

REGISTERED NATIONAL STANDARD

UNIT OF COMPETENCY



Title:	Install flashings and damp-proof course ¹				
TQF Level:	4	Credits:	5	Version:	1
National standard code:	NS163-04				
Associated qualification (and code):	National Certificate in Bricklaying and Blocklaying Level 4 QR-04-NQ-028-02-1005-26-01				
Approval date:	10 September 2026		Review date:	10 September 2031	
Purpose:	This unit describes the skills and knowledge required to install a range of flashings and damp-proof courses to prevent moisture penetration in brick and block constructions. It covers the selection, preparation and installation of materials such as aluminium, copper, lead, bituminous products, emulsions and polythene sheeting. The unit includes installing vertical and head flashings to windows and doors, stepped and tray flashings to parapets, and flashings at roof abutments. It applies to bricklayers and blocklayers who work on both new and existing structures and operate with responsibility, organising their tasks and ensuring compliance with plans, specifications, workplace procedures and relevant codes. This unit supports bricklayers who are expected to take responsibility for installing flashings and damp-proof course tasks and complete work independently while meeting Tonga National Building Code requirements In successfully completing this unit standard, learners are able to: • Interpret drawings, specifications, and installation requirements relating to flashings and damp proofing • Plan and organise installation tasks, sequencing activities and coordinating with others on-site • Apply OHS, environmental, and workplace procedures throughout all stages of work • Identify and control hazards associated with flashing installation, including working at heights and handling materials • Calculate material quantities using measurements and formulas • Select and prepare tools, equipment, flashing materials, and damp-proofing products				

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.

	• Inspect materials and surfaces to ensure compliance with specifications and suitability for installation • Measure and cut flashing and DPC materials allowing for laps and proper fitting • Prepare surfaces and structures according to manufacturer's specifications • Install damp proof course (DPC) to act as a barrier against moisture movement • Lay, lap, and fit flashing materials to divert and control moisture flow • Form and seal flashings around openings such as windows, doors, and parapets • Ensure weep holes are correctly located, clean, and functional for drainage • Finish exposed flashing and moisture barriers to required standards • Clean up work area and dispose of, reuse, or recycle materials according to environmental procedures • Maintain and store tools and equipment in safe and serviceable condition • Apply finishing techniques and ensure compliance with Tonga National Building Code. • Carry out clean-up and maintenance of tools, equipment, and work areas
Learning Outcome 1 (LO1)	Prepare and organise work to install flashings and damp-proof course
Performance standards	1.1 Read, interpret and apply flashing and damp-proof course requirements from plans, specifications and codes; 1.2 Follow requirements in workplace safety and environmental documentation and workplace procedures; 1.3 Use measurements and apply formulas to calculate material quantities; 1.4 Determine job priorities and sequence job tasks in consultation with others on site; 1.5 Identify potential hazards and determine and implement control measures; 1.6 Select and use personal protective equipment (PPE) appropriate for job; 1.7 Select equipment and tools and report damage or faults to relevant person; 1.8 Check conformity of materials against the specifications and place materials in preparation for the work.
Learning Outcome 2 (LO2)	Prepare material and surface to install flashing and damp-proof course (DPC)

Performance Standards	2.1 Inspect specified materials for defects, damage or non-compliance with specifications; 2.2 Locate position of impervious material from plans and specifications; 2.3 Prepare structure and surface to manufacturer's specifications; 2.4 Measure and cut flashing and DPC material allowing for specified laps.
Learning Outcome 3 (LO3)	Install flashing and damp-proof course (DPC)
Performance standards	3.1 Dress flashing and DPC materials in preparation for installation; 3.2 Lay, lap and fit flashings and DPC to prevent moisture movement and divert the travel of moisture; 3.3 Form and seal flashing and moisture barrier around openings; 3.4 Finish any exposed flashing and moisture barrier; 3.5 Locate and ensure weep holes are clean and functional.
Learning Outcome 4 (LO4)	Clean up flashing and DPC installation work area
Performance standards	4.1 Clear the work area and dispose waste following environmental requirements; 4.2 Clean tools and equipment; 4.3 Check for serviceability and report damage or faults; 4.4 Store and secure tools and equipment following workplace procedures.
Pre-requisites	NS133-03 Apply <i>Occupational Health and Safety</i> (OHS) requirements, policies and procedures
Co-requisites	N/A
Underpinning skill and knowledge	The following skills and knowledge underpin this unit standard: <u>Skills:</u> Work Preparation and Planning • Selecting, fitting and using appropriate PPE. • Reading, interpreting and applying flashing and DPC requirements from plans, specifications and codes. • Sequencing job tasks and determining work priorities.

	- Identifying hazards and implementing control measures. - Calculating material quantities using measurements and basic formulas. - Selecting and checking tools, equipment and materials. Material and Surface Preparation - Inspecting materials for defects or non-compliance. - Locating positions for impervious materials from drawings. - Preparing structures/surfaces to manufacturer specifications. - Measuring and cutting flashing and DPC materials with allowance for laps. Installation Techniques - Dressing flashing and DPC materials for installation. - Laying, lapping, fitting and building in flashings/DPC to prevent moisture movement. - Forming and sealing moisture barriers around openings. - Completing finishing requirements for exposed flashings. - Ensuring weep holes are correctly functional. Finishing and Housekeeping - Cleaning and restoring the work area. - Cleaning and maintaining tools and equipment. - Waste disposal in line with workplace and environmental standards. <u>Knowledge:</u> Materials - Characteristics, applications and limitations of materials used for flashing and DPC: - aluminium sheeting - copper - bituminous sheeting - emulsions - lead and polyurethane sheeting - polythene sheeting Processes and Techniques
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	• Damp-proofing techniques that create barriers to moisture movement. • Flashing techniques to divert moisture travel. • Stepped and level flashings for parapets and gables. • Dressing, fitting and installing various types of flashings. Construction Terminology • Key terminology relevant to flashing, DPC and masonry construction. Tools, Plant and Equipment • Functional and operational features of: ○ hand tools ○ power tools ○ battery-operated tools Work Health and Safety • Safe work practices including: ○ working at heights ○ exposure to silica and loud noise ○ hazardous manual handling ○ hazardous materials Regulations and Codes • Current and relevant standards and building codes applicable to flashing and DPC. • Key National Building Code requirements for flashing and damp-proof course installation. Documentation and Environmental Requirements • Features of working drawings and specifications. • Environmental requirements for workplace processes, waste management and disposal.
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.
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	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. Tonga National Building Code 5. Videos on glass block installation 6. Plans and Specifications

	7. Damp-proof course (DPC) materials 8. Sealants and emulsions 9. Fixing accessories and fasteners 10. Weephole components 11. Flashing materials 12. Material handling and preparation equipment 13. Trowels 14. Tin snips or cutting tools 15. Hammers 16. Tape measures 17. Levels 18. Squares 19. Scaffolding 20. Hand and power tools (including battery-operated tools) 21. PPE's 22. Site safety signage and barriers 23. JSEA (Job Safety and Environmental Analysis) 24. Structured assessment and evidence-collection tools
Requirements to complete this unit	There are four (4) Learning outcomes and twenty-one (21) 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.

Definitions:

1. ***Damp-Proof Course (DPC)*** is a barrier placed within walls to prevent moisture from rising through capillary action.
2. ***Dressing*** refers to the process of shaping flashing materials to fit correctly against surfaces.
3. ***Flashing*** refers to thin materials (typically metal or membrane) installed to prevent water penetration and direct moisture away from structures.
4. ***Hazardous Substances*** refer to materials that can cause harm (e.g., adhesives, sealants, or cleaning chemicals)
5. ***Head Flashing*** refers to flashing installed above openings such as doors and windows to prevent water entry.
6. ***JSEA (Job Safety and Environmental Analysis)*** refers to risk assessment process.
7. ***Lap*** refers to the overlap between adjacent sections of flashing or DPC to prevent water ingress.
8. ***Level*** refers to perfect horizontal alignment
9. ***Line*** refers to straight alignment along a length
10. ***Moisture Barrier*** refers to a material or system designed to stop or reduce the movement of water into building components.
11. ***OHS (Occupational Health and Safety)*** refers to workplace safety regulations and practices.
12. ***Parapet*** refers to a low wall extending above the roofline, requiring flashing to prevent water ingress.
13. ***Plumb*** refers to perfect vertical alignment
14. ***PPE (Personal Protective Equipment)*** refers to safety equipment such as helmets, boots, gloves, and high-visibility clothing.
15. ***Roof Abutment*** refers to the junction between a roof and a vertical wall or structure where flashing is required.
16. ***Stepped Flashing*** refers to flashing installed in steps along the junction of a sloping roof and vertical wall.
17. ***Stile (Vertical) Flashing*** refers to flashing installed along the sides of openings to redirect water.
18. ***Tonga National Building Code*** refers to a set of technical provisions for the design and construction of buildings and structures in Tonga.
19. ***Tray Flashing*** refers to a continuous flashing used to collect and direct water to an outlet (e.g., weepholes).

	20. <i>Weep Hole</i> refers to an opening in masonry that allows trapped moisture to drain from a wall cavity. 21. <i>Work area</i> refers to the particular section where tasks are performed at the work site.
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.