National Occupational Standards

Sector: Building and Construction

Occupation: Dry Rubble Wall Builder

MQF Level: 3

Units:

- DRWB301: Health & Safety during work practices
- DRWB302: Identification of different rubble stones
- DRWB303: Reading of drawings and calculations
- DRWB304: Laying of dry rubble wall

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DRWB301: Health & Safety during work practices

This unit is about being able to use safe procedures and safe work practices. The persons carrying out thiswork must possess the necessary knowledge and skills to ensure that their actions do not create health and safety risks to themselves and others, and to identify risks and hazards associated with the working environment, tools, equipment, materials.

Performance Criteria

The candidate must have the necessary knowledge and skills to:

1. Carry out and ensure safe working practices to prevent hazards and to ensure the safety of oneself, workers, and members of the public.
2. Carry out and ensure safe working practices when using appropriate equipment and materials to prevent damages to work areas and injuries to oneself and 3rd parties.
3. Carry out and ensure the safe erection, use and dismantling of simple access platforms less than 2m high.
4. Set up safety barriers and adequate edge protection around a work environment to protect colleagues and members of the public.
5. Use protective clothing and safety equipment according to specifications issued by manufacturers and know the whereabouts of first aid equipment.
6. Use, handle, and store materials hazardous to health in a safe manner and with proper labelling.
7. Ensure that the site is always not accessible to unauthorized persons and according to standard procedures.

Required Knowledge

The Level 3 Dry Rubble Wall Builder must know and explain:

1. The roles and responsibilities of themselves and others under the Health and Safety Act.
2. The health and safety risks associated with their role which includes tools, materials and equipment used and working practices and procedures.
3. The health concerns associated with the workplace and safe practices when carrying out work.
4. The potential hazards at the place of work (such, slippery and uneven surfaces, dust, handling and transporting, heights, improper use of tools and equipment).
5. The importance of being alert to the presence of hazards in the place of work.
6. The emergency procedures in the place of work and the first aid facilities that exist within the work area.
7. The best way to make use of barricades, industrial hurdles, and warning signs to make areas clearly marked out of bounds for protecting customer's property.
8. The safety procedures when using scaffold platforms (less than 2 m). (Note: knowledge on how to use a scaffold safely is not limited to height. The limitation is only when erecting, dismantling, and taking responsibility of the scaffold).
9. The safety requirements and regulations regarding scaffolds higher than 2m. (certification and weekly checks by competent persons. Any changes to the structure, certificating needs to be done again by the competent person).
10. The necessary safety precautions including the use of protective clothing and equipment for a range of applications.

Required Skills
The Level 3 Dry Rubble Wall Builder must be able to: 1. Identify which health and safety procedures are relevant to the working environment. 2. Seek competent person's assistance when help is needed. 3. Ensure compliance with duties and obligations as defined by the Occupational Health & Safety Act 2000 and recent amendments within their remit. 4. Follow workplace policies and supervisors' instructions for the safe use and maintenance of tools and equipment. 5. Control health and safety hazards within the job responsibility. 6. Report any hazards which may present risk. 7. Follow correct procedures in the event of injuries to themselves or others. 8. Apply the necessary skills to erect, use and dismantle access equipment (at height less than 2m). 9. Read, interpret, and install warning signs and sets up safety barriers and edge protection around working areas. 10. Equip oneself with the appropriate protective clothing and safety equipment for rubble wall building including preparatory works and some other specific tasks. 11. Monitor the workplace and maintain good housekeeping whilst keeping it free from hazards. 12. Advocate appropriate health and safety procedures.

DRWB302: Identification of different rubble stones
This unit is about identifying the different materials for specific applications based on their technical properties and identifying direct and indirect environmental impacts. **Performance Criteria** The candidate must have the necessary knowledge and skills to: 1. Distinguish between type of different sizes of rubble stones hearting's (mazkan), Pinning's (filsa) headstone (ktajjen). 2. Distinguish between where and when insert a range of bonding-ties when applicable. 3. Distinguish between where and when insert of pinning's when applicable 4. Distinguish between the different sizes of rubble stones needed to properly execute job.
Required Knowledge
The Level 3 Dry Rubble Wall Builder must know and explain: 1. How to choose a range of the size rubble stones and procedures before applying to the relevant work and their benefits. 2. How to use Pinning's and Hearting's in the construction of the rubble wall construction. 3. How to use a headstone (ktajjen) as a binding layer between the different masonry courses. 4. The methods and techniques to minimize wastage and to minimize environmental risks.
Required Skills
The Level 3 Dry Rubble Wall Builder must be able to: 1. Decide how wide and long the rubble wall to be and directions 2. Calculate the quantity and size of rubble stones needed 3. Dig the length of the wall to provide a stable foundation 4. Use a batter and a string line the length of the wall 5. Slant the stones of each course at least 1cm (1 centimeter), fill between the stones with hearting, pinning-stone, so water can pass through. 6. Know how to lay walls into an existing structure, levelling the wall, and building on slopes, building corners, type of damages and repair retaining rubble walls. 7. Make sure to clear up and tidy the work area at the end of the working day.

DRWB303: Reading of drawings and calculations
This unit is about understanding and applying dimensions from drawings and calculating quantities inthe preparation, costing, and estimation. **Performance Criteria** The candidate must have the necessary knowledge and skills to: 1. Read and interpret plans and specifications to establish important building levels. 2. Calculate the quantities of stones required to meet work schedules. 3. Set out the posts, and any openings indicated in drawings. 4. Know how to tackle all the various types of foundations found. 5. Understand the building regulations. 6. Identify the various types and shapes of wall openings.
Required Knowledge
The Level 3 Dry Rubble Wall Builder must know and explain: 1. Compilations of overall linear dimensions from drawings. 2. Calculations including those involving quantities and costs of materials. 3. The tools and equipment to be used to set out alignment. 4. The correct procedure for setting out work systems. 5. The scaling of working drawings from plans. 6. The spirit levels and other levelling equipment available specifically designed for building of walls on inclined planes.
Required Skills
The Level 3 Dry Rubble Wall Builder must be able to: 1. Translate drawing direct to setting out of work where necessary. 2. Check the wooden batter for accuracy. 3. Translate quality specifications on actual work. Calculate quantity of rubble stones and other materials required for a job. 4. Calculate quantity of rubble stones and other materials required for a job. 5. Take-off quantities from drawing. 6. Measure and comprehend calculations using metric units. 7. Read and show awareness of annotated building drawings. 8. Keep record of any variations and deviation from plans.

DRWB304: Laying of dry rubble wall

This unit is about the understanding the process of laying and building a rubble wall.

Performance Criteria

The candidate must have the necessary knowledge and skills to:

1. State the criteria for the selection and sizes of stones.
2. State the tools, accessories and equipment used for construction of a rubble wall.
3. Identify and explain dry stone masonry, gravity, friction, and other skills required for such work.
4. Clear a level pad of suitable dimensions to build the rubble wall.
5. Set up batter boards.
6. Make sure that the foundation is line is straight by using the necessary calculations.
7. Build rubble walls in a robust manner using the materials available and with the required slant
8. Ensure Bond stones penetrating through the whole width of the wall should be placed every 2 meters or as specified from the competent person.
9. Carry out the safe erection, use and dismantling of simple system scaffold platforms less than 2m high.

Required Knowledge

The Level 3 Dry Rubble Wall Builder must know and explain:

1. The relevant building regulations.
2. Various components of the Building and Construction of a rubble wall. Safety measures in the building industry.
3. The different types of foundations.
4. The safe working practices to be used to prevent hazards and to ensure the safety of workers and members of the public.
5. The safe working practices using appropriate equipment and materials to prevent damages to work areas.
6. How to recognize and understand the various types of foundations and types of walls.
7. The different protective clothing and safety equipment used to accomplish the tasks.
8. The safe lifting and handling of heavy stones.
9. How to safely erect, use and dismantle of any simple scaffold platforms that are less than 2m high.
10. The safety procedures during demolishing works and also during working on heights.
11. The relevant building techniques and regulations: straight walls, curved walls, retaining walls, weep holes etc.
12. How to ensure safe working practices to prevent hazards and to ensure the safety of workers and members of the public before commencement and throughout the works.

Required Skills

The Level 3 Dry Rubble Wall Builder must be able to:

1. Make the necessary calculations for quantities and costs of materials needed.
2. Plan a rubble wall from a given requirements.
3. Choose the right stones from a quarry. Grading of stone: size, length and weight, face-stones, hearting and pinning rubble.
4. Lay out the space and orientation of the wall.
5. Dig and prepare the orientation of the foundation of the rubble wall.
6. Identify which safety equipment and tools will be required.
7. Decide how wide and long the rubble wall to be and orientation.
8. Dig the length of the wall to provide a stable foundation.

9. Use a batter frame and a string line the length of the wall: wood batter frames; setting batter frames.
10. Slant the stones of each course at least 1cm (1 centimeter), fill between the stones with hearting, pinning-stone, so water can pass through.
11. Know how to lay walls into an existing structure, levelling the wall, and building on slopes, building corners, type of damages and repair.