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| ECVET Earth Building | <b>Repair and conservation:<br/>Plaster and building</b> | <b>Unit R</b> |
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| <b>Learning outcomes</b>   |  | <b>Level 5</b> |
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| <b>KNOWLEDGE</b>   | <b>SKILLS</b>  |                |
| <ul style="list-style-type: none"> <li>- Significance of historic building culture</li> <li>- Conservation of traditional earthen techniques and materials</li> <li>- Global diagnosis of earthen buildings</li> <li>- Major pathology with potential for collapse</li> <li>- Specific recommendations for surface maintenance, fixing</li> <li>- Cultural achievements of the workers in the field of earthen architecture</li> <li>- Socio-economic benefits versus financial costs</li> <li>- Resources (specialised literature, organisations, professional networks)</li> <li>- Innovation and development related to repair earth construction</li> </ul>          | <p><b>Planning</b></p> <ul style="list-style-type: none"> <li>- Observe and deduce the building composition, investigate and coordinate samples of earthen elements if necessary</li> <li>- Monitor (observe, analyse and report) the building state (external and internal water and humidity, damages, local environment...)</li> <li>- Assess the impact of changing external factors on the building (climate, vegetation, other constructions, ground level...)</li> <li>- Discuss different options for repair on a building's life cycle</li> <li>- Assess the stresses and transfer of forces applied on a structure and if necessary adapt the engineering design</li> <li>- Identify appropriate equipment, materials and workers needed for repair existing earthen structures</li> <li>- Calculate earth required for repair and maintenance</li> <li>- Analyse earth resources</li> <li>- Organise a specific waste management plan and re-use of earthen materials</li> <li>- Plan the sequence of works to ensure stability and protection of the earth structure and related elements</li> <li>- Provide specific recommendations for maintenance in the user manual for clients and other professionals</li> </ul> <p><b>Coordination</b></p> <ul style="list-style-type: none"> <li>- Coordinate urgent interventions</li> <li>- Organise the workforce and coordinate the team for optimum workflow in earth repairs, maintenance and surface treatments</li> <li>- Organise interventions by specialists in earthen construction where necessary</li> <li>- Liaise with and control various trades related earth repairs, maintenance and surface treatments</li> <li>- Modify program against earth related incidents</li> </ul> <p><b>Controls</b></p> <ul style="list-style-type: none"> <li>- Check if repairs are done in accordance with specification</li> <li>- Check that the repair process respects the historic and aesthetic aspects</li> <li>- Check that the workers know the limits of stability and that any temporary supports are maintained</li> <li>- Check the correct application of the site health &amp; safety plan</li> </ul> |                |
| <b>COMPETENCE</b>  |  |                |
| <ul style="list-style-type: none"> <li>- Create confidence on site and underline the particular issues relating to earthen structures and repair through site inductions and training where necessary</li> <li>- Assist the engineer/architect in assessing existing earthen structures and secure the site: observe, report, calculate, recommend</li> <li>- Integrate special earth construction and repair issues into the general site managing tasks: order, planning works and budget, health and safety, controls, handing over</li> <li>- Manage the drying of the repairs</li> <li>- Understand the buildings construction and heritage significance</li> </ul> |  |                |

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| <b>Criteria and Indicators for the Assessment of Skills</b> |  | <b>Level 5</b> |
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| Criteria  | Indicators   |                |
| Planning  | <ul style="list-style-type: none"> <li>- The defects and their causes are identified and described</li> <li>- The proposed repairs, materials and workforce are suitably planned</li> <li>- Risk areas are flagged or fenced and earth activities are included in the site health &amp; safety plan</li> </ul>   |                |
| Coordination  | <ul style="list-style-type: none"> <li>- The earth building competence of the team is assessed and training needs identified</li> <li>- The workers are aware of the special needs of earth construction and understand the requirements of the earth repairs</li> <li>- The sequence of tasks are well programmed</li> <li>- The work plan and cost plan are up-dated in light of events</li> <li>- Options are evaluated and changes are reported to the client and architect/engineers</li> <li>- The repairs as they progress and any deviations from the plan are recorded</li> </ul>   |                |
| Controls  | <ul style="list-style-type: none"> <li>- The effects of possible changes on site are anticipated and contingency plans are in place</li> <li>- The works are as intended in design and quality, and any variation is coordinated</li> <li>- The heritage is respected</li> <li>- The site is managed safely:               <ul style="list-style-type: none"> <li>○ Personal protection equipment is adapted to risks and is used according to safety instructions</li> <li>○ Equipment is used according to safety instructions.</li> <li>○ All protective safeguards are in place</li> <li>○ Erection of ladders and scaffolding according to regulations</li> </ul> </li> </ul> |                |

Ensure that standards of work and materials comply with relevant codes of practice and to current standards.