

National Certificate in Building, Construction and Allied Trades Skills (BCATS)
Teacher Information & Resources

**Lay paving blocks as a BCATS
project**

Unit Standard – 12938

Level 2, Credit 4





Teaching and assessment tips

Intent – The intent of the unit standard is that the learner is able to lay paving blocks including;

- calculating quantities and preparing an order,
- excavating the area,
- laying and compacting the base course and bedding sand,
- laying the paving blocks so that they are level to line, compacted and finished, and
- completing work operations.

Unit standard interpretation

The paving project is to be no less than one square metre.

Quantities of materials to be calculated and an order prepared for are; bedding sand, jointing sand, base course and paving.

The skills required for this unit standard are assessed using the Assessor Observation sheet, a copy of the learner's calculations and order form, and evidence of the laid paving blocks.

An order form template may be sourced from the internet or you can design your own or use a facsimile of your school or business order form. The completed order must be attached to the Assessor Observation sheet.

Photo(s) to verify that the paving blocks have been finished must also be attached to the Assessor Observation sheet.

Assessment



Assessment of this unit standard consists of:

- Completion of an order, including calculations of materials quantities and
- Completion of the assessor observation sheet and
- Completion of the laying of paving blocks

Example oral assessment questions

1. What factors need to be considered when choosing which type of pavers to use?

Shape and size should suit the area being paved.

Strength should suit the weight of traffic, from pedestrian use, to light vehicle traffic, to heavy vehicles.

2. What method is used to calculate the number of pavers required for an area?

Divide the total area by the area of a single paver, plus allowance for some wastage.

3. Calculate the amount of base course required for the following:

- Area to be paved measures 6 metres x 3.5 metres
- Base course laid to depth of 180mm
- Bulking factor of 15%

$$\begin{aligned} \text{Base course} & (l \times w \times d) + \text{bulking factor} & = m^3 \\ & (6.000 \times 3.500 \times 0.180) + 15\% & = m^3 \\ & 3.780 + 0.567 & = 4.347m^3 \end{aligned}$$

4. Why is it preferable to purchase all of the pavers from the same batch?

Pavers from different batches may result in variations in colour and texture.

5. What is one function of the edging around a paved area?

Prevents the paving from moving sideways.

Retains the base course material.

Assessor Observation Sheet – Paving

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Student Name:
Project Location:

Assessor observation:

Assessment criteria: <i>This unit standard requires laying no less than 1 sq m of paving.</i>	Comments and/or notes
Calculations of material quantities (including bedding and jointing sand, base course and paving) attached <input type="checkbox"/>	
Order form for materials (including bedding and jointing sand,) base course and paving) attached <input type="checkbox"/>	
Area is excavated, base course and sand is laid and compacted <input type="checkbox"/>	
Paving is laid level and to line, compacted and finished <input type="checkbox"/>	
Work is in accordance with job specifications and/or manufacturer’s instructions <input type="checkbox"/>	
All operations completed safely and according to site/workplace practices <input type="checkbox"/>	
Tools are looked after and put away correctly <input type="checkbox"/>	
Photo(s) verifying finished project attached <input type="checkbox"/>	
Assessor name:	RESULT: A = Achieved, N = Not Yet Achieved
Assessor signature: Date:	

Assessment Schedule

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Evidence for credit in this unit standard must be gathered for a paving project of not less than one square metre.

Outcome 1	Calculate quantities and prepare an order for materials for paved area.	Assessment evidence and judgement
ER 1.1	Quantities of materials are calculated from working drawings and job specifications.	Evidence gathered from student's calculations and the assessor observation sheet showing; <ul style="list-style-type: none"> Quantities of sand, base course and paving are calculated correctly.
ER 1.2	An order for materials is prepared in accordance with work place practice.	Evidence gathered using order list. <ul style="list-style-type: none"> Order is legible and correct measurement units are used.
Outcome 2	Excavate, compact, and lay paving blocks.	Assessment evidence and judgement (photos to verify are to be attached)
ER 2.1	Area to be paved is excavated in accordance with working drawings and job specifications.	Evidence gathered from the paving area project and the assessor observation sheet showing; <ul style="list-style-type: none"> Excavation is neat and accurate.
ER 2.2	Base course and sand are laid and compacted in accordance with working drawings and job specifications.	Evidence gathered from the paving area project and the assessor observation sheet showing; <ul style="list-style-type: none"> Base course and sand are laid and compacted correctly.
ER 2.3	Paving is laid level and to line, compacted, and finished in accordance with working drawings, job specifications and manufacturers' instructions.	Evidence gathered from the paving area project and the assessor observation sheet showing. <ul style="list-style-type: none"> Paving is laid level and to line, compacted, and finished correctly.
Outcome 3	Complete work operations.	Assessment evidence and judgement
ER 3.1	All operations are safely completed in accordance with workplace practice.	Evidence gathered from the paving area project and the assessor observation sheet showing; <ul style="list-style-type: none"> Appropriate PPE selected and used. Tools used correctly and safely. Personal safety and safety of others observed.
ER 3.2	Workplace, tools, plant and equipment are cleaned, and tools, plant and equipment stored in accordance with workplace practice.	Evidence gathered from the paving area project and the assessor observation sheet showing; <ul style="list-style-type: none"> Work area cleaned. Waste disposed of. Tools, plant and equipment cleaned and stored correctly.