



## ADVERTISING DATE: 29 JANUARY 2019 UMZ/2019-20/BOTANIC GARDENS (C&CS)

SERVICE PROVIDER TO DO EMAXESIBENI GARDENS NURSERY AND PLANT PROPAGATION DESIGN

Bidders are hereby invited to submit proposals/Quotations service provider to do emaxesibeni gardens nursery and plant propagation designfestival as per ToRs.

# MANDATORY DOCUMENTS TO BE SUBMITTED FAILURE TO DO SO WILL LEAD TO BE NON RESPONSIVE.

Umzimvubu Local Municipality Supply Chain Management will apply. A valid Original Tax Clearance Certificate or confirmation from SARS with a verification pin, copy of company Registration/Founding Statement/CIPC Documents. Certified BBBEE certificate and a combined BBBEE for a joint venture (non-elimination item). JV Agreement for Joint venture. 80/20 evaluation criteria. Prices quoted must be firm and must be inclusive of VAT for vat vendors. Certified ID Copies of Managing Directors/ Owners. CSD Registration and MBD forms 4, 8 and 9 are compulsory submission and Billing Clearance certificate or Statement of Municipal Accounts. Certified copies of Certificates must not be later than 90 days of closing date. No couriered, faxed, e-mailed and late tenders will be accepted. Umzimvubu Local Municipality reserves the right not to appoint and value for money will be the key determinant. All quotation must be deposited in the quotation box situated at Umzimvubu Local Municipality Offices at SCM office 813 Main Street, Mt Frere not later than 12h00 noon on 07 February 2020. All tenders must be clearly marked "Name of the project or Reference number". All service providers must be registered on CSD and submit proof. The municipality will not make award any award to a person or persons working for the state.

**Enquiries:/** All technical enquiries may be directed to Mr. A. Mandlana & Mr Mbukushe (SCM Manager) 039 255 8531/8555

Other enquiries regarding this Bid may be directed to the office of the Municipal Manager:

Attention: Mr G.P.T Nota

813 Main Street or P/Bag X9020

MT FRERE

5090

GPT NOTA (MUNICIPAL MANAGER)

#### Terms of Reference

| Request for: | Consultant | X | Individual contractor |          |
|--------------|------------|---|-----------------------|----------|
|              |            |   |                       | (A) - 3f |

## **EmaXesibeni Botanical Gardens nursery and plant propagation design.**Terms of reference (ToRs).

#### Introduction and background

The Umzimvubu Local Municipality in its quest to conserve the environment and to reclaim the natural ecosystem have earmarked or reserved +/- 10 hectares of urban land for establishment of a Botanical Gardens. The initiative is aimed at addressing the issues of restoring ecosystems. The proposed area is in the build-up urban area and will be integrated to the existing developments which are as follows:

- 1. Ntsizwa Eco Park
- 2. Mount Ayliff old cemetery (Monumental site )
- 3. Bridge Complete Green Street.

This establishment will provide knowledge and expertise in plant taxonomy, horticulture, biodiversity inventory, conservation biology, restoration ecology and ethnobotany.

This Botanic garden will also collectively serve as a Local and District Municipality repository for documented plant material, with at least one-third of all flowering plants maintained in living collections or seed banks. Utilizing knowledge gained from these collections, related herbaria and libraries, and combined with landscape knowledge from field surveys and ecological research, which will bring the understanding necessary to ensure that restoration leads to adequate taxonomic diversity and incorporates appropriate genetic provenance.

Propagation nurseries produce pre-finished plant material (liners), such as ornamental trees, shrubs, and grasses, fruit trees, and annual and perennial flowers. Plants are propagated either by seed or by vegetative means, such as by cuttings, grafting or tissue culture. Some nurseries specialize in growing and selling prefinished plants to other growers, making propagation their sole business. However, some wholesale nursery operations have their own propagation areas where plants are produced for in-house use

With this initiative the Municipality is also aiming to restore diverse and ecologically resilient places, avoiding the dangers and pitfalls associated with growing inappropriate plants in the wrong environment.

- Plant propagation structures plays vital role in propagation of various seedlings and grafts in nurseries.
- These structures helps to maintain congenial climatic conditions for better germination, easy rooting and hardening of seedling.
- Plant propagation structures helps the successful and healthy production of seedlings.

### **Plant Propagation Structures in Nursery:**

- 1. Poly-houses
- 2. Net houses
- Mist Chambers

### The following methods is proposed:

#### Poly-houses

 Poly-house is widely used for prorogating off season seedlings which fetch better price in the market.

Modern poly-house are automated for temperature and humidity control to assist propagation

In poly-houses, plant are propagated using pro-trays or poly-bags on ground or benches.

In Poly-houses, thermostat, hygrometer, automatic ventilation system is maintained to facilitate micro-climate.

Irrigation and fertigation systems in poly-houses is automated to provide measured quantity of water and nutrients to plants.

#### Net houses

 Net houses are widely used as propagation structure in tropical areas, where artificial heating is not required and artificial cooling is expensive. The roof of net house may be covered with gunny cloth or even with live plant creeper to cut off the solar radiation and to keep the house cool. Different type of shade nets are available in the market for shade purpose.

Net houses can be constructed as per need of propagation and therefore its size of net houses varies.

#### Mist Chamber

Nursery plants propagated by cuttings are grown in mist chambers.
 In Mist Chamber, Relative humidity is maintained artificially at high level (95 %) with the help of mist installations, which spray water under pressure.

High relative humidity facilitate better root initiation and cooling effect prevents the cutting from drying out.

Proposed scope of works or deliverables

Determine best greenhouse material/ structure option

Conceptual designs for propagation nursery structures (Poly-houses, Net houses, Mist Chambers) and it's associated accessories (i.e irrigation system).

Detailed working drawings

Cost estimate

#### Work plan

The overall duration of the assignment covered by this ToR is 60 days from the

date of contract signature.

| ID | Task                              | Duration |
|----|-----------------------------------|----------|
| 1. | Methodology and work plan         | 06 days  |
| 2. | Desk/literature review            | 04 days  |
| 3. | Field work assessment and Designs | 30 days  |
| 4. | Cost estimate                     | 20       |

The consultant will provide assistance in the Development of Plant Propagation Nursery designs.

## Reporting lines

The consultant shall report directly to Manager Community Services and Manager Housing and building, Umzimvubu Local Municipality and Project steering committee.

Signed by