

REGISTERED NATIONAL STANDARD



UNIT OF COMPETENCY

Title:	Undertake basic estimating and costing for brick and block work ¹				
TQF Level:	2	Credits:	4	Version:	1
National standard code:	NS139-02				
Associated qualification (and code):	National Certificate in Bricklaying and Blocklaying Level 3 QR-03-NQ-028-01-1005-26-01				
Approval date:	10 September 2026		Review date:	10 September 2031	
Purpose:	This unit describes the skills and knowledge required to gather and interpret brick and block laying information, estimating quantities, calculating labour requirements, and compiling a simple costing sheet. It is designed for individuals performing routine brick and block laying construction tasks under supervision, applying workplace procedures, plans, specifications, and cost data. This unit supports entry-level brick and block laying workers by developing fundamental estimation and costing skills, which are essential for planning, budgeting, and decision-making in brick and block laying projects. In successfully completing this unit standard, learners are able to: • Interpret plans and specifications to identify brick and block laying requirements • Prepare material lists and source unit costs • Estimate quantities of materials required for brick and block laying tasks • Calculate labour requirements and associated costs • Combine material and labour costs into a total project estimate • Document and present costs in a clear and structured format				

¹ Due to safety issues inherent in working with electricity and combustible substances, all training and assessment activities must be in accordance with Tonga National Building Code.

Learning Outcome 1 (LO1)	Gather information required for estimation and costing for basic brick and blocklaying task
Performance standards	1.1 Interpret plans and specifications; 1.2 Obtain linear dimension and/or surface area; 1.3 Create a material list from 1.1 and 1.2; 1.4 Obtain unit costs of materials on material list from suppliers; 1.5 Obtain current labour rates from construction industry.
Learning Outcome 2 (LO2)	Estimate building materials for basic brick and block laying task
Performance Standards	2.1 Measure linear dimension and/or surface area; 2.2 Calculate/take off quantities of building materials; 2.3 Apply appropriate allowance waste; <i>(Range to the project scope of work)</i> 2.4 Estimate cost of building materials.
Learning Outcome 3 (LO3)	Estimate labour for basic brick and block laying task
Performance standards	3.1 Calculate cost of labour per hour; 3.2 Calculate cost per square metre area; 3.3 Estimate all other associated cost; 3.4 Estimate total labour cost.
Learning Outcome 4 (LO4)	Estimate all other associated costs of basic brick and block laying task
Performance standards	4.1 Allow preliminaries and general; <i>(Range to not limited to insure, safety, bond etc.)</i> 4.2 Calculate cost of tools and equipment; 4.3 Allow for overhead cost and transportation cost; 4.4 Allow for marginal cost; 4.5 Allow for contingency; 4.6 Allow consumption tax (CT).
Pre-requisites	N/A
Co-requisites	N/A

Underpinning skill and knowledge

The following skills and knowledge underpin this unit standard:

Skills:

Information Gathering and Interpretation

- Reading and interpreting construction plans, specifications, and work instructions
- Identifying task requirements from drawings and documentation
- Compiling accurate material lists for construction tasks

Estimation and Calculation

- Take off quantities of materials required for basic construction tasks
- Using numerical skills to calculate material quantities and costs
- Estimating labour hours needed to complete construction tasks
- Calculating labour costs based on time and pay rates

Costing and Estimation

- Calculating total project costs by combining material, labour, and all other associated costs.
- Preparing basic costing sheets and reports
- Recording information clearly and accurately according to workplace requirements

Communication and Workplace

- Communicating with suppliers to obtain material costs
- Following workplace procedures and policies
- Working under supervision and collaborating with team members

Numeracy and Accuracy

- Applying basic mathematics (addition, multiplication, unit pricing)
- Ensuring accuracy in calculations and cost estimations
- Organising information systematically for reporting purposes

Knowledge:

Estimation and Costing Processes

	• Methods for estimating materials, labour, and costs for basic construction tasks • Procedures for calculating quantities of materials and required labour • Techniques for combining cost elements into a total estimate Construction Documentation • Processes for reviewing and interpreting plans and specifications • Understanding construction task requirements from drawings and documents Material Costing • Processes for sourcing material costs from suppliers • Understanding unit costs (cost per item, unit, or quantity) • Basic knowledge of construction materials used in routine tasks Labour Costing • Methods for estimating labour hours required for tasks • Understanding hourly rates and labour costing processes Workplace and Industry Requirements • Workplace policies, procedures, and standards for estimation and costing • Compliance with: ○ Tonga National Building Code ○ Occupational Health and Safety (OHS) requirements ○ Environmental requirements ○ Manufacturer specifications Documentation and Reporting • Processes for preparing and presenting basic costing sheets • Recording and organising estimation information clearly and accurately
Assessment requirements	<u>Assessment methods</u> may include more than one of the following:

Direct Observation

Assessment of learners while they are performing tasks in real time in a real simulated environment.

- The learner performs practical tasks.
- The assessor watches the learner complete these tasks against a checklist or performance standards.

Assessor Requirements

- Use a structured observation checklist aligned to performance standards
- Observe multiple occasions to ensure consistency of competence.
- Record evidence of safe work practices, correct use of equipment, etc.
- Provide immediate feedback where appropriate.
- Ensure conditions reflect real workplace standards.

Oral Questioning

Verbal questions asked to assess the learner's understanding of knowledge and reasoning.

- Conducted during or after practical tasks.
- Can be structured (planned questions) or informal (follow-up probing).

Assessor Requirements

- Ask questions that test underpinning knowledge
- Use open-ended questions
- Confirm learner understanding where practical performance is not enough.
- Record responses clearly (notes or checklist).
- Adjust language to suit learner literacy levels.

Written Test

A structured assessment requiring learners to provide written responses.

- Short-answer questions, multiple choice, or case scenarios.
- Typically conducted off-site or in a classroom environment.

Assessor Requirements

- Design questions that assess knowledge.
- Ensure the test is clear, aligned to unit requirements and appropriate for language, literacy, numeracy levels
- Mark responses using a marking guide or model answers.
- Provide feedback and identify gaps in knowledge.

	• Ensure results reflect the learner’s independent performance. Work-Based Activity Assessment conducted in a real workplace while the learner performs actual job tasks. • Learners complete normal workplace duties. • Evidence is collected over time. Assessor Requirements • Coordinate with workplace supervisors. • Gather evidence such as - Observation reports, Supervisor feedback, etc. • Verify that tasks meet unit performance standards. • Ensure authenticity (learner’s own work). • Confirm competence across different situations and timeframes. Assessment should use a combination of the above methods to ensure sufficient, valid, authentic, and current evidence of competence in both skills and knowledge, in line with unit requirements. <u>Context of Assessment:</u> Competency is to be assessed in the workplace or a simulated workplace environment that accurately reflects a real workplace setting. Assessment is to comply with relevant regulatory or relevant standards' requirements. Assessment of essential knowledge will usually be conducted in an off-site situation.
Moderation arrangements	1. Training providers must have their own moderation system approved by TNQAB before accreditation is granted: a) Relevant internal moderation processes are documented; b) Assessment is planned for each unit, and moderation processes are integrated into such plan. 2. Unless specified elsewhere, external moderation is conducted by the National Qualifications unit of TNQAB for all unit components of a national qualification: a) Samples of assessed activities are submitted for moderation; b) Moderation (external) forms are available on request.

Resource requirements	1. Power point presentations. 2. Trainer's Guide 3. Learner's Guide 4. Plans and specifications 5. Electronic calculators (Standard: fx82, fx100) 6. Structured assessment and evidence-collection tools 7. MS Excel 8. Computer 9. Laptop 10. Laser measuring equipment 11. Rulers 12. Scale rule 13. Tape measures 14. Trundle wheels 15. Plan swift software
Requirements to complete this unit	There are four (4) Learning outcomes and nineteen (19) performance Standards to measure competence. To demonstrate competence, the person studying this unit is: a. Required to demonstrate all LOs to the expected standards; b. Required to attain an Achieved Grade (Competent) to fulfil the requirements of the Unit Standard; c. Eligible to three (3) attempts to achieve the required competency within 14 days of the first attempt. Failure to achieve the required competency after three (3) attempts on the specific part of the assessment will require the person studying this Unit to re-enrol for the same Unit.
Important notes and definitions	<u>Notes:</u> 1. All training and assessment activities must be in accordance with Tonga National Building Code. 2. Assessors must comply with the Tonga national assessment and moderation requirements. <u>Definitions:</u> 1. <i>Costing sheet</i> is a document summarising estimated quantities, unit costs, and total costs

	2. <i>Contingency</i> is an amount of money set aside to cover any unexpected costs throughout the task 3. <i>Estimate</i> is an approximate calculation of materials, labour, and costs required for a construction task 4. <i>Labour</i> cost refers to the cost of human resources required, calculated based on time and pay rates 5. <i>Labour hours</i> refer to the estimated time required to complete a task 6. <i>Labour rate</i> is the cost per unit of labour or material 7. <i>Material cost</i> is the total cost of all materials required for a project 8. <i>Material list (Bill of materials)</i> is a detailed list of all materials required for a task 9. <i>Plans</i> refer to technical drawings showing layout, dimensions, and construction details 10. <i>Quantity estimation</i> refers to determining the amount of materials needed 11. <i>Quantity take-off</i> is the process of calculating the amount of materials needed from plans 12. <i>Specifications</i> refer to written instructions outlining materials, workmanship, and standards required 13. <i>Supplier</i> is a company or individual that provides construction materials and pricing information 14. <i>Total cost</i> is the combined cost of materials and labour for a task 15. <i>Unit cost</i> is the cost assigned to a single unit of material or labour (e.g. per m², per item, per hour)
Public comments on unit	Please contact TNQAB National Qualifications Unit (email EnquireNQ@tnqab.to or Telephone 28136) if you like to discuss or suggest changes to the details of this unit.