

ECVET Earth Building	Formwork Rammed earth	Unit F
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Learning outcomes		Levels 3+4
KNOWLEDGE	SKILLS	
<ul style="list-style-type: none"> - Formwork types and requirements (assembly, safety, storage): <ul style="list-style-type: none"> o Moving or static o Partial, integral o Traditional (historical), manufactured - Plan / drawing reading - Formwork assembly: formwork key, spacer tubes, wood spacers - Formwork for curved walls, other shapes - Block-outs (negative / imprint) for constructive details: corners, edges, openings, top of wall, services - Criteria for selection of an appropriate system - Relation of component sizes and resistance to bending - Materials for formwork (different skins, surfaces) - Installation of the formwork: handling, transport, set up, alignment, plumb, clamp connectors - Factors influencing the final rammed wall surface quality - Specific safety works at height and handling - Appropriate scaffold types and requirements - Health and safety regulations 	<p>Set up and rotation</p> <ul style="list-style-type: none"> - Receive and control a system formwork (one-man, craned) - Hand-make specific formwork - Ensure use and placing of appropriate scaffold - Set up, fix and prop the formwork to suit the wall length - Manage the use and rotation of the shutters - Make, set up and remove block-outs - Remove the formwork <p>Maintenance</p> <ul style="list-style-type: none"> - Clean, maintain and store the shutters and accessories <p>Planning and Organisation</p> <ul style="list-style-type: none"> - Read formwork plans and drawings - Calculate materials for hand-made specific formwork - Design block-outs - Select and use appropriate tools and machines - Organise the building site for formwork delivery, production, rotation, storage) 	

COMPETENCE

Level 3

Decision making process

- Choose an appropriate formwork system for a defined task

Planning and organising for own work

- With the materials provided, plan and organise the production of formwork according to the specifications
- Plan and organise the assembly and removal of formwork under site conditions

Execution, quality control and coordination within the earth building team

- Work in accordance with the schedule of works, adjust to general work process on site, instruct L1 + L2 workers of the EB team
- Check if all the steps involved conform to the specification and program
- Identify problems and report
- Control the setting up and stability of formwork

Communication beyond the earth building team

- Liaise with non earth-building specialists on formwork setting up and rotation

COMPETENCE

Level 4

Decision making process

- Advise on formwork coursing and formwork types in the design process

Planning and organising for team work

- Make formwork plans and produce an appropriate formwork for a defined task
- Plan and organise the assembly, rotation and removal of formwork under site conditions

Execution, quality control and coordination within the earth building team

- Supervise and coordinate the entire work of the earth building team according to the specifications and program
- Report construction progress
- Identify significant problems and intervene
- Control the production of formwork
- Control the assembly and removal of formwork

Communication beyond the earth building team

- Liaise with supervision and design team
- Liaise with other trades and professionals, coordinate and sequence earth works within the general schedule
- Liaise with non earth building specialists on formwork setting up and rotation

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Criteria and Indicators for the Assessment of Skills		Levels 3+4
Criteria	Indicators	
Set up and rotation	<ul style="list-style-type: none"> - Formwork is set out according to the plans - Formwork is set up plumb; it is stiff enough - Formwork is stable and regularly checked - It is possible to take the formwork apart without damaging the work - Formwork removal is planned - The dimensions of the form comply with the design - Formwork rotation is done carefully to avoid damage to finished lifts 	
Maintenance	<ul style="list-style-type: none"> - All elements of the formwork are cleaned and stored under dry conditions - Damaged and worn out parts are sorted out and replaced 	

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