

**Tuesday, 10 March 2015**

Regional Manager

**SUBJECT: REQUEST TO CONDUCT A TRIAL PILOT FOR THREE YEARS TO INSTALL A BIOSWIRL FOR RESEARCH PURPOSES ON SOLIDARITY STREET IN TANGANANI, DIEPSLOOT**

**1. BACKGROUND**

Johannesburg City Parks and Zoo (JCPZ) is a municipal entity within the City of Johannesburg, which is responsible for the development and maintenance of Public Open Spaces, Parks, Road verges and cemeteries within the jurisdiction of Johannesburg Metropolitan Municipality. Acquire

JCPZ has examined the proposal application in terms of the following environmental legislation and other applicable policies, procedures and town planning related criteria:

- a) Location and surrounding land uses
- b) Proximity to conservation areas and areas of ecological importance
- c) Alignment to environmental standards, Legislation and policies including
- d) National Environmental Management Act (Act 107 of 1998) as amended
- e) Environmental Impact Assessment Regulations of 2010
- f) Johannesburg Metropolitan Open Space System (JMOSS)

A meeting was held at on the 10<sup>th</sup> of March 2015 at Springfield Facilities Management by OSM, Applicant and Region A Manager. The purpose of the meeting was to introduce the Bioswirl Project to City Parks and to request the construction of the project along Solidarity Street in Tanganani Diepsloot.

**2. DISCUSSION**

- The proposal focuses on Water Sensitive Urban Design (WSUD), ecosystem enhancement services that are used for managing drainage, where water is diverted to a drainage that has natural and indigenous wetland plants. Stormwater infiltrates the plants and the velocity of the water is reduced.
- There are existing guidelines for implementing the proposal in South Africa.
- The model was developed for township environments to assist the purifying quality of stormwater, as there are no adequate services to manage stormwater in the townships.
- The identified site is located upstream of Solidarity Street in Tanganani, Diepsloot, and 50m of the road reserve is required to implement the identified proposals which include the use of indigenous wetland vegetation, fruit trees as part of food security and greening interventions, and mushrooms species.

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- The project is fully funded by NRF and DBSA, and will run for three years thereafter will be handed to the City Parks should the trial be successful.
- The project will be implemented during the winter season preferably in June to allow the plants to establish before the rainy season.
- As part of job creation, the local community will be employed to assist with the project implementation.

### 3. RECOMMENDATIONS

The Applicant to forward a **comprehensive proposal** to City Parks and CoJ Environmental Management that addresses the following aspects:

- 1) Motivation and the scope of work
- 2) Planning information which includes zoning, ownership and zoning in the site location
- 3) Rate of siltation in the stormwater channel, wetland, river and riparian zone
- 4) Extent of the identified erosion and mitigation measures
- 5) Quantification of stormwater that can be anticipated and, impact on the quantity and the ability of the wetland to assist with flood mitigation measures and to minimise flooding of downstream users
- 6) Compliance to the floodlines, buffer zones and riparian zones should be enforced and adhered to as per duty of care principles.
- 7) Legislative compliance
- 8) Type of biodegradable materials and indigenous plants, the system to use only indigenous and natural plants
- 9) Comprehensive project plan and timeframes for commissioning and decommissioning
- 10) Types and botanical names of plants to be used
- 11) Confirmation of associated and relevant legislation
- 12) Confirmation that the site is not impacted by sensitivities such as wetlands, rivers, buffer and riparian zones
- 13) Maintenance Plan which outlines costing and the roles and responsibilities
- 14) Landscaping plans showing the exact location of the proposal and slopes
- 15) Toxicity assessment study of the mushrooms to be used
- 16) Health and safety aspects
- 17) Surrounding land uses, zoning, size and ownership of the identified site
- 18) Stakeholders and relevant consents
- 19) Maintenance plan
- 20) Value-add and benefits
- 21) Water quality data of the selected site
- 22) Short and long-term impacts on existing communities
- 23) All other relevant information and Integrated stormwater management plan
- 24) Water use (Water Act), excavations and infilling of trenches with soil material or any other materials

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- 25) Working or alteration of river beds, the need of a Water use licence and working within 32m of the edge of the river
- 26) Environmental authorisation, and Environmental Management Programme
- 27) Ecosystem disturbance and flow alteration, deposition of materials; ecosystem and river flow, and removal or disturbance of river banks
- 28) Pouring of concrete or other material
- 29) Downstream erosion, and Pollution of river water
- 30) Other legislation (NEMBA for the determination of species)
- 31) Detailed scope of project, and benefits of the project and trade offs
- 32) Ecological buffer, Health and safety
- 33) Flood lines and encroachment
- 34) Recreational and Landscaping
- 35) Risk assessment and impact on transportation
- 36) Quality control and vegetation assessment
- 37) Job creation
- 38) Environmental awareness, farming training, and waste awareness
- 39) River widening and stabilisation of river banks
- 40) Protection of public open space

Enquiries regarding the report can be forwarded to Johannesburg City Parks for the attention of Cebolenkosi Mhlongo, email: [cmhlongo@jhbcityparks.com](mailto:cmhlongo@jhbcityparks.com).

Report compiled by:

## ENVIRONMENTAL PROTECTION

10/03/15

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