

**PROJECT SPECIFICATION FOR
FIREBREAKS
PART B**

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B1. SCOPE

B1.1 The scope of the work consists of the provision of firebreaks on Transnet Freight Rail property along the rail right of way between the boundary fences in the following sections, according to the schedule of quantities:

- (a) Bank – Welverdiend
- (b) Bank – Millsite part section (+/- 6km)
- (c) Bank – Midway part section (+/- 6km)
- (d) Welverdiend – Lichtenburg part section (+/- 6km)
- (e) Welverdiend – Potchefstroom part section (+/- 6km)

B1.2 This part covers the techniques, required standards of workmanship, inspections, measurement, payment, and acceptability of the works in respect of the provision of firebreaks required in terms of the contract.

B1.3 The essence of the contract is that Transnet Freight Rail requires the provision of firebreaks on Transnet Freight Rail property

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 and applications are in accordance with his/her tender, the relevant legislation and are conducive to the achievement of functional firebreaks. 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.

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

B1.4 The Contractor must obtain his/her own information regarding the extent, occurrence and the species of the vegetation over the work area. He/she must also determine the best method to provide these fire breaks.

B2. DEFINITIONS**B2.1 FIRE BREAKS**

Fire breaks are defined as a strip of ground within Transnet Freight Rail boundary along both fences that has the potential to prevent fires spreading to adjoining property from Transnet property or visa versa, it does not cause soil erosion; and it is reasonably free of combustible material capable of carrying a veldfire across it.

~~TRACER LINES~~

~~Tracer lines are narrow strips of vegetation that has been chemically treated and then burnt to indicate the outer boundaries of the firebreaks. Tracer lines are prepared when the adjoining vegetation is still actively growing~~

B2.2 **Yards** are those areas of shunting yards comprising mainly shunting or staging tracks, paths, roadways, platforms and land adjacent to the above and situated within the station or harbour emplacement. Yards and loops start at the clearance mark of the facing points.

B2.3 **Depots/areas** are those sites where assets such as stores and workshops are located, areas of stacking space, hard standing, buildings, access roads, railway tracks and dumping areas within the railway reserve.

This may also include radio masts, signal equipment, relay stations and electrical sub-stations and other specified areas outside the railway reserves.

B3. METHOD OF PROVIDING FIRE BREAKS

B3.1 The Contractor's methods and program shall provide rapid and effective provision of fire breaks in all areas, but particularly building surrounds, staked cable routes, level crossings, shunting yards and approaches to stations. Techniques, programming and methods employed shall therefore be directed at this aim. The Contractor shall carry out immediate treatment of growth in all instances where rapid and effective firebreak provision is not achieved during any period of the contract.

B3.2 Slashing of burnt material to below the height specified in B4 will be permitted.

B3.3 Firebreak provision in terms of the contract will normally be required in respect of yards, depot, Transnet Freight Rail right of way and ancillary areas, where applicable. The methods employed are as specified by the Contractor per Part A15.1 and are subject to the approval of, and monitoring by the Technical Officer.

Fire break provision methods shall, however, be entirely in accordance with the local Fire Protection Association rules / Local Authority by laws and or National Legislation specifications and recommendations for safe and effective fire breaks.

B3.4 Prior to making firebreaks electrical / signal installations must be protected by making minor firebreaks around such installations and or equipment. The Technical Officer will point out such installations and or equipment.

B3.5 **The making of firebreaks will not** take place if the wind speed exceeds 30 km/h and or if the daily Fire Danger Index (FDI), 10h00 reading and 14h00 reading exceeds the acceptable norm as proposed by the local Fire Protection Officer of the FPA where firebreaks are being provided or if a Prohibition Notices has been issued by the Department of Water Affairs and Forestry or any other competent authority.

B3.6 The contractor will be permitted to work outside normal working hours provided the Technical Officer has been notified at least three working days prior to such working. No firebreaks will be made after 12h00 on Friday until 05h00 the following Monday.

B3.7 Any deviation from the method of work submitted as per clause A15.1 by the Contractor shall be subject to the approval of the Technical Officer.

B3.8 No firebreaks may be made if adjoining property owners have not been informed of the intention to provide firebreaks along a mutual fence. The technical Officer will negotiate with adjoining property owners. If agreement cannot be reach regarding appropriate dates with the adjoining property owner or owners provisions as per Act 101 of 1998 National Veld and Forest Fire Act will prevail.

B3.9 No firebreaks may be made if the contractor is not possession of a written daily burning permit received from the local Fire Protection Officer of the relevant Fire Protection Association. The contractor will be responsible to obtain the daily burning permit.

B4. STANDARDS OF WORKMANSHIP

B4.1 Standard of firebreaks shall be such that:

- it is wide enough but not less than 5 meters measured inward from the boundary fences and long enough to have a reasonable chance of preventing a veldfire from

spreading to or from adjoining property, and

- in station areas the width will not be less than 10 meter measure inward from the boundary fences
- it does not cause soil erosion; and
- it is reasonably free of combustible material capable of carrying a veldfires across it.

B5. PROGRAMME OF WORK

- B5.1 The Contractor shall undertake the planning and programming of the entire firebreaks provision 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 burning season as the case may be.
- B5.2 The particulars to be provided in respect of the Contractor's tracer lines, minor fire breaks around electrical and or signal installations and firebreaks provision operation shall include but not be limited to the following:
- B5.2.1 An assessment, based on a proper site investigation of the nature and types of vegetation to be controlled in the contract area,
- B5.2.2 The appropriate methods and procedures to be implemented by him/her to achieve the standards of vegetation control required in terms of the contract,
- B5.3 In addition to the initial programme provided for in terms of B5.1. the Contractor shall submit daily working programmes to the Technical Officer, 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 Contractor's performance, may result in payment for such work being withheld.

B6. PERFORMANCE MONITORING AND EVALUATION

- B6.1 The Contractor shall at all times be responsible for supervision of the work and for follow-up inspections to monitor the successful control achieved over areas of completed. He/she shall immediately take appropriate remedial action in areas where the specified standards of control are not achieved.
- B6.2 The Technical Officer shall at any time during the programme periods carry out inspections of the Contractor's performance methods and procedures.
- B6.3 The Technical Officer will during fire breaks programme carry out **one** official inspections of the work for the purpose of measuring progress and evaluating whether control, as defined, has been achieved. The inspection shall be performed visually and the Contractor shall be present or forfeit his/her right to dispute the measurements and evaluation of the Technical Officer.
- B6.3.1 The inspection shall be done after completion of the firebreaks and after the Contractor has notified the Technical Officer that he/she has inspected the work and that the work has been completed.
- ~~B6.3.2 The second and final inspection of the season will be carried out after completion of the Contractor's firebreaks programme and after he/she has notified the Technical Officer that he/she has inspected the work and that all firebreaks are in place. This inspection may be brought forward.~~
- B6.3.3 During these inspections the worklots treated will each be measured and evaluated. A worklot

that does not comply with the specified level of control will be recorded as a “rejected worklot”.

- B6.4 The rejection of worklots that do not comply with the standard of control for individual worklots will be final and valid for that inspection in that particular year.

The rejection by the Technical Officer of work performance may be contested by the Contractor only at the time and place of rejection.

The rejection of a worklot at a particular inspection shall remain final for that inspection for payment purposes.

- B6.5 In the case where the Technical Officer and the Contractor fail to agree on whether a worklot has failed, the worklot shall be recorded as a “disputed worklot” and the Contractor shall prepare an appropriate record of all disputed worklots in order that such disputes may be resolved by way of the disputes resolution procedures stipulated in the General Conditions of Contract for Maintenance Works, E.5 (MW).

B7. REMEDIAL WORK

- B7.1 The Contractor shall carry out remedial work to all worklots where control has not been achieved, prior to the official inspections in terms of clause B6 taking place. Such remedial work shall include the removal of dry or dead growth with any dimensions in excess of 150mm and forming a fire hazard to Transnet Freight Rail Operations or adjoining property.

- B7.2 Slashing of burnt vegetation will be allowed on its own as a remedial action subject to the conditions stipulated in clause B3.

- B7.4 Fire may be used as a method of vegetation control or as a method of remedial action.

B8. DAMAGE TO FAUNA AND FLORA

- B8.1 The Contractor shall ensure that his/her employees at all times exercise care and consideration for the fauna and flora within and adjacent to the work area.

- B8.2 The Contractor shall not apply any chemicals 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 chemicals are used.

- B8.3 Dumping or polluting of any kind will not be permitted. This stipulation is also applicable to the washing out of tanks and equipment containing harmful chemicals and pollutants.

The Contractor shall institute and maintain procedures for the safe disposal of all chemicals and residual materials originating from the execution of the works.

Containers and residual material shall not be disposed of on Transnet Freight Rail property or as part of Transnet Freight Rail refuse.

- B8.4 The Contractor shall take particular note of environmentally sensitive areas and shall plan and execute his/her work with the utmost care and responsibility.

B9. MEASUREMENT AND PAYMENT

- B9.1 Payment will be based on the numbers of worklots 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 B4.1.

- B9.2 No payment will be made for rejected worklots where control achieved does not meet the

standards of control specified.

B9.3 Measurement and payment for the work completed will be made in 1 stage as follows:

~~B9.3.1 After completion of the tracer lines and minor firebreaks of the entire contract area the Technical Officer or his deputy and the Contractor will measure the work performed. The Contractor will thereafter receive payment at 20% of the rates tendered for all of the completed work.~~

B9.3.2 A measurement and evaluation will be made concurrent with the official inspection conducted in accordance with clause B6.3.1. The Contractor will thereafter receive payment at 100% of the rates tendered for all work where control as specified has been achieved.

B9.3.4 The rates and prices tendered in the Schedule of Quantities and Prices are composite and shall be fully inclusive of all the Contractor costs in respect of establishment on site, labour, materials consumables, Head Office overhead costs, the Contractor's profit, for all delay and consequential costs and for everything of whatever nature required of the Contractor for completion of the work included in the Contract.

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