



50051 Mfundu Mngadi Drive, Kwamakhutha, 4126
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(TO BE SUBMITTED WITH LATEST CSD REPORT)

PHYSICAL ADRESS: DRIVE, KWAMAKHUTHA

DESCRIPTION..... FACILITIEST.....

THE FOLLOWING PARTICULARS MUST BE FURNISHED (FAILURE TO DO SO WILL RESULT IN YOUR OFFER BEING DISQUALIFIED)

[illegible]

Item No	Quantity	Description	Brand & model	UNIT PRICE	PRICE	
						C
1.		REQUEST A SERVICES PROVIDER FOR BUILDING EARTHING AT APPELSBOSCH CAMPUS N.B: SCOPE OF WORK IS ATTACHED				
		NOTE: The Site meeting will be held at APPELSBOSCH CAMPUS on Monday (19/01/2026),The Address is 1621 APPELSBOSCH HOSPITAL ROAD, OZWATINI 3242				
VALUE ADDED TAX @ 15% (Only if VAT Vendor) TOTAL QUOTATION					Your Company stamp here	1 of 3



CENTRAL OFFICE

50051 Mfundu Mngadi Drive, Kwamakhutha, 4126
Tel. (031) 9057081 Fax: 0867625744 Email: SuamadoA.CKZCAO@KZNTVET.EDU.ZA

DECLARATION OF INTEREST

Any legal person, including persons employed by the "college", or persons having a kinship with persons employed by the college, including a blood relationship, may make an offer or offers in terms of this invitation to quote (includes a price quotation, advertised competitive quote, limited quote or proposal). In view of possible allegations of favoritism, should the resulting quote, or part thereof, be awarded to persons employed by the college, or to persons connected with or related to them, it is required that the bidder or his/her authorised representative declare his/her position in relation to the evaluating/adjudicating authority where- - the bidder is employed by the state; and/or - the legal person on whose behalf the bidding document is signed, has a relationship with persons/a person who are/is involved in the evaluation and or adjudication of the quote(s), or where it is known that such a relationship exists between the person or persons for or on whose behalf the declarant acts and persons who are involved with the evaluation and or adjudication of the quote.

2. In order to give effect to the above, the following questionnaire must be completed and submitted with the quote.

2.1. Full Name of bidder/representative.....

2.2. Identity Number:

2.3. Position occupied in the Company (director, trustee, shareholder²):

2.4. Company Registration Number:

2.5. Tax Reference Number:

2.6. VAT Registration Number:

2.7. The names of all directors / trustees / shareholders / members, their individual identity numbers, tax reference numbers and, if applicable, employee / persal numbers must be indicated in paragraph 3 below.

[TICK APPLICABLE]

2.8. Are you or any person connected with the bidder presently employed by the state?

yes	no	
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2.8.1. If so, furnish the following particulars: Name of person / director / trustee / shareholder/ member:

..... Name of state entity at which you or the person connected to the bidder is employed:..... Position occupied in the state institution:

2.8.2. If you are presently employed by the state, did you obtain the appropriate authority to undertake remunerative work outside employment in the public sector?

[TICK APPLICABLE]

yes	no	
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2.8.2.1. If yes, did you attach proof of such authority to the quote document?

yes	no	
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(Note: Failure to submit proof of such authority where applicable, may result in
The disqualification of your quote

2.8.2.2. If no, furnish reasons for non-submission of such proof:

2.9. Did you or your spouse, or any of the company's directors / trustees / shareholders / members or their spouses conduct business with the college in the previous twelve months?

[TICK APPLICABLE]

yes	no	
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2.9.1. If so, furnish particulars:.....

2.10. Do you, or any person connected with the bidder, have any relationship (family, friend, other) with a person employed by the college and who may be involved with the evaluation and or adjudication of this quote?
[TICK APPLICABLE]

yes		no	
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2.10.1. If so, furnish particulars:.....

2.11. Are you, or any person connected with the bidder, aware of any relationship (family, friend, other) between any other bidder and any person employed by the college who may be involved with the evaluation and or adjudication of this quote?

[TICK APPLICABLE]

yes		no	
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2.11.1. If so, furnish particulars:.....

2.12. Do you or any of the directors / trustees / shareholders / members of the company have any interest in any other related companies whether or not they are bidding for this contract?
[TICK APPLICABLE]

yes		no	
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2.12.1. If so, furnish particulars:.....

3. Full details of directors / trustees / members / shareholders. NB: Coastal College will validate details of directors / trustees / members / shareholders on CSD. It is the suppliers' responsibility to ensure that their details are up-to-date and verified on CSD. If the Department cannot validate the information on CSD, the quote will not be considered and passed over as non-compliant according to National Treasury Instruction Note 4 (a) 2016/17.

4 DECLARATION

I, THE UNDERSIGNED (NAME).....CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 2.

I ACCEPT THAT THE COLLEGE MAY REJECT THE QUOTE OR ACT AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....			
Name of Bidder	Signature	Position	Date

02407



Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

COASTAL
KZN
COLLEGE
Your Pioneering Centre of Excellence

Your Pioneering Centre of Excellence

50051 MFUNDI MNGADI DRIVE, KWAMAKHUTHA, 4126

TEL: (031) 905 7000 FAX: (031) 905 1399 E-mail: cao.CKZCAO@KZNTVET.EDU.ZA

GL NO

REQUISTION.

FOR PURCHASE OF GOODS / SERVICES

Name of person requesting goods/services: G. Muthembu

Division: Frailties

[illegible]

SIGNATURE OF COMPLIER: [Signature] DESIGNATION: Facilities DATE: 09/01/26

MOTIVATION/COMMENTS: _____

SIGNATURE OF SUPERVISOR: [Signature] DESIGNATION: Manager DATE: 09/01/26

DEMAND SECTION:

CONFIRMATION THAT THE SPECIFICATIONS ARE CORRECT

SIGNATURE OF OFFICIAL:  DESIGNATION: scm DATE: 09/01/26

APPELSBOSCH CAMPUS BUILDING EARTHING

Scope of Works

1. Main Earthing System Design

- Install a **central earth electrode system** near the main intake point (or multiple zones if the building footprint is large).
- Use **earth rods (copper-clad, 2.4 m)** or a **grid/tape system** to achieve a practical resistance target ($\leq 5 \Omega$ recommended for TN systems).
- Connect this to a **Main Earthing Terminal (MET)** inside the main DB or intake enclosure.

2. Earth Continuity Network

- Run **earth conductors** from the MET to all 39 DBs (size per SANS 10142 tables, typically 16 mm^2 or 25 mm^2 copper depending on fault level).
- Install **earth bars** in each DB and bond all exposed conductive parts.

3. Equipotential Bonding

- Bond metallic water pipes, structural steel, and other extraneous conductive parts to the MET.

4. Testing & CoC

- Perform full SANS 10142 tests: earth electrode resistance, ECC continuity, insulation, loop impedance, RCD tests.
- Issue CoC after compliance.

APPELSBOSCH BUILDING EARTHING BOQ

A) Materials & Equipment

A1. Main Earthing Array (Intake Area)

Item No.	Description	Unit	Qty	Rate	Amount	Notes / Standards
A1.1	Copper-clad earth rods, 2.4 m × 16 mm	No.	12			Base array; space ~3 m; interconnect to reduce resistance; test and augment if >5 Ω.
A1.2	Earth rod clamps (bronze/stainless hardware)	Set	12			Corrosion-resistant mechanical connections.
A1.3	Earth inspection pits (polymer/concrete)	No.	12			Accessible test points for periodic measurements.
A1.4	Bare copper tape/conductor 25 mm ² (interconnect grid)	m	120			Link rods into a network; route to MET.
A1.5	Main Earthing Terminal (MET) earth bar (300–600 mm)	No.	1			Central termination of PE/bonding; labelled per SANS DB labelling requirements.

A2. Zone Earthing Arrays (Remote DB Clusters)

A2.1	Copper clad earth rods, 2.4 m × 16 mm	No.	20			±2 rods per distant cluster; reduce local impedance near remote DBs.
A2.2	Earth rod clamps & inspection pits	Set	20			For each installed rod; local test access.
A2.3	Bare copper tape/conductor 25 mm ² (clusters)	m	80			Interconnect local rods; bond to cluster earth bar.

A3. Earth Continuity Network (MET → DBs)

A3.1	Green/yellow copper earth	m	780			Avg. 20 m per DB × 39; size to meet SANS
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	conductors (16–25 mm ²)					continuity/fault level; validate with loop/ECC tests.
A3.2	DB earth bars (DIN/chassis mount)	No.	39			Dedicated earth bars in each DB.
A3.3	Earthing/bonding terminal labels & warning notices	No.	80			MET + all DBs + services; SANS labelling update for DBs.
A4. Equipotential Bonding						
A4.1	Bonding conductors (6– 16 mm ² Cu)	m	300			Bond metallic services (water/gas pipes, structural steel) to MET/earth bars.
A4.2	Bonding clamps/lugs (pipe/steel)	Set	100			Ensure secure bonds for revised bonding test (≤0.2 Ω).
A5. Surge Protection Devices (SPDs) — All DBs						
A5.1	Type 1 or Type 1+2 SPD (3 phase, 275– 320 V L N) for Main Intake DB	No.	1			Choose Type 1 if lightning exposure likely; Type 1+2 combo acceptable at intake. DIN rail.
A5.2	Type 2 SPD (3 phase, 275– 320 V L N) for Downstream DBs	No.	38			One per DB; keep earth leads very short; follow manufacturer/RCD coordination.
A5.3	SPD accessories: earth strap, DIN blanks, warning labels	Set	39			Short, direct earth path; clear labelling.
A6. Students' Kitchen Sub Meter (Isolation & Monitoring)						
A6.1	DIN rail kWh energy meter (Class 1+, pulse/RS 485; single/3 phase)	No.	1			Meter kitchen load; DIN ecosystem per DBs.
A6.2	Upstream load isolator (rating to suit feeder)	No.	1			Isolate kitchen circuits for independent billing/control.

A6.3	CTs (if CT meter; ratio/burden matched)	No.	3			Only if three phase CT meter; ensure orientation/polarity.
A6.4	Wiring kit, ferrules, labels, single line diagram update	Set	1			Commissioning documentation and identification.
A7. Test Instruments & General Consumables (Contractor supplied)						
A7.1	Earth resistance tester (3/4 pole)	Set	1			For earth electrode resistance tests, per SANS test suite.
A7.2	Earth loop impedance tester	Set	1			For loop tests at main switch and final circuits.
A7.3	Insulation/RCD tester	Set	1			Insulation resistance and RCD trip tests per SANS 8.6.
A7.4	Lugs, clamps, fasteners, heat shrink, markers	Lot	1			General installation consumables.
B) Labour & Implementation						
B1. Survey, Design & Safety						
B1.1	Site survey, earthing layout, DB clustering plan	Job	1			Mark rod arrays, ECC routes, method statements, and outage plan.
B1.2	Safety prep (LOTO, permits, PPE)	Job	1			OHSA electrical installation regulations compliance; CoC context.
B2. Main Earthing Array Installation						
B2.1	Excavate/drive 12 rods, install pits/clamps	Job	1			Test resistance; add rods if > design target.
B2.2	Interconnect rods (25 mm ² tape) and route to MET	Job	1			Ensure low impedance path; secure terminations.
B2.3	Install MET; bond main PE, bonding, and SPD earth	Job	1			Label MET per SANS DB labelling update.

B3. Zone Earthing Arrays (Remote DB Clusters)						
B3.1	Install ±20 rods + pits/clamps at clusters	Job	1			Reduce local impedance; tie to cluster earth bars.
B3.2	Interconnect local rods to cluster bars	Job	1			Provide accessible test points.
B4. Earth Continuity Network (MET → 39 DBs)						
B4.1	Pull & terminate ECC to each DB (avg. 20 m/DB)	DB	39			Size per fault levels; validate ECC resistance/loop impedance.
B4.2	Install earth bars & labels in each DB	DB	39			Ensure clear earthing/bonding terminal identification.
B5. Equipotential Bonding						
B5.1	Identify/bond metallic services (pipes, steel)	Area	39			Perform revised bonding test ($\leq 0.2 \Omega$ continuity).
B5.2	Label bonded services and update records	Area	39			Ensure maintenance visibility and compliance.
B6. Surge Protection Devices (SPDs)						
B6.1	Install Type 1/Type 1+2 SPD at intake DB	No.	1			Short earth leads; coordinate with upstream protection.
B6.2	Install Type 2 SPDs at downstream DBs	No.	38			Short, direct earth path; follow manufacturer/RCD coordination.
B7. Students' Kitchen Sub Meter						
B7.1	Isolate kitchen feeder; install isolator + meter	Job	1			Commission meter; verify polarity/CT orientation.
B7.2	Label circuits; update single line diagram	Job	1			Documentation for billing/control and CoC annexures.
B8. Testing, Rectifications & CoC						
B8.1	Perform SANS 8.6 test suite per DB (39 DBs)	DB	39			Bonding continuity $\leq 0.2 \Omega$; ECC resistance per Table 8.1 or loop test; insulation; RCD; loop at main switch.

B8.2	Earth electrode resistance tests (arrays/clusters)	Job	1			Record baseline values; add rods if needed; target $\leq 5 \Omega$ practical.
B8.3	Rectify non-compliances & retests	P.Su m	1			Cable terminations, damaged bonds, labels; repeat tests after corrections.
B8.4	Compile SANS test reports (Section 4) & issue CoC	Job	1			CoC by a registered person under the OHSA Electrical Installation Regulations.
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B8.3	Rectify non-compliances & retests	P.Su m	1			Cable terminations, damaged bonds, labels; repeat tests after corrections.
B8.4	Compile SANS test reports (Section 4) & issue CoC	Job	1			CoC by a registered person under the OHSA Electrical Installation Regulations.
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