

ANNEXURE 1 - SPECIFICATION / SCOPE OF WORK

1. PREAMBLE

In line with the Prasa strategic objective, Operational effectiveness, PRASA RAIL – Infrastructure department aims to achieve continuous Perway service improvement and reliable track network. This can be achieved through the management and control of vegetation in Prasa rail Lines consisting of railway lines, yards, signal relay rooms, stores, and substations.

2. BACKGROUND INFORMATION

2.1. STATUS QUO

PRASA requires the initially eradication of all declared weeds and invader plants as listed in Categories 1, 2, and 3 of the Conservation of Agricultural resources act, act 43 of 1983 (CARA) for a 12-month period, to the extent that the areas treated in terms of the contract are free of any declared weeds and invader plants.

PRASA RAIL Gauteng Region (Permanent way) has identified the need to control vegetation including noxious weeds by means of chemical herbicides, cutting of vegetation and have selected trees felled where it will have an impact on maintaining a safe and reliable train service within the railway servitude in the Gauteng region.

2.2. PROBLEM STATEMENT

Unmanaged vegetation impact on the rendering of a safe and reliable train service and damage infrastructure.

To conform to Government legislation section 4 of the Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983). Vegetation along the railway tracks, cable runs, yards, substations, stores, and relay-rooms must be controlled as this vegetation poses a fire hazard to infrastructure and safety to personal and train operations.

2.2.1 TREES CAN POSE THE FOLLOWING HAZARDS:

- 2.2.1.1 Large trees can be uprooted in storms, or the stems can burn through in veld fires causing the tree to fall onto the railway lines damaging the OHTE and disrupting train service.
- 2.2.1.2 The rapid growth of new saplings can encroach in the safe clearance and obstruct signal visibility.
- 2.2.1.3 Dense tree groves pose a fire hazard, conceals criminal activity and poses a hindrance to maintenance activities.

2.2.2 VELD GRASS CAN POSE THE FOLLOWING HAZARDS:

- 2.2.2.1 Grass poses a fire hazard to signal cables, and rail infrastructure and contributes to a disruption in train service.
- 2.2.2.2 Dense veld creates a springboard for criminal activity, and facilitates cable theft, loss and damage to infrastructure.
- 2.2.2.3 Unmanaged areas contravene local Municipal bylaws pertaining to the cutting of vegetation and poses a hazard to adjacent property.
- 2.2.2.4 The Town Councils are demanding more frequent cutting cycles to maintain aesthetics within the urban environment.
- 2.2.2.5 Dense vegetation impacts on rapid maintenance activities.

2.2.3 CHEMICAL WEED CONTROL

- 2.2.3.1 Vegetation along the tracks, cable routes, Yards, substations and relay-rooms must be controlled as this vegetation poses a fire hazard to infrastructure and safety to personal and train operations.

PICTORIALS



Fig 2.1: Trees falling on OHE



Fig 2.2: Trees encroaching on railway lines



Vegetation poses fire hazard



Vegetation poses fire hazard



Overgrown vegetation on railway tracks.

3. OBJECTIVES OF THE PROPOSED PROJECT

3.1 DESIRED OUTCOMES FOR CARRYING OUT THE PROPOSED PROJECT

- 3.1.1 The project aims to restore the Perway infrastructure to enable the rail reserve to be a weed free environment, free of weeds that can damage the ballast formation and causes mud holes and drainage problems on the track.
- 3.1.2 For PRASA rail reserve to be a clean, neat and hazardous free environment so that the company can run trains at an optimal schedule with no delays caused by fires or trees that interfere with the OHTE lines and signals. Sections which are critical will be addressed first and the rest will be attended to according to priority.

3.2 PROJECT BENEFITS TO PRASA

Minimal or no train delays caused by trees and veld fires damaging infrastructure, as well as conforming to the legal CARA act 43 of 1983.

3.3 CURRENT MECHANISMS IN PLACE TO ADDRESS THE PROBLEM

There is no mechanism in place to address the problem due to non-award of a long-term vegetation control contract. Perway is currently using in-house maintenance teams to cut vegetation and trees which is not sustainable as the same personnel are also carrying out their day-to-day maintenance schedule.

4. SCOPE OF WORK AND AREAS OF FOCUS

4.1 SCOPE OF THE DESIRED SOLUTION

PRASA RAIL intends to control vegetation along the rail reserve, tracks, cable routes, yards, substations, and relay-rooms within the following lines: IN PRASA RAIL GAUTENG

4.2 DETAILS ON THE PREFERRED SOLUTION

The scope of work required, is for the service provider to provide horticultural services. The contract will be valid for a period of three (1) years, the contracted service provider will fulfil the contract on an “as and when” required basis in line with the demand and Perway operational requirements, respectively.

4.3 AREA TARGETED BY THIS PROJECT

The place of work shall be **PRASA RAIL GAUTENG**

4.4 EXTENT AND COVERAGE OF THE PROPOSED PROJECT

The project will be on an “as and when required”, along railway lines, yards, substations, relay rooms, stores, and cable runs.

4.5 OTHER RELATED PROJECTS

4.5.1 Cleaning of rail reserve.

5. SPECIFICATION OF THE WORK OR PRODUCTS OR SERVICES REQUIRED

5.1 VEGETATION CONTROL AND TREE FELLING

- 5.1.1 This specification covers the chemical weed control, grass cutting and tree felling in Prasa Gauteng
- 5.1.2 The Contractor shall do the work as directed by the Project Manager or his/her delegated assistant and in accordance with the specifications set out in this tender/contract document.
- 5.1.3 PRASA RAIL intends to control vegetation along the rail reserve, tracks, cable routes, yards, substations, and relay-rooms.
- 5.1.4 The tendered prices shall consider all machines, plant and consumables required for the proper completion of the work.

5.2 SPECIFICATION OF PROPOSED WORK PROCESSES

- 5.2.1 PRASA requires the application of herbicides, cutting of all Grass and Trees and invader trees as listed in Categories 1, 2, and 3 of the Conservation of Agricultural resources act 43 of 1983 (CARA).
- 5.2.2 The contract shall have a proven record of wide experience in chemical eradication and the use of herbicides in Southern Africa and have the proper understanding of safe tree felling and grass cutting.
- 5.2.3 The Contractor's procedures for the procurement, storage, handling, transportation, application, and general use of chemicals shall comply with all applicable legislation, Codes of Practice and Local, Regional or Provincial Authorities, including but not restricted to:
 - 5.2.3.1 The Fertilisers, Farm Feeds, Agricultural Remedies and Stock Remedies Act (Act 36 of 1947) as amended.
 - 5.2.3.2 The Hazardous Substance Act (Act 15 of 1973).
 - 5.2.3.3 The Water Act (Act 54 of 1956) and the Water Amendment Act (Act 96 of 1984) (where applicable).
 - 5.2.3.4 The Environmental Conservation Act (Act 73 of 1989).
 - 5.2.3.5 SABS Code of Practice No. 0206 - 1985 "Safety procedures for the disposal of surplus pesticide and associated toxic waste".
 - 5.2.3.6 National Environmental Management, Act No. 107 of 1998
- 5.2.4 The Contractor's authorised representative shall be a registered Pest Control Operator, specialising in the field of industrial weed control only and registered in terms of the Farm Feeds Agricultural and Stock Remedies Act, Act 36 of 1947 as amended. A registered Pest Control Officer shall be in direct control of work taking place on site.
- 5.2.5 Proof of registration as a Pest Control Officer in the field of (Industrial Weed Control) shall be submitted with the tender document.

NB!!!Only valid PCO certificates in industrial weed control will be accepted and if expired a letter from the department of Agriculture must be submitted to show the certificate is in the process of been issued.

5.3 HERBICIDES AND OTHER CHEMICALS

- 5.3.1 The Contractor shall provide safe and secure storage facilities for all herbicides or chemicals brought onto, and in use on site.
- 5.3.2 Such facilities shall be capable of ensuring that unauthorised persons or animals cannot gain access to such chemicals.
- 5.3.3 A list of registered Herbicides to be used in Industrial weed control only, supported by specimen labels.
- 5.3.4 A full list of declared weeds and invader plants as listed in Categories 1, 2, and 3 of the Conservation of Agricultural resources act, act 43 of 1983 (CARA) is available on the department website.
- 5.3.5 A list of herbicides to be used must be completed in full.

5.3.5.1 Trees and hard woods (Triclopyr) (Pyridyloxy Compound).

Picloram (pyridine carboxylic acid)

Trade name (Label name) _____

Generic name _____

Registration number _____

Ingredient (type and content) as shown on the label _____

Application rates, _____

Application rates, and fields of use. _____

Weeds, Grass and Shrubs Foliage Application (Glyfosate not less than 360g/l active)

Trade name (Label name) _____

Registration number _____

Ingredient (type and content) as shown on the label _____

Application rates, and fields of use. _____

Weeds, Grass and Shrubs(Pre emerging ground sterilant) in Combinations of Bromacil-Tebuthiuron-Simazine-Terbuthylazine-Duiron-Imazapyr as per product label

Trade name (Label name) _____

Generic name _____

Registration number _____

Ingredient (type and content) as shown on the label _____

Application rates, and fields of use. _____

5.3.6 A description of the methods to be used for tree felling must be provided.

This must include the following:

5.3.6.1 The description and rate of application of chemicals.

5.3.6.2 Precautions to be taken to prevent damage of adjacent structures.

5.3.6.3 The type and method of use of the proposed equipment and any other relevant information.

5.3.6.4 The description and rates of application submitted shall serve as the minimum basis for estimating performance and vegetation control by the Contractor.

5.3.6.5 The herbicides specified shall be used as the basis for evaluating the efficacy of the Contractor's proposed method of work.

5.3.6.6 The work programme. This will be used for evaluation purposes and monitoring of work.

5.3.6.7 A certified copy of a valid certificate issued by the Department of Agriculture to certify that the tenderer or his/her representative is a pest control operator in industrial weed, in terms of Act 36 of 1947, as stipulated under clause must be submitted.

5.4 DEFINITIONS

5.4.1 **CARA Legislation:** It pertains to The Conservation of Agricultural resources Act, Act 43 of 1983.

5.4.2 **Declared weeds:** Is all species as listed in category 1 of the CARA Legislation, refer to The Conservation of Agricultural resources Act, Act 43 of 1983.

5.4.3 **Invader plants:** Is all species as listed in category 2, and 3 of the CARA Legislation, refer to The Conservation of Agricultural resources Act, Act 43 of 1983.

5.4.4 **Spraying:** means the even and uniform application of chemical herbicides at the rate specified and applies to liquid, granular or any other formulation.

5.4.5 **Technical Officer:** is the PRASA Project Manager, his/her appointed deputy or any person lawfully acting in that capacity.

5.4.6 **Area for invader plants only:** Is a subdivision of any area on which the Contractor shall control trees and grass, it shall be measured in "worklots", a worklot is an area measuring 7500m².

5.4.7 Provisional area for invader plants only comprises the removal of cut vegetation from site.

NB: The rendering of this type of service is not necessarily required during the contract, provision has only been made should the need arise for this type of service.

Apart from the stipulation that provisional work may not necessarily be required, all other contract conditions shall apply mutatis mutandis to provisional work.

5.4.8 **Remove:** comprises moving the entire felled tree from the site and dumping it at a registered municipal dump or other specified area.

5.4.9 **Move:** comprises moving the felled trees to an area determined by the Project Manager where this material will not pose a hindrance, obstruct drainage systems, or present a fire hazard.

5.4.10 **Control:** Is achieved when all existing or potential growth of vegetation is permanently impaired or destroyed by the application and effects of chemical herbicides, to the extent that:

The constituent parts of all plants occurring within the area of treatment (area in m²) cease to exist as living organisms or entities; and the development of new growth of plants from dormant seeds is effectively counteracted or suppressed, for at least the growing season of the year in question; and

There are no dead or dry remains of any vegetation within the treated area (area in m²) which may constitute a hazard, danger, or hindrance to PRASA personnel, equipment trucks or operations.

Control constitutes a process or situation where the destruction of vegetation on treated areas occurs on an on-going basis and not only at the time of measurement and payment inspections.

5.4.11 An area (measured in m²): is a subdivision of any area on which the contractor shall control vegetation.

5.4.12 In yards, depots/areas where control is required area may be irregular in shape.

For inspection and payment purposes, area shall be physically measured where necessary. In such instances the Project Manager or his/her delegated assistant shall decide in advance and advise the Contractor accordingly, of the method of measurement to be adopted in any area.

5.4.13 In yards, depots/areas area will normally be measured parallel to the main direction of the track work present, or parallel to the main axis of any other area. Area will not be measured individually in different directions but will form part of a pattern of continuous and parallel area covering, in the most effective manner possible, the surface of any area.

5.4.14 **An area for cable routes:** will normally be areas of 1.5m wide on both (left and right) sides and parallel to the cable route and 500m long.

5.4.15 **An area for the eradication of declared weed and invader plants:** will be an area measuring 7500m² referred to as a worklot

5.4.16 **Formation:** is the finished earthworks surface upon which the track is laid.

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

5.4.18 **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 emplacement. Yards and loops start at the clearance mark of the facing points.

5.4.19 **Depot's 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.

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

5.4.20 **Declared weeds** means noxious plants proclaimed under the Conservation of Agricultural Resources Act, Act No. 43 of 1983 (C.A.R.A.), as listed in Government Gazette No. 9238 or amendments thereto.

5.4.21 **PCO CERTIFICATE:** Is a pest control operators certificate issued by the Department of Agriculture

5.5 METHOD OF WORK

5.5.1 The scope of work requires a combination of tree felling and cut-stump treatment with herbicides, felling tall herbaceous growth (i.e., grasses, reeds and succulents) with brush cutters, and foliar application of herbicides to low growing weeds, grasses and herbaceous growth.

5.5.2 The Contractor's methods and program shall provide rapid and effective control in all areas.

5.5.3 Priority areas for rapid and effective control include building surrounds, staked cable routes, level crossings, shunting yards, and approaches to stations.

5.6 STANDARDS OF WORKMANSHIP

5.6.1 STANDARD OF VEGETATION CONTROL FOR INDIVIDUAL WORK

5.6.1.1 Tall growth comprising trees, weeds and CARA shall be carefully and safely felled.

The branches and stems must be cut up into one meter pieces, which must be spread out and left on site unless otherwise stated, the remaining stump shall be cut off to a maximum height of 30 cm above ground level and left in situ, all branches and stems shall be moved away from drainage systems where present.

5.6.1.2 The remaining stumps shall be treated immediately after being cut with a registered herbicide, as stated at the manufacturers recommended dosage, to prevent re-growth.

5.6.1.3 The contractor shall apply extreme care when working near live high voltage power lines, railway tracks, and bordering private property.

5.6.1.4 The Contractor shall implement safe working practices and precautions to safeguard his/her personnel and prevent damage to infrastructure.

5.6.1.5 The Contractor shall follow and abide by the prescriptions as specified in the E7/2 (Specifications for works on, over, under, or adjacent to railway lines and near high voltage equipment, where applicable.)

5.6.1.6 In the case of the foliar application of herbicides, the herbicide shall be carefully applied to the target species to prevent damage to desirable vegetation, at the manufacturers recommended dosage and means of application.

5.6.1.7 The Contractor shall appoint a responsible representative at the site, who shall be present while the works is in progress and ensure that safe working practices are implemented.

5.6.2 OVERALL CONTROL

5.6.2.1 The overall standard of control to be achieved by the Contractor over the contract area, is defined as "Overall Control" and expressed as a percentage, will be 90% for the entire contract area.

5.6.2.2 Failure by the Contractor to achieve the standard of "Overall Control" shall constitute a material breach of contract by the Contractor, which will entitle the Executive Officer to act in terms of the General Conditions for Minor Works 287.

5.7 PERFORMANCE MONITORING AND EVALUATION

5.7.1 The Contractor shall always be responsible for supervision of the work and for follow-up.

5.7.2 The Project Manager or his/her delegated assistant shall at any time during the cutting periods carry out inspections of the Contractor's performance methods and procedures.

5.7.3 The Project Manager or his/her delegated assistant may at any time take samples of the chemicals applied and arrange for the testing thereof.

5.7.4 Where test samples fail to conform to the specifications the costs of testing will be recovered from the Contractor, and he/she will be ordered by the Project Manager or his/her delegated assistant to re-treat entire area or sections where such chemicals were applied.

5.8 INSPECTIONS: GRASS CUTTING TREE FELLING

5.8.1 Tree felling will be based on the Schedule of prices where the Contractor successfully applied the vegetation control measures and has achieved the standard of workmanship defined.

5.8.2 Cutting of vegetation will be based on the Contractor's rate per m² as stated in the Schedule of quantities and prices.

5.8.3 Photograph of before and after the work commence with actual references of same area and date stamp on Photos must be submitted as proof with every invoice submitted.

5.9 REMEDIAL WORK

5.9.1 The Contractor shall carry out immediate remedial work to all area where control has not been achieved.

5.9.2 Such remedial work shall include foliar application and the felling and application of tree killers to stumps where re-growth has occurred as well as the removal or moving of dry or dead growth forming a nuisance or hazard to PRASA rail Operations, from the treated area.

5.9.3 Failure on the part of the contractor to take immediate remedial action will result in the application of penalties as specified in the contract.

5.9.4 In the case of inaction or non-conformance by the Contractor, PRASA rail reserves the right to implement remedial action and recover the cost from the contractor.

5.9.5 The felling of re-growth will not be allowed on its own as a remedial action and a tree killer shall be re-applied.

5.10 DAMAGE TO FAUNA AND FLORA

5.10.1 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.

- 5.10.2 The Contractor shall take the presence of drainage works within the work area into account and shall ensure that no waterborne movement of herbicides is possible.
- 5.10.3 The Contractor shall not apply any chemical of an explosive, inflammable, highly volatile or corrosive nature, which may damage crops, vegetation or property or be hazardous to humans or animals.
- 5.10.4 The Contractor shall assume full responsibility for the effectiveness and safety of whatever chemicals are used.
- 5.10.5 Illegal dumping or pollution of any kind will not be permitted.
- 5.10.6 The stipulation is also applicable to the washing out of tanks and equipment containing harmful chemicals and pollutants.
- 5.10.7 The Contractor shall institute and maintain procedures for the safe disposal of all chemicals and residual materials originating from the execution of the works.
- 5.10.8 Containers and residual material shall not be disposed of, on PRASA property.
- 5.10.9 The Contractor shall take note of environmentally sensitive areas and shall plan and execute his/her work with the utmost care and responsibility.

5.11 GRASS CUTTING AND TREE FELLING

- 5.11.1 For tree felling, payment will be based on the Schedule of prices where the Contractor successfully applied the vegetation control measures and has achieved the standard of workmanship defined.
- 5.11.2 No payment will be made where control does not meet the standards of control specified.
- 5.11.3 For cutting of vegetation payment will be based on the Contractor's rate per m² as stated in the Schedule of quantities and prices
- 5.11.4 No payment will be made for rejected areas where control achieved does not meet the standards specified.
- 5.11.5 Payment of rejected areas will be withheld until prescribed standards of workmanship has been achieved.
- 5.11.6 Photograph of before and after the work commence with actual references of same area and date stamp on Photos must be submitted as proof with every invoice submitted.

5.12 WORK SUPERVISION AND PROTECTION ON SITE

- 5.12.1 The Contractor shall provide a Pest Control Operator (registered in terms of the Farm Feeds Agricultural and Stock Remedies Act, Act 36 of 1947 as amended) to supervise vegetation control works.
- 5.12.2 The Contractor shall also provide his/her own qualified flagmen for the protection of the work site (at least 3 flagmen per site) - with valid flagmen certificate's (as required by PRASA Rail)
- 5.12.3 Flagmen must be officially trained, evaluated, and certified competent, (TETA -ASSR 463972 (Accreditation no: TETA 1186) and Transnet 407 – Item Number 37/270451 - "Certificate of Competency") by a designated competent person, before being used on protection duties. This certificate of competency shall remain valid for two (2) years only after, which re-testing and re-certification of competency will be required.
- 5.12.3 It is the responsibility of the contractor to provide security on site for equipment, material, and personnel for the duration of the contract.

5.13. RECTIFICATION OF SUB-STANDARD WORK

- 5.13.1. The contractor shall rectify all sub-standard work within five (5) days on his/her own cost.
- 5.13.2. The Project Manager or his/her delegated assistant will inspect all work done and payment will only be made for work that conforms with to the work specification.
- 5.13.3. Sub-standard work will not be paid.

5.14. PLANT, TOOLS, AND EQUIPMENT

- 5.14.1. The Contractor shall supply all plant, tools and equipment required for and during the execution of the work.
- 5.14.2. All tools are to be in good working condition according to Act 85 of 1993.
- 5.14.3. The correct equipment shall be used e.g., brush cutters, chainsaws, knapsack sprayers.
- 5.14.4. The quality of all tools and equipment to be used shall be specifically pre-approved by PRASA Rail
- 5.14.5. The Contractor shall supply, maintain and operate all labour, equipment and materials

associated with the work.

5.15. GENERAL

- 5.15.1. Should any damages been caused to any assets of Prasa Rail by the contractor during the execution of his/her duties, it will be recovered from the contractor's account.
- 5.15.2. These quantities must be recorded and signed by both parties in the triplicate site book provided by the contractor.
- 5.15.3. The original must be handed to the Project Manager or his/her delegated assistant, one copy will be for the contractors' records and the third to stay in the site book.

5.16. CONTRACT AREA

- 5.16.1. The contract area will be within the Gauteng Region.
- 5.16.2. PRASA will provide the Contractor with a preliminary working program.
- 5.16.3. The Project Manager or his/her delegated assistant will also arrange for a depot planning meeting one week in advance of site occupation and of any plant and machinery arriving on a particular site.
- 5.16.4. This meeting will involve all the local stakeholders and production aspects of all work required for the control of vegetation.
- 5.16.5. Meeting discussions will be recorded by means of the official meeting minutes.

5.17. HOURS OF WORK / OCCUPATION PERIOD

- 5.17.1. The site will be available to the contractor all the time where trains are not operational, and it will be of the contractor's discretion to utilize this time efficiently in order to finish work within the approved time frames.
- 5.17.2. Some work will take place on weekdays, Mondays to Fridays between 09h00 to 15h00 and weekends and public holidays from 06h00 to 17h00 where lines are operational.
- 5.17.3. Occupations between trains will be allowed for preparation and finalizing work relating to felling of trees close to the OHTE equipment.
- 5.17.4. The successful contractor will indicate the number of occupations required to successfully complete the contract.
- 5.17.5. The contractor shall conform to the duration of occupations as indicated by the notices and the Project Manager or his/her delegated assistant.

5.17.6. Occupation time used by the contractor more than the maximum specified occupation time will not be paid against overtime rates, unless:

5.17.7. The Project Manager or his/her delegated assistant agrees on it in writing prior the start of the occupation.

5.18. PROJECT SCHEDULE / PROGRAM

5.18.1. Bidders shall submit with their tender a detailed method statement and sequenced program of how they propose to execute the work.

5.18.2. This shall include details of a number and grades of staff, plant, tools, and equipment that he/she intends using for the duration of appointment.

5.18.3. On award of the tender the Contractor's first task under the contract shall be to agree with the Project Manager or his/her delegated assistant on the final work program to be followed and this must be done within 7 (seven) days from date of award.

5.19. DURATION OF CONTRACT

5.19.1. The Contractor shall be able to commence work within two (2) weeks once all necessary documentation and application for site occupation have been completed.

5.19.2. The Project Manager or his/her delegated assistant will issue the contractor with a written site access certificate to commence his/her work.

5.19.3. PRASA Rail reserves the right to extend the period if occupations are not granted as requested.

5.19.4. The Contract duration will be thirty-six (36) Months as and when required.

5.20. ESTABLISHMENT OF PLANT AND MACHINERY ON SITE

5.20.1. The contractor shall deliver the plant and machinery, in operational condition with maintenance crew, operator crew labour and consumables (diesel, lubricants, etc.) to the initial place of work as directed by the Project Manager or his/her delegated assistant.

5.20.2. This time shall not be regarded as travelling time.

5.21. TO BE PROVIDED BY PRASA

5.21.1. PRASA Rail (in cooperation with the contractor) will arrange for the occupations during which the project will take place.

5.22. TO BE PROVIDED BY CONTRACTOR

5.22.1. The contractor shall in addition to what is stipulated in the Conditions of Contract, also supply the following:

5.22.2. The contractor to provide a site diary or instruction book (in triplicate form) to record any incidents or instructions as well as progress of the work done.

5.22.3. The contractor to provide a logbook or a daily works book (in triplicate form), where he/she shall record the number of personnel on site, trucks, machinery, and equipment used, and a detailed description of work carried out daily.

5.22.4. All equipment, tools, and labour that he/she shall need to successfully complete the project.

5.22.5. Neither of the books should be removed from the site without the permission of the Project Manager or his/her delegated assistant. The original copies of pages from both books shall be delivered to the Project Manager or his/her delegated assistant on a weekly basis.

5.22.6. The Contractor shall do a pre-inspection of work daily for the purpose of planning for each working activity.

5.22.7. The pre-inspection shall include determining the exact material required for each daily task as per the approved working program as well as determining other preparation aspects to be attended by PRASA Rail for the successful completion of each planned task.

5.22.8. The Contractor will have to ensure he/she is familiar with the specifications within this contract documents.

5.23. MEASUREMENT AND PAYMENT

5.23.1. Claims for payment will only be made monthly and successful invoices will be paid within 30 days of approval.

5.23.2. Any rejected or incomplete work will not be paid.

5.23.3. All rates in the schedule of quantities must be made per unit of measure as described under "Measurement and Payments clause."

5.23.4. The tendered rates must all be in South African Rand and VAT inclusive.

5.23.5. The rate quoted by the Tendered and accepted by PRASA Rail is subject to price adjustment in accordance with the formula described in 5.23.6 will be applied to allow for all increases or decreases in production costs of a product, from any cause whatsoever, which may occur after the closing date of the submission of tenders and before the date of completion. The factor shall be rounded off to four decimal places.

5.23.6. The contract price adjustment factor shall be -

$$(a \frac{At}{Ao} + b \frac{Bt}{Bo} + c \frac{Ct}{Co} + d \frac{Dt}{Do} + e \frac{Et}{Eo} + . + . - 1)$$

5.23.7. *Ao, Bo, Co, Do, Eo, etc are respectively labour, machinery, material, energy, etc (production factors) indices ruling for the calendar month two (2) months prior to closing date of the tender.*

5.23.8 *At, Bt, Ct, Dt, Et, etc are respectively labour, machinery, material, energy, etc ruling for the calendar month two (2) months prior to the date of annual price adjustment.*

5.23.9 $a + b + c + d + e + . + . = 1$

5.23.10 The indices to be used shall be those for the Consumer Price Index, Production Price Index, SEIFSA as obtained from the monthly Statistical News Release published by STATS South Africa or SEIFSA.

5.23.11 *The Tenderer shall with his tender submit a breakdown of the production factors per product and the applicable index and relevant table in that index.*

5.23.12 Price shall be firm for the first 12 months calculated from the date of tender. Price adjustment shall there-after only be allowed bi-annually.

5.23.13 Adjustments shall not be effective until accepted by PRASA.

5.23.14 A period of not less than 60 days calculated from the date of application is required by PRASA to consider any increase in prices.

5.23.15 **ITEM 1: VEGETATION CONTROL. Unit. Square Meter**

5.23.15.1 Payment will be based on the numbers of area treated and controlled successfully maintained at areas instructed by the Project Manager or his/her delegated assistant and to which the Contractor successfully applied the vegetation control measures and has achieved the standard of control defined.

- 5.23.15.2 Photographic evidence will be supplied in the form of a photograph of before work commence and after completion of work.
- 5.23.15.3 The photographs must have a clear date stamp on when it was taken as well as exact references to area with mast locations for identification.
- 5.23.15.4 No payment will be made for rejected work that does not conform with the required standard.
- 5.23.16 **ITEM 2: TREE FELLING.** **Unit: Each**
- 5.23.16.1 Payment will be based on the numbers of trees attended to at areas instructed by the Project Manager or his/her delegated assistant.
- 5.23.16.2 Photographic evidence will be supplied in the form of a photograph of before work commence and after completion of work.
- 5.23.16.3 The photographs must have a clear date stamp on when it was taken as well as exact references to area with mast locations for identification.
- 5.23.16.4 No payment will be made for rejected work that does not conform with the required standard.
- 5.23.17 **ITEM 3: CUTTING OF VELD GRASS** **Unit. Square Meter**
- 5.23.17.1 Payment will be based on the numbers of area treated and controlled successfully maintained at areas instructed by the Project Manager or his/her delegated assistant and to which the Contractor successfully applied the vegetation control measures and has achieved the standard of control defined.
- 5.23.17.2 Photographic evidence will be supplied in the form of a photograph of before work commence and after completion of work.
- 5.23.17.3 The photographs must have a clear date stamp on when it was taken as well as exact references to area with mast locations for identification.
- 5.23.17.4 No payment will be made for rejected work that does not conform with the required standard.

5.24. PAYMENT CERTIFICATE

- 5.24.1. On or after the assessment date, the Project Manager or his/her delegated assistant and the Contractor will together assess the quantities of the progress on each item in the Bill of Quantities.
- 5.24.2. The Contractor shall then submit a VAT invoice, a statement and supporting documents and proof of work done.

5.24.3. Contractor to provide the Employer with the necessary details regarding banking details to enable the Employer to make electronic payments.

5.25. PRICING OF THE WORKS

5.25.1. The contractor shall make provision for the costs (direct or otherwise) associated with works on, over or adjacent to railway lines.

5.26. PENALTIES

5.26.1. If the Contractor fails to complete the Services within the time stipulated in this Contract for completion of Services or a part or portion of Services, the Contractor shall be liable to the Employer for an amount calculated at 0.05% of the Contract Price per delayed Day per order, which shall be paid for every day which shall elapse between the time for due completion and completion of the relevant Services. However, the total amount due under this sub-clause shall not exceed the maximum of 10% of the Contract Price.

5.26.2. The imposition of such penalty shall not relieve the Contractor from his/her obligation to complete Services or from any of its obligations and liabilities under the Contract,

5.26.3. PRASA may set off or deduct from the fees due to the Contractor any penalty amounts due and owing by the Contractor in terms of clause 5.26.1

5.26.4. The following penalties will be recovered from the Contractor for delays to PRASA train as described above:

5.26.4.1. Each train R2500,00 per hour or part thereof - maximum of R22 500,00 per day.

5.27. OVERALL STAFFING AND KEY PROFESSIONAL STAFF

5.27.1. PROFESSIONAL TECHNICAL STAFF REQUIREMENTS

The appointed Contractor will be required to provide qualified and experienced professional staff with the following key professional expertise:

- 5.27.1.1 Pest Control operators with valid PCO certificates.
- 5.27.1.2 Railway – Flagman
- 5.27.1.3 Chainsaw operators with valid certificates
- 5.27.1.4 Brush cutter operators with valid certificates

5.27.2 PROFESSIONAL BODY REGISTRATION

5.27.2.1 Registrar Act 36 of 1947 (PCO REGISTRATION)

5.27.2.2 PEST CONTROL OFFICER

The desired minimum qualifications for the PCO are as follows:

- Pest Control Officer (PCO) certificates in industrial weed control
- Minimum of 3 years of post-professional experience.

5.27.2.3 RAILWAY – FLAGMAN

The desired minimum qualifications for the Railway – Flagman are as follows:

- Valid and recognised Railway – Flagman certificate.
- A minimum of 3 years' experience.

NB: A minimum of three qualified railway flagmen shall be deployed for each occupied section.

5.27.3 TEAM COMPOSITION

5.27.3.1 The Contractor shall ensure that he/she has a complete team's composition for any Vegetation control work.

5.27.3.2 No work shall commence before this Vegetation control teams is complete and arrangements for this team must be done prior to the commencement of the works to minimize delays.

5.27.3.3 The Vegetation control teams composition is comprised of the following:

5.27.3.3.1 Two chainsaw operators,

5.27.3.3.2 Three Flag men

5.27.3.3.3 Four Brush cutter operators

5.27.3.3.4 Four Weed spraying personnel.

5.27.3.3.5 Two general workers

5.27.3.4 The contractor shall provide a minimum of three fully staffed vegetation control teams for the duration of the contract, additional teams may be required as and when required.

5.27.3.5 The Contractor shall ensure that he/she have adequate teams deployed to complete the works as per the approved programme and timeframes.

5.28 APPLICABLE SPECIFICATIONS

5.28.1 The documents forming the contract are to be taken as complimentary to each other. In case of any discrepancy or inconsistency between contract documents, the order of precedence will be:

E7/2	Specification for Works on, Over, Under or Adjacent to Railway Lines and Near High Voltage Equipment
	PRASA SHE Specification

PROJECT SPECIFIC TERMS AND CONDITIONS

9.1. PERFORMANCE LEVEL

5.1.5 The Contractor shall perform strictly in accordance with the levels required by this Agreement and any other specifications emanating there from and accept the penalties which will be instituted for non – performance.

9.2. INCREASE OR DECREASE IN COSTS

9.2.1. Price adjustment will be applied as stipulated in clause 5.23.6, to allow for any increase or decrease in cost relating to material, labour and fuel during the contract period.

9.3. SITE PHYSICAL CONDITIONS

9.3.1. The tenderer must ensure that they make any provision in their tender price and programme for foreseeable and unforeseeable circumstances that may occur.

9.3.2. It is the tenderer's responsibility to obtain such information about the site and project circumstances, as is necessary for them to submit a fixed price.

6 PROJECT SPECIFIC SAFETY AND RELATED REGULATIONS

6.1 All work in this contract shall comply with the:

6.2 Occupational Safety Act No 85 of 1993,

6.3 National Environmental management Act 107 of 1997

6.4 A copy of the act as well as an approved safety file shall be kept on site for the duration of the project.

6.5 The Contractor shall comply with all applicable legislation and PRASA's safety requirements adopted from time to time and instructed by the Project Manager or

- his/her delegated assistant. Such compliance shall be entirely at the contractor's cost and shall be deemed to have been allowed for in the rates or total prices in the contract.
- 6.6 The Contractor shall report all incident verbally or telephonically to the Project Manager or his/her delegated assistant within 5 minutes of occurrence and the contractor shall submit a written preliminary incident report to the Project Manager or his/her delegated assistant within 12 hours of its occurrence and a final report to be submitted within 24 hours of its occurrence.
- 6.7 All personnel employed by the Contractor shall have undergone a Health and Safety Induction.
- 6.8 The Contractor shall make necessary arrangements for sanitation and water at these relevant sites during the control of vegetation.
- 6.9 The safety file will be approved only after all the requirements on the checklist are met. WITS_LIB/RISK_MGT/SHE File Checklist (version 3) is attached in this regard.
- 6.10 All work shall always comply with the E7/2 Specification attached hereto.
- 6.11 Normal protection measures in accordance with the Protection Manual shall apply.
- 6.12 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. This procedure shall be updated whenever the need arises, and any changes shall be communicated to all employees on a works site before work proceeds.
- 6.13 The contractor shall be responsible for the safety of personnel on site. The following shall also form part of the safety plan:
- 6.13.1 Transportation of equipment and personnel.
- 6.13.2 Transportation, storage and handling of hazardous material
- 6.13.3 The site access certificate shall only be issued (to the successful bidder) after the evaluation and approval of the safety file.
- 6.14 It is the requirement of this contract that the contractor should provide PRASA with a detailed safety plan prior to being issued with a site access certificate, in accordance with the latest version of the OHS Act and the SPK7 and the PRASA SHE Specification.
- 6.15 The contractor is responsible for appointing the safety officer fulltime on site whose sole responsibility will be to manage and monitor safety related issues on site.
- 6.16 All drivers must have valid driver's licenses and Public Drivers Permits (PDP) where applicable. Vehicles must be road worthy.

- 6.17 The Contractor will be responsible for all protective clothing and equipment for his/her employees.
- 6.18 Normal protection measures in accordance with the Protection Manual shall apply.
- 6.19 All protection arrangements shall always remain under the supervision and responsibility of a Project manager or his/her delegated assistant.
- 6.20 The contractor shall always be required to supply adequate and competent supervision.
The contractor shall provide a fully qualified Pest control officer certificate (as required by PRASA) to properly supervise the execution of the work.
- 6.21 The contractor must supply his/her own flagmen with valid flagmen certificate as required per work site for protection duties. (At least 3 flagmen per site)
- 6.22 The contractor shall appoint at each work site a person whose sole task shall be to be on the lookout for approaching rail traffic. This employee shall operate an audible warning device to timeously warn all people on the work site of approaching rail traffic.
- 6.23 The contractor shall not allow any persons on the work site to venture within the structure gauge when this warning procedure is not operating effectively.
- 6.24 The warning device shall be such that its sound can be clearly and effectively heard above the noise on the work site by all personnel within a radius of 100m around the center of each work site. The cost to the contractor of providing the lookout as well as the warning device shall be deemed to be included in the rates tendered and no separate payment shall be made.
- 6.25 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. This procedure shall be updated whenever the need arises, and any changes shall be communicated to all employees on the work site before work proceeds.
- 6.26 This clause will remain effective for the duration of the contract until the contractor hand back the site to PRASA Project Manager or his/her delegated assistant.