

ASSESSMENT GUIDELINES

Unit 1006

Lay natural stone, slate or tile as
hard surfaces in landscaping

Level 4, Credit 6, version 5

Lay natural stone, slate and tile as hard surfaces in landscaping

Unit standard 1006

Level 4, Credit 6, version 5

Level of performance required for this unit standard

This is a level 4 unit standard. At this level trainees are expected to demonstrate the following abilities when completing assessment tasks:

- To work under broad guidance, independently; with complete responsibility for the standards of the outcome achieved.
- To apply technical skills, knowledge and innovation to complete the task to the specified standard, in a variety of familiar and unfamiliar context.
- To analyse and interpret information, and make an informed judgment.

Assessors may consider linking the assessment of this unit standard with assessment for:

22196 *Lay concrete as a hard surface to specifications in landscape work*

22200 *Lay base and segmental pavers as hard surfaces in landscaping*

12399 *Lay sundry materials as hard surfaces in landscaping*

Workplace assessment:

For guidelines on Workplace Assessment, please refer to the NZHITO Workplace Assessors Manual, and for further information, please contact: NZHITO, PO Box 8638, Christchurch. Ph 03 9644 735, Fax 03 9644 737, Website: www.hortito.org.nz

Special notes:

1. *Workplace procedures* refer to verbal or written instructions to staff on procedures for the worksite and equipment.
2. Legislation relevant to this unit standard includes but is not limited to the Health and Safety in Employment Act 1992.
3. The New Zealand Standards applicable to this unit standard are: NZS 3109:1997 *Concrete construction*, NZS 3113:1979 *Specification for chemical admixtures for concrete*, and NZS 4229:1999 *Concrete masonry buildings not requiring specific engineering design*, available from <http://www.standards.co.nz>.

**Unit 1006: Lay natural stone, slate and tiles as hard surfaces in landscaping
(Apprentice copy)**

ELEMENT	Competent	Range of evidence an assessor should consider
<p>Element 1 Prepare work area for laying of natural stone, slate or tiles.</p>	<p>Yes/No</p>	<ul style="list-style-type: none"> ▪ Complete excavation work for the site in accordance with workplace procedures and the requirements of the drawings and specifications. ▪ Establish the edgings for the work to the height, line and grade shown on the drawings, in accordance with the specifications and manufactures requirements where applicable. ▪ Lay, compact and finish the base to the line and grade required for hard surface finish in accordance with specifications shown and workplace procedures.
<p>Element 2 Lay concrete base for stone, slate, or tile as hard surface</p>	<p>Yes/No</p>	<ul style="list-style-type: none"> ▪ Lay base course to specification or site requirements and according to workplace procedures. This includes: specified level below finish level, to line and grade, and evenly compacted. ▪ Establish edgings to ensure that the grade on the final surface runs water off to the defined drainage points. This is to a minimum grade of 15mm per metre for general use, minimum grade of 25mm per metre away from buildings. ▪ Calculate the reinforcing requirements from drawings or specifications and order them according to workplace procedures. Choose at least two of – reinforcing pre-bent to shape and size, unbent reinforcing bar by size and lineal measure, welded steel fabric by gauge, mesh size and area. ▪ Cut and bend, unbent reinforcing as shown in drawings and in accordance with NZS 3109:1987, using tools according to workplace procedures. Tools must includes two of – bolt cutters, steel rod cutter or steel bender. ▪ Place to detail the reinforcing and secure it using the method specified for the work. Securing methods include: wire ties, spacing blocks or stools, lapping. ▪ Calculate from drawings or specifications the concrete material requirements and order according to workplace procedures. This can include cement by the bag or tonne, aggregate for site mix by cubic metre and aggregate size, or ready mixed concrete by the cubic metre and test strength. ▪ Mix the concrete made on site according to the requirements of NZS 3109:1997. ▪ Place the concrete without segregation of aggregate, damage to edgings, or displacement of reinforcing steel. ▪ Compact the concrete using hand or vibrating screed to achieve line, grade, and density of surface finish, as detailed in drawings and specifications. ▪ Roughen the partly dry concrete surface to provide bonding key for bedding mortar. ▪ Protect the surface, and cure the concrete using methods which prevent foot and vehicular access, retain moisture, and enable the concrete to reach its optimum strength. ▪ Leave the site in a condition which allows further work to proceed unimpeded and according to workplace procedures.

<p>Element 3 Select and set out stone, slate, or tile for hard surface Range: select one of – stone, slate or tile</p>	<p>Yes/No</p>	<ul style="list-style-type: none"> ▪ Describe in terms of their use and characteristics, three types of stone, tile and slate that is commonly used as hard surfaces in landscaping. Characteristics include surface texture, sources, hardness and dimensions. ▪ Calculate from drawings or specifications the material requirements and order by type, size specified, and area to be covered. ▪ Set out material using measurement and lines to provide laying pattern specified in drawings or to achieve a balanced result according to workplace procedures. This includes; edge sizes, distribution of random sized material, colour distribution.
<p>Element 4 Mix and lay bedding mortar. Range: one of stone, slate or tile</p>	<p>Yes/No</p>	<ul style="list-style-type: none"> ▪ Select mortar materials to meet the requirements of the site specification and NZS 4229:1999. ▪ Mix mortar to the requirements of NZS 4229:1999. ▪ Ensure admixtures included in the mortar mix to enhance adhesion and conform to the requirements of NZS 3113:1979. ▪ Clean thoroughly and lightly wet surface concrete base slab to enhance mortar adhesion before mortar is laid. ▪ Ensure placement of bedding mortar on concrete base slab so that a good bond is achieved according to workplace procedures. ▪ Cover unlaid mortar to prevent moisture loss and discard if not used before initial set takes place.
<p>Element 5 Lay stone, tile or slate as hard surface. Range: one of stone, slate or tile</p>	<p>Yes/No</p>	<ul style="list-style-type: none"> ▪ Lay full sections of stone, tile, or slate to details shown on drawings or in specification. Detail includes – pattern, line and height, joint size and evenness, surface variation, expansion joints, or flexible jointing compound. ▪ Cut and fit stone, tile, or slate to complete the hard surface, using hand and mechanical methods without damage or danger to the operator or others and according to workplace procedures. Use one of – hammer and bolster, power saw with specialist blade, specialist water lubricated saw or proprietary tile cutter. ▪ Keep mortar off finished surface. ▪ Tool joints to profile detailed in drawings or specification using bedding mortar, or raked out for future pointing according to workplace procedures. ▪ Ensure that raked out joints are filled with pointing mix, that meets the requirements of NZS 4229:1999 after the bedding mortar has set, and is tooled to the profile detailed in drawings or specification. ▪ Clean down hard surface after pointing is set, using the acid solution specified for the work and washed clear with water on completion. ▪ Handle, store and apply acid safely. ▪ Apply a sealant according to the manufacturer’s requirements and in accordance with workplace procedures. ▪ Leave site in a condition which allows further work to be undertaken unimpeded according to workplace procedures.

_____ (Name of Apprentice)

is **Competent / Not yet competent** in Unit Standard 1006, version 5

Signed (Assessor): _____

WPA Registration Number: _____ Date: _____

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Please send this page to your NZHITO Regional Manager, who will forward it to National Office to register the credits on your NZQA Record of Learning.

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