

1. Introduction

This Scope of Works (SOW) outlines the requirements for the supply of trees, manure, fertilizers, and hydro-seeding for the rehabilitation of disturbed areas at the Medupi Power Station. The contractor will not be responsible for site preparation, which will be completed by others. The contractor's responsibilities include the supply of materials, delivery to the site, and application (where applicable) in compliance with the Medupi Environmental Management Plan (EMP) and relevant South African environmental legislation.

2. Supply of Trees

1. Tree Specifications:

- The contractor shall supply 600 trees of the following species:
 - 1000 litres. *Celtis Africana*, *Combretum erythrophyllum*, *Searsia Lancea*, *Buddleja Saligna*, *Afrocarpus falcatus*, *Podocarpus henkelii*, *Vachellia xanthophloea*, *Senegalia Galpinii*, *Olea Africana*, *Vachellia Sieberiana*, *Dombeya rotundifolia*, *Nuxia floribunda*. SIZE 1000L Quantity 48 QTY OF TREES per ha 4, total 12 ha)
 - 500 litres. *Celtis Africana*, *Combretum erythrophyllum*, *Searsia Lancea*, *Buddleja Saligna*, *Afrocarpus falcatus*, *Podocarpus henkelii*, *Vachellia xanthophloea*, *Senegalia Galpinii*, *Olea Africana*, *Vachellia Sieberiana*, *Dombeya rotundifolia*, *Nuxia floribunda*. SIZE 500L Quantity 84 (QTY OF TREES per ha 7, Total 12 ha)
 - 200 litres. *Celtis africana*, *Combretum erythrophyllum*, *Searsia lancea*, *Buddleja saligna*, *Afrocarpus falcatus*, *Podocarpus henkelii*, *Vachellia xanthophloea*, *Senegalia galpinii*, *Olea africana*, *Vachellia sieberiana*. SIZE 200L Quantity 120 (QTY OF TREES per ha 10, Total 12 ha)
 - 100 litres. *Celtis africana*, *Combretum erythrophyllum*, *Searsia lancea*, *Buddleja saligna*, *Afrocarpus falcatus*, *Podocarpus henkelii*, *Vachellia xanthophloea*, *Senegalia Galpinii*, *Olea Africana*, *Vachellia Sieberiana*, *Berchemia zeyheri*, *Pappea capensis*, *Sclerocarya birrea*, *Schotia brachypetala*, *Combretum imberbe*, *Burkea africana*, *Philenoptera violacea*, *Kiggelaria africana*, *Ficus sur*, *Vachellia tortilis*, *Segelia nigrescens*, *Vachellia robusta*, *Searsia leptodictya*. SIZE 100L Trees Quantity 228 (QTY OF TREES per ha 19 , Total 12 ha).

- 50 litres. *Celtis africana*, *Combretum erythrophyllum*, *Searsia lancea*, *Buddleja saligna*, *Afrocarpus falcatus*, *Podocarpus henkelii*, *Vachellia xanthophloea*, *Senegalia Galpinii*, *Olea Africana*, *Vachellia Sieberiana*, *Berchemia zeyheri*, *Pappea capensis*, *Sclerocarya birrea*, *Schotia brachypetala*, *Combretum imberbe*, *Burkea africana*, *Philenoptera violacea*, *Kiggelaria africana*, *Ficus sur*, *Vachellia tortilis*, *Segelia nigrescens*, *Vachellia robusta*, *Searsia leptodictya*, *Adansonia digitata*. SIZE 50L Trees: Quantity 120 (QTY OF TREES per ha 10 ,Total 12 ha).
- All trees must be indigenous, healthy, free from pests and diseases, and of appropriate quality for planting.
- Trees must meet the following size requirements:
 - Minimum height: [Specify height, e.g., 1.5m]

Container size:

- 1000 liters 48
- 500 liters 84
- 200 liters 120
- 100 liters 228
- 50 liters 120

2. **Delivery:**

- Trees shall be delivered to the Medupi Power Station site in a manner that ensures they are not damaged during transport.
- Trucks used for transportation must be equipped with covers to protect the plants from windburn and sun exposure.

3. **Inspection and Approval:**

- Upon delivery, the trees will be inspected by the Site Manager or Environmental Control Officer (ECO) to ensure compliance with the specifications.
- Any trees that do not meet the required standards will be rejected and must be replaced at the contractor's expense.

4. **Climatization Maintenance:**

- The contractor shall maintain the supplied trees for a period of **one month** after delivery to allow for climatization to the local environment.
- Maintenance activities include:

- **Watering:** Trees must be watered three times weekly in summer and once weekly in winter unless sufficient rainfall occurs.
 - **Pruning:** Dead or damaged branches must be pruned as necessary.
 - **Mulching:** Coarsely chipped bark from pine trees must be placed in a 75mm deep layer at the base of each tree to retain moisture.
 - **Pest and Disease Control:** Weekly inspections for pests or diseases, with appropriate action taken if issues are identified.
 - After the one-month climatization period, the contractor will hand over the trees to the client for planting.
-

3. Supply of Manure and Fertilizers

1. Manure:

- The contractor shall supply [specify type and quantity] of well-rotted manure, free from weeds, seeds, and disease.
- Manure must be of high quality and suitable for use in the rehabilitation of disturbed areas.

2. Fertilizers:

- The contractor shall supply the following fertilizers:
 - **Hydro-seeding Fertilizer:** Liquid fertilizer with a ratio of 2:3:2 (22) + Zn at 300 kg/ha.
 - **Basic Re-grassing Fertilizer:** 2:3:2 and super-phosphate for post-germination application.
- Fertilizers must be labelled in accordance with the Government Seed Act No. 28 of 1961 or its amendments.

3. Delivery:

- Manure and fertilizers shall be delivered to the site in sealed, labelled containers to prevent contamination.
 - The contractor must ensure that all materials are stored in a cool, dry, and rodent-free environment until use.
-

4. Hydro-seeding

1. **Seed Mix:**

- The contractor shall supply and apply a hydro-seeding slurry according to the approved mix design. The mix will vary depending on the area and season (summer or winter mix).
- **Summer Seed Mixture:**
 - *Cynodon dactylon*: 20 kg/ha
 - *Eragrostis tef*: 10 kg/ha
 - *Hyparrhenia hirta*: 5 kg/ha
- **Winter Seed Mixture:**
 - *Lolium multiflorum*: 10 kg/ha
 - *Chaetobromus dregeanus*: 5 kg/ha

2. **Slurry Components:**

- The hydro-seeding slurry shall consist of the following components:
 - **Seed Mix:** As specified above.
 - **Fertilizer:** 2:3:2 (22) + Zn at 300 kg/ha.
 - **Soil Binder:** Hydropam or similar at 15 kg/ha.
 - **Mulch:** Chopped veldt mulch at 250 kg/ha.
 - **Organic Supplement:** Gromor at 2000 kg/ha.
 - **Water:** 20 kl/ha.

3. **Application:**

- The contractor shall use a hydro-seeder capable of achieving uniform coverage at the specified rate.
- Application must occur under suitable weather conditions to ensure successful germination.

4. **Post-Application Maintenance:**

- The contractor shall monitor the seeded areas for a period of [specify duration] and perform necessary maintenance, such as watering and weed control, to ensure successful establishment.

5. **Exclusions**

- The contractor will not be responsible for site preparation, which includes clearing, scarification, and topsoil application.
- The contractor will not be responsible for planting the supplied trees.

6. Reporting

- The contractor shall submit weekly progress reports to the Site Manager or ECO, detailing activities performed, quantities delivered, and any issues encountered.

Bill of Quantities (BOQ)

				Selling Rate ERI	
Level	Bill description	Unit	Bill quantity	Rate ZAR	Total
	The Quantities inserted below are provisional and are based on best information available at the time of compiling these Bills of Quantities and as such the Works shall be subject to remeasurement.				
	NOTE: Tenderers are advised to study the "Specification of Materials and Methods to be used" before pricing this bill.				
1	PROVISIONAL BOQ FOR TREE PLANTING AND HYDRO-SEEDING ENABLING CONTRACTS			R	R
1	HYDRO-SEEDING			R	R

1.1	Type: Veldt Grass The areas to be re-vegetated are to be manually scarified forming drills running parallel to the contours. The drills are to be 30 – 50 mm deep and 50 – 100 mm apart. The formation of the drills will form a suitable seedbed for the grass types and combined with the hydro seeding slurry, form an ideal microclimate for the germination. The hydraulic seeding or hydro seeding method where homogenous slurry is mixed and applied to areas to be vegetated is to be considered. Seed shall be procured from a reputable supplier and conform with all legal requirements for seed. This slurry is to comprise of the following: a. Seed mixture as specified 100kg/ha b. Fertilizer: 2:3:2 (22) + Zn 300 kg/ha c. Soil binder – Hydropam 15 kg/ha d. Mulch – Chopped veldt mulch 250 kg/ha e. Organic supplement – Gromor 2000 kg/ha f. Water 20 kl/ha. g. Rate to include polyacrilimide soil binder (HYDROPAM, @ 10 kg/ha) or similar approved soil binding agent, to be applied at the manufacturer's application rate. Includes seed mix, fertilizer, mulch, soil binder and watering .	Hectare	12	R -	R
1.2	Delivery of trees to Medupi Power Station including transport and protection during transit.	Item	1.00	R -	R
1.3	Maintenance for climatization (1 Month)	Item	1.00	R -	R
2	BILL 2: TREE PLANTING				R

2.1	1000 litres.Celtis Africana, Combretum erythrophyllum, Searsia Lancea, Buddleja Saligna, Afrocarpus falcatus, Podocarpus henkelii, Vachellia xanthophloea, Senegalia Galpinii, Olea Africana, Vachellia Sieberiana, Dombeya rotundifolia, Nuxia floribunda.SIZE 1000L Trees: 4000-5000mm+ height and 1500-2000mm+ wide after planting with stem diameter of 90 - 150mm measured 300mm above soil level.CompostThe Employer will only accept compost if the samples submitted comply with the following requirements:All compost shall consist of well-decomposed organic material, free of detrimental salts, glass, debris, weeds and other toxic impurities.Compost shall be composed of properly decayed organic material, free from harmful deposits, salts, seeds and other waste material and shall have a pH of more than 4 and less than 7. Compost shall be protected against excessive rain, wind and dissipation.Compost shall be applied in quantities as specified. All tree holes would require a layer of compost as required by the Employer.The contractor to provide all necessary equipment, labour and machinery for import and spread of compost. Payment after planting. Provision for 0.7m³ per tree (1000L trees) Subsidence Only available as 500 litre & 1000 litres	no.	48	R -	R

2.2	500 litres.Celtis Africana, Combretum erythrophyllum, Searsia Lancea, Buddleja Saligna, Afrocarpus falcatus, Podocarpus henkelii, Vachellia xanthophloea, Senegalia Galpinii, Olea Africana, Vachellia Sieberiana, Dombeya rotundifolia, Nuxia floribunda.SIZE 500L Trees: 3500-4000+mm height and 1400-1800+mm wide after planting with stem diameter of 60 - 90mm measured 300mm above soil level.Compost The Employer will only accept compost if the samples submitted comply with the following requirements: All compost shall consist of well-decomposed organic material, free of detrimental salts, glass, debris, weeds and other toxic impurities. Compost shall be composed of properly decayed organic material, free from harmful deposits, salts, seeds and other waste material and shall have a pH of more than 4 and less than 7. Compost shall be protected against excessive rain, wind and dissipation. Compost shall be applied in quantities as specified. All tree holes would require a layer of compost as required by the Employer. The contractor to provide all necessary equipment, labour and machinery for import and spread of compost. Payment after planting. Provision for 0.7m³ per tree (500L trees) Subsidence Only available as 500 litre & 1000 litres	no.	84	R -	R

2.3	200 litres <i>Celtis africana</i>, <i>Combretum erythrophyllum</i>, <i>Searsia lancea</i>, <i>Buddleja saligna</i>, <i>Afrocarpus falcatus</i>, <i>Podocarpus henkelii</i>, <i>Vachellia xanthophloea</i>, <i>Senegalia galpinii</i>, <i>Olea africana</i>, <i>Vachellia sieberiana</i>. SIZE 200L Trees: 3000-3500+mm height and 700-1200+mm wide after planting with stem diameter of 50 - 80mm measured 300mm above soil level. Compost The Employer will only accept compost if the samples submitted comply with the following requirements: All compost shall consist of well-decomposed organic material, free of detrimental salts, glass, debris, weeds and other toxic impurities. Compost shall be composed of properly decayed organic material, free from harmful deposits, salts, seeds and other waste material and shall have a pH of more than 4 and less than 7. Compost shall be protected against excessive rain, wind and dissipation. Compost shall be applied in quantities as specified. All tree holes would require a layer of compost as required by the Employer. The contractor to provide all necessary equipment, labour and machinery for import and spread of compost. Payment after planting. Provision for 0.3m³ per tree (200L trees) Subsidence Only available as 200 litres	no.	120	R -	R

2.4	100 litres. <i>Celtis africana</i>, <i>Combretum erythrophyllum</i>, <i>Searsia lancea</i>, <i>Buddleja saligna</i>, <i>Afrocarpus falcatus</i>, <i>Podocarpus henkelii</i>, <i>Vachellia xanthophloea</i>, <i>Senegalia Galpinii</i>, <i>Olea Africana</i>, <i>Vachellia Sieberiana</i>, <i>Berchemia zeyheri</i>, <i>Pappea capensis</i>, <i>Sclerocarya birrea</i>, <i>Schotia brachypetala</i>, <i>Combretum imberbe</i>, <i>Burkea africana</i>, <i>Philenoptera violacea</i>, <i>Kiggelaria africana</i>, <i>Ficus sur</i>, <i>Vachellia tortilis</i>, <i>Segelia nigrescens</i>, <i>Vachellia robusta</i>, <i>Searsia leptodictya</i>. SIZE 100L Trees: 2300-2500mm height and 500-700mm wide after planting with stem diameter of 40-60mm measured 300mm above soil level. Compost The Employer will only accept compost if the samples submitted comply with the following requirements: All compost shall consist of well-decomposed organic material, free of detrimental salts, glass, debris, weeds and other toxic impurities. Compost shall be composed of properly decayed organic material, free from harmful deposits, salts, seeds and other waste material and shall have a pH of more than 4 and less than 7. Compost shall be protected against excessive rain, wind and dissipation. Compost shall be applied in quantities as specified. All tree holes would require a layer of compost as required by the Employer. The contractor to provide all necessary equipment, labour and machinery for import and spread of compost. Payment after planting. Provision for 0.17m³ per tree (100L trees) Subsidence Only available as 100 litres	no.	228	R -	R

2.5	50 litres.Celtis africana, Combretum erythrophyllum, Searsia lancea, Buddleja saligna, Afrocarpus falcatus, Podocarpus henkelii, Vachellia xanthophloea, Senegalia Galpinii, Olea Africana, Vachellia Sieberiana, Berchemia zeyheri, Pappea capensis, Sclerocarya birrea, Schotia brachypetala, Combretum imberbe, Burkea africana, Philenoptera violacea, Kiggelaria africana, Ficus sur, Vachellia tortilis,Segelia nigrescens, Vachellia robusta, Searsia leptodictya.SIZE 100L Trees: 2300-2500mm height and 500-700mm wide after planting with stem diameter of 40-60mm measured 300mm above soil level.CompostThe Employer will only accept compost if the samples submitted comply with the following requirements:All compost shall consist of well-decomposed organic material, free of detrimental salts, glass, debris, weeds and other toxic impurities.Compost shall be composed of properly decayed organic material, free from harmful deposits, salts, seeds and other waste material and shall have a pH of more than 4 and less than 7. Compost shall be protected against excessive rain, wind and dissipation.Compost shall be applied in quantities as specified. All tree holes would require a layer of compost as required by the Employer.The contractor to provide all necessary equipment, labour and machinery for import and spread of compost. Payment after planting. Provision for 0.17m³ per tree (100L trees) Subsidence Only available as 100 litres	no.	120	R -	R
2.6	Delivery of trees to Medupi Power Station including transport and protection during transit.	Item	1	R -	R

2.7	Maintenance for climatization (1 Month) Including watering,pruning,muluching pest control and staking.	Item	1	R -	R
2.8	Supply of manure well-rotted,weed-free manure.	Item	1	R -	R
2.9	Supply of fertilizers includes hydro-seeding and regrassing fertilizers.	Item	1	R -	R
	SUB-TOTAL BOQ				
1	HYDRO-SEEDING				R
2	BILL 2: TREE PLANTING				R
	SUB-TOTAL				R
	15% VAT				R
	TOTAL AMOUNT				R

Technical Evaluation Criteria

The evaluation of tenders will be based on the following criteria, scored out of 100%. The evaluation excludes financial and SHEQ-related aspects, focusing instead on technical and operational capabilities.

Criterion	Weight (%)	Score (%)	Description
1. Relevant Experience	30%		The contractor's experience in supplying and maintaining indigenous trees and hydro-seeding.
2. Quality of Proposed Materials	25%		The quality of the proposed trees, manure, fertilizers, and seed mixes, including compliance with specifications.
3. Methodology and Maintenance Plan	20%		The contractor's proposed methodology for hydro-seeding and tree maintenance during climatization.
4. Environmental Compliance	15%		The contractor's adherence to environmental regulations and best practices.
5. Innovation and Value-Added Proposals	10%		Any innovative approaches or value-added proposals that enhance the project outcomes.
Total	100%		