Unit 721 Installing drainage in the workplace

19 credits

Level: 2
UAN: A/503/9544

Unit aim:
This unit aims to provide you with the necessary skills and knowledge to:

- interpret information
- adopt safe and healthy working practices
- select materials, components and equipment
- prepare for, install and test new and/or replacement drainage.

*PER – Portfolio evidence reference SO – Site observation OQ – Oral question WQ – Written question WT – Witness testimony
PS – Product supplementary PD – Professional discussion

Assessment criteria that are practical activities are highlighted in bold.

1. Interpret the given information relating to the work and resources when installing drainage.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
1.1 **interpret and extract relevant information from:**							
a. **drawings**							
b. **risk assessments**							
c. **method statements**							
d. **specifications**							
e. **schedules**							
f. **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:							
a. drawings							
b. risk assessments							
c. method statements							
d. specifications							
e. schedules							
f. manufacturers' information							
g. regulations governing the installation and construction of drainage systems.							

2. Know how to comply with relevant legislation and official guidance when installing drainage.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
2.1 describe your responsibilities regarding potential accidents and health hazards, whilst working:							
a. in the workplace							
b. below ground level							
c. in confined spaces							
d. at height							
e. with tools and equipment							
f. with materials and substances							
g. with movement/storage of materials							
h. by manual handling							
i. by mechanical lifting							
2.2 describe the organisational security procedures for tools, equipment and personal belongings in relation to:							
a. site							
b. workplace							
c. company							
d. operative							
2.3 explain what the accident reporting procedures are and who is responsible for making reports.							

3. Maintain safe and healthy working practices when installing drainage.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
3.1 **use health and safety control equipment and access equipment safely to carry out the activity in accordance with current legislation and organisational requirements when installing drainage**							
3.2 **comply with information relating to specific risks to health when installing drainage**							
3.3 explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to installing drainage, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to:							
a. collective protective measures							
b. Personal Protective Equipment (PPE)							
c. Respiratory Protective Equipment (RPE)							
d. Local Exhaust Ventilation (LEV)							
3.4 describe how the relevant health and safety control equipment should be used in accordance with the given instructions							
3.5 describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with:							
a. fires							
b. spillages							
c. injuries							
d. other task-related hazards.							

4. Select the required quantity and quality of resources for the methods of work to install drainage.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
4.1 select resources associated with own work in relation to:							
a. materials							
b. components and fixings							
c. tools							
d. equipment							
4.2 describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to:							
a. pipes, fittings and ancillary components							
b. pre-cast (metal, concrete, clay or plastic) components							
c. bricks, blocks and sandbags							
d. granular materials, aggregates, cement, concrete, mortars and sand							
e. sealant materials (adhesives, compounds, solvents)							
f. hand and/or powered tools and equipment							
4.3 describe how the resources should be used correctly and how problems associated with the resources are reported							
4.4 explain why the organisational procedures have been developed and how they are used for the selection of required resources							
4.5 describe any potential hazards associated with the resources and methods of work							
4.6 describe how to calculate:							
a. quantity							
b. length							
c. area							
d. wastage associated with the method/procedure to install drainage.							

5. Minimise the risk of damage to the work and surrounding area when installing drainage.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
5.1 **protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures**							
5.2 **minimise damage and maintain a clean work space**							
5.3 **dispose of waste in accordance with current legislation**							
5.4 describe how to protect work from damage and the purpose of protection in relation to:							
a. general workplace activities							
b. other occupations							
c. adverse weather conditions							
5.5 explain why the disposal of waste should be carried out safely in accordance with:							
a. environmental responsibilities							
b. organisational procedures							
c. manufacturers' information							
d. statutory regulations							
e. official guidance.							

6. Complete the work within the allocated time when installing drainage.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
6.1 **demonstrate completion of the work within the allocated time**							
6.2 describe the purpose of the work programme and explain why deadlines should be kept in relation to:							
a. types of progress charts, timetables and estimated times							
b. organisational procedures for reporting circumstances which will affect the work programme.							

7. Comply with the given contract information to install drainage to the required specification.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
7.1 **demonstrate the following work skills when installing drainage:**							
a. **measuring**							
b. **marking out**							
c. **laying**							
d. **positioning**							
e. **fitting**							
f. **leveling**							
g. **plumbing**							
h. **aligning**							
i. **securing**							
j. **testing**							
7.2 **install and test new and/or replacement, foul and/or surface water drainage for two of the following to given working instructions:**							
a. **pipework (eg clay, concrete, metal, or plastic)**							
b. **inspection chambers (eg brick, concrete, metal or plastic)**							
c. **surface water systems (eg cells, culverts, high capacity, linear, balancing ponds, interceptors, recycling equipment, soak-a-ways, sustainable urban drainage systems)**							
d. **foul water systems (eg cess pools, septic tanks, reed beds, treatment plants)**							
7.3 **safely use:**							
a. **materials**							
b. **hand tools**							
c. **portable power tools**							
d. **ancillary equipment**							

7.4 **safely store the:**							
a. **materials used when installing drainage**							
b. **tools used when installing drainage**							
c. **equipment used when installing drainage**							
7.5 describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:							
a. excavate trenches and provide trench support							
b. confirm ground conditions, site and excavations are suitable for the drainage installation work							
c. prepare bedding for pipework							
d. determine levels and gradients							
e. identify the differences between surface and foul water drainage							
f. lay, position, level, plumb, align, fit, fix and secure new and replacement drainage systems							
g. construct structures of a drainage system (storm alleviation, culverts, inspection chambers, lateral drains, overflows, sumps, filter drains, sustainable urban drainage systems)							
7.6 describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:							
a. assemble pre-cast components (metal, concrete, clay and plastic) of a drainage system structure (inspection chambers, street iron work)							
b. connect and seal new systems to existing systems							
c. conduct smoke, water, ball and close circuit television tests on drainage systems							
d. work with plant and machinery							
e. use hand tools, power tools and equipment							
f. work at height and below ground level							
g. use access equipment							
7.7 describe the needs of other occupations and how to effectively communicate within a team when installing drainage							
7.8 describe how to maintain the tools and equipment used when installing drainage.							

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Declaration

I confirm that the evidence supplied for the above unit is authentic and a true representation of my own work. The work logged is my own work carried out during my normal work duties.

Candidate name:	
Candidate signature:	
Date:	

I confirm that this candidate has achieved all the requirements of this unit with the evidence listed. Assessment was conducted under the specified conditions and context, and is valid, authentic, reliable, current and sufficient.

Assessor name:	
Assessor signature:	
Date:	

IQA name:	
IQA signature:	
Date:	