



Established in terms of Act 38 of 1995

### **SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)**

In accordance with regulation 24(c) of the Standard Generating Bodies Regulations of 28 March 1998, the Standards Generating Body (SGB) for

Electrical Engineering and Construction

publishes the following unit standards for public comment.

This notice contains the titles, fields, sub-fields, **NQF** levels, credits, and purpose of the unit standards. The unit standards can be accessed via the SAQA web-site at [www.saqqa.org.za](http://www.saqqa.org.za). Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, Hatfield Forum West, 1067 Arcadia Street, Hatfield, Pretoria.

Comment on the unit standards should reach SAQA at the address below and no **later** than 5 September 2005. All correspondence should be marked Standards Setting **SGB for** – Electrical Engineering and Construction and addressed to

The Director: Standards Setting and Development  
SAQA

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**DUGMORE MPHUTHING**  
**ACTING DIRECTOR: STANDARDS SETTING AND DEVELOPMENT**



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

### UNIT STANDARD:

1

SAQA US ID	UNIT STANDARD TITLE		
120021	Afford on-track protection		
SGB NAME	NSB 12	PROVIDER NAME	
SGB Electrical Engineering & Construction	Physical Planning and Construction		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Physical Planning and Construction	Electrical InfrastructureConstruction	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	3	Level 2	Regular

#### **SPECIFIC OUTCOME 2**

Identify the specific site that requires protection.

#### **SPECIFIC OUTCOME 3**

Afford appropriate protection in accordance with procedures and/or work instruction.

#### **SPECIFIC OUTCOME 4**

Discontinue protection.



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

## UNIT STANDARD:

2

SAQA US ID	UNIT STANDARD TITLE		
120024	Maintain associated works		
SGB NAME	NSB 12	PROVIDER NAME	
SGB Electrical Engineering & Construction	Physical Planning and Construction		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Physical Planning and Construction	Electrical Infrastructure Construction	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	3	Level 2	Regular

**SPECIFIC OUTCOME 2**

Prepare for the maintenance of associated works.

**SPECIFIC OUTCOME 3**

Inspect and maintain associated works.

**SPECIFIC OUTCOME 4**

Complete post-maintenance operations.



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

*UNIT STANDARD:*

3

**Demonstrate an understanding of materials and components used in rail construction and maintenance**

SAQA US ID		UNIT STANDARD TITLE	
120025		Demonstrate an understanding of materials and components used in rail construction and maintenance	
SGB NAME		NSB 12	PROVIDER NAME
SGB Electrical Engineering & Construction		Physical Planning and Construction	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Physical Planning and Construction	Electrical Infrastructure Construction
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	9	Level 2	Regular

### **SPECIFIC OUTCOME 1**

Demonstrate an understanding of the purpose, properties and application of ballast and sleepers.

### **SPECIFIC OUTCOME 2**

Demonstrate an understanding of the purpose, properties and application of different rail types.

### **SPECIFIC OUTCOME 3**

Demonstrate an understanding of the purpose, properties and application of turnouts and turnout components.

### **SPECIFIC OUTCOME 4**

Demonstrate an understanding of the purpose, properties, application and combination of fastening components.



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

## UNIT STANDARD:

4

SAQA US ID	UNIT STANDARD TITLE		
120028	Demonstrate an understanding of the "permanent way" context and related operations		
SGB NAME	NSB 12	PROVIDER NAME	
SGB Electrical Engineering & Construction	Physical Planning and Construction		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Physical Planning and Construction	Electrical Infrastructure Construction	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	3	Level 2	Regular

**SPECIFIC OUTCOME 1**

Demonstrate an understanding of the organisational context.

**SPECIFIC OUTCOME 2**

Demonstrate an understanding of the permanent way context.

**SPECIFIC OUTCOME 3**

Demonstrate an understanding of rail construction and maintenance operations.

**SPECIFIC OUTCOME 4**

Demonstrate an understanding of the cost, statutory and regulatory considerations in relation to permanent way operations.



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

### UNIT STANDARD:

5

#### Maintain ballast

SAQA US ID		UNIT STANDARD TITLE	
120032		Maintain ballast	
SGB NAME		NSB 12	PROVIDER NAME
SGB Electrical Engineering & Construction		Physical Planning and Construction	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Physical Planning and Construction	Electrical Infrastructure Construction
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	6	Level 2	Regular

#### SPECIFIC OUTCOME 1

Prepare for ballast maintenance.

#### SPECIFIC OUTCOME 2

Screen ballast by hand.

#### SPECIFIC OUTCOME 3

Replenish ballast.

#### SPECIFIC OUTCOME 4

Complete post-maintenance operations.



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

6

SAQA US ID		UNIT STANDARD TITLE	
120034		Maintain sleepers	
SGB NAME		NSB 12	PROVIDER NAME
SGB Electrical Engineering & Construction		Physical Planning and Construction	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Physical Planning and Construction	Electrical Infrastructure Construction
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	8	Level 2	Regular

**SPECIFIC OUTCOME 1**

Prepare to maintain sleepers.

**SPECIFIC OUTCOME 2**

Replace and space sleeper in track.

**SPECIFIC OUTCOME 3**

Tamp sleepers.

**SPECIFIC OUTCOME 4**

Complete post-maintenance operations.



## SOUTH AFRICAN QUALIFICATIONS AUTHORITY

### UNIT STANDARD:

7

SAQA US ID		UNIT STANDARD TITLE	
120035		Select, use and maintain perway tools and equipment	
SGB NAME		NSB 12	PROVIDER NAME
SGB Electrical Engineering & Construction		Physical Planning and Construction	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Physical Planning and Construction	Electrical Infrastructure Construction
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	18	Level 2	Regular

#### **SPECIFIC OUTCOME 1**

Select and use Perway hand tools.

#### **SPECIFIC OUTCOME 2**

Select and use Perway measuring equipment.

#### **SPECIFIC OUTCOME 3**

Select and use Perway power tools.

#### **SPECIFIC OUTCOME 4**

Ensure tools and equipment are maintained.