



CONTROL OF VEGETATION: HIGH-RISK TREE FELLING AND BRUSH CLEARING

TECHNICAL CONTRACT SPECIFICATIONS

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1 SCOPE OF WORK

- 1.1 The essence of the Contract is that Transnet Freight Rail requires High Risk Tree Felling, brush clearing chemical control of vegetation and the management of dead remains of previously living vegetation, to the extent that areas treated in terms of the Contract are free from any form of vegetation (dead or otherwise) which may obstruct, hinder or interfere with operational activities, or have the potential to damage equipment or facilities, on tracks or other areas included in the Contract.
- 1.2 This contract covers the control of vegetation by means of mechanical and chemical methods only on Transnet property, for a period of 2 years to the extent that areas treated in terms of this Contract all identified trees that pose a danger of falling on overhead or cause disruption of train movement and affect access for maintenance activities.
- 1.3 The essence of the Contract is that Transnet Freight Rail requires Tree Felling, brush Clearing chemical control of vegetation and the management of dead remains of previously living vegetation, to the extent that areas treated in terms of the Contract are free from any form of vegetation (dead or otherwise) which may obstruct, hinder or interfere with operational activities, or have the potential to damage equipment or facilities, on tracks or other areas included in the Contract.
- 1.4 The ways and means by which the above-mentioned results are obtained are the responsibility of the Contractor. Transnet Freight Rail, however, shall have the right to monitor the materials and activities of the Contractor to ascertain that all procedures are in **accordance with his/her tender, the relevant legislation and are conducive to the achievement of control of vegetation**. Such right of monitoring shall be entirely without prejudice to Transnet Freight Rail and shall in no way relieve the Contractor of his/her responsibility for satisfactory control of vegetation.
- 1.5 Failure to comply with the minimum performance proposed by the Contractor in his/her tender may form the basis for non-payment for work done, pending the achievement of control as defined and/or termination or cancellation of the Contract.
- 1.6 The Contractor must obtain his/her own information regarding the extent, occurrence and the species of the vegetation over the work area and must also determine the best method to control the vegetation.

The performance due by the Contractor shall include any work arising from or incidental to the above or required of the Contractor for the proper completion of the Contract in accordance with the true meaning and intent of the Contract documents.

2 SUFFICIENCY OF TENDER

- 2.1 The Contract will only be awarded to a Contractor who has the required experience in
 - Control of vegetation of Invasive Alien Plant Species
 - Application of herbicide in Industrial Areas
 - Felling of dangerous trees near Live Overhead Power.

3 DURATION OF CONTRACT

- 3.1 The work provides for the control of vegetation for commencement on the date of notification of acceptance of tender with Transnet Freight Rail for a period of 24 months

4 LOCATION OF THE WORKS

- 4.1 The location of the works is between Estcourt and Rushbrook (Pietermaritzburg) from km64 to km175 as indicated in the Schedule of Quantities in the geographical area controlled by the Depot Engineering Manager Ladysmith.

5 TO BE PROVIDED BY TRANSNET FREIGHT RAIL

- 5.1 The following material, equipment and services will be provided free of charge by Transnet Freight Rail where required:
- 5.1.1 Water as required from Transnet Freight Rail's existing points of supply; such water may be untreated, chemically treated or borehole water. The Contractor shall be responsible for all work and equipment needed to fill the water trucks or spray units from the water point provided and to ensure that the water is suitable for its intended use. These water points may be up to 200km apart.
- 5.1.2 Road vehicle accessibility via service roads to the work site is not always possible.

6 TO BE PROVIDED BY THE CONTRACTOR

- 6.1 In addition to all labour materials, plant, equipment, and incidentals needed to complete the work, the Contractor shall provide all accommodation and toilet facilities for his/her employees.
- 6.2 The Contractor shall provide at his/her own cost any security measures he/she may deem necessary for safe and effective execution of the work within the Contract area.
- 6.3 The personnel of the Contractor shall always, while on Transnet Freight Rail property and during vegetation control operations, wear reflective safety jackets. These jackets must either be yellow or light blue or preferably bear the name of the Contractor's company. Should the Contractor wish to use another colour this must first be cleared with the Technical Officer.
- 6.4 An effective safety procedure to be followed by all personnel on any Transnet Freight Rail work site shall be compiled by the Contractor and implemented before any work commences. The procedure shall be updated whenever the need arises, and any changes shall be communicated to all employees on a work site before work proceeds.
- 6.5 When required the Contractor shall appoint at each work site sufficient personnel whose sole task shall be to be on the lookout for approaching rail traffic. These employees shall operate an audible warning device to timeously warn all people on the work site of approaching rail traffic.
- 6.6 An effective safety procedure to be followed by all personnel on any work site in the case of approaching rail traffic shall be compiled by the Contractor and implemented before any work commences. The procedure shall be updated whenever the need arises and

any changes shall be communicated to all employees on a work site before work proceeds.

7 EXISTING SERVICES

- 7.1 Reinstatement of services and property damaged during execution of the work.
- 7.2 Any damages caused by the Contractor to Transnet property and services shall be rectified by the Contractor at his own cost and to the full satisfaction of the Transnet Freight Rail's representative.

8 MANAGEMENT OF THE WORKS

8.1 SITE MEETINGS

The Contractor shall attend site meetings when required. These meetings will be held under the chairmanship of Transnet's representative. These meetings will be conducted to monitor progress and discuss agreed issues when required. A register will be kept of attendance and a minute of the proceedings will be recorded and distributed afterwards. When sub-Contractors are required to attend, the Contractor shall ensure their attendance.

8.2 SITE BOOKS

- 8.2.1 A Site Instruction Book, A4 size, with triplicate pages shall be provided by the Contractor. The format for written communication on site shall be the Site Instruction Book. The site instruction shall have numbered sheet for receiving and recording instructions by the Employer's representative and shall be clearly marked "Site Instruction Book". (See Attached Sample)
- 8.2.2 A Daily Diary Book with triplicate pages shall be provided by the Contractor and be available on site at all times. The number of staff and plant on site for every day shall be recorded. The hours of actual work and the accurate amount of work measured per item as in the Schedule of Quantities completed for each day shall also be recorded and signed off by both Transnet Freight Rail (TFR) and the Contractor at the end of each day. This site diary shall also serve as a daily record of all relevant information concerning herbicide application and site conditions prevailing on site and as required in terms of section 16 of Act 36 of 1947.
- 8.2.3 Only persons authorized in writing by the Project Manager or Contractor may make entries in the site books.

8.3 PROGRAMME OF WORK

The Contractor shall undertake the planning and programming of the entire vegetation control operation and shall submit to the Technical Officer for approval full particulars thereof within 2 weeks from the date of notification by Transnet Freight Rail of the acceptance of his/her tender or the commencement of the annual rainy season as the case may be.

- 8.3.1 The items listed below will form part of the evaluation criteria during tender evaluation. The particulars to be provided in respect of the Contractor's vegetation control programme shall

include but not be limited to the following:

- 8.3.1.1 An undertaking that all equipment will be ready for operation and that the work can commence timeously, to comply with requirements of the contract.
- 8.3.1.2 A schedule of the plant and equipment dedicated to this project and available while on site.
- 8.3.1.3 The methods and procedures to be implemented regarding health and safety, quality control, protection of third parties and security.
- 8.3.1.4 Valid certification list for brush-cutter and chainsaw operators available for this work.
- 8.3.1.5 A valid Pest Control Operators License for herbicide in the field of Industrial Weed Control issued by the Department of Agriculture
- 8.3.1.6 An experienced Tree feller in the felling of Dangerous trees near live overhead power. (Recent CV and traceable references to be attached)
- 8.3.2 The Contractor shall conduct regular site investigations and monitoring procedures for the purpose of:
 - Ascertaining the nature and extent of infestation and factors that could influence the work.
 - Monitoring the standard of control achieved.
 - Identifying any damage or hazards which may have been caused by the control operation, and
 - Planning of timeous execution of remedial work where control is not being achieved.
- 8.3.3 The Contractor's **programme shall be completed in the shortest possible time as indicated in the delivery schedule in the technical evaluation criteria.**
 - 8.3.3.1 The program shall be based on the quantities shown in the Schedule of Quantities.
 - 8.3.3.2 Failure by the Contractor to deliver on what was stated by him/her in the tender document shall constitute a material breach of Contract by the Contractor, which will entitle the Employer to act in terms of the Standard Terms and Conditions of Contract for the provision of services to Transnet.
 - 8.3.3.3 It is required that for the duration of the Contract, the Contractor shall base his / her work program on the provision of a minimum of **2 fully operational teams**, to commence work at different locations as will be indicated by the Technical Officer. A detailed organogram to be supplied.
 - 8.3.3.4 Whether the tenderer intends to work on Saturdays, Sundays or statutory holidays or is prepared to work on such days if required to do so by Transnet Freight Rail.

8.4 PERFORMANCE MONITORING INSPECTIONS

- 8.4.1 The Contractor shall always be responsible for supervision of the work and for follow-up inspections to monitor the successful control achieved over areas of completed application. He/she shall immediately take appropriate remedial action in areas where the specified standards of control are not achieved.
- 8.4.2 The contractor shall conduct regular site investigations and monitoring procedures for the purpose of:
- Ascertain the nature of weed infestation and factors that could influence the work
 - Monitoring the standard of weed control achieved
 - Identify any damage or hazards which may have been caused by the caused weed control operation.
 - Planning of timeous execution of remedial work where control is not being achieved.
 - In addition to the annual programme provided the Contractor shall submit daily working programmes to the Technical Support Manager, 7 days in advance of the next working week, indicating the specific areas where the Contractor will be working each day of the week. Failure by the contractor to submit a daily programme and/or deviating from it without notifying the Technical Officer, preventing him/her from monitoring the Contractors performance.
- 8.4.3 The Technical Officer shall at any time during the application periods carry out inspections of the Contractor's performance methods and procedures.

9 PRICING INSTRUCTIONS

9.1 GENERAL

- 9.1.1 The prices and rates must cover all costs and expenses that may be required for the execution of the works.
- 9.1.2 The quantities set out in the Schedule of Quantities are estimated and may be more or less than stated. The Contractor shall submit with the tender a complete and detailed priced Schedule of Quantities (prepared in black ink) for the Works.
- 9.1.3 Each item shall be priced by the Contractor. If the Contractor has omitted to price any items in the Schedule of Quantities, the tender will be regarded as non-responsive.
- 9.1.4 Payment for this Contract shall be based on the Schedule of Quantities and the payment will be made in accordance with the rates tendered in the Schedule of Quantities.

The absence of stated quantities in the Schedule of Quantities is no guarantee that none will be required. Reasonable prices should therefore be inserted for every item as these prices may be considered in adjudication of tenders.

The short descriptions of the items in the Schedule of Quantities are for identification purposes only.

9.2 PAYMENT

- 9.2.1 Payment will be based on the areas treated as instructed by the Technical Officer and to which

the Contractor successfully applied the vegetation control measures and has achieved the standard of control defined in Clause 11.2 and 12.

- 9.2.2 No payment will be made for areas where control achieved does not meet the standards of control specified.
- 9.2.3 Measurement and payment for the work completed will be made upon completion of work and inspection by the Technical Officer, a signed copy of the site diary must accompany all invoices.

10 ENVIRONMENTAL REQUIREMENTS

10.1 The Contractor's procedures shall comply with all applicable legislation, Codes of Practice and Local, Regional or Provincial Authorities, including but not restricted to:

- a) The Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act (Act 36 of 1947) as amended.
- b) The Hazardous Substance Act (Act 15 of 1973) as amended.
- c) The Water Act (Act 54 of 1956) and the Water Amendment Act (Act 96 of 1984) (where applicable).
- d) The National Environmental Management Act (Act 107 of 1998).
- e) The National Environmental Management Biodiversity act (Act 10 of 2004).
- f) SABS Code of Practice No. 0206-1985 "Safety procedures for the disposal of surplus Pesticide and associated toxic waste".
- g) Conservation of Agricultural resources Act (Act 43 of 1983) as amended.
- h) Common law of nuisance.
- i) Mountain Catchment Area Act (Act 63 of 1970).
- j) The National Veld and Forest Fire Act (Act 101 of 1989)
- k) National Forest Act, act no. 84 of 1998.
- l) National Environmental Management: Waste Act, Act no. 59 of 2008.

10.2 A comprehensive Environmental Management plan including but not restricted to proof of reasonable measures to minimise impacts on the environment.

10.3 DAMAGE TO FAUNA AND FLORA

- 10.3.1 The Contractor shall always ensure that his/her employees exercise care and consideration for the fauna and flora within and adjacent to the area to be sprayed.
- 10.3.2 The Contractor shall not apply any herbicide of an explosive, inflammable, highly volatile or corrosive nature, which may damage crops vegetation or property or be hazardous to humans or animals. The Contractor shall assume full responsibility for the efficiency and safety of whatever herbicide are used.
- 10.3.3 Dumping or polluting of any kind will not be permitted.
- 10.3.4 The Contractor shall take note of environmentally sensitive areas and shall plan and execute his/her work with the utmost care and responsibility.

11 DEFINITIONS

11.1 **Technical Officer.** Any person appointed by the Project Manager to deputize for him / her in supervising and carrying out the Contract.

11.2 CONTROL

11.2.1 Control is achieved when the following results are visible:

- The vegetation (grass and Invasive Alien Plant Species {IAPs}) including tree saplings must be cut to a height not exceeding 300mm from ground level.
- Trees felled should not be larger than 500mm, and all cut material should be cut into 500mm sizes
- Stump treatment and/or herbicide control will only be applicable on IAPs and where specified by the Project Manager and his/her deputy. Where this method is to be used IAPs will need to be
 - permanently impaired or destroyed by the application
 - All IAPs occurring within the area of treatment cease to exceed 300mm in height.
 - all IAPs (dead or alive) cease to exceed 300mm in height

11.3 Formation is the finished earthworks surface upon which the track is laid.

11.4 Ballast means that part normally consisting of crushed stone, gravel, ash or muck, (the material placed on the formation to support the track superstructure).

12 METHOD OF VEGETATION CONTROL

12.1 The Contractor's methods and program shall provide rapid and effective control in all areas. Techniques and programming employed shall therefore be directed at this aim. The Contractor shall carry out immediate treatment of growth in all instances where rapid and effective control is not achieved during any period of the Contract.

12.2 Any deviation from the method of work submitted as per the applicable returnable document (Clause 9.3) by the Contractor shall be subject to the approval of the Technical Officer.

13 STANDARDS OF WORKMANSHIP

13.1 Vegetation control shall be such that there be no dry or dead remains of vegetation within the areas of control greater than 500mm for trees and 300mm for grass and bush encroachment that constitutes a hazard, hindrance, or danger to Transnet Freight Rail operations. The evaluation of what density of dry or dead growth constitutes a hazard, hindrance, or obstruction shall be made by the Transnet Representative. Suitable areas and/or methods will be agreed to with the Transnet Representative on-site before disposal of cut material.

14 MANUAL REMOVAL OF VEGETATION

- 14.1 For this Contract, the Contractor should timeously acquaint him/herself with the existing conditions of the sites and ensure that his/her tender prices include all work necessary to achieve the required control.

15 REMEDIAL WORK

- 15.1 The Contractor shall carry out remedial work and shall include the removal of dry or dead growth with any dimensions more than 500mm for trees and 300mm for grass and bush encroachment and forming a nuisance or hazard to Transnet Freight Rail operations.

16 GENERAL SPECIFICATIONS

16.1 WORK SPECIFICATIONS

16.1.1 Standard Specifications.

The following standard Specifications will be applicable to this Contract:

SANS 1200A – General

SABS Code of Practices no 0206-1983” Safety procedures for the disposal of surplus pesticides and associated toxic waste.”

16.1.2 The following Transnet Generic Specifications will be applicable to this Contract:

- E4E (August 2006): Safety arrangements and procedural compliance with the Occupational Health and Safety Act, Act 85 of 1993 and regulations.
- E7/1 (July 1998); Specifications for works on, over, under or adjacent to railway lines and near high voltage equipment.

16.2 HEALTH AND SAFETY

16.2.1 The Contractor shall always comply with safety rules, regulations and legislation, as well as Transnet Freight Rail (TFR) Safety Guidelines for Infrastructure (Latest Edition).

16.2.2 The Contractor shall always comply with the Basic Conditions of Employment Act as well as all other relevant labour legislation. The Contractor must conduct his own formal risk assessment to identify all risks. The Contractor is to clearly indicate in his tender submission the processes and procedures he intends to implement to mitigate the total of all these risks: e.g.

- Working with herbicides
- Live OHTE
- Executing work on one line while a normal train service is running on adjacent line/s
- Sanitation and refuse disposal as a threat to the environment.

16.2.3 The Contractor shall be responsible for ensuring the use of only technically competent trained staff on all types of work. This cost is to be borne by the Contractor.

16.2.4 The Contractor shall ensure that all workers are appropriately equipped and wearing Personal Protective Equipment (PPE) and that Safety Talks are conducted and noted in the Site Diary

before the start of every shift.

- 16.2.5 The Contractor shall be responsible for ensuring that site staff are always competently trained regarding Electrical Awareness Training.
- 16.2.6 The Contractor shall be responsible for ensuring that workers working on machines (high-risk areas), operators, machine fitters, area Project Manager's Deputies and Contract 'supervisors' site staff are always competently trained with regards to (AHSI) apply high voltage electrical safety instruction.
- 16.2.7 The Contractor shall also be responsible for ensuring that Contract managers in charge of sites are always competently trained with regards to (AHSI) apply high voltage electrical safety instructions.
- 16.2.8 The Contractor shall ensure that all his employees undergo medical surveillance where required by legislation.
- 16.2.9 Non-compliance with safety requirements will result in an immediate suspension of work without payment.
- 16.2.10 Where training is required by the Contractor, Transnet Freight Rail (TFR) is committed to provide training, the Contractor shall qualify his tender as to what and how many staff, training will be required for. After award of the Contract, the Contractor shall then arrange with the appropriate Transnet Freight Rail (TFR) representative, through the Project Manager's Deputy, for this training / testing.

The following training shall be arranged for the following Contractor's staff:

Course	Objective	Duration & trainer	Grade to attend
A) Awareness (Electrical)	To inform all Contractors staff working near a machine and on the line on electrified sections of the dangerous situations of high voltage OHTE	Two-hour on-the-job lecture and training. Accredited Electrical trainer / Depot's Electrical Supervisor	• All workers and staff working on the Contract

The electrical awareness training must be arranged for beforehand on-the-job.

The electrical educational and competency training may be arranged for at either a depot's lecture room's (Transnet Freight Rail (TFR) property), or at a venue of the Contractor's choice (Contractor's cost).

17. Schedule of Quantities

High Risk Tree Felling and Brush clearing (Including stump and/or herbicide treatment) (15 meters from ballast toe to fence line/15 meters from ballast toe)	Rate/Worklot (300m²) = 7400 worklots	Amount
High Risk Tree Felling and stump treatment: Estcourt - Rushbrook (111,14km) (Year 1)		
Brush Clearing and foliar spray: Estcourt - Rushbrook (111,14km) (Year 1)		
High Risk Tree Felling and stump treatment: Estcourt - Rushbrook (111,14km) (Year 2)		
Brush Clearing and foliar spray: Estcourt - Rushbrook (111,14km) (Year 2)		

16.3 Copy of Standard Operating Procedure for IAPs

Name of Species				
Treatment to be applied (Soil; Aerial; Foliar; Cut Stump)	Name of the herbicide	Equipment to be utilised and size	Rate of application and quantity to be used according to equipment size	Method description details of how herbicide will be applied

16.4 Copy of Site Diary

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