

# CERTIFICATE OF ACCREDITATION

## RANKIN ENGINEERING CONSULTANTS - ZAMBIA

*Company Registration No. 21082*

**Facility Accreditation Number: TEST-3 0004**

is a SADCAS accredited Testing Laboratory  
provided that all SADCAS conditions are complied with

This certificate is valid as per the scope stated in the accompanying schedule of accreditation,  
Annexure "A", bearing the above accreditation number for

### CIVIL ENGINEERING

*The facility is accredited in accordance with the recognized International Standard*

### ISO/IEC 17025:2017

*The accreditation demonstrates technical competency for a defined scope and the operation  
of a laboratory quality management system*

*SADCAS is a subsidiarity organization of SADC. A memorandum of understanding between SADC and  
SADCAS serves as the basis for the recognition of SADCAS by SADC Member States  
as a multi-economy accreditation body*

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**Eve Christine Gadzikwa**  
**SADCAS Chief Executive Officer**

**Date of renewal of Accreditation** 04 September 2023  
**Effective Date (Issue No: 1):** 04 September 2023  
**Certificate Expires:** 03 September 2028

# ANNEXURE A

## SCHEDULE OF ACCREDITATION

### CIVIL ENGINEERING

**Laboratory Accreditation Number: TEST-3 0004 (ISO/IEC 17025:2017)**

| <b><u>Permanent Address of Laboratory</u></b><br>Rankin Engineering Consultants<br>Rankin House<br>11038 Chozi Road<br>Northmead<br>Lusaka<br>Zambia<br><br><b><u>Postal Address:</u></b><br>PO Box 50566<br>Lusaka<br>Zambia<br><br><b><u>Tel</u></b> : +260 211 290 085<br><b><u>Cell</u></b> : +260 977 758800<br><b><u>Fax</u></b> : +260 211 290562<br><b><u>Email</u></b> : <a href="mailto:tphiri@rankinengineering.com">tphiri@rankinengineering.com</a> |                                                                                                            | <b><u>Technical Signatories</u></b> : Mr K Malata (All methods)<br>Mr B Zulu (All methods)<br>Mr C Mukuka (All methods)<br>Mr E Tembo (All methods)<br><br><b><u>Nominated Representative</u></b> : Ms T Phiri<br><br><b><u>Issue No</u></b> : 03<br><b><u>Date of Issue</u></b> : 17 April 2026<br><b><u>Expiry Date</u></b> : 03 September 2028 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MATERIALS/PRODUCTS TESTED                                                                                                                                                                                                                                                                                                                                                                                                                                        | TYPES OF TESTS/PROPERTIES MEASURED, RANGE OF MEASUREMENT                                                   | STANDARD SPECIFICATIONS, EQUIPMENT/TECHNIQUES USED                                                                                                                                                                                                                                                                                                |
| Aggregates                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Particle Size Analysis by sieving Aggregate<br>Crush Value (ACV) and 10% FACT values of coarse aggregates. | SANS 3001-AG: 2014 Part AG1<br>SANS 3001-AG: 2012 Part AG10                                                                                                                                                                                                                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Determination of the flakiness of coarse aggregate                                                         | SANS 3001-AG4: 2023 Part AG4                                                                                                                                                                                                                                                                                                                      |
| Asphalt                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Determination of bulk density and void content of compacted asphalt.                                       | SANS 3001-AS10:2011 Part AS10                                                                                                                                                                                                                                                                                                                     |
| Bitumen and Bituminous Binders                                                                                                                                                                                                                                                                                                                                                                                                                                   | Effect of heat and air on a moving film of Asphalt (Rolling Thin Film Oven Test)                           | ASTM D2872-22                                                                                                                                                                                                                                                                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Bitumen and bituminous binders – Determination of need penetration                                         | BS EN 1426:2015                                                                                                                                                                                                                                                                                                                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Viscosity determination of Asphalt at elevated temperatures using a rotational Viscometer                  | ASTM D 4402-23                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Softening point of Bitumen (Ring - and - Ball apparatus)                                                   | ASTM D36/D36M – 14                                                                                                                                                                                                                                                                                                                                |

## ANNEXURE A

Laboratory Accreditation No: TEST-3 0004 (ISO/IEC 17025:2017)

Issue No: 03

Date of Issue: 17 April 2026

Date of Expiry: 03 September 2028

| MATERIALS/PRODUCTS TESTED | TYPES OF TESTS/PROPERTIES MEASURED, RANGE OF MEASUREMENT                                          | STANDARD SPECIFICATIONS, EQUIPMENT/TECHNIQUES USED |
|---------------------------|---------------------------------------------------------------------------------------------------|----------------------------------------------------|
| Gravel                    | Wet preparation and particle size analysis                                                        | SANS 3001-GR1:2022 Part GR1                        |
|                           | Determination of the California Bearing Ratio                                                     | SANS 3001- GR40:2023 Part GR40                     |
|                           | Determination of moisture content by Oven drying                                                  | SANS 3001- PR20:2023 Part PR20                     |
|                           | Determination of the maximum dry density and optimum moisture content                             | SANS 3001- GR30:2024 Part GR30                     |
|                           | Determination of the flow curve liquid limit                                                      | SANS 3001- GR12:2013 Part GR12                     |
|                           | Determination of the one-point liquid limit, plastic limit, plasticity index and linear shrinkage | SANS 3001- GR10:2013 Part GR10                     |
| Concrete                  | Compressive strength of hardened concrete                                                         | SANS 5863:2006                                     |

Original date of accreditation: 25 January 2019

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**Pinkie J Malebe**  
**SADCAS Technical Manager**