	FOSKOR (PTY) LTD SCOPE OF WORKS	
TITLE: RFP for the Supply of Extreme Switches and Access points to Foskor Phalaborwa and Aruba switches to Richards Bay for a period of Two (2) years.		

Tender No.: FOSCO-RFP-06-2023

COMPANY BACKGROUND

Foskor is one of the world's largest producers of phosphate rock (concentrate) and phosphoric acid. It is one of the world's few vertically integrated producers of phosphoric acid and is the second largest supplier to India, the world's largest consumer of phosphoric acid. The Company owns and mines phosphate resources and beneficiates the mined material to produce a phosphate concentrate at Phalaborwa, in the Limpopo Province of South Africa.

The phosphate concentrate is sold locally and transported to the Richards Bay plant on the coast of Kwa-Zulu Natal to produce phosphoric acid, sulphuric acid and granular fertilisers MAP and DAP from phosphoric acid and is the leading supplier of fertilisers to South Africa. In all about 95% of the phosphoric acid is exported and the granular sales are divided between exports and local markets. Since 1951 Foskor has supplied more than 95% of South Africa's fertiliser requirements.

1. SCOPE BACKGROUND

Foskor requires the supply of network switches and access points as follows:

1.1. Section A - Phalaborwa.

The current switches are not compatible with the new core switches because of incompatible technology.

1.2. Section B – Richards Bay

The current installed Network edge switches are HP 3500YI POE 1gigabyte uplink.

Proposed replacement network edge switch is Aruba POE with 10gigabyte uplinks and upgrade cabling and cabinets in critical areas.

2. SCOPE OF WORK

2.1. Background and Documentation

The current switches at the Plant and Moshate are Enterasys switches, and they are not compatible with the new Extreme VSP 8000 core switch already installed.

Reason: Outdated technology used on current edge switches.

The current Network edge switches at Richards Bay has reached end of product life and has been utilized for over 10 years, current uplink is 1gigabyte, new technology to match up with the core and distribution layer is 10 Gigabytes. There is current 30 edge switches in service including 2 spares that's needs to be replaced.

2.2. Scope - extent of work or service required:

- a. Must be compatible with Extreme VSP 8000 Core switch.
- b. Must be compatible with Extreme CloudIQ manage software.
- c. Ap's must be compatible with Extreme Ap controller.
- d. Must comply to the technical specifications stipulated in this document.
- e. Must have a 5-year warranty.
- f. Must supply all Materials needed to complete the work.
- g. Must supply all consumables needed to complete installations.
- h. Installation includes tiding of cabinets.
- i. Completed pricing table at end of this document.

The Service Provider is expected to Supply, configure, and install Extreme network switches and Access points.

WHO WILL SUPPLY THE FOLLOWING?					
N/A = NOT APPLICABLE C = CONTRACTOR FF = FOSKOR, FREE OF CHARGE					
1.Sanitary –		2.Transport		3.Electrical	
		2.1 All TMMS	C	3.1 Electrical connection point	FF
4. Quality –		5. Security		6. Trenching	
4.1 Plan, Management, QA, QC	C	5.1 Foskop ID Card	C	6.1 Not required	C
7. Medicals -		8. Communication devices		9. PPE	
7.1 Entry	C	8.1 Declare at Security	C	9.1 Supply, Issue, inspect and manage	C
10 Site Surveys		11. Safety File		12 Training & Authorizations	
		11.1 Ensure file conform/populate to Foskop standards	C	12.1 All Required Training	C
13. Site Establishment		14 Waste management		15 Painting	
16 Scaffolding		17 Labour		18. Compressed air	
		17.1 All labour as per Scope of Work to execute task including management	C		
19 Fuel		20. Storage and inventory control		21 Consumables	
				21.1 All Consumables needed	C

2.3. Project Urgency

This is a Project that does have an impact on operations.

2.4. Battery Limits – Inclusions and Exclusions

List the boundaries in terms of equipment up to where is it Foskor's responsibility and where/what is the contractor's responsibility.

2.5. As Built Drawings

As built drawings not applicable

2.6. Project Deliverables

The deliverables for this project include:

- The Supply, configuration, installation, and commissioning of compatible POE switches at Foskor Phalaborwa.
- Supplier must be skilled to provide technical support on equipment supplied.

2.7. On-Site Supervision Requirements: Contractor to appoint Legal appointees.

2.8. Safety

Contractor to refer to the full and updated Foskor COP's available:

- The contractor and subcontractors need to always comply with the Mine Health and Safety act.
- All Foskor COP's Policies and procedures needs to be adhered to.
- Medical, Induction, Foskor ID Card.
- The Successful tenderer will be required to compile a Foskor Works permit.
- All person's competencies to be verified before being allowed to work on Foskor premises for a specific task.
- Site access will need to be controlled and all persons must receive site specific induction before entering the site.
- All contractors not in possession of a valid Foskor ID card have to complete the Foskor induction course and have to undergo a medical examination at the Foskor clinic for the contractor's account.
- All contract workers must have completed all training required by Foskor.
- Contractor must provide 2.9.2 and 2.6.1 officials.
- All the required PPE and Safety Equipment are for the contractor's account.
- All Vehicles working in Red flag area's must be fitted with Foskor standard Rops.

3. Legislative Requirements – Summary

The successful or appointed contractor shall comply with:

- Foskor (Pty) Ltd. COP (Compendium of Procedures) No. 25 for Contractor Control (Available on request)
- Extracts from Foskor Cop's – Required to comply to complete Foskor Cop's and procedures.

Before entering and operating/working on the Foskop site the appointed contractor shall ensure that his driver/workmen are:

- Briefed on the required task and have been informed of any abnormal conditions/situations.
- Physically, emotionally, and mentally fit to perform their duty.
- Issued with the necessary PPE (Personal Protective Equipment) to safely operate his service vehicles and perform the duty of maintaining, servicing, inspecting, and testing earthmoving- and mobile equipment.

3.1. **Permit To Work**

- Before any on-site work under this contract may commence, the appointed or successful contractor shall obtain from Foskop a work permit and a trenching permit where trenching is needed.
- A copy of the PERMIT TO WORK to be always kept on site.
- Base line risk assessment of ALL and ANY POTENTIAL tasks that may be performed on site under this contract.
- Copy of on-site induction training.

4. **Reminder of Risk definition – LIFE SAVING BEHAVIOURS**

1. Trackless Mobile Machinery
2. Working at Heights
3. Lock-out
4. Lifting Machinery
5. Working with live electrical installations
6. Confined spaces
7. Machine guarding
8. Conveyors
9. Machine Safety Devices

Risk assessment is also on life saving behaviours – but this is applicable to all jobs and training apply to all that will do physical work!

5. **Site Geography**

The plant is located at Phalaborwa, Limpopo, South Africa

5.1. **Ambient conditions**

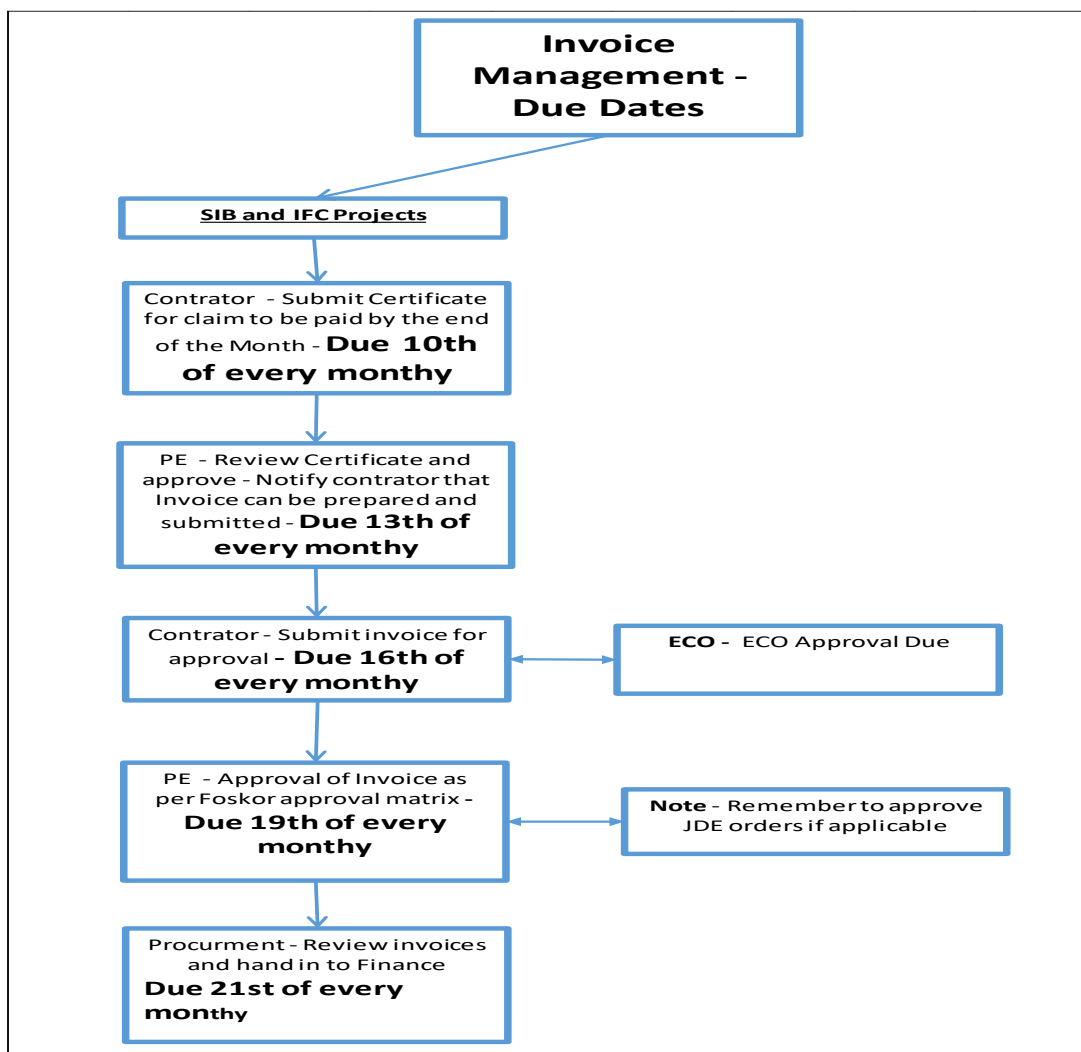
- Ambient temperature

Summer	35 Degrees Avg.	50 Degrees Max
Winter	17 Degrees Avg.	7 Degrees Min

- Site Altitude: 380m
- Prevailing wind direction: Generally South Easterly - Maximum design velocity 40m/s (144km/h)
- Very dusty conditions
- Average annual rainfall = 540 mm

4. Invoice due dates

The Due dates for certificate and invoices are outlined in the graphical presentation.



SWITCH SPECIFICATIONS.

These switches must be Policy enabled, remote manageable and compatible with ExtremeCloud IQ Management software.

CPU/Memory

- ARM A9 CPU
- 512 MB DRAM
- 128 MB Flash Environment

Environmental Specifications

- EN/ETSI 300 019-2-1 v2.1.2 - Class 1.2 Storage
- EN/ETSI 300 019-2-2 v2.1.2 - Class 2.3 Transportation
- EN/ETSI 300 019-2-3 v2.1.2 - Class 3.1e Operational
- EN/ETSI 300 753 (1997-10) - Acoustic Noise
- ASTM D3580 Random Vibration Unpackaged 1.5

Environmental Compliance

- EU RoHS 2011/65/EU
- EU WEEE 2012/19/EU
- China RoHS SJ/T 11363-2006
- Taiwan RoHS CNS 15663(2013.7

Operating Conditions

- Temperature
- 8-port X435 models: 0° C to 40° C (32° F to 104° F)
- 24-port X435 models: 0° C to 45° C (32° F to 113° F)
- Humidity: 10% to 95% relative humidity, non-condensing
- Altitude: 0 to 3,000 meters (9,850 feet)
- Shock (half sine) 30m/s² (3G), 11ms, 60 shocks
- Random vibration: 3 to 500 Hz at 1.5 G rm

Regulatory and Safety North American ITE

- UL 60950-1 • UL 62368-1
- Complies with FCC 21CFR 1040.10 (U.S. Laser Safety)
- CDRH Letter of Approval (US FDA Approval)
- CAN/CSA 22.2 No. 60950-1
- CAN/CSA No. 22.2 62368-1-1

European ITE

- EN 60950-1, EN 62368-1
- EN 60825-1 Class 1 (Lasers Safety)
- 2014 / 35/ EU Low Voltage Directive

International ITE

- CB Report & Certificate per IEC 60950-1 AS/NZS 60950-1 (Australia /New Zealand)
- IEC 62368-1 • GB 4943.1-2011
- CNS 14336-1

EMI/EMC Standards North American EMC for ITE

- FCC CFR 47 part 15 Class A (USA)
- ICES-003 Class A (Canada)
- European EMC Standards
- EN 55032 Class A
- EN 55024 • EN 55035
- EN 61000-3-2, 2014 (Harmonics)
- EN 61000-3-3 2013 (Flicker)
- EN 300 386 (EMC Telecommunications)
- 2014/30/EU EMC Directive
- EN 55011

Class A International EMC Certifications CISPR 32, Class A (International Emissions)

- AS/NZS CISPR32
- CISPR 24 Class A (International Immunity)
- IEC 61000-4-2 / EN 61000-4-2 Electrostatic Discharge, 8kV Contact, 15 kV Air, Criteria A
- IEC 61000-4-3 / EN 61000-4-3 Radiated Immunity 10V/m, Criteria A
- IEC 61000-4-4 / EN 61000-4-4 Transient Burst, 1 kV, Criteria A
- IEC 61000-4-5 / EN 61000-4-5 Surge, 2 kV L-L, 2 kV L-G, Level 3, Criteria A
- IEC 61000-4-6 Conducted Immunity, 0.15-80 MHz, 10V/m unmod. RMS, Criteria A
- IEC/EN 61000-4-11 Power Dips & Interruptions, >30%, 25 periods, Criteria C
- IEC 61000-4-8 / EN 61000-4-8
- CISPR 11 Class A
- GB/T 9254-2008 Country Specific •

VCCI Class A (Japan Emissions)

- ACMA RCM (Australia Emissions)
- CCC Mark (China)
- KCC Mark, EMC Approval (Korea)
- EAC Mark (Custom Union)
- NRCS / ICASA Mark (South Africa) •
- BSMI Mark (Taiwan) Telecom Standards

- CE 2.0 Compliant

IEEE 802.3 Media Access Standards

- IEEE 802.3bz 2.5GBASE-X*
- IEEE 802.3ab 1000BASE-T
- IEEE 802.3at PoE Plus
- IEEE 802.3bt Type3 PoE
- IEEE 802.3az Energy Efficient Ethernet * 2.5Gb uplink support is a future capability Ordering Note

ACCEPTANCE

The conditions and requirements as stated in this "Scope of Work" are accepted with the following exceptions / exclusions:

The conditions and requirements as stated in this "Scope of Work" are accepted with the following **inclusions**:

Subcontractor (please provide list and function)

I, _____ in my capacity as _____

for and on behalf of _____ hereby acknowledge that

I have read and understand the Instruction to Tender and the Scope of Work as detailed in this document and accept all the Terms and Conditions of Tender: _____

Signed at _____ on this the _____ day of _____ 2023

Signature: _____

Witness:

1. _____ Name: _____

2. _____ Name: _____

For and on behalf of Foskor (Pty) Limited

Name: _____

Signature: _____

Designation: _____ Date: _____

DOCUMENTED INFORMATION

DESCRIPTION	RESP	LOCATION	FILE NAME / INDEX	RETENTION TIME (MINIMUM)
Scope of Works	Procurement	Procurement	Procurement	As per Procurement Policies and procedures

Annexure C

SWITCH SPECIFICATIONS

<i>PART NO</i>	<i>DESCRIPTION</i>	<i>QTY</i>
X435-8T-4P	Extreme X435-8P-4P (8 UTP and 4 Universal ports)	58
X435-24-4P	Extreme X435-24-4P (24 UTP and 4x1/2.5G unpopulated SFP 1 AC PSU)	28
AP505i	Extreme Indoor Wi-Fi 6 AI-Infused Access Point AP505i	15
Apache optics 10051H 1 Gig Mini Gbic Multi Mode		150
Apache optics 10052H 1 Gig Mini Gbic Single Mode		10
Apache optics 10052H 10 Gig Mini Gbic Single Mode		10

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