

BQA NCQF QUALIFICATION TEMPLATE

SECTION A: QUALIFICATION DETAILS												
QUALIFICATION DEVELOPER (S)	Botswana Railways											
TITLE	Certificate V in Shunting						NCQF LEVEL	5				
STRANDS (where applicable)	N/A											
FIELD	Manufacturing, Engineering and Technology						CREDIT VALUE	120				
SUB FIELD	Engineering and Engineering Trades											
New Qualification	Legacy Qualification		√		Renewal Qualification						Registration Code	
SUB-FRAMEWORK	General Education			TVET			Higher Education					
QUALIFICATION TYPE	Certificate	I	I	II	IV	V	√	Diplom a	Bachel or			
Bachelor Honours		Post Graduate Certificate			Post Graduate Diploma							
Masters				Doctorate/ PhD								
RATIONALE AND PURPOSE OF THE QUALIFICATION												
<p>According to NDP 11 pg. 23, the Botswana Government, in partnership with the private sector, has put in place the requisite infrastructure to open export routes to the seas. In line with the above, there is a plan to transport coal and other bulk commodities to outside markets in Asia and Europe through the proposed Trans Kalahari Railway that will provide a link to Namibian ports and the other railway lines that connects to SADC region.</p> <p>The Botswana Railways strategy as aligned to NDP 11 anticipates a growth in business due to new and/or ongoing projects such as the Mmamabula-Lephalale rail project, Trans Kalahari Railway and Moseitse-Kazungula rail line which will introduce new routes that will result in increase of volume of rail traffic thereby</p>												

increasing the demand for specialised railway personnel such as Engineman, Shunter, Locomotive Fitter and Trainman. However, this qualification is developed to address the need for Shunters, hence the development of Certificate V in Shunting.

The March 2025, Human Resource Development Council's Priority skills report, which comprised of the long-term skills forecasts to enable pro-active responses to the emerging, future skills, & future jobs in the local and global markets further emphasised the need for training under the transport and logistics' Rail subsector, Under the National Transformation Strategy (for the period of 2023 – 2030). As part of this strategy, several rail cadres within the Transport and Logistics sector were identified as priority and future jobs in upcoming mega projects within the Transport Special Economic Zone projects. Pages 45, 47, 49, 51 outlines the priority occupations within the rail subsector and the manpower forecasts.

The envisaged increase in the number of railway projects and rail vehicle needs, calls for deployment of a larger number of shunting personnel. The purpose of this qualification is therefore to produce artisans with competencies to perform shunting operations in any railway-oriented organisation in accordance with relevant legislative and regulatory frameworks and associated health and safety policies and procedures.

PURPOSE: (itemise exit level outcomes)

The purpose of this qualification is to produce graduates with broad technical knowledge, skills and competence to:

1. Perform shunting operations in any railway organisation, in accordance with train working regulations.
2. Document and report shunting activities, siding status, and yard positions using approved templates and communication channels.
3. Inspect railway vehicles to ascertain rail worthiness in accordance with set railway standards.
4. Assemble and arrange loaded/unloaded wagons in line with their destination points.
5. Direct movement of trains within yard through operating different types of points.
6. Check train braking systems and equipment functionality prior to train run.

MINIMUM ENTRY REQUIREMENTS (including access and inclusion)

Certificate IV, NCQF level 4 (GE/TVET)

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Access to the qualification through RPL and CAT will be applicable in line with ETP policies

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SECTION B QUALIFICATION SPECIFICATION	
GRADUATE PROFILE (LEARNING OUTCOMES)	ASSESSMENT CRITERIA
<p>1. Operate and inspect various types of rolling stock components in accordance with organisational standards and rail safety procedures.</p>	<ul style="list-style-type: none"> i. Perform safe coupling and uncoupling of rolling stock, including buffers, vacuum and air pressure pipes ii. Operate and align key components such as release valves, ankle cocks, and control valve isolating cocks. iii. Comply with relevant regulations when handling special rolling stock. iv. Conduct routine inspections to assess rolling stock readiness and report defects. v. Tag and isolate defective wagons according to procedures.
<p>2. Operate and monitor rail infrastructure and yard components, identifying and reporting faults, and maintaining operational safety.</p>	<ul style="list-style-type: none"> i. Inspect and assess infrastructure such as level crossings, points, and sidings in accordance with applicable standards and procedures e.g. TWR. ii. Check and operate mechanical and powered points in line with organisational standards. iii. Apply preventative measures to avoid irregular movement of wagons. iv. Report identified infrastructure defects using standard reporting formats.
<p>3. Use effective communication techniques and signalling methods to support safe and coordinated operations in line with organisational standards</p>	<ul style="list-style-type: none"> i. Select and use appropriate communication and signalling methods based on the operational context and task requirements. ii. Communicate accurately and timely using verbal, written, digital, and signalling tools in accordance with organisational standards.

	<ul style="list-style-type: none"> iii. Coordinate with relevant personnel (e.g., control room, train crew) to ensure safe and efficient operations through effective communication. iv. Apply relevant safety protocols, terminology, and escalation procedures during normal and emergency communication situations. v. Review the effectiveness of communication and signalling practices and suggest improvements for future operations.
<p>4. Monitor and inspect rail infrastructure and private sidings, reporting defects and ensuring operational readiness.</p>	<ul style="list-style-type: none"> i. Conduct pre-operational inspections of wagons, yard layout, signalling systems, and private sidings in accordance with organisational procedures. ii. Identify, report, and respond to irregularities or hazards; such as obstructions, unauthorized wagons, or infrastructure faults; using appropriate safety and communication protocols. iii. Develop and implement cost-effective shunting plans in collaboration with relevant personnel, considering yard conditions and operational requirements. iv. Execute shunting movements safely and efficiently, maintaining appropriate speeds, using correct signalling methods, and assembling wagons as per the operational plan. v. Apply continuous hazard identification and mitigation strategies throughout the operation, including during abnormal or emergency situations.
<p>5. Direct and perform shunting operations to ensure the safe, efficient movement of trains and wagons through effective task execution, communication, and application of technical knowledge.</p>	<ul style="list-style-type: none"> i. Plan and coordinate shunting tasks by allocating roles and responsibilities based on operational needs and safety protocols.

	<ul style="list-style-type: none"> ii. Operate shunting movements accurately and safely, adhering to signalling instructions, speed limits, and yard layout. iii. Communicate effectively with yard teams, control centres, and other stakeholders to ensure smooth execution of shunting operations. iv. Apply technical knowledge to manage train and wagon movement, including alignment, coupling/uncoupling, and positioning. v. Identify potential hazards during shunting and implement appropriate measures to prevent accidents or service disruptions. vi. Respond promptly and appropriately to unexpected events or changes in operational plans, demonstrating problem-solving and situational awareness.
<p>6. Prepare, dispatch and admit trains under normal and abnormal circumstances ensuring safety and compliance</p>	<ul style="list-style-type: none"> i. Conduct comprehensive pre-dispatch checks of trains, including brake tests, wagon order, load securing, and readiness documentation, in accordance with safety regulations and operational procedures. ii. Set up and confirm departure routes by ensuring correct signal alignment and track clearance for safe dispatch. iii. Obtain and verify dispatch authority from control or supervising personnel, following organisational communication protocols. iv. Admit incoming trains by coordinating with yard personnel and ensuring line availability, signal readiness, and proper reception procedures. v. Respond effectively to abnormal or emergency situations during preparation, dispatch, or admission, applying relevant safety protocols and decision-making.
<p>7. Implement occupational health, safety, and environmental</p>	<ul style="list-style-type: none"> i. Interpret and apply relevant OHS legislation and industry standards.

<p>practices to ensure personal and workplace safety.</p>	<ul style="list-style-type: none"> ii. Identify and assess workplace hazards and maintain a hazard register. iii. Take corrective action to eliminate or control unsafe conditions. iv. Present verbal and written analyses of health and safety risks. v. Use PPE correctly and safely when handling equipment and machinery. vi. Promote environmental sustainability in workplace practices.
<p>8. Demonstrate professional work ethic, self-management, and readiness for advancement within the rail operations sector.</p>	<ul style="list-style-type: none"> i. Adhere to workplace codes of conduct, ethics, and behaviour. ii. Maintain punctuality, reliability, and accountability in task completion. iii. Reflect on own performance and identify areas for improvement. iv. Demonstrate initiative and responsibility in independent tasks. v. Prepare for performance reviews through documentation and self-assessment. vi. Participate in coaching or feedback sessions with supervisors.

<p>9. Utilize information and communication technology to support shunting operations, record keeping, and reporting.</p>	<ul style="list-style-type: none"> i. Access, retrieve, and analyse wagon and yard data using ICT tools. ii. Produce and present reports using appropriate software. iii. Collaborate with team members using digital communication platforms. iv. Implement ICT based solutions to improve reporting and operational accuracy.
<p>10. Respond effectively to workplace emergencies and provide basic First Aid in accordance with Organisational and national protocols.</p>	<ul style="list-style-type: none"> i. Identify body systems relevant to common rail-related injuries. ii. Assess and secure emergency scenes before intervention. iii. Administer First Aid for common injuries (e.g., bleeding, unconsciousness, shock, CPR). iv. Use First Aid equipment safely and effectively. v. Communicate clearly with injured persons and emergency responders. vi. Maintain calmness and control during emergency scenarios.
<p>11. Demonstrate professional behaviour and effective communication when interacting with internal and external stakeholders</p>	<ul style="list-style-type: none"> i. Communicate clearly and confidently using appropriate language, tone, and terminology. ii. Use relevant communication tools (e.g. radio, face-to-face, written reports) in line with organisational protocols.

	<ul style="list-style-type: none"> iii. Respond to feedback or instructions constructively and in a timely manner. iv. Manage conflicts or misunderstandings professionally and escalate issues when necessary. v. Maintain confidentiality and professionalism when handling sensitive information. vi. Demonstrate awareness of the needs and roles of both internal (e.g. colleagues, supervisors) and external (e.g. customers, contractors) stakeholders.
<p>12. Apply dynamic risk assessment during operational activities and accurately report incidents and near-misses in line with organisational procedures.</p>	<ul style="list-style-type: none"> i. Conduct dynamic risk assessments in operational contexts to identify existing and emerging hazards. ii. Select and implement appropriate control measures to mitigate identified risks in line with workplace safety standards. iii. Recognize and distinguish between incidents and near-misses based on workplace scenarios. iv. Complete incident and near-miss reports accurately using approved organisational templates and documentation protocols. v. Reflect on risk assessment and reporting outcomes to recommend improvements for future operational safety practices.
<p>13. Demonstrate applied knowledge and skills in operation and inspection of locomotive wagon braking systems in line with railway standards and safety procedures.</p>	<ul style="list-style-type: none"> i. Apply the operational principles of air brake and vacuum brake systems used in locomotive wagons, including the role of key components such as compressors, reservoirs, brake cylinders, and control valves. ii. Identify and maintain the components of both air and vacuum braking systems. iii. Conduct pre-departure brake tests on air and vacuum brake-equipped wagons to verify brake integrity, pressure retention, and system responsiveness according to standard operating procedures.

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	<ul style="list-style-type: none"> iv. Diagnose common faults in air and vacuum braking systems (e.g., air leaks, vacuum loss, sticking brake cylinders), and report issues accurately using fault-reporting procedures. v. Apply safe isolation, charging, and release procedures for both air and vacuum brake systems during wagon coupling, decoupling, and routine yard operations. vi. Apply appropriate response procedures to in-transit braking system failures or irregularities, including communication with the control center. vii. Maintain accurate records and documentation related to brake testing, maintenance schedules, and fault reporting in compliance with railway operational and safety standards
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SECTION C	QUALIFICATION STRUCTURE				
COMPONENT	TITLE	Credits Per Relevant NCQF Level			Total Credits
		Level [4]	Level [5]	Level [6]	
FUNDAMENTAL COMPONENT <i>Subjects/ Courses/ Modules/Units</i>	ICT Applications for Shunting and Operational Reporting	4			4
	Emergency Response and First Aid in Railway Operations		5		5
	Professional Ethics and Career Readiness in Rail Operations	5			5
	Stakeholder Communication and Workplace Conduct	4			4

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CORE COMPONENT <i>Subjects/Courses/ Modules/Units</i>	Rolling Stock Operations and Inspection Techniques		6		6
	Rail Infrastructure Monitoring and Fault Reporting		12		12
	Communication and Signalling in Rail Operations		16		16
	Rail Infrastructure Operations and Maintenance		12		12
	Shunting Operations and Yard Coordination		20		20
	Train Dispatch and Admission Procedures		5		5
	Occupational Health, Safety and Environmental Practices in Rail		5		5
	Dynamic Risk Assessment and Incident Reporting			6	6
	Operation of locomotive wagon braking systems		20		20
	STRANDS/ SPECIALIZATION	<i>Subjects/ Courses/ Modules/Units</i>	Credits Per Relevant NCQF Level		
Level []			Level []	Level [V]	120
1.	N/A				

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2.	N/A				
Electives	N/A				



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SUMMARY OF CREDIT DISTRIBUTION FOR EACH COMPONENT PER NCQF LEVEL

TOTAL CREDITS PER NCQF LEVEL

<i>NCQF Level</i>	<i>Credit Value</i>
• NCQF Level 4	13
• NCQF Level 5	101
• NCQF Level 6	6
TOTAL CREDITS	120

Rules of Combination:

(Please Indicate combinations for the different constituent components of the qualification)

Fundamental	Level 4 – 13 Credits
Fundamental	Level 5 - 5 Credits
Core	Level 5 82 Credits
Core	Level 6 20 Credits
Total	120 Credits

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ASSESSMENT ARRANGEMENTS

Formative assessment

Formative assessment or continuous assessment contributing towards the award of credits shall be based on course outcomes. This can include tests, assignments, and projects as well as simulated and real work settings. The contribution of formative assessment to the final grade shall be 50%.

Summative assessment

Assessments that make judgments about achievement of a candidate. It is used to provide information about a candidate's level of competence (i.e., pass or fail) on completion of a course or sub-unit in a module, a module or training programme.

Assessment tools and methods for the course shall include among others, tests, questionnaires, observations, and checklists. All summative practical assessments shall, as far as possible, be related to real work settings.

Assessors for this qualification must be registered as assessors and moderator with the BQA, qualified or experienced in shunting.

MODERATION ARRANGEMENTS

There shall be provision for internal and external moderation, conducted by persons qualified and having experience in shunting and registered with the BQA.

RECOGNITION OF PRIOR LEARNING

RPL will be applicable for award of credits towards the qualification as per ETP RPL policy guidelines, which are aligned with National RPL policy

CREDIT ACCUMULATION AND TRANSFER

CAT will be applicable for award of credits towards the qualification as per ETP RPL policy guidelines, which are aligned with National CAT policy.

PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

Learning Pathways

Horizontal

- Certificate V in Wagon Fitting

Vertical

- Diploma Rail Engineering
- Diploma in Radio Communications
- Diploma in Mechanical Engineering
- Diploma in Civil Engineering

Employment Pathways

Holders of this qualification may be eligible for jobs including but not limited to:

- Shunter
- Gang Leader

QUALIFICATION AWARD AND CERTIFICATION

Standards of achievement for the award of the qualification

- **Certificate V in Shunting (120 credits)**

A candidate is required to achieve the stipulated total credits inclusive of the fundamental and core components, to be awarded the qualification.

Certification

Candidates meeting prescribed requirements will be awarded the certificate in accordance with standards prescribed for the award of the qualification and applicable policies. Candidates who do not meet the prescribed minimum standards may, where applicable, be considered for appropriate exit awards in accordance with applicable policies.

SUMMARY OF REGIONAL AND INTERNATIONAL COMPARABILITY

International benchmark - Certificate II in Shunting (Australia)

Regional Benchmark - National Certificate in Rail Operations (Functional Yard Operations) South Africa

Title

The qualification type and qualifier for both the developed and the Australian qualification are the same. The title of the South African qualification is different because it is generic and encompasses more than just shunting roles.

NQF level

The Certificate II in Shunting (Australia) is at AQF whereas the South African qualification is at NQF level 3. However, the developed qualification is at NCQF Level 5. This is because the developed qualification carries all core roles of a Shunter as well as additional supervisory and administrative functions that are not in the benchmark qualification. The developed qualification also has additional components not found in the qualifications used as benchmarks such as the braking system, First Aid and wagon administration.

The two benchmarks were found to be the ones with the closest description of the core function (Shunter) even though they are at different NQF levels.

Exit Outcomes

The exit outcomes of developed and benchmarked qualification are similar because they demand the graduate to be able to direct and control shunting movements at stations and siding safely.

Modules

The main modules for all the qualifications are similar though wording may be different, for instance marshalling and compiling the train mean the same thing. Operation of the radio and radio communication also mean the same thing.

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Assessment Criteria

The benchmarked qualifications offer an integrated approach to assessments, combining both theory and practical assessments. Further recognizing that assessments have to be carried out in the real occupational context or simulated. All the learning outcomes and assessment criteria must be achieved.

REVIEW PERIOD

This qualification shall be reviewed every 5 years.

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For Official Use Only:

CODE (ID)			
REGISTRATION STATUS	BQA DECISION NO.	REGISTRATION START DATE	REGISTRATION END DATE
LAST DATE FOR ENROLMENT		LAST DATE FOR ACHIEVEMENT	



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