicles
18. Operate the machine safely to prevent damage to buildings, materials and equipment.
19. Use tools and equipment to carry out basic operator maintenance and adjustments to the mobile plant equipment in accordance with organisational procedures
20. Replenish fuel, lubricants and fluids on the plant machine in accordance with organisational procedures
21. Report any problems that may affect the work programme in accordance with organisational procedures
22. Prepare and set up the applicable wheeled machine for travelling on the public highway
23. Ensure work is completed using productive cycles of operation and within allocated timescales
24. Ensure that post-start checks are carried out and the plant machine is shut down, isolated and secured on completion of work