

# Preparing and Erecting or Conserving and Restoring Earthen Structures in the Workplace

**Reference :** M/618/5658

**Level :** Level 3

**Credit Value :** 31

**Guided Learning Hours :** 155

**Aim :** The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in Preparing and erecting or conserving and restoring earthen structures in the workplace within the construction industry.

Learning Outcomes		Assessment Criteria
The Learner Will		The Learner Can
1	Interpret the given information relating to the work and resources when preparing and erecting or conserving and restoring earthen structures.	<p>1.1 - Interpret and extract information from drawings, specifications, schedules, method statements, risk assessments and manufacturers' information.</p> <p>1.2 - Comply with information and/or instructions derived from risk assessments and/or 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:</p> <ul style="list-style-type: none"> <li>– drawings, specifications, schedules, method statements, risk assessments, manufacturers' information, archaeological watching brief, historical conservation plans and charters, legislation, official guidance and current regulations governing buildings.</li> </ul>
2	Know how to comply with relevant legislation and official guidance when preparing and erecting or conserving and restoring earthen structures.	<p>2.1 - Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working:</p> <ul style="list-style-type: none"> <li>– 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.</li> </ul> <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 - Explain what the accident reporting procedures are and who is responsible for making reports.</p>
3	Maintain safe working practices when preparing and erecting or conserving and restoring earthen structures.	<p>3.1 - Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when preparing and erecting or conserving and restoring earthen structures.</p> <p>3.2 - Demonstrate compliance with given information and relevant legislation when preparing and erecting or conserving and restoring earthen structures in relation to at least one of the following:</p> <ul style="list-style-type: none"> <li>– safe use of access equipment</li> <li>– safe use, storage and handling of materials, tools and equipment</li> <li>– specific risks to health.</li> </ul> <p>3.3 - Explain why and when health and safety control equipment, identified by the principles of prevention, should be used, relating to preparing and erecting or conserving and restoring earthen structures, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to:</p> <ul style="list-style-type: none"> <li>– collective protective measures</li> <li>– local exhaust ventilation (LEV)</li> <li>– personal protective equipment (PPE)</li> <li>– respiratory protective equipment (RPE).</li> </ul> <p>3.4 - Describe how the relevant health and safety control equipment should be used in accordance with the given working instructions.</p> <p>3.5 - Describe how emergencies should be responded to in</p>

		<p>accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.</p>
4	<p>Select the required quantity and quality of resources for the methods of work to prepare and erect or conserve and restore earthen structures.</p>	<p>4.1 - Select resources associated with own work in relation to materials, components, fixings, tools and equipment          4.2 - Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to:          – timber, manufactured sheet material, limes, aggregates, base materials, earth, binding materials, finishing materials, turf, fixings and associated ancillary items          – hand tools, portable power tools and equipment.          4.3 - Describe how the resources should be used correctly, 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 quantity, length, area, volume and wastage associated with the method/procedure to prepare and erect or conserve and restore earthen structures.</p>
5	<p>Minimise the risk of damage to the work and surrounding area when preparing and erecting or conserving and restoring earthen structures.</p>	<p>5.1 - Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.          5.2 - 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 general workplace activities, other occupations and adverse weather conditions.          5.5 - 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.</p>
6	<p>Complete the work within the allocated time when preparing and erecting or conserving and restoring earthen structures.</p>	<p>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:          – types of progress charts, timetables and estimated times          – organisational procedures for reporting circumstances which will affect the work programme.</p>
7	<p>Comply with the given contract information to prepare and erect or conserve and restore earthen structures to the required specification.</p>	<p>7.1 - Demonstrate the following work skills when preparing and erecting or conserving and restoring earthen structures:          – selecting, measuring, marking, mixing, fitting, finishing, cutting, laying, positioning and bedding.          7.2 - Use and maintain hand tools, portable power tools and ancillary equipment.          7.3 - Select and prepare earth materials (binders, fibres) and/or supports/formwork          7.4 - Prepare and erect or conserve and/or restore at least one of the following earthen structures to given working instructions:          – monolithic earth walls (cob, rammed earth, mud) including forming openings, detail and finishes          – earth mortared masonry structures (clay lump, stone, brick) including forming openings, detail and finishes.          7.5 - Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:          – select and test raw materials, including field and laboratory tests          – prepare earth materials (soil, binders, fibre, additives)          – erect and dismantle formwork          – produce specialist tools          – work with plant or machinery          – produce templates and earth blocks          – identify line, level and verticality          – identify and produce lift lines and overhangs          – protect structures from shrinkage, cracking and moisture intrusion          – validate appropriate ways in which the work should be carried out          – recognise sensitive areas (plaster, details, timber-work)          – maintain heritage and archaeological integrity          – maintain the principles of minimum intervention and reversible alterations</p>

- prepare and erect, or, conserve and restore monolithic earth walls (cob, rammed earth, mud) including forming openings, details and finish
  - prepare and erect, or, conserve and restore earth mortared masonry structures (clay lump, stone, brick) including forming openings, details and finishes
  - record work carried out (written, photographic or digital)
  - recognise and/or report protected flora and fauna, (mortar bees)
  - remove deteriorated and/or inappropriate materials
  - erect and replace fabric, materials or structural components
  - repair fabric, materials or structural components in-situ
  - maintain existing structures
  - integrate existing and new constructional components or finishes
  - store salvageable fabric, materials and structural components
  - recognise and determine when specialist skills and knowledge are required and report accordingly
  - determine specific requirements for structures of special interest, traditional build (pre 1919) and historical significance
  - use hand tools, portable power tools and ancillary equipment
  - work at height
  - use access equipment.
- 7.6 - Describe the needs of other occupations and how to communicate effectively within a team when preparing and erecting or conserving and restoring earthen structures.
- 7.7 - Describe how to maintain the plant/machinery, tools and equipment used when preparing and erecting or conserving and restoring earthen structures.

**Assessment guidance and/or requirements** : This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment. Please refer to the hyperlink for clarity - <https://www.citb.co.uk/qualifications-standards/qualification-framework/>

Assessors for this 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. Workplace evidence of skills cannot be simulated.