



DEPARTMENT
OFFICE OF OPERATIONS MANAGEMENT
DIRECTORATE
FLEET MANAGEMENT AND ADMINISTRATION
DIVISION
SUPPORT SERVICES

PROCUREMENT DOCUMENT
GOODS / SERVICES

Documents are to be obtained, free of charge, in electronic format, from the [National Treasury's eTenders website](#) or the [eThekweni Municipality's website](#).

Tender No: 31891 - 1J

Title: Supply and Delivery of various heavy plant and specialised equipment for a period of thirty-six (36) months (as and when required)

CLARIFICATION MEETING AND QUERIES

Clarification Meeting: There will be no clarification meeting.

Queries can be addressed to: All email queries are to be submitted by 2026-06-25. Email questions and answers will be consolidated and posted on eTenders/Municipal website for the benefit of all tenderers by 2026-07-02.

General / Contractual: Nondumiso Khumalo, 031 322 5093, Nondumiso.khumalo@durban.gov.za

DELIVERY OF TENDERS

Sealed Tenders, addressed to the City Manager and marked with the Tender Number, are to be placed in the Tender Box **located in the ground floor foyer of the Municipal Buildings, 166 KE Masinga Road (Old Fort Rd), Durban** (and not any other municipal department): Tenderers are to also make an electronic submission via the eThekweni Municipality JDE System (ESP Module)

ESP Queries: Contact: Lindo Dlamini: Tel: 031-322-7133 / 031-322 7153
Email: supplier.selfservice@durban.gov.za

Closing Date: Friday, 10 July 2026

Time: 11:00am

FACSIMILE, eMAIL or POSTED TENDERS WILL NOT BE ACCEPTED

Issued by:

ETHEKWINI MUNICIPALITY

Deputy Director: SUPPORT SERVICES

Issued: May 2026

Document Version: 01/12/2025

NAME OF TENDERER:

Tender Price: R

VAT Registered: YES / NO
(circle applicable)

PROCUREMENT DOCUMENT (Goods / Services)

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SECTION 1: GENERAL INFORMATION

YOU ARE HEREBY INVITED TO TENDER FOR REQUIREMENTS OF THE ETHEKWINI MUNICIPALITY

TENDER No.: 31891 - 1J

DESCRIPTION: **Supply and Delivery of various heavy plant and specialised equipment for a period of thirty-six (36) months (as and when required)**

CLOSING DATE / TIME: **Friday, 10 July 2026 at 11:00am**

All tenders must be submitted on official tender documentation issued (in electronic format) by the eThekwini Municipality from:

- the National Treasury's eTenders website (<https://www.etenders.gov.za/>), or
- the eThekwini Municipality's website (<https://www.durban.gov.za/pages/business/procurement>).

Electronically downloaded documentation should be printed by the tenderer.

- Bidders must submit a "hard copy" submission to the Tender Box located in the ground floor foyer of the Municipal Buildings, 166 KE Masinga Road (Old Fort Rd), Durban and an electronic submission via Supplier Self Service (ESP). Notwithstanding the electronic submission, a tender offer will only be deemed valid if the "hard copy" submission has been made. The "hard copy" submission will be deemed to be the ruling version. Bidders are responsible for resolving all access rights and submission queries before the tender closing date. Tender closing date and time remain unchanged

Tenderers are required to be registered on the **National Treasury Central Supplier Database** (CSD) as a service provider. In the case of a Joint Venture, this requirement will apply individually to each party in the Joint Venture.

Registration on the **eThekwini Municipality's Database** can be done via website:

<https://ethekwivendor.durban.gov.za/> and on **ESP:supplier.selfservice@durban.gov.za**

Tenderers should ensure that tenders are delivered timeously to the correct address as stated in the Conditions of Tender. If a tender is late, it will not be accepted for consideration.

The Municipality will consider a tender submitted in response to this request for tender to be an offer from your company to perform the supply on the basis of that tender. Accordingly, please review the attached General and Special Terms and Conditions which will form the basis for any supply arrangement entered into between the Municipality and your company.

The Municipality is seeking tenders from potential suppliers only and makes no representation or promise in relation to procuring work from a supplier or supplier. The Municipality will not be responsible for any costs associated with preparing and submitting a tender.

The Municipality does not bind itself to accept the lowest or any tender. It reserves the right to accept the whole or any part of a tender to place orders. Bidders shall not bind the Municipality to any minimum quantity per order. The successful Tenderer (s) shall be bound to provide any quantities stipulated in the specification.

The successful tenderer will be required to fill in and sign a written Contract Form (MBD 7).

NB: NO TENDER WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE
(as defined in Regulation 44 of the Local Government: Municipal Supply Chain Management Regulations).

**THE FOLLOWING PARTICULARS MUST BE FURNISHED
(Failure to do so may result in your tender being disqualified)**

Name of Tenderer:

Postal Address:

Street Address:

E-Mail Address:

Telephone Number:

-

-

Cell phone Number:

Facsimile Number:

Circle Applicable

Is your entity registered on the **eThekweni Municipality's supplier database?**

YES / NO

- **If YES insert** your PR Number:

PR

Is your entity registered on the **National Treasury Central Supplier Database (CSD)?**

YES / NO

- **If YES, insert** your MAAA Number:

MAAA

Insert a SARS Tax Compliance Status PIN

.....

Is your entity VAT registered?

YES / NO

- **If YES insert** Vat Registration Number:

.....

Has a **Declaration of Municipal Fees** been submitted?

YES / NO

Has a **Declaration of Interest** (MBD 4) been submitted?

YES / NO

Has a **Declaration for Procurement Above R10 Million** (MBD 5) been submitted?

YES / NO

Has a **Preference Points Claim** (MBD 6.1) been submitted?

YES / NO

Has a **Declaration of Bidder's Past SCM Practices** (MBD 8) been submitted?

YES / NO

Has a **Certificate of Independent Bid Determination** (MBD 9) been submitted?

YES / NO

Are you the accredited representative in South Africa for the goods / services / works offered? **If YES, enclose proof** at the back of the tender submission.

YES / NO

Signature of Tenderer: Date:

Name / Surname: (in block capitals)

Capacity under which this tender is signed:

SECTION 2 : CONDITIONS OF TENDER – (Goods / Services : June 2019)

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SPECIAL / ADDITIONAL CONDITIONS OF TENDER

STANDARD CONDITIONS OF TENDER (Goods / Services)

1. DEFINITIONS

General:

- (1) Defined words / phrases are printed in *Italic font*.
- (2) Definitions apply to the singular as well as the plural.
- (3) Any reference to the masculine gender shall be taken to include the feminine and any reference to the feminine gender shall be taken to include the masculine.
- (4) The words “bid” and “tender”, and “bidder” and “tenderer” can be used interchangeably.
- (5) All definitions as defined in the **General Conditions of Contract** are applicable to these **Standard Conditions of Tender**. These definitions include:
 - “Closing time”
 - “Contract”
 - “Contract Price”
 - “Corrupt practice”
 - “Countervailing duties”
 - “Country of origin”
 - “Day”
 - “Delivery”
 - “Delivery ex stock”
 - “Delivery into consignees store or to his site”
 - “Dumping”
 - “Force majeure”
 - “Fraudulent practice”
 - “GCC”
 - “Goods”
 - “Imported content”
 - “Local content”
 - “Manufacture”
 - “Order”
 - “Project site”
 - “Purchaser”
 - “Republic”
 - “SCC”
 - “Services”
 - “Supplier”
 - “Tort”
 - “Turnkey”
 - “Written” or “in writing”
- (6) **Bid or Tender:** The offer submitted in respect of an invitation to submit such an offer.
- (7) **Bidder or Tenderer:** An entity (company, close corporation, partnership, joint venture, sole proprietor) which submits a *bid/tender*.
- (8) **Municipality:** The eThekweni Municipality, as represented by the duly authorised delegate, official or committee.
- (9) **SCT:** Special Conditions of Tender (found in Section 3).
- (10) **Week:** A period of seven (7) consecutive *days*.
- (11) **Material Deviation:** A material deviation or qualification is one which, in the *Municipality’s* opinion, would:
 - (a) Detrimentally affect the scope, quality, or performance of the services or supply identified in the Scope;
 - (b) Significantly change the *Municipality’s* or the *Tenderer’s* risks and responsibilities under the contract; or
 - (c) Affect the competitive position of other *Tenderers* presenting responsive *tenders*, if it were to be rectified.

2. CONDITIONS OF TENDER & CONTRACT

The specification will be governed by the **Standard Conditions of Tender** (Goods and Services), **Special Conditions of Tender (SCT)**, **General Conditions of Contract (GCC)** (Government Procurement General Conditions (July 2010), as amended by National Treasury Circular 52 dated 30 July 2010), the **Special Conditions of Contract (SCC)**, the **Occupational Health and Safety Act** (Act No. 85 of 1993), and the **eThekweni Code of Conduct**.

Complete Acceptance of Conditions

Unless otherwise expressly stipulated in a letter covering the *tender*, every *Tenderer* shall be deemed to have waived, renounced, and abandoned any conditions printed or written upon any stationery used for the purpose of, or in connection with, the submission of their *tender*, which are in conflict with the **General Conditions of Contract** and **Special Conditions of Contract**. *Tenderers* are advised that any *material divergences / qualifications* from the official Conditions or Specification will render their *tenders* liable to disqualification.

3. TENDER INFORMATION

(1) General

- (a) *Tenders* will be liable for rejection unless made out on the official tendering documentation.
- (b) Any alterations effected upon any of the tendering documents must be clearly shown by means of a hand written (black, non-erasable ink), or typed, entry and must be signed in full by the *Tenderer*. **The use of correction fluid is not permitted.**
- (c) *Tenderers* may submit alternative solutions that, in the *Tenderer’s* opinion, are to the *Municipality’s* advantage economically and technically. Full technical details of the alternative *tender(s)* shall be submitted with the tender documents. Alternative *tender(s)* shall be submitted separately.

(2) Obtaining Tender Documentation

All tenders must be submitted on official tender documentation issued, in electronic format, by the eThekweni Municipality. Electronically downloaded documentation (obtainable free of charge) should be printed and suitably bound by tenderer.

(3) Queries Relating to this Tender

Queries can be directed to the person / Department as stated in the **SCT**.

(4) Briefing Session (Clarification Meeting)

Details of the briefing session are stated in the **SCT**. Failure to attend a **compulsory** briefing session will invalidate the *tender*. *Tenderers* must sign the attendance list in the name of the tendering entity. *Tenders* will only be evaluated from those tendering entities appearing on the attendance list.

(5) Closing Date and Delivery of Tender Submissions

Sealed *tenders* made out on the enclosed Official Tender Form, which shall be signed by or on behalf of the *Tenderer*, and addressed to the City Manager, marked with the appropriate Tender number, must be placed in the **Tender Box** as stated in the **SCT** not later than the **date and time** as stated in the **SCT**, where after they will be opened publicly.

All tender documents **must** be placed directly into the Tender Box and should not be delivered to any other Municipal Department. *Bidders* are advised that *tenders* submitted by post, fax or email **will not** be considered. All couriered documents must be placed directly into the Tender Box and should not be delivered to any other Municipal Department.

Any *tender* received after the closing date and time stated for the receipt thereof **shall not** be accepted for consideration and shall be returned to the *Tenderer*.

(6) Tender Validity and Withdrawal of Tenders

Tenders must hold good until 16:00 of the 5th week following the date on which *tenders* are opened, or during such other period as may be specified in the **SCT**. The *Municipality* may, during the period for which *tenders* are to remain open for acceptance, authorize a *Tenderer* to withdraw their *tender* in whole or in part on condition that the *Tenderer* pays to the *Municipality* on demand, a sum of one thousand Rand (R1,000.00). The *Municipality* may, if it thinks fit, waive payment of such sum in whole or in part.

4. RETURNABLE SCHEDULES, FORMS, CERTIFICATES

Each *Tenderer* shall complete fully and accurately the following documents and submit these documents with the *tender*:

- (1) **Authority of Signatory:** In terms of Clause 4(5)(c) of the Conditions of Tender.
- (2) **Tax Compliance Status PIN / Tax Clearance Certificate:** SARS has introduced a new Tax Compliance Status System. Tenderers can submit a Tax Compliance Status PIN (TCS PIN) instead of an original Tax Clearance Certificate. This TCS PIN can be used by third parties to certify the taxpayer's real-time compliance status.
- (3) **Declaration of Municipal Fees:** Only those *Bidders* whose municipal fees are fully paid, or those that have concluded acknowledgement of debt agreements with the *Municipality*, are eligible to *tender*.
All *Bidders* must sign the Declaration of Municipal Fees returnable form, declaring that their municipal fees are in order or that acknowledgement of debt agreements have been concluded, and include the relevant account numbers in the declaration. Failure to include account numbers or sign will invalidate the *tender*. The completion of the declaration is also applicable to *Bidders* outside of the eThekweni Municipal Area.
- (4) **Declaration with respect to the Occupational Health and Safety Act:** Acceptance of undertaking in terms of the Occupational Health and Safety Act (Act 85 of 1993) and the relevant Regulations.

(5) Municipal Bidding Documents (which includes):

- (a) **MBD 4: Declaration of Interest:** All *Bidders* are to sign the Declaration of Interest wherein they declare any relationship that may exist with an official of the *Municipality* involved in the evaluation process.
Regulation 44 of the Supply Chain Management Regulations states that a *Municipality* or *Municipal Entity* may not make any award to a person:
 - (i) Who is in the service of the state;
 - (ii) If that person is not a natural person, of which any Director, Manager, Principal, Shareholder or Stakeholder is a person in the service of the state; or
 - (iii) Who is an advisor or consultant contracted with the *Municipality* or *municipal entity*.
Should a contract be awarded, and it is subsequently established that Regulation 44 has been breached, the *Municipality* shall have the right to terminate the contract with immediate effect.
- (b) **MBD 5: Declaration for Procurement Above R10 Million (if applicable):** For all procurement expected to exceed R10 million (all applicable taxes included), tenderers must complete this questionnaire.
- (c) **MBD 6.1: Preference Points Claim Form:** For the awarding of Preference Points, *Bidders* are required to complete the attached MBD 6.1 form and return it with their tender submission. Failure on the part of a tenderer to complete and submit this form will be interpreted to mean that preference points for **Specific Goals** are not claimed.
The *Municipality* reserves the right to require of a tenderer, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the *Municipality*.
- (d) **MBD 8: Declaration of Bidders Past Supply Chain Management Practices Form:** This form serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.
- (e) **MBD 9: Certificate of Independent Bid Determination:** Section 4(1)(b)(iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms if it involves collusive tendering or tender rigging. In order to give effect to this, the Certificate of Bid Determination must be completed and submitted with the tender.

(5) Official Tender Form (see Section 9)**(a) Legal Status of Tenderer**

It is essential for the purpose of entering into a legal contract that *Bidders* state on the Official Tender Form, under "Name and Address of Tenderer ", their full legal status:

- (i) the full registered name of the company making a *tender*; or
- (ii) if the *Tenderer* is a person conducting business under a recognised trading name then:
 - State the name of the person(s);
 - State recognised trading name; and
 - State whether an owner, co-owner, proprietor, etc.

(b) Signing of Official Tender Form

Failure of a *Tenderer* to complete, in its entirety, and sign the Official Tender Form will invalidate the *tender*.

(c) Authority of Signatory

Bidders are to complete and sign the Authority of Signatory returnable document, and attach the required additional documents.

(d) Differences or Discrepancies

Should there be any difference or discrepancy between the prices or price contained in the Official Tender Form and those contained in any covering letter from the *Tenderer*, the prices or price contained in the Official Tender Form shall prevail.

(6) Any additional Schedules, Forms, or Certificates as stated in the SCT.**5. INFORMATION TO BE SUPPLIED REGARDING SUB-CONTRACTORS**

Bidders are to state in their *tenders*, or covering letters, whether, if the contract were to be awarded to them, the whole of the work would be executed by them in their own workshop / factory. If the answer is in the negative, they are required to state which part(s) would be handed to sub-contractors and the name and address of such sub-contractors.

6. SAMPLES

Bidders may be required to state where samples of the full range of products can be inspected or be required to submit samples for inspection prior to the closing date of the *tender*.

7. MANUFACTURERS

The names of the manufacturers of the goods or equipment offered must be stated in the *tender*.

Bidders who are not manufacturers, accredited distributors, or agents must provide a valid agreement / Joint Venture Agreement, entered into with the manufacturer, accredited distributors, or agents, with their submission. This agreement must meet all the requirements as laid down in the *tender* document, and must cover the contract period.

8. CLARIFICATION

The Head: Supply Chain Management Unit, or an authorized representative, may request clarification or further information on any aspect of the *tender*. The *Tenderer* **must** supply the requested information within the time specified. Failure to comply will render the *tender* non-responsive.

9. PRICING

Bidders would be precluded from this *tender* if their pricing structure deviates from the Official Tender Form.

(1) Nett Prices

All prices shall be quoted in South African currency (Rand) after deduction of any brokerage or discount allowed to the Municipality.

(2) Unit Prices

Bidders shall quote only one price in respect of each item. Such price is to hold good for the full duration of the contract period, being subject to variation only in accordance with specified criteria, as stated in the *Conditions of Contract*.

(3) Firm Tenders

Bidders may submit firm prices for each 12 month period. These prices shall be free from all fluctuations, including any statutory increases.

(4) Value Added Tax (V.A.T)

Prices exclusive and inclusive of VAT must be stated separately on the Official Tender Form.

10. ESTIMATED QUANTITIES

The estimated quantities are set out in Section 8 : Bill of Quantities / Schedule of Rates/Activities which forms part of the official tender documents. The quantities are stated purely for the information of the *Bidders* and are in order to ascertain an estimated total contract price. The *Supplier* will, however, be bound to supply whatever quantity or quantities the *Municipality* may actually require, and may exceed, or be less than, the estimated quantities stated.

11. DELIVERY, RISK, PACKAGES, ETC

(1) Unless otherwise provided, all goods are to be supplied only against the form of order issued by the *Municipality*.

(2) *Bidders* shall quote a unit price which shall include delivery to the specified delivery point, as stated in the *SCT*.

(3) The risk in all goods purchased by the *Municipality* under the contract shall remain with the *Supplier* until such goods shall have been duly delivered.

(4) *Bidders* shall clearly state the period within which delivery will be made after receipt of the official order, as this may be material in the adjudication of the *tender*.

12. RATES OF EXCHANGE

- (1) Where the goods are imported the *Supplier* shall, within seven days of date of official Purchase Order, arrange through their bankers for the foreign commitment to be covered forward down to the Rand in order to fix the rate of exchange. The *Supplier* shall notify the *Municipality* as soon as possible thereafter regarding the rate which has been fixed on such forward exchange.

Any increase or decrease between the basic rate of exchange as at a date seven days prior to the date of closing of *tenders* and that existing at the date of establishment of the forward exchange cover within the period stipulated above shall be paid or deducted by the *Municipality*. Upon the failure of the *Supplier* to arrange forward exchange cover, the *Supplier* shall be liable should there be any increase in the basic rate of exchange occurring after the last mentioned date.

The bank charges incurred in obtaining the forward exchange cover shall be for the *Municipality's* account.

- (2) The *Supplier* shall on request:
- Submit documentary proof of the rate of exchange; and
 - When an adjustment is claimed in terms of this sub-clause, whether by the *Supplier* or the *Municipality*, submit documentary proof to the satisfaction of the Deputy City Manager: Treasury in respect of such claim.

13. IMPORT PERMITS

- (1) In order to minimise special importation, *Bidders* should, where possible, have recourse to local suppliers and / or manufacturers.
- (2) *Bidders* must state whether their *tender* is dependent upon the issue of a special import permit or whether they are able to supply the goods by making use of the import facilities available to them.
- (3) In the event of a tender being dependent upon the issue of a special import permit, application for such special import permit shall be made by the *Tenderer*, unless otherwise provided for in the *SCT*.

14. EVALUATION PROCESS

The procedure for evaluation of responsive Tender Offers will be in accordance with the eThekweni Municipality's current SCM Policy and the Preferential Procurement Policy Framework Act (5 of 2000), and the Preferential Procurement Policy Framework Act Regulations (November 2022).

Details of additional evaluation criteria, if applicable, are stated in the *SCT*.

Evaluation points for price and preference will only be calculated for *Bidders* who comply with the contractual and technical specification, and if applicable, have attained the minimum Functionality Score as stated in the *SCT*.

The evaluation process of responsive *tenders* will be as follows:

- Score each *tender* in respect of the financial offer made and preferences claimed (if any);
- Calculate the total number of evaluation points (T_{EV}) in accordance with the following formula:
 $T_{EV} = N_{FO} + N_P$ where: N_{FO} : is the number of evaluation points awarded for the financial offer; and N_P : is the number of evaluation points awarded for preferences claimed.
- Rank *tenders* from the highest number of evaluation points to the lowest.
- Recommend the *Tenderer* with the highest number of evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.
- Rescore and re-rank all *Bidders* should there be compelling and justifiable reasons not to recommend the *Tenderer* with the highest number of evaluation points, and recommend the *Tenderer* with the highest number of evaluation points, unless there are compelling and justifiable reasons not to do so, and the process set out in this sub-clause is repeated.

(1) Evaluation points awarded for the financial offer:

Reference is to be made to the Special Conditions of Tender (*SCT*), and returnable form 5(c) in Section 4.

INCOME-GENERATING CONTRACTS

The financial offer will be scored using the formula:

$$N_{FO} = W \left(1 + \frac{Pt - P_{max}}{P_{max}} \right)$$

GOODS and SERVICES

The financial offer will be scored using the formula:

$$N_{FO} = W \left(1 - \frac{Pt - P_{min}}{P_{min}} \right)$$

Where the value of W is:

- (a) **90** where the financial value inclusive of VAT of all responsive *tenders* received have a value in excess of R 50,000,000; OR
- 80** where the financial value inclusive of VAT of one or more responsive *tenders* offers have a value that equals or is less than R 50,000,000.
- It is unclear** (at the time of advertising) which of the two preference point systems applies. Either the 80/20 or 90/10 preference point system will apply, determined by the price offered by the lowest acceptable tender.

(b) **P_{max}** is the comparative offer of the most favourable comparative offer (highest acceptable tender).

(c) **P_{min}** is the comparative offer of the most favourable comparative offer (lowest acceptable tender).

(d) **P_t** is the comparative offer of the *tender* offer under consideration.

(2) Evaluation points awarded for preference:

The **Specific Goals** for Preference Points are specified in the *SCT*.

15. BRIBERY AND COMMUNICATION WITH COUNCILLORS / OFFICIALS**(1) Bribery**

No *Tenderer* shall offer, promise or give to any person or person connected with a *tender* or the awarding of a contract, any gratuity, bonus or discount etc, in connection with the obtaining of a contract.

(2) Communication, Councillors and Officials

A *Tenderer* shall not in any way communicate with a member of the *Municipality* or with any official of the *Municipality* on a question affecting any contract for the supply of goods or for any work, undertaking or services which is the subject of a *tender* during the period between the closing date for receipt of *tenders* and the dispatch of the written notification of the *Municipality's* decision on the award of the contract; provided that a *Tenderer* shall not hereby be precluded:

- (a) At the request of the Head: SCM Unit, or an authorized representative, from furnishing him with additional information or with a sample or specimen for testing purposes or otherwise from giving a demonstration so as to enable the recommendation to the Bid Committee on the award of the contract to be formulated;
- (b) From obtaining from the Head : SCM Unit, or an authorised representative, information as to the date upon which the award of the contract is likely to be made, or, after the decision upon the award has been made by the *Municipality* or any Committee to which the *Municipality* has delegated its powers, information as to the nature of the decision or such information as was publicly disclosed at the opening of *tenders* or from submitting to the Accounting Officer in writing any communication relating to their *tender* or the award of the contract or a request for leave to withdraw their *tender*; and
- (c) Provided further that nothing contained herein shall be construed so as to prevent information being sought and obtained from an Official in regard to any decision taken at an open Municipal meeting, or any Committee to which the *Municipality* has delegated its powers.

A contravention of subsection (1) and / or (2), or an attempt to contravene such subsection, shall be reported to the Accounting Officer, who may on receipt of such report disqualify the *tender* of the *Tenderer* concerned.

16. NEGOTIATIONS WITH PREFERRED BIDDERS

The *Municipality* reserves the right to invoke Regulation 24 of Municipal Finance Management Act if required.

- (1) The Accounting Officer may negotiate the final terms of a contract with *Bidders* identified through a competitive tendering process as preferred *Bidders*, provided that such negotiation:
 - Does not allow any preferred *Tenderer* a second or unfair opportunity;
 - Is not to the detriment of any other *Tenderer* ; and
 - Does not lead to a higher price than the *tender* as submitted.
- (2) Minutes of such negotiations must be kept for record purposes.
- (3) Such negotiation may be delegated by the Accounting Officer.

17. CANCELLATION OF TENDER PROCESS

The municipality is entitled to cancel the tender at any time before the award of a tender and the decision to cancel the tender shall be published in the same manner in which the original tender invitation was advertised. The Municipality shall, in no way, be liable for any damages whatsoever, including, without limitation, damages for loss of profit, in any way connected with the cancellation of this bid.

18. ACCEPTANCE OF BID

- (1) The *Municipality* does not bind itself to accept the lowest or any *tender*, and reserves the right to accept the whole or any part of a *tender* to place orders.
- (2) The *Municipality* reserves the right to accept more than one technically and contractually compliant *tender* for part or the whole of the contract and to place orders on the price and availability.
- (3) *Bidders* shall not bind the *Municipality* to any minimum quantity per order.
- (4) The successful *Tenderer (s)* shall be bound to provide any quantities stipulated in the specification.
- (5) Tenders will only be accepted on condition that:
 - (a) The *tender* is signed by a person authorised to sign on behalf of the *Tenderer* .
 - (b) A valid (at time of close of tenders), original, Tax Clearance Certificate OR Tax Compliance Status PIN is included with the *tender* submission. Both should have sufficient validity to ensure the process is adequately covered;
 - (c) A *Tenderer* who submitted their *tender* as a Joint Venture has included an acceptable Joint Venture Agreement and a B-BBEE Certificate pertaining to the Joint Venture with their *tender*.
- (6) Financial Standing: The Head: Supply Chain Management reserves the right to require *Bidders* to submit evidence that their financial standing is adequate to meet their obligations under the contract should they be successful.
- (7) Change of Ownership or Major Policy: Where it is known to a *Tenderer* that a change in ownership or major policy (of the tendering entity) will occur, or is likely to occur, during a specified contract period, the scope and effect thereof must be fully defined in a covering letter to be submitted with the *tender*.
- (8) Purchase of Goods From Other Sources: Nothing contained in this contract shall be held to restrain the *Municipality* from purchasing from persons other than the *Supplier*, any of the goods described or referred to in this contract, if it shall in its discretion think fit to do so.
- (9) Capability and Breach of Contract: Tenderers that do not have the capability of undertaking this enquiry in terms of the requirements of the contract or have been in breach of contract previously will not be considered.

19. PAYMENT and FACTORING

Payment conditions will be as per the **Conditions of Contract**.

Payment will be made only to the *Supplier(s)*. Factoring arrangements will not be accepted.

20. APPEALS

In terms of Regulation 49 of the Municipal Supply Chain Management Regulations persons aggrieved by decisions or actions taken by the *Municipality*, may lodge an appeal within 14 days of the decision or action, in writing to the *Municipality*. The appeal (clearly setting out the reasons for the appeal) and queries with regard to decision of award are to be directed to the office of the City Manager, attention:

Ms. S. Pillay, P.O. Box 1394, Durban, 4000;
eMail: Simone.Pillay@durban.gov.za.

SECTION 3: SPECIAL / ADDITIONAL CONDITIONS OF TENDER

3.1 SPECIAL CONDITIONS OF TENDER (SCT)

The **Standard Conditions of Tender** (Goods / Services) make several references to the **Special Conditions of Tender** (SCT) for details that apply specifically to this tender. The **Special Conditions of Tender** shall have precedence in the interpretation of any ambiguity or inconsistency between it and the **Standard Conditions of Tender**.

Each item below is cross-referenced to the clause in the **Standard Conditions of Tender** to which it mainly applies.

SCT 3(1) TENDER INFORMATION: General

The tender document comprises of a cover page and 204 pages.

SCT 3(2) TENDER INFORMATION: Obtaining Tender Documentation

Documents are issued by the eThekweni Municipality electronic format.

Electronically downloaded documentation is obtainable from:

- the National Treasury's eTenders website
 - (<https://www.etenders.gov.za/>), or
- the eThekweni Municipality's website
 - (<https://www.durban.gov.za/pages/business/procurement>).

The entire document should be printed on A4 paper (one sided) and suitably bound by the tenderer.

SCT 3(3) TENDER INFORMATION: Queries Relating to this Tender

General and Contractual Queries are to be directed to:

Nondumiso Khumalo, 031 322 5093, Nondumiso.khumalo@durban.gov.za

SCT 3(4) TENDER INFORMATION: Briefing Session

There will be no clarification meeting.

SCT 3(5) TENDER INFORMATION: Closing Date and Delivery of Tender Submissions

1. Tenderers are hereby advised to submit the following, no later than **Friday, 05 June 2026 at 11:00 am**:

- a) A signed **hard copy** of the Tender Document that is sealed, addressed to the City Manager and clearly marked with the Tender Number. This **hard copy** shall be deposited into the Tender Box **located in the ground floor foyer of the Municipal Buildings at 166 KE Masinga Road (Old Fort Rd), Durban**; and
- b) An **electronic copy** of the Tender Document, identical to that of the signed **hard copy**, via the eThekweni Municipality JDE System (ESP Module).

2. Notwithstanding the submission of the **electronic copy** of the Tender Document via the JDE System (ESP Module):
 - a) The Tender Offer shall only be deemed valid if the **hard copy** submission has been made; and
 - b) The **hard copy** submission shall take precedence and be utilised for the evaluation of Tenders.
3. In the event of any ambiguity or inconsistency within the **hard copy** submissions, eThekweni Municipality reserves the right to verify the information by comparing the **hard copy** with the corresponding **electronic copy**. Subsequently, if the **electronic copy** is found not to be identical to the **hard copy**, the Tender Offer shall be deemed invalid.
4. Tenderers shall ensure all access rights and submission queries related to the JDE system are resolved prior to the closing date.:

BID VIEWING, TENDER DOCUMENT DOWNLOAD AND BID SUBMISSION PROCESS

5. The following link must be followed for login, to view advertised bids, and to submit a bid advertised by eThekweni Municipality.

<https://rfq.durban.gov.za/jde/E1Menu.maf>

All queries related to the JDE system shall be directed to:

ESP Queries:Lindo Dlamini

Tel: 031-3227133 / 031-3227153

Email: supplier.selfservice@durban.gov.za

ESP Technical Queries: Jabulane Chauke:

Tel: 031 322 9535

Email: Jabulani.chauke@durban.gov.za

SCT 3(6) TENDER INFORMATION: Tender Validity and Withdrawal of Tenders

1. Tenders must remain valid for a period of 120 days following the date on which the Tenders are opened. This period is referred to as the **original validity period**.
2. In addition to the original validity period, Tenders must remain valid for acceptance for a further period of twelve (12) months, unless the Municipality is advised otherwise by the bidder in writing.
3. eThekweni Municipality reserves the right to request confirmation of Tender validity at any time during the twelve (12) month period.

SCT 4(6) RETURNABLE SCHEDULES, FORMS, CERTIFICATES

There are no additional returnable schedules, forms, certificates

SCT 14 EVALUATION PROCESS

14.1.1 Mandatory Requirement for Supply of Plant and Specialised Equipment Trailers

Offers will be considered from Original Equipment Manufacturer (OEM) or an accredited agent from the OEM.

In a case of a bidder being an accredited agent, a letter confirming the accreditation from the OEM must be submitted as part of the tender submission.

If these mandatory requirements are not met in the tender submission, it will invalidate the tender.

14.2 **Price and Preference**

The procedure for the evaluation of responsive tenders is **PRICE AND PREFERENCE** in accordance with the Employer's current SCM Policy, the Preferential Procurement Policy Framework Act (5 of 2000), and the Preferential Procurement Policy Framework Act Regulations (2022).

The **80/20** preference points system will be applied. The Formula used to calculate the **Price Points (max. 80)** will be according to that specified Regulation 5.1.

14.3 **Preference Point System and Specific Goals**

The definitions as per the SCM Policy are applicable.

Preference Points (either 20 or 10) will be derived from points claimed on Returnable Document **MBD 6.1: "Preference Points Claim Form"** (in Section 4 of this procurement document) for the **Specific Goal(s)** as indicated on the table(s) below, and according to the specified **Goal Weightings**.

Ownership Goal

The tendering entity's **Percentage Ownership**, in terms of the **Ownership Category(s)** listed below, is to be used in the determination of the tenderer's claim for **Preference Points**.

Goal Weighting 30%			
Ownership Categories	Criteria	80/20	
Race: Black (100%)	0%	0	
	>0% and <51%	2.4	
	>51% and <100%	4.2	
	100%	6	
Proof of claim as declared on MBD 6.1 (1 or more of the following will be used in verifying the tenderer's status) <ul style="list-style-type: none"> • Companies and Intellectual Property Commission registration document (CIPC) • CSD report. • B-BBEE Certificate of the tendering entity. • Consolidated B-BBEE Certificate if the tendering entity is a Consortium, Joint Venture, or Trust (Issued by verification agency accredited by the South African Accreditation System). • Agreement for a Consortium, Joint Venture, or Trust. 			

RDP Goal: The promotion of South African owned enterprises

The tendering entity's **Address** (as stated on the National Treasury Central Supplier Database (CSD) or on the eThekweni Municipality Vendor Portal) is to be used in the determination of the tenderer's claim for **Preference Points** for this Specific Goal.

Goal Weighting 70%		
Location	80/20	
Not in South Africa	0	
South Africa	5.6	
KZN	9.8	
ETM	14	
Proof of claim as declared on MBD 6.1 (1 or more of the following will be used in verifying the tenderer's status) <ul style="list-style-type: none"> • CSD report 		

3.2 ADDITIONAL CONDITIONS OF TENDER (ACT)

ACT 1 ELIGIBILITY – CSD REGISTRATION

Tenderers are required to be registered on the National Treasury Central Supplier Database (CSD) as a service provider. In the case of a Joint Venture, this requirement will apply individually to each party in the Joint Venture. Tenderers not so registered, at time of closing of tenders, will not be eligible to submit tenders.

The Tenderer's CSD Supplier Number (starting with "MAAA") is to be provided on the information table in Section 1.

Tenderers who wish to register on the CSD may do so via web address <https://secure.csd.gov.za>.

ACT 2 Vehicle/Equipment/Unit derivatives (Euro standards)

The bidder shall tender for variants of the vehicle/equipment/unit in different Euro versions. eThekweni Municipality reserves the right to award based on their discretion and evaluation which aligns with operational, environmental and strategic requirements in conjunction with the adopted Durban Climate Strategy.

ACT 3 AWARDING OF TENDER – PANEL CONTRACT

The awarding shall be done according to per item to form a panel based on the items listed.

The bidder is not compelled to bid for every item in the tender.

ACT 4 New equipment manufacturers into eThekweni Fleet

In the event that a new Vehicle/Equipment/Unit OEM that is not part of the existing Municipal fleet and is responsive as a bidder. Such OEM shall be subjected to pilot testing of an individual prototype before been evaluated for further consideration. The period shall be a minimum of 12 months according to the departments protocol.

SECTION 4: RETURNABLE TENDER DOCUMENTS

The required returnable documents are as detailed in [Section 2 \(Clause 4\)](#): “Returnable Schedules, Forms, Certificates” of the Conditions of Tender / Special Conditions of Tender.

- 1) Authority of Signatory
- 2) Tax Compliance Status PIN / Tax Clearance Certificate
- 3) Declaration of Municipal Fees
- 4) Declaration with respect to The Occupational Health and Safety Act
- 5(a) MBD 4: Declaration of Interest
- 5(b) MBD 5: Declaration for Procurement Above R10 Million
- 5(c) MBD 6.1: Preference Points Claim
- 5(d) MBD 8: Declaration of Bidder’s Past Supply Chain Management Practices
- 5(e) MBD 9: Certificate of Independent Bid Determination

The Tender Form can be found in [Section 9](#): “Official Tender Form”, and any additional schedules, forms, certificates can be found in [Section 10](#): “Annexures”.

1) AUTHORITY OF SIGNATORY

Reference is made to the Conditions of Tender: [Clause 4\(5\)\(c\)](#).

Indicate the status of the tenderer by ticking the appropriate box hereunder.

COMPANY		CLOSE CORPORATION		PARTNERSHIP		JOINT VENTURE		SOLE PROPRIETOR	
Refer to Notes at the bottom of the page									

I / We, the undersigned, being the Chairperson (Company), Member(s) (Close Corporation), Partners (Partnership), Sole Owner (Sole Proprietor), Lead Partner (JV), in the company / business trading as:

.....

hereby authorise Mr/Mrs/Ms

acting in the capacity of

to sign all documents in connection with the tender for Contract No. **31891 - 1J** and any contract resulting from it on our behalf.

NAME	ADDRESS	SIGNATURE	DATE

Notes

Tenderers are to include, at the back of their tender submission document, a printout of the following documents:

- If a Company : a "Resolution of the Board" in this regard.
- If a Joint Venture : a "Power of Attorney" signed by the legally authorised signatories of all the partners to the Joint venture.

2) TAX COMPLIANCE STATUS PIN / TAX CLEARANCE CERTIFICATE

SARS has introduced a new Tax Compliance Status System. Tenderers can submit a Tax Compliance Status PIN (TCS PIN) instead of an original Tax Clearance Certificate. This TCS PIN can be used by third parties to certify the taxpayer's real-time compliance status.

Separate Tax Clearance Certificates / TCS PINs are required for each entity in a Joint Venture.

The TCS PIN(s) are to be entered on the information table in **SECTION 1: GENERAL INFORMATION**.

Tenderers are to include, at the back of their tender submission document, a printout of their Tax Compliance Status PIN (TCS PIN) OR an original Tax Clearance Certificate.

Failure to include the required document will make the tender submission non-responsive.

*I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct, **and that the requested documentation has been included in the tender submission.***

NAME (Block Capitals): _____

Date

SIGNATURE: _____

3) DECLARATION OF MUNICIPAL FEES

I, the undersigned, do hereby declare that the Municipal fees of

.....
 (full name of Company / Close Corporation / partnership / sole proprietary/Joint Venture)

(hereinafter referred to as the TENDERER) are, as at the date hereunder, fully paid or an Acknowledgement of Debt has been concluded with the Municipality to pay the said charges in instalments.

The following account details relate to property of the said TENDERER:

<u>Account</u>	<u>Account Number:</u> to be completed by tenderer.														
Consolidated Account No.	<table border="1" style="display: inline-table; border-collapse: collapse; width: 100%;"><tr><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td></tr></table>														
Electricity	<table border="1" style="display: inline-table; border-collapse: collapse; width: 100%;"><tr><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td></tr></table>														
Water	<table border="1" style="display: inline-table; border-collapse: collapse; width: 100%;"><tr><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td></tr></table>														
Rates	<table border="1" style="display: inline-table; border-collapse: collapse; width: 100%;"><tr><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td></tr></table>														
Other	<table border="1" style="display: inline-table; border-collapse: collapse; width: 100%;"><tr><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td><td style="width: 25px; height: 20px;"></td></tr></table>														

I acknowledge that should the aforesaid Municipal charges fall into arrears, the Municipality may take such remedial action as is required, including termination of any contract, and any payments due to the Contractor by the Municipality shall be first set off against such arrears.

- Where the TENDERER'S place of business or business interests are outside the jurisdiction of eThekweni Municipality, a copy of the accounts/agreements from the relevant municipality must be attached (to the back inside cover of this document).
- Where the tenderer's Municipal Accounts are part of their lease agreement, then a copy of the agreement, or official letter to that effect is to be attached (to the back inside cover of this document).

Tenderers are to be include, at the back of their tender submission document, a printout of the above account's and or agreements signed with the municipality.

Failure to include the required document will make the tender submission non-responsive.

NAME (Block Capitals):

Date

SIGNATURE:

4) DECLARATION WITH RESPECT TO THE OCCUPATIONAL HEALTH AND SAFETY ACT**Definitions**

The Act: The Occupational Health and Safety Act No 85 of 1993 (as amended by the Occupational Health and Safety Amendment Act No 181 of 1993), and any associated / applicable Regulations.

Declaration by Tenderer

1. I, the undersigned, hereby declare and confirm that I am fully conversant with the Act.
2. I hereby declare that my company has the competence and the necessary resources to safely carry out the work / supply / services under this contract in compliance with the Act, and the Employer's / Purchaser's / Client's Health and Safety Specifications.
3. I hereby undertake, if my tender is accepted, to provide on request a suitable and sufficiently documented Health and Safety Plan which plan shall be subject to approval by the Employer / Purchaser / Client.
4. I hereby confirm that adequate provision has been made in my tendered rates to cover the cost of all resources, actions, training and all health and safety measures envisaged in the Act, and that I will be liable for any penalties that may be applied by the Employer / Purchaser / Client for failure to comply with the provisions of the Act.
5. I agree that my failure to complete and execute this declaration to the satisfaction of the Employer / Purchaser / Client will mean that I am unable to comply with the requirements of the Act and accept that my tender will be prejudiced and may be rejected at the discretion of the Employer / Purchaser / Client.

NAME (Block Capitals):**Date****SIGNATURE:**

5(a) MBD 4: DECLARATION OF INTEREST

NOTES
 MSCM Regulations: "in the service of the state" means to be:
 (a) a member of:
 (i) any municipal council.
 (ii) any provincial legislature.
 (iii) the national Assembly or the national Council of provinces.
 (b) a member of the board of directors of any municipal enterprise.
 (c) an official of any municipality or municipal enterprise.
 (d) an employee of any national or provincial department, national or provincial public enterprise or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999).
 (e) a member of the accounting authority of any national or provincial public enterprise.
 (f) an employee of Parliament or a provincial legislature.
 "Shareholder" means a person who owns shares in the company and is actively involved in the management of the company or business and exercises control over the company.

- 1 No bid will be accepted from persons **in the service of the state**.

- 2 Any person, having a kinship with persons **in the service of the state**, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to **persons in service of the state**, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority and/or take an oath declaring his/her interest.

- 3 In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

3.1 Name of enterprise	
Name of enterprise's representative	
3.2 ID Number of enterprise's representative	
3.3 Position enterprise's representative occupies in the enterprise	
3.4 Company Registration number	
3.5 Tax Reference number	
3.6 VAT registration number	

3.7 The names of all directors / trustees / shareholders / members / sole proprietors / partners in partnerships, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below. In the case of a joint venture, information in respect of each partnering enterprise must be completed and submitted.

	Circle Applicable		
3.8 Are you presently in the service of the state?	<table style="margin: auto; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 2px 10px;">YES</td> <td style="border: 1px solid black; padding: 2px 10px;">NO</td> </tr> </table>	YES	NO
YES	NO		

If yes, furnish particulars:

	<table style="margin: auto; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 2px 10px;">YES</td> <td style="border: 1px solid black; padding: 2px 10px;">NO</td> </tr> </table>	YES	NO
YES	NO		

If yes, furnish particulars:

<p>3.10 Do you have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid? If yes, furnish particulars: </p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">YES</td> <td style="width: 50%; text-align: center;">NO</td> </tr> </table>	YES	NO
YES	NO		
<p>3.11 Are you, aware of any relationship (family, friend, other) between any other bidder and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid? If yes, furnish particulars: </p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">YES</td> <td style="width: 50%; text-align: center;">NO</td> </tr> </table>	YES	NO
YES	NO		
<p>3.12 Are any of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state? If yes, furnish particulars: </p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">YES</td> <td style="width: 50%; text-align: center;">NO</td> </tr> </table>	YES	NO
YES	NO		
<p>3.13 Are any spouse, child or parent of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state? If yes, furnish particulars: </p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">YES</td> <td style="width: 50%; text-align: center;">NO</td> </tr> </table>	YES	NO
YES	NO		
<p>3.14 Do you or any of the directors, trustees, managers, principle shareholders, or stakeholders of this company have any interest in any other related companies or business whether or not they are bidding for this contract? If yes, furnish particulars: </p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">YES</td> <td style="width: 50%; text-align: center;">NO</td> </tr> </table>	YES	NO
YES	NO		

4 The names of all directors / trustees / shareholders / members / sole proprietors / partners in partnerships, their individual identity numbers and state employee numbers must be indicated below. In the case of a joint venture, information in respect of each partnering enterprise must be completed and submitted

Full Name	Identity No.	State Employee No.	Personal income tax No.
Use additional pages if necessary			

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals):

Date

SIGNATURE:

5(b) **MBD 5: DECLARATION FOR PROCUREMENT ABOVE R10 MILLION**
(ALL APPLICABLE TAXES INCLUDED)

For all procurement expected to exceed R10 million (all applicable taxes included), bidders must complete the following questionnaire.

	Circle Applicable	
1.0 Are you by law required to prepare annual financial statements for auditing?	YES	NO
1.1 If YES, submit audited annual financial statements for the past three years or since the date of establishment if established during the past three years.		
2.0 Do you have any outstanding undisputed commitments for municipal services towards any municipality for more than three months or any other service provider in respect of which payment is overdue for more than 30 days?	YES	NO
2.1 If NO, this serves to certify that the bidder has no undisputed commitments for municipal services towards any municipality for more than three months or other service provider in respect of which payment is overdue for more than 30 days.		
2.2 If YES, provide particulars.		
3.0 Has any contract been awarded to you by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract?	YES	NO
3.1 If YES, provide particulars.		
4.0 Will any portion of goods or services be sourced from outside the Republic, and, if so, what portion and whether any portion of payment from the municipality / municipal entity is expected to be transferred out of the Republic?	YES	NO
4.1 If YES, provide particulars.		

If required by 1.1 above, tenderers are to include, at the back of their tender submission document, a printout of their audited annual financial statements.

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct, and, if required, that the requested documentation has been included in the tender submission.

NAME (Block Capitals): **Date**

SIGNATURE:

5(c) MBD 6.1: PREFERENCE POINTS CLAIM
In terms of THE PREFERENTIAL PROCUREMENT REGULATIONS (2022)

This preference form must form part of all tenders invited. It contains general information and serves as a claim form for preference points for specific goals.

NB: BEFORE COMPLETING THIS FORM, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF THE TENDER AND PREFERENTIAL PROCUREMENT REGULATIONS, 2022

1.0 GENERAL CONDITIONS

1.1 The following preference point systems are applicable to invitations to tender:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included).
- the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

1.2 The applicable preference point system for this tender is the **80/20 preference point system**.

1.3 Preference Points for this tender shall be awarded for:

- **Price and Specific Goals:** Either 80 or 90 (price) and 20 or 10 (specific goals), in terms of 1.2 above.
- The total Preference Points, for Price and Specific Goals, is 100.

1.4 Failure on the part of the tenderer to submit the required proof or documentation, in terms of the requirements in the (Special) Conditions of Tender for claiming **Specific Goal** preference points, will be interpreted that preference points for **Specific Goals** are not claimed.

1.5 The Municipality reserves the right to require of a tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard of preferences, in any manner required by the Municipality.

2.0 DEFINITIONS

2.1 “**tender**” means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation.

2.2 “**price**” means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts.

2.3 “**rand value**” means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes.

2.4 “**tender for income-generating contracts**” means a written offer in the form determined by Municipality in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the Municipality and a third party that produces revenue for the Municipality, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions.

2.5 “**the Act**” means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

3.0 FORMULA FOR CALCULATION OF PREFERENCE PRICE POINTS

3.1 PROCUREMENT OF GOODS AND SERVICES

PRICE POINTS: A maximum of 80 or 90 points is allocated for price on the following basis:

<u>80 / 20 Points System</u>	OR	<u>90 / 10 Points System</u>
$P_s = 80 \left(1 - \frac{P_t - P_{min}}{P_{min}} \right)$		$P_s = 90 \left(1 - \frac{P_t - P_{min}}{P_{min}} \right)$

Where:

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmin = Price of lowest acceptable tender

3.2 DISPOSAL OR LEASING OF STATE ASSETS AND INCOME GENERATING PROCUREMENT

PRICE POINTS: A maximum of 80 or 90 points is allocated for price on the following basis:

<u>80 / 20 Points System</u>	OR	<u>90 / 10 Points System</u>
$P_s = 80 \left(1 + \frac{P_t - P_{max}}{P_{max}} \right)$		$P_s = 90 \left(1 + \frac{P_t - P_{max}}{P_{max}} \right)$

Where:

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmax = Price of highest acceptable tender

4.0 POINTS AWARDED FOR SPECIFIC GOALS

- 4.1 In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the **points claimed** for the goal(s) stated in **Table 1** below, as supported by proof/ documentation stated in the **Conditions of Tender**:
- 4.2 In cases where the municipality intends to use Regulation 3(2) of the Regulations, which states that if it is unclear whether the 80/20 or 90/10 preference point system applies, the municipality must, in the tender documents, stipulate in the case of:
- (a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system, or
 - (b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,

then the municipality must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

TABLE 1: Specific Goals for the tender and maximum points for each goal are indicated per the table below.

Tenderers are to indicate their points claim for each of the Specific Goals in the shaded blocks.

The Specific Goals to be allocated points in terms of this tender	Number of points ALLOCATED (80/20 system)	Number of points ALLOCATED (90/10 system)	Number of points CLAIMED (80/20 system)
Ownership Goal: Race (Black)	6	N/A	
RDP Goal: The promotion of South African owned enterprises.	14	N/A	
Total point claimed	20		
Should the municipality apply a combination of Specific Goals, the points for the individual goals will be weighted according to the Goal Weightings specified in the Tender Data to arrive at the final points for Preferential Points for Specific Goals .			

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, certify that the points claimed, based on the specific goals as specified in the tender, qualifies the tendering entity for the preference(s) shown.

I acknowledge that:

- 1) The information furnished is true and correct.
- 2) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form.klkj
- 3) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct.
- 4) If the specific goals have been claimed or obtained on a fraudulent basis, or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have:
 - (a) disqualify the person from the tendering process.
 - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct.
 - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation.
 - (d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
 - (e) forward the matter for criminal prosecution, if deemed necessary.

NAME (Block Capitals): _____

Date

SIGNATURE: _____

5(d) MBD 8: DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

- 1.0 This Municipal Bidding Document must form part of all bids invited.
- 2.0 It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.
- 3.0 The bid of any bidder may be rejected if that bidder, or any of its directors have:
 - a) abused the municipal entity's supply chain management system or committed any improper conduct in relation to such system.
 - b) been convicted for fraud or corruption during the past five years.
 - c) wilfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years.
 - d) been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004).
- 4.0 In order to give effect to the above, the following questions must be completed and submitted with the bid.

4.1 Is the bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector?

(Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer / Authority of the institution that imposed the restriction after the audi alteram partem rule was applied.)

The Database of Restricted Suppliers now resides on the National Treasury's website (www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.

Circle Applicable	
YES	NO

4.1.1 If YES, provide particulars.

.....

.....

4.2 Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)?

The Register for Tender Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.

YES	NO
-----	----

4.2.1 If YES, provide particulars.

.....

.....

4.3 Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?

YES	NO
-----	----

4.3.1 If YES, provide particulars.

.....

.....

4.4 Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months?

YES	NO
-----	----

4.4.1 If YES, provide particulars.

.....

.....

4.5 Was any contract between the bidder and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?

YES	NO
-----	----

4.5.1 If YES, provide particulars.

.....

.....

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

I accept that, in addition to cancellation of a contract, action may be taken against me should this declaration prove to be false.

NAME (Block Capitals):

Date

.....

SIGNATURE:

.....

5(e) MBD 9: CERTIFICATE OF INDEPENDENT BID DETERMINATION**NOTES**

- ¹ Includes price quotations, advertised competitive bids, limited bids and proposals.
- ² Bid rigging (or collusive bidding) occurs when businesses, that would otherwise be expected to compete, secretly conspire to raise prices or lower the quality of goods and / or services for purchasers who wish to acquire goods and / or services through a bidding process. Bid rigging is, therefore, an agreement between competitors not to compete.
- ³ Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

- 1.0 This Municipal Bidding Document (MBD) must form part of all **bids**¹ invited.
- 2.0 Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or **bid rigging**).² Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.
- 3.0 Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
- take all reasonable steps to prevent such abuse;
 - reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
 - cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.
- 4.0 This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of **bid rigging**.
- 5.0 In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid.

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

(Bid Number and Description)

in response to the invitation for the bid made by:

(Name of Municipality / Municipal Entity)

do hereby make the following statements that I certify to be true and complete in every respect.

I certify, on behalf of:

(Name of Bidder)

that:

1. I have read and I understand the contents of this Certificate.
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect.
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
 - (a) has been requested to submit a bid in response to this bid invitation.
 - (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience.
 - (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder.
6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement, or arrangement with any competitor. However, communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.

-
7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
- (a) prices.
 - (b) geographical area where product or service will be rendered (market allocation).
 - (c) methods, factors or formulas used to calculate prices.
 - (d) the intention or decision to submit or not to submit, a bid.
 - (e) the submission of a bid which does not meet the specifications and conditions of the bid.
 - (f) bidding with the intention not to win the bid.
8. In addition, there have been no consultations, communications, agreements, or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.
9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

NAME (Block Capitals): _____

Date

SIGNATURE: _____

SECTION 5: CONDITIONS OF CONTRACT

GOVERNMENT PROCUREMENT: CONDITIONS OF CONTRACT (July 2010)

The **Conditions of Contract** are the **General Conditions of Contract** as published by the National Treasury titled "Government Procurement: General Conditions of Contract (July 2010)", as amended by National Treasury Circular 52 dated 30 July 2010, hereinafter referred to as **GCC**.

THE NATIONAL TREASURY

Republic of South Africa



GOVERNMENT PROCUREMENT: GENERAL CONDITIONS OF CONTRACT

July 2010

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1. Definitions

The following terms shall be interpreted as indicated:

- 1.1 "Closing time" means the date and hour specified in the bidding documents for the receipt of bids.
- 1.2 "Contract" means the written agreement entered into between the purchaser and the supplier, as recorded in the contract form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
- 1.3 "Contract price" means the price payable to the supplier under the contract for the full and proper performance of his contractual obligations.
- 1.4 "Corrupt practice" means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution.
- 1.5 "Countervailing duties" are imposed in cases where an enterprise abroad is subsidized by its government and encouraged to market its products internationally.
- 1.6 "Country of origin" means the place where the goods were mined, grown or produced or from which the services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembly of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.
- 1.7 "Day" means calendar day.
- 1.8 "Delivery" means delivery in compliance of the conditions of the contract or order.
- 1.9 "Delivery ex stock" means immediate delivery directly from stock actually on hand.
- 1.10 "Delivery into consignee store or to his site" means delivered and unloaded in the specified store or depot or on the specified site in compliance with the conditions of the contract or order, the supplier bearing all risks and charges involved until the goods are so delivered and a valid receipt is obtained.
- 1.11 "Dumping" occurs when a private enterprise abroad market its goods on own initiative in the RSA at lower prices than that of the country of origin and which have the potential to harm the local industries in the RSA.
- 1.12 "Force majeure" means an event beyond the control of the supplier and not involving the supplier's fault or negligence and not foreseeable. Such events may include, but is not restricted to, acts of the purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
- 1.13 "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any bidder, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the bidder of the benefits of free and open competition.
- 1.14 "GCC" means the General Conditions of Contract.
- 1.15 "Goods" means all of the equipment, machinery, and/or other materials that the supplier is required to supply to the purchaser under the contract.
- 1.16 "Imported content" means that portion of the bidding price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or his subcontractors) and which costs are inclusive of the costs abroad, plus freight and other direct importation costs such as landing costs, dock dues, import duty, sales duty or other similar tax or duty at the South African place of entry as well as transportation and handling charges to the factory in the Republic where the goods covered by the bid will be manufactured.
- 1.17 "Local content" means that portion of the bidding price, which is not included in the imported content provided that local manufacture does take place.
- 1.18 "Manufacture" means the production of products in a factory using labour, materials, components and machinery and includes other related value-adding activities.
- 1.19 "Order" means an official written order issued for the supply of goods or works or the rendering of a service.
- 1.20 "Project site," where applicable, means the place indicated in bidding documents.
- 1.21 "Purchaser" means the organization purchasing the goods.
- 1.22 "Republic" means the Republic of South Africa.
- 1.23 "SCC" means the Special Conditions of Contract.
- 1.24 "Services" means those functional services ancillary to the supply of the goods, such as transportation and any other incidental services, such as installation, commissioning, provision of technical assistance, training, catering, gardening, security, maintenance and other such obligations of the supplier covered under the contract.
- 1.25 "Supplier" means the successful bidder who is awarded the contract to maintain and administer the required and specified service(s) to the State.
- 1.26 "Tort" means in breach of contract.
- 1.27 "Turnkey" means a procurement process where one service provider assumes total responsibility for all aspects of the project and delivers the full end product / service required by the contract.
- 1.28 "Written" or "in writing" means hand-written in ink or any form of electronic or mechanical writing.

2. Application

- 2.1 These general conditions are applicable to all bids, contracts and orders including bids for functional and professional services (excluding professional services related to the building and construction industry), sales, hiring, letting and the granting or acquiring of rights, but excluding immovable property, unless otherwise indicated in the bidding documents.
- 2.2 Where applicable, special conditions of contract are also laid down to cover specific goods, services or works.
- 2.3 Where such special conditions of contract are in conflict with these general conditions, the special conditions shall apply.

3. General

- 3.1 Unless otherwise indicated in the bidding documents, the purchaser shall not be liable for any expense incurred in the preparation and submission of a bid. Where applicable a non-refundable fee for documents may be charged.
- 3.2 Invitations to bid are usually published in locally distributed news media and on the municipality/municipal entity website.

4. Standards

4.1 The goods supplied shall conform to the standards mentioned in the bidding documents and specifications.

5. Use of contract documents and information inspection

5.1 The supplier shall not, without the purchaser's prior written consent, disclose the contract, or any provision thereof, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the purchaser in connection therewith, to any person other than a person employed by the supplier in the performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.

5.2 The supplier shall not, without the purchaser's prior written consent, make use of any document or information mentioned in GCC clause 5.1 except for purposes of performing the contract.

5.3 Any document, other than the contract itself mentioned in GCC clause 5.1 shall remain the property of the purchaser and shall be returned (all copies) to the purchaser on completion of the supplier's performance under the contract if so required by the purchaser.

5.4 The supplier shall permit the purchaser to inspect the supplier's records relating to the performance of the supplier and to have them audited by auditors appointed by the purchaser, if so required by the purchaser.

6. Patent Rights

6.1 The supplier shall indemnify the purchaser against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the goods or any part thereof by the purchaser.

6.2 When a supplier developed documentation / projects for the municipality / municipal entity, the intellectual, copy and patent rights or ownership of such documents or projects will vest in the municipality / municipal entity.

7. Performance security

7.1 Within thirty (30) days of receipt of the notification of contract award, the successful bidder shall furnish to the purchaser the performance security of the [amount specified in SCC](#).

7.2 The proceeds of the performance security shall be payable to the purchaser as compensation for any loss resulting from the supplier's failure to complete his obligations under the contract.

7.3 The performance security shall be denominated in the currency of the contract or in a freely convertible currency acceptable to the purchaser and shall be in one of the following forms:

- (a) a bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the purchaser's country or abroad, acceptable to the purchaser, in the form provided in the bidding documents or another form acceptable to the purchaser; or
- (b) a cashier's or certified cheque.

7.4 The performance security will be discharged by the purchaser and returned to the supplier not later than thirty (30) days following the date of completion of the supplier's performance obligations under the contract, including any warranty obligations, [unless otherwise specified](#).

8. Inspections, tests and analyses

8.1 All pre-bidding testing will be for the account of the bidder.

8.2 If it is a bid condition that goods to be produced or services to be rendered should at any stage be subject to inspections, tests and analyses, the bidder or contractor's premises shall be open, at all reasonable hours, for inspection by a representative of the purchaser or organization acting on behalf of the purchaser.

8.3 If there are no inspection requirements indicated in the bidding documents and no mention is made in the contract, but during the contract period it is decided that inspections shall be carried out, the purchaser shall itself make the necessary arrangements, including payment arrangements with the testing authority concerned.

8.4 If the inspections, tests and analyses referred to in clauses 8.2 and 8.3 show the goods to be in accordance with the contract requirements, the cost of the inspections, tests and analyses shall be defrayed by the purchaser.

8.5 Where the goods or services referred to in clauses 8.2 and 8.3 do not comply with the contract requirements, irrespective of whether such goods or services are accepted or not, the cost in connection with these inspections, tests or analyses shall be defrayed by the supplier.

8.6 Goods and services which are referred to in clauses 8.2 and 8.3 and which do not comply with the contract requirements may be rejected.

8.7 Any contract goods may on or after delivery be inspected, tested or analysed and may be rejected if found not to comply with the requirements of the contract. Such rejected goods shall be held at the cost and risk of the supplier who shall, when called upon, remove them immediately at his own cost and forthwith substitute them with goods, which do comply with the requirements of the contract. Failing such removal the rejected goods shall be returned at the suppliers cost and risk. Should the supplier fail to provide the substitute goods forthwith, the purchaser may, without giving the supplier further opportunity to substitute the rejected goods, purchase such goods as may be necessary at the expense of the supplier.

8.8 The provisions of clauses 8.4 to 8.7 shall not prejudice the right of the purchaser to cancel the contract on account of a breach of the conditions thereof, or to act in terms of Clause 22 of GCC.

9. Packing

9.1 The supplier shall provide such packing of the goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing, case size weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.

9.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the contract, [including additional requirements](#), if any, and in any subsequent instructions ordered by the purchaser.

10. Delivery and documents

10.1 Delivery of the goods and arrangements for shipping and clearance obligations, shall be made by the supplier in accordance with the terms [specified in the contract](#).

11. Insurance

11.1 The goods supplied under the contract shall be fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery [in the manner specified](#).

12. Transportation

12.1 Should a price other than an all-inclusive delivered price be required, [this shall be specified](#).

13. Incidental Services

- 13.1 The supplier may be required to provide any or all of the following services, [including additional services](#), if any:
- (a) performance or supervision of on-site assembly and/or commissioning of the supplied goods;
 - (b) furnishing of tools required for assembly and/or maintenance of the supplied goods;
 - (c) furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied goods;
 - (d) performance or supervision or maintenance and/or repair of the supplied goods, for a period of time agreed by the parties, provided that this service shall not relieve the supplier of any warranty obligations under this contract; and
 - (e) training of the purchaser's personnel, at the supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied goods.
- 13.2 Prices charged by the supplier for incidental services, if not included in the contract price for the goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the supplier for similar services.

14. Spare parts

- 14.1 [As specified](#), the supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the supplier:
- (a) such spare parts as the purchaser may elect to purchase from the supplier, provided that this election shall not relieve the supplier of any warranty obligations under the contract; and;
 - (b) in the event of termination of production of the spare parts:
 - (i) advance notification to the purchaser of the pending termination, in sufficient time to permit the purchaser to procure needed requirements; and
 - (ii) following such termination, furnishing at no cost to the purchaser, the blueprints, drawings, and specifications of the spare parts, if requested.

15. Warranty

- 15.1 The supplier warrants that the goods supplied under the contract are new, unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the contract. The supplier further warrants that all goods supplied under this contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the purchaser's specifications) or from any act or omission of the supplier, that may develop under normal use of the supplied goods in the conditions prevailing in the country of final destination.
- 15.2 This warranty shall remain valid for twelve (12) months after the goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the contract, or for eighteen (18) months after the date of shipment from the port or place of loading in the source country, whichever period concludes earlier, [unless specified otherwise](#).
- 15.3 The purchaser shall promptly notify the supplier in writing of any claims arising under this warranty.
- 15.4 Upon receipt of such notice, the supplier shall, [within the period specified](#) and with all reasonable speed, repair or replace the defective goods or parts thereof, without costs to the purchaser.

- 15.5 If the supplier, having been notified, fails to remedy the defect(s) [within the period specified](#), the purchaser may proceed to take such remedial action as may be necessary, at the supplier's risk and expense and without prejudice to any other rights which the purchaser may have against the supplier under the contract.

16. Payment

- 16.1 The method and conditions of payment to be made to the supplier under this contract [shall be specified](#).
- 16.2 The supplier shall furnish the purchaser with an invoice accompanied by a copy of the delivery note and upon fulfillment of other obligations stipulated in the contract.
- 16.3 Payments shall be made promptly by the purchaser, but in no case later than thirty (30) days after submission of an invoice or claim by the supplier.
- 16.4 Payment will be made in Rand [unless otherwise stipulated](#).

17. Prices

- 17.1 Prices charged by the supplier for goods delivered and services performed under the contract shall not vary from the prices quoted by the supplier in his bid, with the exception of any [price adjustments authorized](#) or in the purchaser's request for bid validity extension, as the case may be.

18. Variation orders

- 18.1 In cases where the estimated value of the envisaged changes in purchase does not vary more than 15% of the total value of the original contract, the contractor may be instructed to deliver the goods or render the services as such. In cases of measurable quantities, the contractor may be approached to reduce the unit price, and such offers may be accepted provided that there is no escalation in price.

19. Assignment

- 19.1 The supplier shall not assign, in whole or in part, its obligations to perform under the contract, except with the purchaser's prior written consent.

20. Subcontracts

- 20.1 The supplier shall notify the purchaser in writing of all subcontracts awarded under this contracts if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the supplier from any liability or obligation under the contract.

21. Delays in the supplier's performance

- 21.1 Delivery of the goods and performance of services shall be made by the supplier in accordance with the [time schedule prescribed](#) by the purchaser in the contract.
- 21.2 If at any time during performance of the contract, the supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the goods and performance of services, the supplier shall promptly notify the purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the supplier's notice, the purchaser shall evaluate the situation and may at his discretion extend the supplier's time for performance, with or without the imposition of penalties, in which case the extension shall be ratified by the parties by amendment of contract.
- 21.3 The right is reserved to procure outside of the contract small quantities or to have minor essential services executed if an emergency arises, the supplier's point of supply is not situated at or near the place where the goods are required, or the supplier's services are not readily available.

- 21.4 Except as provided under GCC Clause 25, a delay by the supplier in the performance of its delivery obligations shall render the supplier liable to the imposition of penalties, pursuant to GCC Clause 22, unless an extension of time is agreed upon pursuant to GCC Clause 22.2 without the application of penalties.
- 21.5 Upon any delay beyond the delivery period in the case of a goods contract, the purchaser shall, without cancelling the contract, be entitled to purchase goods of a similar quality and up to the same quantity in substitution of the goods not supplied in conformity with the contract and to return any goods delivered later at the supplier's expense and risk, or to cancel the contract and buy such goods as may be required to complete the contract and without prejudice to his other rights, be entitled to claim damages from the supplier.
- 22. Penalties**
- 22.1 Subject to GCC Clause 25, if the supplier fails to deliver any or all of the goods or to perform the services within the period(s) specified in the contract, the purchaser shall, without prejudice to its other remedies under the contract, deduct from the contract price, as a penalty, a sum calculated on the delivered price of the delayed goods or unperformed services using the current prime interest rate calculated for each day of the delay until actual delivery or performance. The purchaser may also consider termination of the contract pursuant to GCC Clause 23.
- 23. Termination for default**
- 23.1 The purchaser, without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier, may terminate this contract in whole or in part:
- if the supplier fails to deliver any or all of the goods within the period(s) specified in the contract, or within any extension thereof granted by the purchaser pursuant to GCC Clause 21.2;
 - if the supplier fails to perform any other obligation(s) under the contract; or
 - if the supplier, in the judgement of the purchaser, has engaged in corrupt or fraudulent practices in competing for or in executing the contract.
- 23.2 In the event the purchaser terminates the contract in whole or in part, the purchaser may procure, upon such terms and in such manner, as it deems appropriate, goods, works or services similar to those undelivered, and the supplier shall be liable to the purchaser for any excess costs for such similar goods, works or services. However, the supplier shall continue performance of the contract to the extent not terminated.
- 23.3 Where the purchaser terminates the contract in whole or in part, the purchaser may decide to impose a restriction penalty on the supplier by prohibiting such supplier from doing business with the public sector for a period not exceeding 10 years.
- 23.4 If a purchaser intends imposing a restriction on a supplier or any person associated with the supplier, the supplier will be allowed a time period of not more than fourteen (14) days to provide reasons why the envisaged restriction should not be imposed. Should the supplier fail to respond within the stipulated fourteen (14) days the purchaser may regard the supplier as having no objection and proceed with the restriction.
- 23.5 Any restriction imposed on any person by the purchaser will, at the discretion of the purchaser, also be applicable to any other enterprise or any partner, manager, director or other person who wholly or partly exercises or exercised or may exercise control over the enterprise of the first-mentioned person, and with which enterprise or person the first-mentioned person, is or was in the opinion of the purchaser actively associated.
- 23.6 If a restriction is imposed, the purchaser must, within five (5) working days of such imposition, furnish the National Treasury, with the following information:
- the name and address of the supplier and / or person restricted by the purchaser;
 - the date of commencement of the restriction
 - the period of restriction; and
 - the reasons for the restriction.
- These details will be loaded in the National Treasury's central database of suppliers or persons prohibited from doing business with the public sector.
- 23.7 If a court of law convicts a person of an offence as contemplated in sections 12 or 13 of the Prevention and Combating of Corrupt Activities Act, No. 12 of 2004, the court may also rule that such person's name be endorsed on the Register for Tender Defaulters. When a person's name has been endorsed on the Register, the person will be prohibited from doing business with the public sector for a period not less than five years and not more than 10 years. The National Treasury is empowered to determine the period of restriction and each case will be dealt with on its own merits. According to section 32 of the Act the Register must be open to the public. The Register can be perused on the National Treasury website.
- 24. Antidumping and countervailing duties and rights**
- 24.1 When, after the date of bid, provisional payments are required, or anti-dumping or countervailing duties are imposed, or the amount of a provisional payment or anti-dumping or countervailing right is increased in respect of any dumped or subsidized import, the State is not liable for any amount so required or imposed, or for the amount of any such increase. When, after the said date, such a provisional payment is no longer required or any such anti-dumping or countervailing right is abolished, or where the amount of such provisional payment or any such right is reduced, any such favourable difference shall on demand be paid forthwith by the supplier to the purchaser or the purchaser may deduct such amounts from moneys (if any) which may otherwise be due to the supplier in regard to goods or services which he delivered or rendered, or is to deliver or render in terms of the contract or any other contract or any other amount which may be due to him.
- 25. Force Majeure**
- 25.1 Notwithstanding the provisions of GCC Clauses 22 and 23, the supplier shall not be liable for forfeiture of its performance security, damages, or termination for default if and to the extent that his delay in performance or other failure to perform his obligations under the contract is the result of an event of force majeure.
- 25.2 If a force majeure situation arises, the supplier shall promptly notify the purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the purchaser in writing, the supplier shall continue to perform its obligations under the contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the force majeure event.
- 26. Termination for insolvency**
- 26.1 The purchaser may at any time terminate the contract by giving written notice to the supplier if the supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the supplier, provided that such termination will not prejudice or affect any right of action or remedy, which has accrued or will accrue thereafter to the purchaser.

27. Settlement of Disputes

- 27.1 If any dispute or difference of any kind whatsoever arises between the purchaser and the supplier in connection with or arising out of the contract, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.
- 27.2 If, after thirty (30) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the purchaser or the supplier may give notice to the other party of his intention to commence with mediation. No mediation in respect of this matter may be commenced unless such notice is given to the other party.
- 27.3 Should it not be possible to settle a dispute by means of mediation, it may be settled in a South African court of law.
- 27.4 Notwithstanding any reference to mediation and/or court proceedings herein,
- (a) the parties shall continue to perform their respective obligations under the contract unless they otherwise agree; and
 - (b) the purchaser shall pay the supplier any monies due the supplier for goods delivered and / or services rendered according to the prescripts of the contract.

28. Limitation of Liability

- 28.1 Except in cases of criminal negligence or wilful misconduct, and in the case of infringement pursuant to Clause 6;
- (a) the supplier shall not be liable to the purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the supplier to pay penalties and/or damages to the purchaser; and
 - (b) the aggregate liability of the supplier to the purchaser, whether under the contract, in tort or otherwise, shall not exceed the total contract price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment.

29. Governing language

- 29.1 The contract shall be written in English. All correspondence and other documents pertaining to the contract that is exchanged by the parties shall also be written in English.

30. Applicable law

- 30.1 The contract shall be interpreted in accordance with South African laws, unless otherwise specified.

31. Notices

- 31.1 Every written acceptance of a bid shall be posted to the supplier concerned by registered or certified mail and any other notice to him shall be posted by ordinary mail to the address furnished in his bid or to the address notified later by him in writing and such posting shall be deemed to be proper service of such notice.
- 31.2 The time mentioned in the contract documents for performing any act after such aforesaid notice has been given, shall be reckoned from the date of posting of such notice.

32. Taxes and duties

- 32.1 A foreign supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the purchaser's country.
- 32.2 A local supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted goods to the purchaser.
- 32.3 No contract shall be concluded with any bidder whose tax matters are not in order. Prior to the award of a bid SARS must have certified that the tax matters of the preferred bidder are in order.
- 32.4 No contract shall be concluded with any bidder whose municipal rates and taxes and municipal services charges are in arrears.

33. Transfer of Contracts

- 33.1 The contractor shall not abandon, transfer, cede assign or sublet a contract or part thereof without the written permission of the purchaser.

34. Amendment of contracts

- 34.1 No agreement to amend or vary a contract or order or the conditions, stipulations or provisions thereof shall be valid and of any force unless such agreement to amend or vary is entered into in writing and signed by the contracting parties. Any waiver of the requirement that the agreement to amend or vary shall be in writing, shall also be in writing.

35. Prohibition of restrictive practices

- 35.1 In terms of section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, an agreement between, or concerted practice by, firms, or a decision by an association of firms, is prohibited if it is between parties in a horizontal relationship and if a bidder(s) is / are or a contractor(s) was / were involved in collusive bidding.
- 35.2 If a bidder(s) or contractor(s) based on reasonable grounds or evidence obtained by the purchaser has / have engaged in the restrictive practice referred to above, the purchaser may refer the matter to the Competition Commission for investigation and possible imposition of administrative penalties as contemplated in section 59 of the Competition Act No 89 Of 1998.
- 35.3 If a bidder(s) or contractor(s) has / have been found guilty by the Competition Commission of the restrictive practice referred to above, the purchaser may, in addition and without prejudice to any other remedy provided for, invalidate the bid(s) for such item(s) offered, and / or terminate the contract in whole or part, and / or restrict the bidder(s) or contractor(s) from conducting business with the public sector for a period not exceeding ten (10) years and / or claim damages from the bidder(s) or contractor(s) concerned.

SECTION 6: SPECIAL / ADDITIONAL CONDITIONS OF CONTRACT

The **Conditions of Contract** make reference to the **Special Conditions of Contract (SSC)** for details that apply specifically to this bid. The **Special Conditions of Contract** shall have precedence in the interpretation of any ambiguity or inconsistency between it and the **Conditions of Contract**.

Each item below is cross-referenced to the clause in the **Conditions of Contract** to which it mainly applies.

SCC 1.2 CONTRACT

This contract is a 36-month contract.

SCC 7.1 PERFORMANCE SECURITY

The liability of the Performance Security shall be Nil.

SCC 10.1 DELIVERY AND DOCUMENTS

The complete unit will have to be delivered to eThekweni Municipality Premises and have to be accompanied by an invoice. Delivery will only take place after the prototype and relevant documentation have been received and assessed by eThekweni Municipality's officials responsible.

10.1.1 The following documentation (soft and hard copies) shall accompany the vehicle:

- a) Operating manual
- b) Training manual
- c) Spares manual
- d) Certificate showing unit and all serial numbers of main components (engine, gearbox, drivetrain, braking system, etc.) fitted from the factory according to the specification of the customer's requirements. No retro fitments of major components shall be undertaken.

10.1.2 The following documentation shall accompany the tender response:

- a) An assembly drawing indicating the general arrangement of the body and the subassemblies making up the customisation.
- b) A product catalogue showing the units specifications and abilities for the application.

SCC 11.1 INSURANCE

It is the sole responsibility of the service provider to maintain insurance cover to the value of R 10,000,000.00 to cover eThekweni Municipality against all insurable risks for the duration of this contract.

SCC 12.1 TRANSPORTATION

No separate costs will be paid by the City for transportation of the goods, the tenderer must provide a price which is inclusive of delivery costs.

SCC 14.1 SPARE PARTS

The tenderer must have service representation in South Africa that can provide spare parts for the unit tendered on.

SCC 15.5 WARRANTY

The machines supplied to meet the warranties:

All components fitted (excl. chassis and structures) and the hydraulic system to be covered by a minimum 2-year warranty.

The customisation steel structures shall have a minimum of a 7-year warranty for its application.

The paintwork shall be covered by a 10-year corrosion free warranty.

SCC 16.1 PAYMENT

The Contractor shall submit to the Department concerned a detailed account which shall reflect the identifying number of each item / service. Payment will be made on this account when checked and substantiated by the authorised official.

Payment for goods received and accepted by the Municipality shall be made no later than 30 days after submission of invoice or claim, provided however that all the terms of the contract are duly complied with.

Payment will be made only to the supplier. Factoring arrangements will not be accepted.

SCC 17 PRICES

Prices must be fixed for the first six (06) months of the contract, thereafter application / requests for price adjustments will be allowed annually to cover year two (02) and year three (03), these must be in line with SEIFSA and Consumer Price Index

The application / request for price adjustment must be addressed via a signed formal letter (on the service providers company letterhead) to Fleet Management - Contracts Department. The letter must be accompanied by relevant supporting documents.

The new prices (year 2 and 3) will only be implemented once the internal approvals of the adjustment requests have been finalised and such will be communicated to the service provider.

SCC 21.1 DELAYS IN THE SUPPLIER'S PERFORMANCE

The time schedule for the delivery of goods and performance of services is 26 weeks from the date of confirmation of an order.

SCC 22.1 PENALTIES

"If the supplier fails to deliver any or all of the goods or to perform the services within the period(s) specified in the contract, the purchaser shall, without prejudice to its other remedies under the contract, deduct from the contract price (as a penalty):

- A penalty of R 5000 per day for each day delivery is delayed.

ADDITIONAL CONDITIONS OF CONTRACT
ACC1 PERFORMANCE MONITORING & ASSESSMENT OF SERVICE PROVIDERS

For contract awards that are greater than R10m, the Contractor shall be subjected to "Performance Monitoring" assessments in terms of the applicable Section of the Council's current Supply Chain Management Policy.

ACC2 QUALITY OF PRODUCTS

No inferior products will be accepted under this enquiry.

Should there be any cause for complaint against the standard of service or quality of products offered which is not resolved within a period of 10 working days, the Municipality reserves the right to cancel the contract after serving one month's notice, in writing, to the supplier involved. Should such notice be given, the supplier shall nevertheless be obliged to perform the duties covered by the contract up to the date of expiration of the period of notice.

ACC3 SATISFACTORY PERFORMANCE

The supplier shall employ for the purpose of this contract only such personnel as are careful and competent and the Municipality shall be at liberty to object to and require the supplier to remove from the job forthwith any person, including supervisory staff, employed by the supplier who, in the opinion of the Municipality, misconducts himself/herself or is incompetent or negligent in the proper performance of his/her duties and such person shall not again be employed upon this contract without the permission of the Municipality.

ACC4 OCCUPATIONAL INJURIES AND DISEASES ACT

This act replaces the Workmen's Compensation Act:

The supplier shall, before commencement of work, produce documentary proof to the Deputy Municipal Manager, Treasury: Finance that he has complied in all respects with the provisions of the Occupational Injuries and Diseases Act. The supplier undertakes that he/she will perform and comply with all provisions of the Occupational Injuries and Diseases Act and more particularly that he/she will render all returns and pay all assessments for which he/she is liable in terms of such Act.

ACC5 DAMAGE TO PERSONS AND PROPERTY

- (1) The supplier **shall** indemnify and keep indemnified the Council against any claim for death, injury, damage or loss to any person or property whatsoever in respect thereof or in relation thereto.
- (2) The supplier enters into this contract as an independent contractor and shall be solely liable in respect of any claim for death, injury, damage or loss to any person or property whatsoever in respect thereof or in relation thereto.

ACC6 RATE OF EXCHANGE VARIATION

Where the goods are imported the Contractor shall within seven days of date of Official Purchase Order, arrange through his bankers for the foreign commitment to be covered forward down to the Rand in order to fix the rate of exchange. The Contractor shall notify the Municipality as soon as possible thereafter regarding the rate which has been fixed on such forward exchange. The forward cover shall be from a reputable South African bank. The Contractor is to confirm with the employer prior to placing forward cover if the service provider is acceptable.

Any increase or decrease between the basic rate of exchange as at 12:00 on the date of close of the bid and that existing at the date of establishment of the forward exchange cover within the period stipulated above shall be paid or deducted by the Municipality. Upon the failure of the Contractor to arrange forward exchange cover, the Contractor shall be liable should there be an increase in the basic rate of exchange occurring after the last-mentioned date.

The bank charges incurred in obtaining the forward exchange cover must be included in the Tenderer's bid.

ACC7 ESTIMATED QUANTITIES

The quantities stated in Section 8 are applicable for evaluation purposes only. The final quantity of goods and services required shall vary, depending on the total number of actual instances a service/goods will be required over the Contract Period. The rates tendered shall be applicable, irrespective of the total quantity of goods and services procured over the contract duration.

ACC8 SERVICE PROVIDER OFFICE REQUIREMENTS

The service provider must have, for the duration of the contract, a local presence (within the geographical eThekweni boundary).

ACC 9 FITMENT OF AUXILIARY EQUIPMENT

It must be noted that once the vehicle(s) have been received by eThekweni Municipality there will be fitment of auxiliary equipment such as fuel monitoring and vehicle tracking systems.

The bidder will be required to provide an electrical diagram and tap off points for such fitments.

ACC10 Homologation and Registration of the vehicles where applicable:

The vehicle/equipment/unit shall be completely homologated, registered and licensed. Fitted licence plates and accompanying documentation shall accompany the delivered

vehicle/equipment/unit. This will be applicable on all items of bid where necessary and compulsory. Registration numbers shall be provided by eThekweni Municipality.

SECTION 7: SCOPE AND SPECIFICATION OF REQUIRED SUPPLY / SERVICES

The vehicles/equipment/unit with the customization shall be supplied complete and fully assembled in all respects, including standard equipment supplied by the manufacturer and shall comply with the South African Occupational Health and Safety Act, Act 85 of 1993/as amended and the applicable current Road Traffic Legislation. All work on the vehicle equipment/unit including the customisation is to be constructed by the OEM or a SABS/SANS approved body/coach/vehicle manufacturer/ builder. The layout should also ensure that the laden individual axle loads do not exceed the legal limits where applicable.

The vehicle/equipment/unit and its customisation must be operationally friendly, easy to operate and maintain. All replaceable items including (but not limited to) critical components shall be designed for easy access, removal and replacement. There shall be a prescreening design phase of the concept of the vehicle provided by the bidder before getting approval from eThekweni City Fleet to go ahead with the prototype. Prototype will be used in field conditions before being accepted or revised. Thereafter consent will be provided for production (if multiple units required). The vehicle and its customisation shall be to I.S.O. Metric Standards, and instrumentation gauges, dials, etc. shall be in Systeme International (S.I.) units. Prospective tenderers must ensure that they read the specific Contractual Conditions applicable to this contract which appear in the section immediately preceding Section 7.

Each vehicle/equipment/unit must be supplied with detailed maintenance, operating, training and spares manuals (in English), including technical data for each spare, as well as general arrangement drawings and a bill of materials. There must be sufficient information to allow the capture of maintenance schedules in terms of inspections, servicing and replacement of parts. Three hardcopies and three electronic copies of the operating, maintenance, training and spare parts manuals shall be provided, as well as a training manual for each trainee; driver, operator and maintenance staff. Training shall be provided for every item supplied to at least two eThekweni staff members of driver, operator and maintenance departments. The training shall be fully OEM accredited.

PTO calibration shall be performed by the bidder after tracking device is installed on the vehicle/equipment/unit by eThekweni City Fleet. All exposed electrical wiring looms of the vehicle/equipment/unit shall be full encased in a flexible protective metallic conduit and securely clamped with fasteners to the chassis or the structure. Each vehicle/equipment/unit must be supplied with three sets of keys.

Note: Bidders are encouraged to also offer hybrid electric plant equipment/units if offered from their respective product range. The unit should meet the minimum Euro 3 engine specification and have a similar operating mass and payload handling capability. Bidder must provide a separate product catalogue for this respective Item and a price option in Section 8.

List of items for supply:

Item 1.1: Backhoe loader (TLB)
Item 1.2: Backhoe loader (TLB) with an extended boom
Item 2.1 2WD tractor with the option of a driver's canopy, driver's cab and various implements
Item 2.2 4WD tractor with the option of various implements
Items 2.3 high powered 4WD tractor with the option of various terrain and agricultural implements
Item 2.4 Electric 2WD/4WD tractor
Item 3.1 Small excavator
Item 3.2 Medium Excavator
Items 3.3: Large Excavator
Item 4: Skid loader with various implements
Item 5: Site dumper
Item 6.1 to 6.6: Beach Cleaning Vehicles
Item 7: Diesel Forklifts
Item 8.1: Road Milling machine
Item 8.2: Cold Planar vehicle
Items 9: Electric Reach truck
Item 10.1-10.3: Vibratory drum roller
Item 11: Asphalt Road Paver
Item 12.1 Landfill Grader
Item 12.2 Asphalt Grader
Item 13.1 to 13.3: Self powered Aerial/Scissors platforms
Item 14: Electric Pallet Stacker
Item 15: Manual Pallet Stacker
Item 16: Mobile crane
Item 17: Asphalt Sweeper/Broom
Item 18: Quad bike
Item 19: Rescue Ski with paddles
Item 20: Inflatable rescue boat with trailer
Item 21: Jet ski with trailer
Item 22: Golf cart
Item 23: Ride on Mowers
Item 24: Electric Quad Bike
Item 25: Personal Transporter
Item 26: Front End Loader
Item 27: Patrol Boat
Item 28: Shipping Container Loader
Item 29: Pneumatic Tyre Roller
Item 30: Electric forklifts

Item 1: Technical specification for a backhoe loader (TLB)

1. Scope

The intent of this specification is to provide for a fully operational vehicle/unit, which has the capability to load and off-load various commodities including landfill waste, sludge, gravel, asphalt and stone.

The front lifting bucket shall have a volumetric capacity of at least 1 m³ and a lifting capacity of 3 000 kg and the rear bucket a minimum of 0.3 m³ and a lifting capacity of 2 000 kg. Both shall be fitted with forks.

Bidder shall provide two options for Item 1; Item 1.1: TLB with a minimum digging depth of 4.5 m and,

Item 1.2 TLB with an extended boom and minimum digging depth of 6.0 m.

Bidder shall also provide the option for implements for either or both models bid on in 1.1 and 1.2.

2. Vehicle

- 1.1 The unit shall have a minimum Gross Vehicle Mass (GVM) of 7 500 kg
- 1.2 Transmission shall be fully automatic incorporating a torque converter, with at least four forward and three reverse gears.
- 1.3 Minimum diesel engine requirements shall be: Euro 3 to 5, 65 kW of power and 350 Nm of torque.
- 1.4 Vehicle should have a limited top speed of not more than 60 km/hr.
- 1.5 ABS brakes are mandatory. Integrated auxiliary braking to be provided through an integrated retarder which shall immediately activated upon deceleration.
- 1.6 Minimum wheelbase of 2 000 mm.
- 1.7 Steel suspension.
- 1.8 Fitment of a steel under belly plate to protect the radiator & engine.
- 1.9 Driver's cab shall be ROPS/FOPS compliant.
- 1.10 Clear visibility through all sides of the cab.
- 1.11 Park and emergency braking to be independent systems.
- 1.12 A fully laden minimum gradeability of 40 % shall be expected.
- 1.13 Rear axle with hub reduction gearing and differential lock to provide all wheel drive.
- 1.14 Servicing platform.
- 1.15 To safely and comfortably accommodate driver using an equal levelling suspended type seat. To be fully adjustable.
- 1.16 Wide angle adjustable mirrors.
- 1.17 Driver assist mirrors for front and sides of vehicle.
- 1.18 Heater, windscreen demister and air-conditioning system should be adequate for the cab and its occupant.
- 1.19 12v charger socket.
- 1.20 Rear and front windscreen wipers with washer spray.
- 1.21 Aerial mounted camera to assist with viewing of the rear.
- 1.22 Fuel tank shall be at least 120 liters with a lockable fuel cap and anti-siphon device.
- 1.23 Fuel management system to remove access water and dirt before delivery to the engine.
- 1.24 Heat sensing engine protection device, mechanical monitoring system to safely shut down engine if engine cylinder head increases to an unsafe temperature.
- 1.25 Auto lubrication system.
- 1.26 The vehicle and the customisation shall be designed according to these critical specifications (summary of evidence shall be provided):
 - a) SANS 1506:1994 (2000-07-25) Brake systems.
 - b) SANS 20474: Earthmoving Machinery Safety.

- c) ISO 6015: Earth-moving machinery, Hydraulic excavators and backhoe loaders, Methods of determining tool forces.
- d) The end of Section 7 covers other specifications/standards that shall be adhered to.

3. Material specification

The load bearing items including the booms and goose neck shall be made out of structural steel to withstand the payload. Corten steel and Domex for the structural rolled sections and flat plate is recommended. Whilst Hardox for the wear pads in the lifting bucket.

4. Construction requirements

4.1 Body

- 4.1.1 Areas of the floor that shall be used as access walkways shall have a hard wearing, slip resistant material (Vastrap).
- 4.1.2 Access ladder and railings/grabs shall be installed in a suitable position behind the cab and rear/side.
- 4.1.3 The hydraulic cylinder/s shall be suitable for the application and lift the laden bucket at the applicable angle to load and offload. Maintenance free bushings/bearings shall be used.
- 4.1.4 The main hoist shall incorporate a hook mount system. The hook shall be bolt on type to be easily replaced.
- 4.1.5 Articulation angle of 40° or better shall be required for the front-end bucket and 160° or better for the backhoe bucket.
- 4.1.6 The bucket shall have wear plates installed in the interior over the primary structure. It shall be installed such that it can be removed for replacement when minimum thickness is reached. It must have properties to withstand the various commodities the vehicle is expected to handle.

All items in chapter 4 must be thoroughly sealed with an approved sealer to prevent rusting between mating surfaces and drain holes must be provided in areas where water can accumulate. Any floor that persons will use on the body should be coated with a hard wearing, slip resistant material (Vastrap).

5. Lighting

5.1 A waterproof slim line bar light 1200 mm in length and 200 mm in width to be installed on bracket on the front of the cab without drilling into the roof. Generation 3 type LED consisting of 1 watt, 6x4 modules to the front with end cap modules consisting of 1x2 head modules with amber coloured polycarbonate lenses to be fitted to the bracket on the cab roof with on/off switch with random flash pattern positioned in the cab.

5.2 A pair of rubber encased spotlights shall be installed to the front and rear top of the cab facing the driving and work area. Switch shall be located on the interior panel.

5.3 Interior controls and cabin to illuminated for use in poor light conditions.

6. Hydraulic system

- 6.1 In respect of the hydraulic tank the following shall be required:
 - 6.1.1 To be constructed of steel.
 - 6.1.2 To be fitted with a bump guard from externalities.
 - 6.1.3 To be fitted with a front mounted sight glass for visual oil level inspection. Glass should be marked minimum and maximum accordingly with levels of fluid in the tank.
 - 6.1.4 Must have a filler cap strainer & filter into filler base and filler cap assembly.
 - 6.1.5 Oil capacity shall be sufficient, and a cooler added if necessary.
 - 6.1.6 To be fitted to an accessible side on the chassis, low enough that the body height does not impede the maintenance staff or driver of filling oil to tank.
- 6.2 Must have an inline filter with a blockage indicator fitted onto the pressure side of hydraulic pump, before the tipper / solenoid valve system.

- 6.3 The hydraulic valves shall be grouped together for ease of maintenance.
- 6.4 Test points for testing hydraulic pressures shall be fitted and grouped together.
- 6.5 Where possible steel tubing, which shall be treated with suitable corrosion protection, in lieu of rubber hosing shall be used for hydraulic lines.
- 6.6 All hydraulic fittings shall be wrapped with a petrolatum impregnated tape or sprayed with a petrolatum primer to prevent corrosion.
- 6.7 Safety hold valve for cylinder in case of hydraulic failure.
- 6.8 Hydraulic controls for the operation of the loading/offloading shall be fitted in a user friendly manner in the driver's cab and behind the cab allowing for ease of operation. The outside controls shall be protected by means of an enclosure.
- 6.9 The controls shall where possible be electronic, and activate the necessary servos (either pneumatic or hydraulic) that will activate the operation. All actions will be fully adjustable at variable speeds for the operation of the hydraulics. A plug in, modular type, control panel is preferred for ease of maintenance.

7. Power Take Off (PTO)

- 7.1 The PTO drive assembly shall be approved by the OEM mechanically and electrically for use on the engine and the wiring systems of the vehicle for the engagement of the PTO drive. Any modifications to the vehicle to accommodate the P.T.O. must be approved by the truck manufacturer and not affect the trucks warranty in any way.
- 7.2 The engine and transmission must not be harmed by use of the PTO.
- 7.3 The fitment of the P.T.O. should not negatively impact on the vehicles ground clearance.
- 7.4 Electronic control module and wiring harness which incorporates the "Rev Up Limiter" must be integrated into the existing OEM vehicle using the OEM 12/24 Volt system.
- 7.5 The PTO must only run when the PTO switch is engaged. The system will not allow the PTO to be engaged if the vehicle is in gear or if the handbrake is not engaged.
- 7.6 The accelerator pedal cannot be used, while the PTO is engaged.
- 7.7 PTO calibration shall be performed by the bidder after tracking device is installed on the vehicle/equipment/unit by eThekweni City Fleet.

8. Metal Preparation and Painting Procedure

The following procedure must be adhered to:

- 8.1 Descale all metal surfaces
- 8.2 Grind down & smooth all rough edges
- 8.3 Thoroughly clean all surfaces and shot blast to primer specification
- 8.4 Prime the trailer using a two component self-curing inorganic zinc ethyl silicate or two component zinc rich polyamide cured epoxy primer.
- 8.5 Thereafter paint using a coat of premium quality twin pack automotive paint.
- 8.6 The bucket should have a polyurethane protective final coat.
- 8.7 Paint film thickness must not be less than 80 microns each. Two coats of primer and one colour coat.

9. Colors

Underside of Body	Black
Cab	Yellow or White (Will be finalized at time of the order)
Bucket	Black

10. Electrical

All additional electrical circuits are to be suitably fused and must not interfere with or adversely affect the existing electrical system.

- 10.1 Rear units to be premium quality equal light unit incorporating 30 LEDs or more of minimum 100 mm in diameter that are screwed into position with a stainless steel flange.
- 10.2 Reversing buzzer and warning light to be installed when reverse gear is engaged.
- 10.3 Battery isolator switch.
- 10.4 Uninterrupted power supply points shall be made available for the vehicle tracking and fuel master monitoring system.
- 10.5 All exposed electrical wiring looms of the vehicle/equipment/unit and superstructure shall be full encased in a flexible protective metallic conduit and securely clamped with fasteners to the chassis or the structure.

11. Signage and Markings

11.1 Data plates shall be fitted labelling the storage areas and capacity. Safe working loads should be labelled where necessary:

- a) The hydraulic system indicating tank capacity, system pressure, fluid type/grade, hydraulic cylinder specifications and test criteria.
- b) Safe working loads to be clearly labeled on the structure on both sides.
- c) Safety, operation, technical data, dates of manufacture, manufacturer's details etc.

11.2 Chevron board to be fitted at the rear conforming with the appropriate SABS/SANS standard.

11.4 Durable, ultraviolet resistant and weather resistant warning signs shall be provided at all locations of the vehicle that impose a danger to persons.

11.5 Durable, ultraviolet resistant and weather resistant information signs shall be provided in specific locations to assist the driver/maintenance staff with the operation/maintenance of the vehicle.

11.6 Retro-reflective tape shall be fitted to both sides and the rear of the vehicle as well as the rear bumper.

11.7 Registration number to be clearly marked on roof.

12. Miscellaneous items

12.1 The batteries to have a lockable weather proof cover to prevent debris and moisture ingress or built within the vehicle chassis.

12.2 Fuel tank, batteries, pneumatic cylinders and hydraulic tank to have structures built around them for safety or built within the vehicle.

12.3 Bolt on covers for safety where parts are rotating, swinging or of high temperature.

12.4 A 4.5 kg fire extinguisher should be supplied and fitted in an accessible position close to the driver when exiting the cab.

12.5 Tyres shall be E4 type tubeless radial articulated hauler type with specified load ratings for the application.

12.6 One complete spare wheel as in 12.5 and one set of emergency changing tools shall be supplied per vehicle.

12.7 Bolt on head and tail light guards.

12.8 Front and rear mud guards constructed from a suitable material for the application.

Item 2.1: Technical specification for a 2WD tractor with the option of a driver's canopy, driver's cab and various implements

1. Scope

The intent of this specification is to provide for a fully operational vehicle, which will primarily be used for maintaining landscapes and has the capability to shunt light trailers and recreational vehicles.

This 2WD tractor which shall be primarily used for maintaining of parks terrain, vacant land and cemeteries. The tractor shall be supplied with a set of wheels (rims and tyres) for all terrain application. Bidder shall provide the option of wheels (rims and tyres) for sensitive turf like stadiums and sports grounds and for beach application. Bidder shall bid for this item with the following options; a driver's canopy (Item 2.1.1) and a driver's cab (Item 2.1.2).

2. Vehicle

- 2.1 The chassis/body shall have a minimum Gross Vehicle Mass (GVM) of 3500 kg.
- 2.2 Transmission shall be preferably fully automatic, or power assisted. Manual assisted or manual shall be equipped with at least ten forward and ten reverse gears.
- 2.3 Minimum diesel engine requirements shall be: Euro 3 to 5, 60 kW of power and 350 Nm of torque.
- 2.4 Vehicle should have a limited top speed of not more than 40 km/hr.
- 2.5 Minimum wheelbase of 2 000 mm.
- 2.6 Steel suspension.
- 2.7 Fitment of a steel under belly plate (fastened with lock washers) to protect the radiator, engine/motors and other exposed drive items.
- 2.8 2WD tractor shall have a driver's canopy and/or the option of a fully enclosed ROPS/FOPS driver's cab in Section 8.
- 2.9 Heater, windscreen demister and air-conditioning system should be adequate for the fully enclosed ROPS/FOPS driver's cab option.
- 2.10 Clear visibility through all sides of the vehicle.
- 2.11 A fully laden minimum grade ability of 40 % shall be expected.
- 2.12 To safely and comfortably accommodate driver using a suspended type seat. To be adjustable.
- 2.13 Wide angle adjustable mirrors.
- 2.14 12v charger socket.
- 2.15 Fuel tank shall be at least 80 liters with a lockable fuel cap and anti-siphon device.
- 2.16 Automated fuel management system to remove water and dirt before delivery to the engine.
- 2.17 Heat sensing engine protection device, mechanical monitoring system to safely shut down engine if engine cylinder head increases to an unsafe temperature.
- 2.18 Auto lubrication system (if required), maintenance free bearings/bushings preferred.
- 2.19 The vehicle and the customisation shall be designed according to these critical specifications (summary of evidence shall be provided):
 - a) ROPS/FOPS compliant canopy/cab.
 - b) SANS 1447-1 (SABS 1447-1), Braking (motor and towed vehicles, designed for low speed or for use off public roads) - Part 1: Low speed vehicles.
 - c) SANS 10205 (SABS 0205), The measurement of noise emitted by motor vehicles in motion
 - d) The end of Section 7 covers other specifications/standards that shall be adhered to.

3. Material specification

The load bearing items shall be made out of structural steel to withstand the payload. Corten steel and Domex for the structural rolled sections and flat plate is recommended. Wearing items shall be made of Hardox or a

similar high wear resistant steel. Items that are subjective to high corrosive environment shall be made of automotive grade stainless steel similar to 3CR12.

4. Construction requirements

4.1 Areas of the floor that shall be used as access walkways shall have a hard wearing, slip resistant material (Vastrap).

4.2 Access steps and railings/grabs shall be installed in a suitable position on both sides of the vehicle to enter the driver's position.

4.3 The tractor shall be compatible with a variety of interchangeable devices;

4.3.1 A rotary grass cutting attachment with 1 500-2 000 mm width. The attachment shall be compatible with the tractors PTO and coupling system. It shall have a double row front and rear chain deflector. The side deflectors shall have wear pads underneath the primary structure. Adjustable cutting height, preferably using a quick release type system. Preferably shall have a four-blade system for cutting. System should be balanced and can operate either on one or two pairs of blades depending on the application.

4.3.2 A dual rotary grass cutting attachment with 5 500-6 300 mm width. The attachment shall be compatible with the tractors PTO and coupling system. It shall have a double row front and rear chain deflector on all pieces. The side deflectors shall have wear pads underneath the primary structure. Adjustable cutting height, preferably using a quick release type system. Preferably shall have a four-blade system for cutting. System should be balanced and can operate either on one or two pairs of blades depending on the application.

4.3.3 A roller mower for maintenance of sports fields and stadiums. It shall have a cut width of 1 500-2 000 mm. The cutting system shall be able to cut the material finely enough to not require collection. Rollers shall be coated in a durable protective polyurethane finish. The side deflectors shall have wear pads underneath the primary structure.

4.3.4 The above attachments (4.3.1-4.3.3) shall have the option of a collection Shute that can collect the waste material in heavy duty bags. Three bags per unit shall be supplied.

4.4 A mowing collector attachment with an enclosed collection hopper/tank with a working width of 2 000 mm or better. Collection tank shall have a capacity of 2 500- 3 500 litres with a tank capacity indicator. The system should be able to handle applications such as sports fields/stadiums, parks and race courses. It is expected to handle refuse as well. It shall be able to offload itself into a trailer or truck with a discharge reach of 2 000 mm or better. The lid/s shall automatically open and close and hold the position when loading and off-loading. It shall have mowing capabilities and scarifying (tool attachments shall be included). Mowing shall be done preferably by a rotating drum with replaceable blades. It shall be height adjustable. Wheels to be placed for transporting the unit at tractor top speed (40km/hr).

4.5 A collector attachment with an enclosed collection hopper/tank with a working width of 2 000 mm or better. Collection tank shall have a capacity of 2 000- 3 000 litres with a tank capacity indicator. The system should be able to handle applications for the beaches and coastal shorelines of the eThekweni region. It is expected to handle refuse litter as well. It shall be able to offload itself into a trailer or truck with a discharge reach of 2 000 mm or better. The lid/s shall automatically open and close and hold the position when loading and off-loading. It shall have levelling capabilities before collection of litter (tool attachments shall be included). Collection shall be done preferably by a rotating system with replaceable blades and filtration of finer particles. It shall be height adjustable. Wheels to be placed for transporting

the unit at tractor top speed (40km/hr). Due to the nature of the operation this system shall be preferably made with automotive grade stainless steel especially for the working parts.

- 4.6 Attachments shall be fully adjustable and allow easy universal coupling to all tractors including the supplied (three-point linkage system). Gearboxes/transfer cases and prop shafts with universal couplings and guards must be included. The chain guards and wear pads shall be easily replaceable without structural work. Maintenance free bushings/bearings and hinges shall be used. Guides and deflectors shall be installed strategically to keep the attachments clean from the generated waste. Hydraulic and electrical connections shall be made available to the attachments. Self levelling designs shall be supplied with jockey wheels and stands necessary to use the item. Solid rubber wheels are preferred.
- 4.7 Curb side road clearance system consisting of a crane, flail and a power pack (if required). The system shall be able to fit onto the tractor and be adjustable to cut the flora that generally grows on the various roadsides. The flails shall be provided in options; for cutting grass, clearing flora for uneven/rural terrain and general-purpose plants found on highway medians. Minimum working width of 1 500 mm or closest. The crane shall be provided in options based on the outreach required; minimum 5 000 mm, minimum 7 000 mm, minimum 10 000 mm or closest. The power pack shall be sufficient to be safely mounted and coupled to the primary vehicle and to operate the crane and flail to full capacity. Flail shall have protective guards to allow debris to be contained whilst cutting and the control system should include sensitive height adjustment with emergency shut off. The power pack and crane shall have thermal and mechanical protection to safely shut down in case of machine failure. System shall have a speed limiter linked to the primary vehicle if possible whilst cutting for safety. Standard display system shall be supplied with the option of a camera mounted on the crane for easy operation from the driver's cab on a monitor.
- 4.8 Offset flail mowers. The system shall be able to fit onto the tractor and be adjustable to cut the flora that generally grows on the various roadsides and curb sides. The flails shall be provided in options; for cutting grass, clearing flora for uneven/rural terrain and general-purpose plants found on highway medians. Minimum working width of 1 500 mm or closest. Flail shall have protective guards to allow debris to be contained whilst cutting and the control system should include sensitive height adjustment with emergency shut off.

All items in chapter 4 must be thoroughly sealed with an approved sealer to prevent rusting between mating surfaces and drain holes must be provided in areas where water can accumulate. Any floor that persons will use on the body should be coated with a hard wearing, slip resistant material (Vastrap).

5. Lighting

- 5.1 A pair of amber LED strobe beacon encased lights shall be installed on the top rear of the cab/canopy facing. Switch shall be located on the interior panel.
- 5.2 A pair of rubber encased spotlights shall be installed to the front and rear top of the cab/canopy facing the driving and rear work area. Switch shall be located on the interior panel.
- 5.3 There shall be a pair of interior lights for the tractor mounted on the interior roof. Switch shall be coated on the interior panel.
- 5.4 A chevron board shall be constructed for the tractor attachments. It shall be the same as 8.1 and shall have an electrical connector complying to SANS 1327: Electrical connectors for towing and towed vehicles.
- The attachments shall have a slot and quick coupler fasteners for efficient attaching of the chevron board.

6. Metal Preparation and Painting Procedure

The following procedure must be adhered to:

- 6.1 Descale all metal surfaces
- 6.2 Grind down & smooth all rough edges
- 6.3 Thoroughly clean all surfaces
- 6.4 Prime the body, attachments and other components using a two component self-curing inorganic zinc ethyl silicate or two component zinc rich polyamide cured epoxy primer.
- 6.5 Thereafter paint using a coat of premium quality twin pack automotive paint.
- 6.6 The wearing items should have a polyurethane protective final coat.
- 6.7 Paint film thickness must not be less than 80 microns each. Two coats of primer and one colour coat.

7. Colors

Underside of Body	Black
Cab	Verdi Green
Attachments	Verdi Green
Prop shafts and safety shields	Safety Yellow

8. Electrical

All additional electrical circuits are to be suitably fused and must not interfere with or adversely affect the existing electrical system.

- 8.1 Rear units to be premium quality equal light unit incorporating 30 LEDs or more of minimum 100 mm in diameter that are screwed into position with a stainless-steel flange.
- 8.2 Reversing buzzer and warning light to be installed when reverse gear is engaged.
- 8.3 Battery isolator switch.
- 8.4 Uninterrupted power supply points shall be made available for the vehicle tracking and fuel master monitoring system.
- 8.5 All exposed electrical wiring looms of the vehicle/equipment/unit and superstructure shall be full encased in a flexible protective metallic conduit and securely clamped with fasteners to the chassis or the structure.

9. Signage and Markings

9.1 Data plates shall be fitted labelling the storage areas and capacity. Safe working loads should be labelled where necessary:

- a) Safety, operation, technical data, dates of manufacture, manufacturer's details etc.

9.2 Chevron board to be fitted at the rear conforming with the appropriate SABS/SANS standard.

9.3 Durable, ultraviolet resistant and weather resistant warning signs shall be provided at all locations of the vehicle that impose a danger to persons.

9.4 Durable, ultraviolet resistant and weather resistant information signs shall be provided in specific locations to assist the driver/maintenance staff with the operation/maintenance of the vehicle.

9.5 Retro-reflective tape shall be fitted to both sides and the rear of the vehicle as well as the attachments.

10. Miscellaneous items

10.1 The batteries to have a weather proof cover to prevent debris and moisture ingress or built within the vehicle chassis.

10.2 Fuel tank, batteries and pneumatic cylinders to have structures built around them for safety or built within the vehicle.

- 10.3 Bolt on covers for safety where parts are rotating, swinging or of high temperature.
- 10.4 A 4.5 kg fire extinguisher should be supplied and fitted in an accessible position close to the driver when exiting the tractor.
- 10.5 One complete spare wheel for front and rear and one set of emergency changing tools shall be supplied per vehicle.
- 10.6 Bolt on head and tail light guards.
- 10.7 Front and rear mud guards constructed from a suitable material for the application.

Item 2.2: Technical specification for a 4WD tractor with the option of various implements

1. Scope

The intent of this specification is to provide for a fully operational vehicle, which will primarily be used for maintaining landscapes and has the capability to shunt light trailers and recreational vehicles.

It shall be 4WD tractor with a fully enclosed cab. This tractor shall be used for beaches and rough terrain. The tractor shall be supplied with a set of wheels (rims and tyres) for all terrain application. Bidder shall provide the option of wheels (rims and tyres) for sensitive turf like stadiums and sports grounds and for beach application.

2. Vehicle

- 2.1 The chassis/body shall have a minimum Gross Vehicle Mass (GVM) of 4000 kg.
- 2.2 Transmission shall be preferably fully automatic, or power assisted. Manual assisted or manual shall be equipped with at least ten forward and ten reverse gears.
- 2.3 Minimum diesel engine requirements shall be: Euro 3 to 5, 80 kW of power and 500 Nm of torque.
- 2.4 Vehicle should have a limited top speed of not more than 40 km/hr.
- 2.5 Minimum wheelbase of 2 000 mm.
- 2.6 Steel suspension.
- 2.7 Fitment of a steel under belly plate (fastened with lock washers) to protect the radiator, engine/motors and other exposed drive items.
- 2.8 4WD drive tractors shall have a driver's cab which shall be ROPS/FOPS compliant.
- 2.9 Clear visibility through all sides of the vehicle.
- 2.10 A fully laden minimum grade ability of 40 % shall be expected.
- 2.11 To safely and comfortably accommodate driver using a suspended type seat. To be adjustable.
- 2.12 Wide angle adjustable mirrors.
- 2.13 Heater, windscreen demister and air-conditioning system should be adequate for the cab of the 4WD tractor.
- 2.14 12v charger socket.
- 2.15 Rear and front windscreen wipers with washer spray.
- 2.16 Fuel tank shall be at least 120 liters with a lockable fuel cap and anti-siphon device.
- 2.17 Automated fuel management system to remove water and dirt before delivery to the engine.
- 2.18 Heat sensing engine protection device, mechanical monitoring system to safely shut down engine if engine cylinder head increases to an unsafe temperature.
- 2.19 Auto lubrication system (if required), maintenance free bearings/bushings preferred.
- 2.20 The vehicle and the customisation shall be designed according to these critical specifications (summary of evidence shall be provided):
- a) ROPS/FOPS compliant.
 - b) SANS 1447-1 (SABS 1447-1), Braking (motor and towed vehicles, designed for low speed or for use off public roads) - Part 1: Low speed vehicles.
 - c) SANS 10205 (SABS 0205), The measurement of noise emitted by motor vehicles in motion

- d) The end of Section 7 covers other specifications/standards that shall be adhered to.

3. Material specification

The load bearing items shall be made out of structural steel to withstand the payload. Corten steel and Domex for the structural rolled sections and flat plate is recommended. Wearing items shall be made of Hardox or a similar high wear resistant steel. Items that are subjective to high corrosive environment shall be made of automotive grade stainless steel similar to 3CR12.

4. Construction requirements

4.1 Areas of the floor that shall be used as access walkways shall have a hard wearing, slip resistant material (Vastrap).

4.2 Access steps and railings/grabs shall be installed in a suitable position on both sides of the vehicle to enter the driver's position.

4.3 The tractor shall be compatible with a variety of interchangeable devices;

4.3.1 A rotary grass cutting attachment with 1 500-2 000 mm width. The attachment shall be compatible with the tractors PTO and coupling system. It shall have a double row front and rear chain deflector. The side deflectors shall have wear pads underneath the primary structure. Adjustable cutting height, preferably using a quick release type system. Preferably shall have a four-blade system for cutting. System should be balanced and can operate either on one or two pairs of blades depending on the application.

4.3.2 A dual rotary grass cutting attachment with 5 500-6 300 mm width. The attachment shall be compatible with the tractors PTO and coupling system. It shall have a double row front and rear chain deflector on all pieces. The side deflectors shall have wear pads underneath the primary structure. Adjustable cutting height, preferably using a quick release type system. Preferably shall have a four-blade system for cutting. System should be balanced and can operate either on one or two pairs of blades depending on the application.

4.3.3 A roller mower for maintenance of sports fields and stadiums. It shall have a cut width of 1 500-2 000 mm. The cutting system shall be able to cut the material finely enough to not require collection. Rollers shall be coated in a durable protective polyurethane finish. The side deflectors shall have wear pads underneath the primary structure.

4.3.4 The above attachments (4.3.1-4.3.3) shall have the option of a collection Shute that can collect the waste material in heavy duty bags. Three bags per unit shall be supplied.

4.4 A mowing collector attachment with an enclosed collection hopper/tank with a working width of 2 000 mm or better. Collection tank shall have a capacity of 2 500- 3 500 litres with a tank capacity indicator. The system should be able to handle applications such as sports fields/stadiums, parks and race courses. It is expected to handle refuse as well. It shall be able to offload itself into a trailer or truck with a discharge reach of 2 000 mm or better. The lid/s shall automatically open and close and hold the position when loading and off-loading. It shall have mowing capabilities and scarifying (tool attachments shall be included). Mowing shall be done preferably by a rotating drum with replaceable blades. It shall be height adjustable. Wheels to be placed for transporting the unit at tractor top speed (40km/hr).

4.5 A collector attachment with an enclosed collection hopper/tank with a working width of 2 000 mm or better. Collection tank shall have a capacity of 2 000- 3 000 litres with a tank capacity indicator. The system should be able to handle applications for the beaches and coastal shorelines of the eThekweni region. It is expected to handle refuse litter as well. It shall be able to offload itself into a trailer or truck with a discharge reach of 2 000 mm or better. The lid/s shall automatically open and close and hold the

position when loading and off-loading. It shall have levelling capabilities before collection of litter (tool attachments shall be included). Collection shall be done preferably by a rotating system with replaceable blades and filtration of finer particles. It shall be height adjustable. Wheels to be placed for transporting the unit at tractor top speed (40km/hr). Due to the nature of the operation this system shall be preferably made with automotive grade stainless steel especially for the working parts.

- 4.6 Attachments shall be fully adjustable and allow easy universal coupling to all tractors including the supplied (three-point linkage system). Gearboxes/transfer cases and prop shafts with universal couplings and guards must be included. The chain guards and wear pads shall be easily replaceable without structural work. Maintenance free bushings/bearings and hinges shall be used. Guides and deflectors shall be installed strategically to keep the attachments clean from the generated waste. Hydraulic and electrical connections shall be made available to the attachments. Self levelling designs shall be supplied with jockey wheels and stands necessary to use the item. Solid rubber wheels are preferred.
- 4.7 Curb side road clearance system consisting of a crane, flail and a power pack (if required). The system shall be able to fit onto the tractor and be adjustable to cut the flora that generally grows on the various roadsides. The flails shall be provided in options; for cutting grass, clearing flora for uneven/rural terrain and general-purpose plants found on highway medians. Minimum working width of 1 500 mm or closest. The crane shall be provided in options based on the outreach required; minimum 5 000 mm, minimum 7 000 mm, minimum 10 000 mm or closest. The power pack shall be sufficient to be safely mounted and coupled to the primary vehicle and to operate the crane and flail to full capacity. Flail shall have protective guards to allow debris to be contained whilst cutting and the control system should include sensitive height adjustment with emergency shut off. The power pack and crane shall have thermal and mechanical protection to safely shut down in case of machine failure. System shall have a speed limiter linked to the primary vehicle if possible whilst cutting for safety. Standard display system shall be supplied with the option of a camera mounted on the crane for easy operation from the driver's cab on a monitor.
- 4.8 A mouldboard plough for industrial agricultural operations. Shall be built robust with adjustable spacing and cutting width (minimum of 400 mm). Mouldboards shall be easy to maintain and replace plough bottoms with fasteners. Bidder shall provide a minimum bid for a 3 furrow plough board with an option of a 4 and 5 furrow plough board if available. Wear plate option for the plough boards shall be offered.
- 4.9 A disc plough for industrial agricultural operations. Shall be built robust with adjustable spacing and cutting width (minimum of 400 mm). Minimum disc diameter of 600 mm and minimum clearance of 600 mm. Adjustable disc positions (penetration angle and disc position) in multiple directions for working in different soil types. Discs shall be easy to maintain and replace with fasteners. Bidder shall provide a minimum bid for a 3 disc plough with an option of a 4 and 5 disc plough board if available. High tensile steel disc option for the plough shall be offered.
- 4.10 A hydraulic reversible plough for industrial agricultural operations. Shall be built robust with adjustable spacing of furrows. Minimum furrow working depth of 300 mm. Stone protection release system and shear bolt option to be included if offered. Adjustable positions in applicable directions for working in different soil types. Furrows shall be easy to maintain and replace with fasteners. Bidder shall provide a minimum bid for a 3 furrow plough with an option of a 4 and 5 furrow plough if available. Wear plate option for the furrows shall be offered.

- 4.11 A mouldboard ridger for industrial agricultural operations. Shall be built robust with spacing of furrows a minimum of 500 mm apart. Minimum furrow width of 300 mm and minimum working depth of 200 mm. Adjustable positions in applicable directions for working in different soil types. Furrows shall be easy to maintain and replace with fasteners. Bidder shall provide a minimum bid for a 3 furrow ridger with an option of a 4 and 5 furrow ridger mouldboard if available. Wear plate option for the furrows shall be offered.
- 4.12 A ripper for industrial agricultural operations. Shall be built robust with adjustable ripper angle settings. Tines shall be easy to maintain and replace plough bottoms with fasteners. Bidder shall provide a minimum bid for a 3 tine ripper with an option of a 4 and 5 tine ripper if available. High tensile steel option for the tines shall be offered. If the ripper is also available with a crumbler, bidder shall provide that option.
- 4.13 A bed former for industrial agricultural operations. The working width shall be a minimum of 1750 mm with a minimum working depth of 250 mm. A 3 blade pattern is recommended for all blades as standard. Rotovator shall be included with an option of a 3 furrow cultivator.
- 4.14 Boom sprayer with tank and pump. Should have an appropriate size tank (minimum of 400 litres) and pump to effectively spray herbicides and pesticides to different land areas. Should be adjustable and allow left or right hand operation configurations for spraying of weeds on pavements if possible. Bidder can provide either a 6-8 m boom option and a 10-12 m boom option.
- 4.15 A disc harrow for industrial agricultural operations. Shall be built robust with adjustable angling/spacing and locking device. Minimum disc diameter of 500 mm and minimum working depth of 150 mm. Discs shall be easy to maintain and replace with fasteners. Bidder shall provide a minimum bid for a 22 disc harrow with a minimum 2.5 m working width, with an option of a minimum 28 disc harrow with a minimum 3 m working width. High tensile steel disc option for the harrow shall be offered.
- 4.16 A Planter for seeds and grains for industrial agricultural operations. Shall be a minimum 2 row planter configuration with a working width of 1.5m. Shall have the option of seed and fertilizer tank for dual function. Tanks should be of suitable capacity seeds for seeds and fertilizer. Bidder can provide the option of a 3 or 4 row planter as well.
- 4.17 Offset flail mowers. The system shall be able to fit onto the tractor and be adjustable to cut the flora that generally grows on the various roadsides and curb sides. The flails shall be provided in options; for cutting grass, clearing flora for uneven/rural terrain and general-purpose plants found on highway medians. Minimum working width of 1 500 mm or closest. Flail shall have protective guards to allow debris to be contained whilst cutting and the control system should include sensitive height adjustment with emergency shut off.

All items in chapter 4 must be thoroughly sealed with an approved sealer to prevent rusting between mating surfaces and drain holes must be provided in areas where water can accumulate. Any floor that persons will use on the body should be coated with a hard wearing, slip resistant material (Vastrap).

5. Lighting

5.1 Rear units to be premium quality equal light unit incorporating 30 LEDs or more of minimum 100 mm in diameter that are screwed into position with a stainless-steel flange.

5.2 A pair of rubber encased spotlights shall be installed to the front and rear top of the cab/canopy facing the driving and rear work area. Switch shall be located on the interior panel.

5.3 Interior controls and cabin to be illuminated for use in poor light conditions.

5.4 There shall be a pair of interior lights for the tractor mounted on the interior roof. Switch shall be coated on the interior panel.

5.5 A chevron board shall be constructed for the tractor attachments. It shall be the same as 5.1 and shall have an electrical connector complying to SANS 1327: Electrical connectors for towing and towed vehicles.

The attachments shall have a slot and quick coupler fasteners for efficient attaching of the chevron board.

6. Metal Preparation and Painting Procedure

The following procedure must be adhered to:

6.1 Descale all metal surfaces

6.2 Grind down & smooth all rough edges

6.3 Thoroughly clean all surfaces

6.4 Prime the body, attachments and other components using a two component self-curing inorganic zinc ethyl silicate or two component zinc rich polyamide cured epoxy primer.

6.5 Thereafter paint using two coats of premium quality twin pack automotive paint.

6.6 The wearing items should have a polyurethane protective final coat.

6.7 Paint film thickness must not be less than 80 microns each. Two coats of primer and one colour coat.

7. Colors

Underside of Body	Black
Cab	Verdi Green
Attachments	Verdi Green
Prop shafts and safety shields	Safety Yellow

8. Electrical

All additional electrical circuits are to be suitably fused and must not interfere with or adversely affect the existing electrical system.

8.1 Reversing buzzer and warning light to be installed when reverse gear is engaged.

8.2 Battery isolator switch.

8.3 Uninterrupted power supply points shall be made available for the vehicle tracking and fuel master monitoring system.

8.4 All exposed electrical wiring looms of the vehicle/equipment/unit and superstructure shall be full encased in a flexible protective metallic conduit and securely clamped with fasteners to the chassis or the structure.

9. Signage and Markings

9.1 Data plates shall be fitted labelling the storage areas and capacity. Safe working loads should be labelled where necessary:

a) Safety, operation, technical data, dates of manufacture, manufacturer's details etc.

9.2 Chevron board to be fitted at the rear conforming with the appropriate SABS/SANS standard.

9.3 Durable, ultraviolet resistant and weather resistant warning signs shall be provided at all locations of the vehicle that impose a danger to persons.

9.4 Durable, ultraviolet resistant and weather resistant information signs shall be provided in specific locations to assist the driver/maintenance staff with the operation/maintenance of the vehicle.

9.5 Retro-reflective tape shall be fitted to both sides and the rear of the vehicle as well as the attachments.

10. Miscellaneous items

10.1 The batteries to have a weather proof cover to prevent debris and moisture ingress or built within the vehicle chassis.

10.2 Fuel tank, batteries and pneumatic cylinders to have structures built around them for safety or built within the vehicle.

10.3 Bolt on covers for safety where parts are rotating, swinging or of high temperature.

10.4 A 4.5 kg fire extinguisher should be supplied and fitted in an accessible position close to the driver when exiting the tractor.

10.5 One complete spare wheel for front and rear and one set of emergency changing tools shall be supplied per vehicle.

10.6 Bolt on head and tail light guards.

10.7 Front and rear mud guards constructed from a suitable material for the application.

Item 2.3: Technical specification for a high powered 4WD tractor with the option of various terrain and agricultural implements

1. Scope

The intent of this specification is to provide for a fully operational vehicle, which will primarily be used for maintaining landscapes and agricultural operations and has the capability to shunt light trailers and recreational vehicles.

It shall be 4WD tractor with a fully enclosed cab. This tractor shall be used for farming, beaches and rough terrain. The tractor shall be supplied with a set of wheels (rims and tyres) for all terrain application. Bidder shall provide the option of wheels (rims and tyres) for sensitive turf like stadiums and sports grounds and for beach application.

2. Vehicle

2.1 The chassis/body shall have a minimum Gross Vehicle Mass (GVM) of 5500 kg.

2.2 Transmission shall be preferably fully automatic, or power assisted. Manual assisted or manual shall be equipped with at least twelve forward and twelve reverse gears.

2.3 Minimum diesel engine requirements shall be: Euro 3 to 5, 100 kW of power and 600 Nm of torque.

2.4 Vehicle should have a limited top speed of not more than 40 km/hr.

2.5 Minimum wheelbase of 2 500 mm.

2.6 Steel suspension.

2.7 Fitment of a steel under belly plate (fastened with lock washers) to protect the radiator, engine/motors and other exposed drive items.

2.8 4WD drive tractors shall have a driver's cab which shall be ROPS/FOPS compliant.

2.9 Clear visibility through all sides of the vehicle.

2.10 A fully laden minimum grade ability of 40 % shall be expected.

2.11 To safely and comfortably accommodate driver using a suspended type seat. To be adjustable.

2.12 Wide angle adjustable mirrors.

2.13 Heater, windscreen demister and air-conditioning system should be adequate for the cab of the 4WD tractor.

2.14 12v charger socket.

2.15 Rear and front windscreen wipers with washer spray.

- 2.16 Fuel tank shall be at least 250 liters with a lockable fuel cap and anti-siphon device.
- 2.17 Automated fuel management system to remove water and dirt before delivery to the engine.
- 2.18 Heat sensing engine protection device, mechanical monitoring system to safely shut down engine if engine cylinder head increases to an unsafe temperature.
- 2.19 Auto lubrication system (if required), maintenance free bearings/bushings preferred.
- 2.20 The vehicle and the customisation shall be designed according to these critical specifications (summary of evidence shall be provided):
- a) ROPS/FOPS compliant.
 - b) SANS 1447-1 (SABS 1447-1), Braking (motor and towed vehicles, designed for low speed or for use off public roads) - Part 1: Low speed vehicles.
 - c) SANS 10205 (SABS 0205), The measurement of noise emitted by motor vehicles in motion
 - d) The end of Section 7 covers other specifications/standards that shall be adhered to.

3. Material specification

The load bearing items shall be made out of structural steel to withstand the payload. Corten steel and Domex for the structural rolled sections and flat plate is recommended. Wearing items shall be made of Hardox or a similar high wear resistant steel. Items that are subjective to high corrosive environment shall be made of automotive grade stainless steel similar to 3CR12.

4. Construction requirements

- 4.1 Areas of the floor that shall be used as access walkways shall have a hard wearing, slip resistant material (Vastrap).
- 4.2 Access steps and railings/grabs shall be installed in a suitable position on both sides of the vehicle to enter the driver's position.
- 4.3 The tractor shall be compatible with a variety of interchangeable devices;
- 4.3.1 A rotary grass cutting attachment with 1 500-2 000 mm width. The attachment shall be compatible with the tractors PTO and coupling system. It shall have a double row front and rear chain deflector. The side deflectors shall have wear pads underneath the primary structure. Adjustable cutting height, preferably using a quick release type system. Preferably shall have a four-blade system for cutting. System should be balanced and can operate either on one or two pairs of blades depending on the application.
- 4.3.2 A dual rotary grass cutting attachment with 5 500-6 300 mm width. The attachment shall be compatible with the tractors PTO and coupling system. It shall have a double row front and rear chain deflector on all pieces. The side deflectors shall have wear pads underneath the primary structure. Adjustable cutting height, preferably using a quick release type system. Preferably shall have a four-blade system for cutting. System should be balanced and can operate either on one or two pairs of blades depending on the application.
- 4.3.3 A roller mower for maintenance of sports fields and stadiums. It shall have a cut width of 1 500-2 000 mm. The cutting system shall be able to cut the material finely enough to not require collection. Rollers shall be coated in a durable protective polyurethane finish. The side deflectors shall have wear pads underneath the primary structure.
- 4.3.4 The above attachments (4.3.1-4.3.3) shall have the option of a collection Shute that can collect the waste material in heavy duty bags. Three bags per unit shall be supplied.
- 4.4 A mowing collector attachment with an enclosed collection hopper/tank with a working width of 2 000 mm or better. Collection tank shall have a capacity of 2 500- 3 500 litres with a tank capacity indicator. The system should be able to handle applications such as sports fields/stadiums, parks and race courses.

It is expected to handle refuse as well. It shall be able to offload itself into a trailer or truck with a discharge reach of 2 000 mm or better. The lid/s shall automatically open and close and hold the position when loading and off-loading. It shall have mowing capabilities and scarifying (tool attachments shall be included). Mowing shall be done preferably by a rotating drum with replaceable blades. It shall be height adjustable. Wheels to be placed for transporting the unit at tractor top speed (40km/hr).

- 4.5 A collector attachment with an enclosed collection hopper/tank with a working width of 2 000 mm or better. Collection tank shall have a capacity of 2 000- 3 000 litres with a tank capacity indicator. The system should be able to handle applications for the beaches and coastal shorelines of the eThekweni region. It is expected to handle refuse litter as well. It shall be able to offload itself into a trailer or truck with a discharge reach of 2 000 mm or better. The lid/s shall automatically open and close and hold the position when loading and off-loading. It shall have levelling capabilities before collection of litter (tool attachments shall be included). Collection shall be done preferably by a rotating system with replaceable blades and filtration of finer particles. It shall be height adjustable. Wheels to be placed for transporting the unit at tractor top speed (40km/hr). Due to the nature of the operation this system shall be preferably made with automotive grade stainless steel especially for the working parts.
- 4.6 Attachments shall be fully adjustable and allow easy universal coupling to all tractors including the supplied (three-point linkage system). Gearboxes/transfer cases and prop shafts with universal couplings and guards must be included. The chain guards and wear pads shall be easily replaceable without structural work. Maintenance free bushings/bearings and hinges shall be used. Guides and deflectors shall be installed strategically to keep the attachments clean from the generated waste. Hydraulic and electrical connections shall be made available to the attachments. Self levelling designs shall be supplied with jockey wheels and stands necessary to use the item. Solid rubber wheels are preferred.
- 4.7 Curb side road clearance system consisting of a crane, flail and a power pack (if required). The system shall be able to fit onto the tractor and be adjustable to cut the flora that generally grows on the various roadsides. The flails shall be provided in options; for cutting grass, clearing flora for uneven/rural terrain and general-purpose plants found on highway medians. Minimum working width of 1 500 mm or closest. The crane shall be provided in options based on the outreach required; minimum 5 000 mm, minimum 7 000 mm, minimum 10 000 mm or closest. The power pack shall be sufficient to be safely mounted and coupled to the primary vehicle and to operate the crane and flail to full capacity. Flail shall have protective guards to allow debris to be contained whilst cutting and the control system should include sensitive height adjustment with emergency shut off. The power pack and crane shall have thermal and mechanical protection to safely shut down in case of machine failure. System shall have a speed limiter linked to the primary vehicle if possible whilst cutting for safety. Standard display system shall be supplied with the option of a camera mounted on the crane for easy operation from the driver's cab on a monitor.
- 4.8 A mouldboard plough for industrial agricultural operations. Shall be built robust with adjustable spacing and cutting width (minimum of 400 mm). Mouldboards shall be easy to maintain and replace plough bottoms with fasteners. Bidder shall provide a minimum bid for a 3 furrow plough board with an option of a 4 and 5 furrow plough board if available. Wear plate option for the plough boards shall be offered.
- 4.9 A disc plough for industrial agricultural operations. Shall be built robust with adjustable spacing and cutting width (minimum of 400 mm). Minimum disc diameter of 600 mm and minimum clearance of 600 mm. Adjustable disc positions (penetration angle and disc position) in multiple directions for working in different soil types. Discs shall be easy to maintain and replace with fasteners. Bidder shall provide a

minimum bid for a 3 disc plough with an option of a 4 and 5 disc plough board if available. High tensile steel disc option for the plough shall be offered.

- 4.10 A hydraulic reversible plough for industrial agricultural operations. Shall be built robust with adjustable spacing of furrows. Minimum furrow working depth of 300 mm. Stone protection release system and shear bolt option to be included if offered. Adjustable positions in applicable directions for working in different soil types. Furrows shall be easy to maintain and replace with fasteners. Bidder shall provide a minimum bid for a 3 furrow plough with an option of a 4 and 5 furrow plough if available. Wear plate option for the furrows shall be offered.
- 4.11 A mouldboard ridger for industrial agricultural operations. Shall be built robust with spacing of furrows a minimum of 500 mm apart. Minimum furrow width of 300 mm and minimum working depth of 200 mm. Adjustable positions in applicable directions for working in different soil types. Furrows shall be easy to maintain and replace with fasteners. Bidder shall provide a minimum bid for a 3 furrow ridger with an option of a 4 and 5 furrow ridger mouldboard if available. Wear plate option for the furrows shall be offered.
- 4.12 A ripper for industrial agricultural operations. Shall be built robust with adjustable ripper angle settings. Tines shall be easy to maintain and replace plough bottoms with fasteners. Bidder shall provide a minimum bid for a 3 tine ripper with an option of a 4 and 5 tine ripper if available. High tensile steel option for the tines shall be offered. If the ripper is also available with a crumbler, bidder shall provide that option.
- 4.13 A bed former for industrial agricultural operations. The working width shall be a minimum of 1750 mm with a minimum working depth of 250 mm. A 3 blade pattern is recommended for all blades as standard. Rotovator shall be included with an option of a 3 furrow cultivator.
- 4.14 Boom sprayer with tank and pump. Should have an appropriate size tank (minimum of 400 litres) and pump to effectively spray herbicides and pesticides to different land areas. Should be adjustable and allow left or right hand operation configurations for spraying of weeds on pavements if possible. Bidder can provide either a 6-8 m boom option and a 10-12 m boom option.
- 4.15 A disc harrow for industrial agricultural operations. Shall be built robust with adjustable angling/spacing and locking device. Minimum disc diameter of 500 mm and minimum working depth of 150 mm. Discs shall be easy to maintain and replace with fasteners. Bidder shall provide a minimum bid for a 22 disc harrow with a minimum 2.5 m working width, with an option of a minimum 28 disc harrow with a minimum 3 m working width. High tensile steel disc option for the harrow shall be offered.
- 4.16 A Planter for seeds and grains for industrial agricultural operations. Shall be a minimum 2 row planter configuration with a working width of 1.5m. Shall have the option of seed and fertilizer tank for dual function. Tanks should be of suitable capacity seeds for seeds and fertilizer. Bidder can provide the option of a 3 or 4 row planter as well.
- 4.17 Offset flail mowers. The system shall be able to fit onto the tractor and be adjustable to cut the flora that generally grows on the various roadsides and curb sides. The flails shall be provided in options; for cutting grass, clearing flora for uneven/rural terrain and general-purpose plants found on highway medians. Minimum working width of 1 500 mm or closest. Flail shall have protective guards to allow debris to be contained whilst cutting and the control system should include sensitive height adjustment with emergency shut off.

All items in chapter 4 must be thoroughly sealed with an approved sealer to prevent rusting between mating surfaces and drain holes must be provided in areas where water can accumulate. Any floor that persons will use on the body should be coated with a hard wearing, slip resistant material (Vastrap).

5. Lighting

5.1 Rear units to be premium quality equal light unit incorporating 30 LEDs or more of minimum 100 mm in diameter that are screwed into position with a stainless-steel flange.

5.2 A pair of rubber encased spotlights shall be installed to the front and rear top of the cab/canopy facing the driving and rear work area. Switch shall be located on the interior panel.

5.4 Interior controls and cabin to be illuminated for use in poor light conditions.

5.4 There shall be a pair of interior lights for the tractor mounted on the interior roof. Switch shall be coated on the interior panel.

5.6 A chevron board shall be constructed for the tractor attachments. It shall be the same as 5.1 and shall have an electrical connector complying to SANS 1327: Electrical connectors for towing and towed vehicles.

The attachments shall have a slot and quick coupler fasteners for efficient attaching of the chevron board.

6. Metal Preparation and Painting Procedure

The following procedure must be adhered to:

6.1 Descale all metal surfaces

6.2 Grind down & smooth all rough edges

6.3 Thoroughly clean all surfaces

6.4 Prime the body, attachments and other components using a two component self-curing inorganic zinc ethyl silicate or two component zinc rich polyamide cured epoxy primer.

6.5 Thereafter paint using two coats of premium quality twin pack automotive paint.

6.6 The wearing items should have a polyurethane protective final coat.

6.7 Paint film thickness must not be less than 80 microns each. Two coats of primer and one colour coat.

7. Colors

Underside of Body	Black
Cab	Verdi Green
Attachments	Verdi Green
Prop shafts and safety shields	Safety Yellow

8. Electrical

All additional electrical circuits are to be suitably fused and must not interfere with or adversely affect the existing electrical system.

8.1 Reversing buzzer and warning light to be installed when reverse gear is engaged.

8.2 Battery isolator switch.

8.3 Uninterrupted power supply points shall be made available for the vehicle tracking and fuel master monitoring system.

8.4 All exposed electrical wiring looms of the vehicle/equipment/unit and superstructure shall be full encased in a flexible protective metallic conduit and securely clamped with fasteners to the chassis or the structure.

9. Signage and Markings

9.1 Data plates shall be fitted labelling the storage areas and capacity. Safe working loads should be labelled where necessary:

a) Safety, operation, technical data, dates of manufacture, manufacturer's details etc.

9.2 Chevron board to be fitted at the rear conforming with the appropriate SABS/SANS standard.

9.3 Durable, ultraviolet resistant and weather resistant warning signs shall be provided at all locations of the vehicle that impose a danger to persons.

9.4 Durable, ultraviolet resistant and weather resistant information signs shall be provided in specific locations to assist the driver/maintenance staff with the operation/maintenance of the vehicle.

9.5 Retro-reflective tape shall be fitted to both sides and the rear of the vehicle as well as the attachments.

10. Miscellaneous items

10.1 The batteries to have a weather proof cover to prevent debris and moisture ingress or built within the vehicle chassis.

10.2 Fuel tank, batteries and pneumatic cylinders to have structures built around them for safety or built within the vehicle.

10.3 Bolt on covers for safety where parts are rotating, swinging or of high temperature.

10.4 A 4.5 kg fire extinguisher should be supplied and fitted in an accessible position close to the driver when exiting the tractor.

10.5 One complete spare wheel for front and rear and one set of emergency changing tools shall be supplied per vehicle.

10.6 Bolt on head and tail light guards.

10.7 Front and rear mud guards constructed from a suitable material for the application.

Item 2.4: Technical specification for an electric 2WD/4WD tractor

1. Scope

The intent of this specification is to provide for a fully operational vehicle, which will primarily be used for maintaining landscapes and has the capability to shunt light trailers and recreational vehicles.

Item shall be an electric 2WD/4WD tractor with a canopy/fully enclosed cab. This tractor shall be used for beaches and flora terrain. The tractor shall be supplied with a set of wheels (rims and tyres) for all terrain application. Bidder shall provide the option of wheels (rims and tyres) for sensitive turf like stadiums and sports grounds and for beach application. Bidder shall bid for this item with the following options; a driver's canopy (Item 2.4.1) and a driver's cab (Item 2.4.2) for a 2WD tractor and a driver's cab (Item 2.4.3) for a 4WD tractor.

2. Vehicle

2.1 The chassis/body shall have a minimum Gross Vehicle Mass (GVM) of 2 000 kg.

2.2 Transmission shall be preferably fully automatic, or power assisted. Manual assisted or manual shall be equipped with at least four forward and two reverse gears.

2.3 Unit shall have brushless motors with a minimum of 40 kW of AWD power. Batteries shall be expected to be 25kWh or better and shall have a lifespan of 8-10 years. Battery charger should be for RSA voltage.

2.4 Vehicle should have a limited top speed of not more than 40 km/hr.

2.5 Minimum wheelbase of 2 000 mm.

2.6 Steel suspension.

2.7 Fitment of a steel under belly plate (fastened with lock washers) to protect motors and other exposed drive items.

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- 2.8 2WD/4WD drive tractors shall have a driver's cab which shall be ROPS/FOPS compliant.
- 2.9 Clear visibility through all sides of the vehicle.
- 2.10 A fully laden minimum grade ability of 30 % shall be expected.
- 2.11 To safely and comfortably accommodate driver using a suspended type seat. To be adjustable.
- 2.12 Wide angle adjustable mirrors.
- 2.13 Heater, windscreen demister and air-conditioning system should be adequate for the cab of the cab tractors.
- 2.14 12v charger socket.
- 2.15 Rear and front windscreen wipers with washer spray (cab tractor).
- 2.16 Unit shall have safety devices to protect the motors and batteries from damage caused by use or high temperatures.
- 2.17 Auto lubrication system (if required), maintenance free bearings/bushings preferred.
- 2.18 The vehicle and the customisation shall be designed according to these critical specifications (summary of evidence shall be provided):
- a) ROPS/FOPS compliant
 - b) SANS 1447-1 (SABS 1447-1), Braking (motor and towed vehicles, designed for low speed or for use off public roads) - Part 1: Low speed vehicles.
 - c) SANS 10205 (SABS 0205), The measurement of noise emitted by motor vehicles in motion
 - d) The end of Section 7 covers other specifications/standards that shall be adhered to.

3. Material specification

The load bearing items shall be made out of structural steel to withstand the payload. Corten steel and Domex for the structural rolled sections and flat plate is recommended. Wearing items shall be made of Hardox or a similar high wear resistant steel. Items that are subjective to high corrosive environment shall be made of automotive grade stainless steel similar to 3CR12.

4. Construction requirements

- 4.1 Areas of the floor that shall be used as access walkways shall have a hard wearing, slip resistant material (Vastrap).
- 4.2 Access steps and railings/grabs shall be installed in a suitable position on both sides of the vehicle to enter the driver's position.
- 4.3 The tractor shall be compatible with a variety of interchangeable devices;
- 4.3.1 A rotary grass cutting attachment with 1 500-2 000 mm width. The attachment shall be compatible with the tractors PTO and coupling system. It shall have a double row front and rear chain deflector. The side deflectors shall have wear pads underneath the primary structure. Adjustable cutting height, preferably using a quick release type system. Preferably shall have a four-blade system for cutting. System should be balanced and can operate either on one or two pairs of blades depending on the application.
 - 4.3.2 A dual rotary grass cutting attachment with 5 500-6 300 mm width. The attachment shall be compatible with the tractors PTO and coupling system. It shall have a double row front and rear chain deflector on all pieces. The side deflectors shall have wear pads underneath the primary structure. Adjustable cutting height, preferably using a quick release type system. Preferably shall have a four-blade system for cutting. System should be balanced and can operate either on one or two pairs of blades depending on the application.
 - 4.3.3 A roller mower for maintenance of sports fields and stadiums. It shall have a cut width of 1 500-2 000 mm. The cutting system shall be able to cut the material finely enough to not require

collection. Rollers shall be coated in a durable protective polyurethane finish. The side deflectors shall have wear pads underneath the primary structure.

- 4.3.4 The above attachments (4.3.1-4.3.3) shall have the option of a collection Shute that can collect the waste material in heavy duty bags. Three bags per unit shall be supplied.
- 4.4 A mowing collector attachment with an enclosed collection hopper/tank with a working width of 2 000 mm or better. Collection tank shall have a capacity of 2 500- 3 500 litres with a tank capacity indicator. The system should be able to handle applications such as sports fields/stadiums, parks and race courses. It is expected to handle refuse as well. It shall be able to offload itself into a trailer or truck with a discharge reach of 2 000 mm or better. The lid/s shall automatically open and close and hold the position when loading and off-loading. It shall have mowing capabilities and scarifying (tool attachments shall be included). Mowing shall be done preferably by a rotating drum with replaceable blades. It shall be height adjustable. Wheels to be placed for transporting the unit at tractor top speed (40km/hr).
- 4.5 A collector attachment with an enclosed collection hopper/tank with a working width of 2 000 mm or better. Collection tank shall have a capacity of 2 000- 3 000 litres with a tank capacity indicator. The system should be able to handle applications for the beaches and coastal shorelines of the eThekweni region. It is expected to handle refuse litter as well. It shall be able to offload itself into a trailer or truck with a discharge reach of 2 000 mm or better. The lid/s shall automatically open and close and hold the position when loading and off-loading. It shall have levelling capabilities before collection of litter (tool attachments shall be included). Collection shall be done preferably by a rotating system with replaceable blades and filtration of finer particles. It shall be height adjustable. Wheels to be placed for transporting the unit at tractor top speed (40km/hr). Due to the nature of the operation this system shall be preferably made with automotive grade stainless steel especially for the working parts.
- 4.6 Attachments shall be fully adjustable and allow easy universal coupling to all tractors including the supplied (three-point linkage system). Gearboxes/transfer cases and prop shafts with universal couplings and guards must be included. The chain guards and wear pads shall be easily replaceable without structural work. Maintenance free bushings/bearings and hinges shall be used. Guides and deflectors shall be installed strategically to keep the attachments clean from the generated waste. Hydraulic and electrical connections shall be made available to the attachments. Self levelling designs shall be supplied with jockey wheels and stands necessary to use the item. Solid rubber wheels are preferred.
- 4.7 Curb side road clearance system consisting of a crane, flail and a power pack (if required). The system shall be able to fit onto the tractor and be adjustable to cut the flora that generally grows on the various roadsides. The flails shall be provided in options; for cutting grass, clearing flora for uneven/rural terrain and general-purpose plants found on highway medians. Minimum working width of 1 500 mm or closest. The crane shall be provided in options based on the outreach required; minimum 5 000 mm, minimum 7 000 mm, minimum 10 000 mm or closest. The power pack shall be sufficient to be safely mounted and coupled to the primary vehicle and to operate the crane and flail to full capacity. Flail shall have protective guards to allow debris to be contained whilst cutting and the control system should include sensitive height adjustment with emergency shut off. The power pack and crane shall have thermal and mechanical protection to safely shut down in case of machine failure. System shall have a speed limiter linked to the primary vehicle if possible whilst cutting for safety. Standard display system shall be

supplied with the option of a camera mounted on the crane for easy operation from the driver's cab on a monitor.

- 4.8 Offset flail mowers. The system shall be able to fit onto the tractor and be adjustable to cut the flora that generally grows on the various roadsides and curb sides. The flails shall be provided in options; for cutting grass, clearing flora for uneven/rural terrain and general-purpose plants found on highway medians. Minimum working width of 1 500 mm or closest. Flail shall have protective guards to allow debris to be contained whilst cutting and the control system should include sensitive height adjustment with emergency shut off.

All items in chapter 4 must be thoroughly sealed with an approved sealer to prevent rusting between mating surfaces and drain holes must be provided in areas where water can accumulate. Any floor that persons will use on the body should be coated with a hard wearing, slip resistant material (Vastrap).

5. Lighting

5.1 A pair of amber LED strobe beacon encased lights shall be installed on the top rear of the cab/canopy facing. Switch shall be located on the interior panel.

5.2 A pair of rubber encased spotlights shall be installed to the front and rear top of the cab/canopy facing the driving and rear work area. Switch shall be located on the interior panel.

5.3 Interior controls and cabin to be illuminated for use in poor light conditions (4WD tractor).

5.4 There shall be a pair of interior lights for the tractor mounted on the interior roof. Switch shall be located on the interior panel.

5.5 A chevron board shall be constructed for the tractor attachments. It shall be the same as 8.1 and shall have an electrical connector complying to SANS 1327: Electrical connectors for towing and towed vehicles.

The attachments shall have a slot and quick coupler fasteners for efficient attaching of the chevron board.

6. Metal Preparation and Painting Procedure

The following procedure must be adhered to:

- 6.1 Descale all metal surfaces
- 6.2 Grind down & smooth all rough edges
- 6.3 Thoroughly clean all surfaces
- 6.4 Prime the body, attachments and other components using a two component self-curing inorganic zinc ethyl silicate or two component zinc rich polyamide cured epoxy primer.
- 6.5 Thereafter paint using one coat of premium quality twin pack automotive paint.
- 6.6 The wearing items should have a polyurethane protective final coat.
- 6.7 Paint film thickness must not be less than 80 microns each. Two coats of primer and one colour coat.

7. Colors

Underside of Body	Black
Cab	Verdi Green
Attachments	Verdi Green
Prop shafts and safety shields	Safety Yellow

8. Electrical

All additional electrical circuits are to be suitably fused and must not interfere with or adversely affect the existing electrical system.

- 8.1 Tailight units to be premium quality equal light unit incorporating 30 LEDs or more of minimum 100 mm in diameter that are screwed into position with a stainless-steel flange.
- 8.2 Reversing buzzer and warning light to be installed when reverse gear is engaged.
- 8.3 Battery isolator switch.
- 8.4 Uninterrupted power supply points shall be made available for the vehicle tracking and fuel master monitoring system.
- 8.5 All exposed electrical wiring looms of the vehicle/equipment/unit and superstructure shall be full encased in a flexible protective metallic conduit and securely clamped with fasteners to the chassis or the structure.

9. Signage and Markings

- 9.1 Data plates shall be fitted labelling the storage areas and capacity. Safe working loads should be labelled where necessary:
 - a) Safety, operation, technical data, dates of manufacture, manufacturer's details etc.
- 9.2 Chevron board to be fitted at the rear conforming with the appropriate SABS/SANS standard.
- 9.3 Durable, ultraviolet resistant and weather resistant warning signs shall be provided at all locations of the vehicle that impose a danger to persons.
- 9.4 Durable, ultraviolet resistant and weather resistant information signs shall be provided in specific locations to assist the driver/maintenance staff with the operation/maintenance of the vehicle.
- 9.5 Retro-reflective tape shall be fitted to both sides and the rear of the vehicle as well as the attachments.

10. Miscellaneous items

- 10.1 The batteries to have a weather proof cover to prevent debris and moisture ingress or built within the vehicle chassis.
- 10.2 Batteries and exposed systems to have structures built around them for safety or built within the vehicle.
- 10.3 Bolt on covers for safety where parts are rotating, swinging or of high temperature.
- 10.4 A 4.5 kg fire extinguisher should be supplied and fitted in an accessible position close to the driver when exiting the tractor.
- 10.5 One complete spare wheel for front and rear and one set of emergency changing tools shall be supplied per vehicle.
- 10.6 Bolt on head and tail light guards.
- 10.7 Front and rear mud guards constructed from a suitable material for the application.

Item 3.1: Technical specification for a small excavator

1. Scope

The intent of this specification is to provide for a fully operational vehicle, which has the capability to dig, load and offload various commodities including landfill waste, sludge, gravel, asphalt and stone.

Item 3.1 shall have an operating weight: 13-21 000 kg. The lifting bucket shall have a volumetric capacity of at least 0.5-1.5 m³ and it shall be fitted with forks.

Bidder to provide the option of implements, the unit fitted with rubber tracks for beach and loose sand terrain application.

2. Vehicle

- 2.1 The vehicle shall have a minimum dig depth of approx. 6 000 mm and minimum dig height of 8 000 mm.

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- 2.2 Minimum diesel engine requirements shall be: Euro 3 to 5 ranging from 70-120kW of power and 300-800 Nm of torque.
- 2.3 Minimum wheelbase of 2 700-4 200 mm.
- 2.4 Minimum ground clearance of 450 mm.
- 2.5 Driver's cab shall be ROPS/FOPS compliant.
- 2.6 Clear visibility through all sides of the cab.
- 2.7 Park and emergency braking to be independent systems.
- 2.8 A fully laden minimum grade ability of 60 % shall be expected.
- 2.9 Servicing platform.
- 2.10 To safely and comfortably accommodate driver using an equal levelling suspended type seat. To be fully adjustable.
- 2.11 Wide angle adjustable mirrors.
- 2.12 Driver assist mirrors for front and sides of vehicle.
- 2.13 Heater, windscreen demister and air-conditioning system should be adequate for the cab and its occupant.
- 2.14 12v charger socket.
- 2.15 Rear and front windscreen wipers with washer spray.
- 2.16 Aerial mounted cameras to assist with viewing of the rear and down the boom.
- 2.17 Fuel tank shall be at least 250 liters with a lockable fuel cap and anti-siphon device.
- 2.18 Fuel management system to remove access water and dirt before delivery to the engine.
- 2.19 Heat sensing engine protection device, mechanical monitoring system to safely shut down engine if engine cylinder head increases to an unsafe temperature.
- 2.20 Auto lubrication system.
- 2.21 The vehicle and the customisation shall be designed according to these critical specifications (summary of evidence shall be provided):
- a) ISO 6015: Earth-moving machinery, Hydraulic excavators and backhoe loaders, Methods of determining tool forces.
 - b) ISO 10567: Earth-moving machinery, Hydraulic excavators, Lift capacity
 - c) The end of Section 7 covers other specifications/standards that shall be adhered to.

3. Material specification

The load bearing items including the booms and goose neck shall be made out of structural steel to withstand the payload. Corten steel and Domex for the structural rolled sections and flat plate is recommended. Whilst Hardox for the wear pads inside the lifting bucket. For operation with sludge the wear plates shall be a suitable chromium/stainless steel/composite liner shall be used with adequate strength and corrosion properties.

4. Construction requirements

4.1 Body

- 4.1.1 Areas of the floor that shall be used as access walkways shall have a hard wearing, slip resistant material (Vastrap).
- 4.1.2 Access ladder and railings/grabs shall be installed in a suitable position behind the cab and rear/side.
- 4.1.3 The hydraulic cylinder/s shall be suitable for the application and lift the laden bucket at the applicable angle to load and offload. Maintenance free bushings/bearings shall be used.
- 4.1.4 Articulation angle of and 160° or better for the bucket.
- 4.1.5 The bucket shall have wear plates installed in the interior over the primary structure. It shall be installed such that it can be removed for replacement when minimum thickness is reached. It must have properties to withstand the various commodities the vehicle is expected to handle.

All items in chapter 4 must be thoroughly sealed with an approved sealer to prevent rusting between mating surfaces and drain holes must be provided in areas where water can accumulate. Any floor that persons will use on the body should be coated with a hard wearing, slip resistant material (Vastrap).

5. Lighting

5.1 A waterproof slim line bar light 1200 mm in length and 200 mm in width to be installed on bracket on the front of the cab without drilling into the roof. Generation 3 type LED consisting of 1 watt, 6x4 modules to the front with end cap modules consisting of 1x2 head modules with amber coloured polycarbonate lenses to be fitted to the bracket on the cab roof with on/off switch with random flash pattern positioned in the cab.

5.2 A pair of rubber encased spotlights shall be installed to the front and rear top of the cab facing the driving and work area. Switch shall be located on the interior panel.

5.3 Interior controls and cabin to illuminated for use in poor light conditions.

6. Hydraulic system

6.1 In respect of the hydraulic tank the following shall be required:

6.1.1 To be constructed of steel.

6.1.2 To be fitted to an accessible side on the chassis, low enough that the body height does not impede the maintenance staff or driver of filling oil to tank.

6.1.2 To be fitted with a bump guard from externalities.

6.1.3 To be fitted with a front mounted sight glass for visual oil level inspection. Glass should be marked minimum and maximum accordingly with levels of fluid in the tank.

6.1.4 Must have a filler cap strainer & filter into filler base and filler cap assembly.

6.1.5 Oil capacity shall be sufficient, and a cooler added if necessary.

6.2 Must have an inline filter with a blockage indicator fitted onto the pressure side of hydraulic pump, before the tipper / solenoid valve system.

6.3 The hydraulic valves shall be grouped together for ease of maintenance.

6.4 Test points for testing hydraulic pressures shall be fitted and grouped together.

6.5 Where possible steel tubing, which shall be treated with suitable corrosion protection, in lieu of rubber hosing shall be used for hydraulic lines.

6.6 All hydraulic fittings shall be wrapped with a petrolatum impregnated tape or sprayed with a petrolatum primer to prevent corrosion.

6.7 Safety hold valve for cylinder in case of hydraulic failure.

6.8 Hydraulic controls for the operation of the loading/offloading shall be fitted in a user-friendly manner in the driver's cab.

6.9 The controls shall where possible be electronic and activate the necessary servos (either pneumatic or hydraulic) that will activate the operation. All actions will be fully adjustable at variable speeds for the operation of the hydraulics. A plug in, modular type, control panel is preferred for ease of maintenance.

7. Power Take Off (PTO)

7.1 The close coupled PTO drive assembly shall be approved by the OEM mechanically and electrically for use on the engine and the wiring systems of the vehicle for the engagement of the PTO drive. Any modifications to the vehicle to accommodate the P.T.O. must be approved by the truck manufacturer and not affect the trucks warranty in any way.

7.2 The engine and transmission must not be harmed by use of the PTO.

7.3 The fitment of the P.T.O. should not negatively impact on the vehicles ground clearance.

7.4 Electronic control module and wiring harness which incorporates the “Rev Up Limiter” must be integrated into the existing OEM vehicle using the OEM 12/24 Volt system.

7.5 The PTO must only run when the PTO switch is engaged. The system will not allow the PTO to be engaged if the vehicle is in gear or if the handbrake is not engaged.

7.6 The accelerator pedal cannot be used, while the PTO is engaged.

7.7 PTO calibration shall be performed by the bidder after tracking device is installed on the vehicle/equipment/unit by eThekweni City Fleet.

8. Metal Preparation and Painting Procedure

The following procedure must be adhered to:

8.1 Descale all metal surfaces

8.2 Grind down & smooth all rough edges

8.3 Thoroughly clean all surfaces

8.4 Prime the unit using a component self-curing inorganic zinc ethyl silicate or two component zinc rich polyamide cured epoxy primer.

8.5 Thereafter paint using one coat of premium quality twin pack automotive paint.

8.6 The bucket should have a polyurethane protective final coat.

8.7 Paint film thickness must not be less than 80 microns each. Two coats of primer and one colour coat.

9. Colors

Underside of Body	Black
Cab	Yellow
Bucket	Black

10. Electrical

All additional electrical circuits are to be suitably fused and must not interfere with or adversely affect the existing electrical system.

10.1 Front and rear LED lights with an extra set of adjustable front aerial lights to illuminate working area.

10.2 Battery isolator switch.

10.3 Uninterrupted power supply points shall be made available for the vehicle tracking and fuel master monitoring system.

10.4 All exposed electrical wiring looms of the vehicle/equipment/unit and superstructure shall be full encased in a flexible protective metallic conduit and securely clamped with fasteners to the chassis or the structure.

11. Signage and Markings

11.1 Data plates shall be fitted labelling the storage areas and capacity. Safe working loads should be labelled where necessary:

a) The hydraulic system indicating tank capacity, system pressure, fluid type/grade, hydraulic cylinder specifications and test criteria.

b) Safe working loads to be clearly labeled on the structure on both sides.

c) Safety, operation, technical data, dates of manufacture, manufacturer’s details etc.

11.2 Chevron board to be fitted at the rear conforming with the appropriate SABS/SANS standard.

11.4 Durable, ultraviolet resistant and weather resistant warning signs shall be provided at all locations of the vehicle that impose a danger to persons.

11.5 Durable, ultraviolet resistant and weather resistant information signs shall be provided in specific locations to assist the driver/maintenance staff with the operation/maintenance of the vehicle.

11.6 Retro-reflective tape shall be fitted to both sides and the rear of the vehicle as well as the rear bumper.

11.7 Registration number to be clearly marked on roof.

12. Miscellaneous items

12.1 The batteries to have a weather proof cover to prevent debris and moisture ingress or built within the vehicle chassis.

12.2 Fuel tank, batteries, pneumatic cylinders and hydraulic tank to have structures built around them for safety or built within the vehicle.

12.3 Bolt on covers for safety where parts are rotating, swinging or of high temperature.

12.4 A 4.5 kg fire extinguisher should be supplied and fitted in an accessible position close to the driver when exiting the cab.

12.5 Bolt on guards for front and rear lights.

Item 3.2: Technical specification for a medium excavator

1.Scope

The intent of this specification is to provide for a fully operational vehicle, which has the capability to dig, load and offload various commodities including landfill waste, sludge, gravel, asphalt and stone.

Item 3.2 shall have an operating weight of 22-26 000 kg. The lifting bucket shall have a volumetric capacity of at least 1.5-2.2 m³ and it shall be fitted with forks.

Bidder to provide the option of implements, the unit fitted with rubber tracks for beach and loose sand terrain application.

2. Vehicle

2.1 The vehicle shall have a minimum dig depth of approx. 6 000 mm and minimum dig height of 9 000 mm.

2.2 Minimum diesel engine requirements shall be: Euro 3 to 5 ranging from 110-180kW of power and 600-900 Nm of torque.

2.3 Minimum wheelbase of 3 500-4 200 mm.

2.4 Minimum ground clearance of 450 mm.

2.5 Driver's cab shall be ROPS/FOPS compliant.

2.6 Clear visibility through all sides of the cab.

2.7 Park and emergency braking to be independent systems.

2.8 A fully laden minimum grade ability of 60 % shall be expected.

2.9 Servicing platform.

2.10 To safely and comfortably accommodate driver using an equal levelling suspended type seat. To be fully adjustable.

2.11 Wide angle adjustable mirrors.

2.12 Driver assist mirrors for front and sides of vehicle.

2.13 Heater, windscreen demister and air-conditioning system should be adequate for the cab and its occupant.

2.14 12v charger socket.

- 2.15 Rear and front windscreen wipers with washer spray.
- 2.16 Aerial mounted camera to assist with viewing of the rear and down the boom.
- 2.17 Fuel tank shall be at least 325 liters with a lockable fuel cap and anti-siphon device.
- 2.18 Fuel management system to remove access water and dirt before delivery to the engine.
- 2.19 Heat sensing engine protection device, mechanical monitoring system to safely shut down engine if engine cylinder head increases to an unsafe temperature.
- 2.20 Auto lubrication system.
- 2.21 The vehicle and the customisation shall be designed according to these critical specifications (summary of evidence shall be provided):
- a) ISO 6015: Earth-moving machinery, Hydraulic excavators and backhoe loaders, Methods of determining tool forces.
 - b) ISO 10567: Earth-moving machinery, Hydraulic excavators, Lift capacity
 - c) The end of Section 7 covers other specifications/standards that shall be adhered to.

3. Material specification

The load bearing items including the booms and goose neck shall be made out of structural steel to withstand the payload. Corten steel and Domex for the structural rolled sections and flat plate is recommended. Whilst Hardox for the wear pads in the lifting bucket. For handling sludge applications, the wear plates shall be a suitable chromium/stainless steel/composite liner shall be used with adequate strength and corrosion properties.

4. Construction requirements

1.1 Body

- 4.1.1 Areas of the floor that shall be used as access walkways shall have a hard wearing, slip resistant material (Vastrap).
- 4.1.2 Access ladder and railings/grabs shall be installed in a suitable position behind the cab and rear/side.
- 4.1.3 The hydraulic cylinder/s shall be suitable for the application and lift the laden bucket at the applicable angle to load and offload. Maintenance free bushings/bearings shall be used.
- 4.1.4 Articulation angle of and 160° or better for the bucket.
- 4.1.5 The bucket shall have wear plates installed in the interior over the primary structure. It shall be installed such that it can be removed for replacement when minimum thickness is reached. It must have properties to withstand the various commodities the vehicle is expected to handle.

All items in chapter 4 must be thoroughly sealed with an approved sealer to prevent rusting between mating surfaces and drain holes must be provided in areas where water can accumulate. Any floor that persons will use on the body should be coated with a hard wearing, slip resistant material (Vastrap).

5. Lighting

- 5.1 A waterproof slim line bar light 1200 mm in length and 200 mm in width to be installed on bracket on the front of the cab without drilling into the roof. Generation 3 type LED consisting of 1 watt, 6x4 modules to the front with end cap modules consisting of 1x2 head modules with amber coloured polycarbonate lenses to be fitted to the bracket on the cab roof with on/off switch with random flash pattern positioned in the cab.
- 5.2 A pair of rubber encased spotlights shall be installed to the front and rear top of the cab facing the driving and work area. Switch shall be located on the interior panel.
- 5.3 Interior controls and cabin to illuminated for use in poor light conditions.

6. Hydraulic system

- 6.1 In respect of the hydraulic tank the following shall be required:
- 6.1.1 To be constructed of steel.

- 6.1.2 To be fitted to an accessible side on the chassis, low enough that the body height does not impede the maintenance staff or driver of filling oil to tank.
- 6.1.2 To be fitted with a bump guard from externalities.
- 6.1.3 To be fitted with a front mounted sight glass for visual oil level inspection. Glass should be marked minimum and maximum accordingly with levels of fluid in the tank.
- 6.1.4 Must have a filler cap strainer & filter into filler base and filler cap assembly.
- 6.1.5 Oil capacity shall be sufficient, and a cooler added if necessary.
- 6.2 Must have an inline filter with a blockage indicator fitted onto the pressure side of hydraulic pump, before the tipper / solenoid valve system.
- 6.3 The hydraulic valves shall be grouped together for ease of maintenance.
- 6.4 Test points for testing hydraulic pressures shall be fitted and grouped together.
- 6.5 Where possible steel tubing, which shall be treated with suitable corrosion protection, in lieu of rubber hosing shall be used for hydraulic lines.
- 6.6 All hydraulic fittings shall be wrapped with a petrolatum impregnated tape or sprayed with a petrolatum primer to prevent corrosion.
- 6.7 Safety hold valve for cylinder in case of hydraulic failure.
- 6.8 Hydraulic controls for the operation of the loading/offloading shall be fitted in a user-friendly manner in the driver's cab.
- 6.9 The controls shall where possible be electronic and activate the necessary servos (either pneumatic or hydraulic) that will activate the operation. All actions will be fully adjustable at variable speeds for the operation of the hydraulics. A plug in, modular type, control panel is preferred for ease of maintenance.

7. Power Take Off (PTO)

- 7.1 The close coupled PTO drive assembly shall be approved by the OEM mechanically and electrically for use on the engine and the wiring systems of the vehicle for the engagement of the PTO drive. Any modifications to the vehicle to accommodate the P.T.O. must be approved by the truck manufacturer and not affect the trucks warranty in any way.
- 7.2 The engine and transmission must not be harmed by use of the PTO.
- 7.3 The fitment of the P.T.O. should not negatively impact on the vehicles ground clearance.
- 7.4 Electronic control module and wiring harness which incorporates the "Rev Up Limiter" must be integrated into the existing OEM vehicle using the OEM 12/24 Volt system.
- 7.5 The PTO must only run when the PTO switch is engaged. The system will not allow the PTO to be engaged if the vehicle is in gear or if the handbrake is not engaged.
- 7.6 The accelerator pedal cannot be used, while the PTO is engaged.
- 7.7 PTO calibration shall be performed by the bidder after tracking device is installed on the vehicle/equipment/unit by eThekwini City Fleet.

8. Metal Preparation and Painting Procedure

The following procedure must be adhered to:

- 8.1 Descale all metal surfaces
- 8.2 Grind down & smooth all rough edges
- 8.3 Thoroughly clean all surfaces
- 8.4 Prime the unit using a two component self-curing inorganic zinc ethyl silicate or two component zinc rich polyamide cured epoxy primer.
- 8.5 Thereafter paint using one coat of premium quality twin pack automotive paint.

8.6 The bucket should have a polyurethane protective final coat.

8.7 Paint film thickness must not be less than 80 microns each. Two coats of primer and one colour coat.

9. Colors

Underside of Body	Black
Cab	Yellow
Bucket	Black

10. Electrical

All additional electrical circuits are to be suitably fused and must not interfere with or adversely affect the existing electrical system.

10.1 Front and rear LED lights with an extra set of adjustable front aerial lights to illuminate working area.

10.2 Battery isolator switch.

10.3 Uninterrupted power supply points shall be made available for the vehicle tracking and fuel master monitoring system.

10.4 All exposed electrical wiring looms of the vehicle/equipment/unit and superstructure shall be full encased in a flexible protective metallic conduit and securely clamped with fasteners to the chassis or the structure.

11. Signage and Markings

11.1 Data plates shall be fitted labelling the storage areas and capacity. Safe working loads should be labelled where necessary:

a) The hydraulic system indicating tank capacity, system pressure, fluid type/grade, hydraulic cylinder specifications and test criteria.

b) Safe working loads to be clearly labeled on the structure on both sides.

c) Safety, operation, technical data, dates of manufacture, manufacturer's details etc.

11.2 Chevron board to be fitted at the rear conforming with the appropriate SABS/SANS standard.

11.4 Durable, ultraviolet resistant and weather resistant warning signs shall be provided at all locations of the vehicle that impose a danger to persons.

11.5 Durable, ultraviolet resistant and weather resistant information signs shall be provided in specific locations to assist the driver/maintenance staff with the operation/maintenance of the vehicle.

11.6 Retro-reflective tape shall be fitted to both sides and the rear of the vehicle as well as the rear bumper.

11.7 Registration number to be clearly marked on roof.

12. Miscellaneous items

12.1 The batteries to have a weather proof cover to prevent debris and moisture ingress or built within the vehicle chassis.

12.2 Fuel tank, batteries, pneumatic cylinders and hydraulic tank to have structures built around them for safety or built within the vehicle.

12.3 Bolt on covers for safety where parts are rotating, swinging or of high temperature.

12.4 A 4.5 kg fire extinguisher should be supplied and fitted in an accessible position close to the driver when exiting the cab.

12.5 Bolt on guards for front and rear lights.

Item 3.3: Technical specification for a large excavator

1. Scope

The intent of this specification is to provide for a fully operational vehicle, which has the capability to dig, load and offload various commodities including landfill waste, sludge, gravel, asphalt and stone.

Item 3.3 shall have an operating weight: 30-36 000 kg. The lifting bucket shall have a volumetric capacity of at least 1.8-2.5 m³ and it shall be fitted with forks.

Bidder to provide the option of implements, the unit fitted with rubber tracks for beach and loose sand terrain application.

2. Vehicle

- 2.1 The vehicle shall have a minimum dig depth of approx. 6 000 mm and minimum dig height of 9 000 mm.
- 2.2 Minimum diesel engine requirements shall be: Euro 3 to 5 ranging from 180-260kW of power and 800-1200 Nm of torque.
- 2.3 Minimum wheelbase of 3 700-4 200 mm.
- 2.4 Minimum ground clearance of 450 mm.
- 2.5 Driver's cab shall be ROPS/FOPS compliant.
- 2.6 Clear visibility through all sides of the cab.
- 2.7 Park and emergency braking to be independent systems.
- 2.8 A fully laden minimum grade ability of 60 % shall be expected.
- 2.9 Servicing platform.
- 2.10 To safely and comfortably accommodate driver using an equal levelling suspended type seat. To be fully adjustable.
- 2.11 Wide angle adjustable mirrors.
- 2.12 Driver assist mirrors for front and sides of vehicle.
- 2.13 Heater, windscreen demister and air-conditioning system should be adequate for the cab and its occupant.
- 2.14 12v charger socket.
- 2.15 Rear and front windscreen wipers with washer spray.
- 2.16 Aerial mounted camera to assist with viewing of the rear and down the boom.
- 2.17 Fuel tank shall be at least 400 liters with a lockable fuel cap and anti-siphon device.
- 2.18 Fuel management system to remove access water and dirt before delivery to the engine.
- 2.19 Heat sensing engine protection device, mechanical monitoring system to safely shut down engine if engine cylinder head increases to an unsafe temperature.
- 2.20 Auto lubrication system.
- 2.21 The vehicle and the customisation shall be designed according to these critical specifications (summary of evidence shall be provided):
 - a) ISO 6015: Earth-moving machinery, Hydraulic excavators and backhoe loaders, Methods of determining tool forces.
 - b) ISO 10567: Earth-moving machinery, Hydraulic excavators, Lift capacity
 - c) The end of Section 7 covers other specifications/standards that shall be adhered to.

3. Material specification

The load bearing items including the booms and goose neck shall be made out of structural steel to withstand the payload. Corten steel and Domex for the structural rolled sections and flat plate is recommended. Whilst Hardox for the wear pads in the lifting bucket. For handling sludge applications, the wear plates shall be a suitable chromium/stainless steel/composite liner shall be used with adequate strength and corrosion properties.

4. Construction requirements

4.1 Body

- 4.1.1 Areas of the floor that shall be used as access walkways shall have a hard wearing, slip resistant material (Vastrap).
- 4.1.2 Access ladder and railings/grabs shall be installed in a suitable position behind the cab and rear/side.
- 4.1.3 The hydraulic cylinder/s shall be suitable for the application and lift the laden bucket at the applicable angle to load and offload. Maintenance free bushings/bearings shall be used.
- 4.1.4 Articulation angle of and 160° or better for the bucket.
- 4.1.5 The bucket shall have wear plates installed in the interior over the primary structure. It shall be installed such that it can be removed for replacement when minimum thickness is reached. It must have properties to withstand the various commodities the vehicle is expected to handle.

All items in chapter 4 must be thoroughly sealed with an approved sealer to prevent rusting between mating surfaces and drain holes must be provided in areas where water can accumulate. Any floor that persons will use on the body should be coated with a hard wearing, slip resistant material (Vastrap).

5. Lighting

- 5.1 A waterproof slim line bar light 1200 mm in length and 200 mm in width to be installed on bracket on the front of the cab without drilling into the roof. Generation 3 type LED consisting of 1 watt, 6x4 modules to the front with end cap modules consisting of 1x2 head modules with amber coloured polycarbonate lenses to be fitted to the bracket on the cab roof with on/off switch with random flash pattern positioned in the cab.
- 5.2 A pair of rubber encased spotlights shall be installed to the front and rear top of the cab facing the driving and work area. Switch shall be located on the interior panel.
- 5.3 Interior controls and cabin to illuminated for use in poor light conditions.

6. Hydraulic system

- 6.1 In respect of the hydraulic tank the following shall be required:
 - 6.1.1 To be constructed of steel.
 - 6.1.2 To be fitted to an accessible side on the chassis, low enough that the body height does not impede the maintenance staff or driver of filling oil to tank.
 - 6.1.2 To be fitted with a bump guard from externalities.
 - 6.1.3 To be fitted with a front mounted sight glass for visual oil level inspection. Glass should be marked minimum and maximum accordingly with levels of fluid in the tank.
 - 6.1.4 Must have a filler cap strainer & filter into filler base and filler cap assembly.
 - 6.1.5 Oil capacity shall be sufficient, and a cooler added if necessary.
- 6.2 Must have an inline filter with a blockage indicator fitted onto the pressure side of hydraulic pump, before the tipper / solenoid valve system.
- 6.3 The hydraulic valves shall be grouped together for ease of maintenance.
- 6.4 Test points for testing hydraulic pressures shall be fitted and grouped together.
- 6.5 Where possible steel tubing, which shall be treated with suitable corrosion protection, in lieu of rubber hosing shall be used for hydraulic lines.
- 6.6 All hydraulic fittings shall be wrapped with a petrolatum impregnated tape or sprayed with a petrolatum primer to prevent corrosion.
- 6.7 Safety hold valve for cylinder in case of hydraulic failure.
- 6.8 Hydraulic controls for the operation of the loading/offloading shall be fitted in a user-friendly manner in the driver's cab.

6.9 The controls shall where possible be electronic and activate the necessary servos (either pneumatic or hydraulic) that will activate the operation. All actions will be fully adjustable at variable speeds for the operation of the hydraulics. A plug in, modular type, control panel is preferred for ease of maintenance.

7. Power Take Off (PTO)

7.1 The close coupled PTO drive assembly shall be approved by the OEM mechanically and electrically for use on the engine and the wiring systems of the vehicle for the engagement of the PTO drive. Any modifications to the vehicle to accommodate the P.T.O. must be approved by the truck manufacturer and not affect the trucks warranty in any way.

7.2 The engine and transmission must not be harmed by use of the PTO.

7.3 The fitment of the P.T.O. should not negatively impact on the vehicles ground clearance.

7.4 Electronic control module and wiring harness which incorporates the "Rev Up Limiter" must be integrated into the existing OEM vehicle using the OEM 12/24 Volt system.

7.5 The PTO must only run when the PTO switch is engaged. The system will not allow the PTO to be engaged if the vehicle is in gear or if the handbrake is not engaged.

7.6 The accelerator pedal cannot be used, while the PTO is engaged.

7.7 PTO calibration shall be performed by the bidder after tracking device is installed on the vehicle/equipment/unit by eThekweni City Fleet.

8. Metal Preparation and Painting Procedure

The following procedure must be adhered to:

8.1 Descale all metal surfaces

8.2 Grind down & smooth all rough edges

8.3 Thoroughly clean all surfaces

8.4 Prime the unit using a two component self-curing inorganic zinc ethyl silicate or two component zinc rich polyamide cured epoxy primer.

8.5 Thereafter paint using one coat of premium quality twin pack automotive paint.

8.6 The bucket should have a polyurethane protective final coat.

8.7 Paint film thickness must not be less than 80 microns each. Two coats of primer and one colour coat.

9. Colors

Underside of Body	Black
Cab	Yellow
Bucket	Black

10. Electrical

All additional electrical circuits are to be suitably fused and must not interfere with or adversely affect the existing electrical system.

10.1 Front and rear LED lights with an extra set of adjustable front aerial lights to illuminate working area.

10.2 Battery isolator switch.

10.3 Uninterrupted power supply points shall be made available for the vehicle tracking and fuel master monitoring system.

10.4 All exposed electrical wiring looms of the vehicle/equipment/unit and superstructure shall be full encased in a flexible protective metallic conduit and securely clamped with fasteners to the chassis or the structure.

11. Signage and Markings

11.1 Data plates shall be fitted labelling the storage areas and capacity. Safe working loads should be labelled where necessary:

- a) The hydraulic system indicating tank capacity, system pressure, fluid type/grade, hydraulic cylinder specifications and test criteria.
- b) Safe working loads to be clearly labeled on the structure on both sides.
- c) Safety, operation, technical data, dates of manufacture, manufacturer's details etc.

11.2 Chevron board to be fitted at the rear conforming with the appropriate SABS/SANS standard.

11.4 Durable, ultraviolet resistant and weather resistant warning signs shall be provided at all locations of the vehicle that impose a danger to persons.

11.5 Durable, ultraviolet resistant and weather resistant information signs shall be provided in specific locations to assist the driver/maintenance staff with the operation/maintenance of the vehicle.

11.6 Retro-reflective tape shall be fitted to both sides and the rear of the vehicle as well as the rear bumper.

11.7 Registration number to be clearly marked on roof.

12. Miscellaneous items

12.1 The batteries to have a weather proof cover to prevent debris and moisture ingress or built within the vehicle chassis.

12.2 Fuel tank, batteries, pneumatic cylinders and hydraulic tank to have structures built around them for safety or built within the vehicle.

12.3 Bolt on covers for safety where parts are rotating, swinging or of high temperature.

12.4 A 4.5 kg fire extinguisher should be supplied and fitted in an accessible position close to the driver when exiting the cab.

12.5 Bolt on guards for front and rear lights.

Item 4: Technical specification for a skid loader with various implements

1.Scope

The intent of this specification is to provide for a fully operational vertical lift vehicle, which has the capability to load and offload various commodities including landfill waste, sludge, gravel, asphalt and stone.

The forked lifting bucket shall have a minimum volumetric capacity of at least 1 m³ and a minimum tipping/lifting capacity of 1-1 200 kg. The skid loader should also allow different implements to be used with it such as an auger, blower, breaker, grapples etc. These attachments shall be quoted on in Section 8 under this item.

The skid loader shall be supplied with a set of wheels (rims and tyres) for all terrain application. Bidder shall provide the option of wheels (rims and tyres) for sensitive turf like parks, stadiums and sports grounds, for beach application and tracks if offered.

2. Vehicle

2.1 The chassis/body shall have a minimum Gross Vehicle Mass (GVM) of 1 750 kg

2.2 Transmission shall be fully automatic incorporating two speeds and forward and reverse directions.

2.3 Minimum diesel engine requirements shall be: Euro 3 to 5, 35 kW of power and 150 Nm of torque.

2.4 Vehicle should have a limited top speed of not more than 20 km/hr.

2.5 Minimum wheelbase of 900 mm.

2.6 Fitment of a steel under belly plate to protect the radiator & engine.

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- 2.7 Driver's cab shall be ROPS/FOPS compliant.
 - 2.8 Clear visibility through all sides of the cab.
 - 2.9 Park and emergency braking to be independent systems.
 - 2.10 A fully laden minimum grade ability of 40 % shall be expected. .
 - 2.11 To safely and comfortably accommodate driver using an equal levelling suspended type seat. To be fully adjustable.
 - 2.12 Side mirrors and driver assist mirrors shall be installed to aid viewing of surroundings.
 - 2.13 Heater, windscreen demister and air-conditioning system should be adequate for the cab and its occupant.
 - 2.14 12v charger socket.
 - 2.15 Front windscreen wipers with washer spray.
 - 2.16 Aerial mounted camera to assist with viewing of the rear.
 - 2.17 Fuel tank shall be fitted with a lockable fuel cap and anti-siphon device.

3. Material specification

The load bearing items including the booms and goose neck shall be made out of structural steel to withstand the payload. Corten steel and Domex for the structural rolled sections and flat plate is recommended. Whilst Hardox for the wear pads in the lifting bucket. For handling sludge applications, the wear plates shall be a suitable chromium/stainless steel/composite liner shall be used with adequate strength and corrosion properties.

4. Construction requirements

- 4.1 Areas of the floor that shall be used as access walkways shall have a hard wearing, slip resistant material (Vastrap).
- 4.2 The hydraulic cylinder/s shall be suitable for the application and lift the laden bucket at the applicable angle to load and offload. Maintenance free bushings/bearings shall be used.
- 4.3 Articulation angle of 40° or better shall be required.
- 4.4 The bucket shall have wear plates installed in the interior over the primary structure. It shall be installed such that it can be removed for replacement when minimum thickness is reached. It must have properties to withstand the various commodities the vehicle is expected to handle.

All items in chapter 4 must be thoroughly sealed with an approved sealer to prevent rusting between mating surfaces and drain holes must be provided in areas where water can accumulate. Any floor that persons will use on the body should be coated with a hard wearing, slip resistant material (Vastrap).

5. Lighting

- 5.1 An LED emergency light viewable in all directions shall be mounted on the roof of the cab
- 5.2 A pair of rubber encased spotlights shall be installed to the front and rear top of the cab facing the driving and work area. Switch shall be located on the interior panel.
- 5.3 Interior controls and cabin to illuminated for use in poor light conditions.

6. Hydraulic system

- 6.1 In respect of the hydraulic tank the following shall be required:
 - 6.1.1 To be constructed of steel.
 - 6.1.2 To be fitted to an accessible side on the chassis, low enough that the body height does not impede the maintenance staff or driver of filling oil to tank.

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- 6.1.2 To be fitted with a bump guard from externalities.
 - 6.1.3 To be fitted with a front mounted sight glass for visual oil level inspection. Glass should be marked minimum and maximum accordingly with levels of fluid in the tank.
 - 6.1.4 Must have a filler cap strainer & filter into filler base and filler cap assembly.
 - 6.1.5 Oil capacity shall be sufficient, and a cooler added if necessary.
 - 6.2 Must have an inline filter with a blockage indicator fitted onto the pressure side of hydraulic pump, before the tipper / solenoid valve system.
 - 6.3 The hydraulic valves shall be grouped together for ease of maintenance.
 - 6.4 Test points for testing hydraulic pressures shall be fitted and grouped together.
 - 6.5 Where possible steel tubing, which shall be treated with suitable corrosion protection, in lieu of rubber hosing shall be used for hydraulic lines.
 - 6.6 All hydraulic fittings shall be wrapped with a petrolatum impregnated tape or sprayed with a petrolatum primer to prevent corrosion.
 - 6.7 Safety hold valve for cylinder in case of hydraulic failure.
 - 6.8 Hydraulic controls for the operation of the loading/offloading shall be fitted in a user-friendly manner in the driver's cab and behind the cab allowing for ease of operation. The outside controls shall be protected by means of an enclosure.
 - 6.9 The controls shall where possible be electronic and activate the necessary servos (either pneumatic or hydraulic) that will activate the operation. All actions will be fully adjustable at variable speeds for the operation of the hydraulics. A plug in, modular type, control panel is preferred for ease of maintenance.

7. Power Take Off (PTO)

- 7.1 The PTO drive assembly shall be approved by the OEM mechanically and electrically for use on the engine and the wiring systems of the vehicle for the engagement of the PTO drive. Any modifications to the vehicle to accommodate the P.T.O. must be approved by the truck manufacturer and not affect the trucks warranty in any way.
- 7.2 The engine and transmission must not be harmed by use of the PTO.
- 7.3 The fitment of the P.T.O. should not negatively impact on the vehicles ground clearance.
- 7.4 Electronic control module and wiring harness which incorporates the "Rev Up Limiter" must be integrated into the existing OEM vehicle using the OEM 12/24 Volt system.
- 7.5 The PTO must only run when the PTO switch is engaged. The system will not allow the PTO to be engaged if the vehicle is in gear or if the handbrake is not engaged.
- 7.6 The accelerator pedal cannot be used, while the PTO is engaged.
- 7.7 PTO calibration shall be performed by the bidder after tracking device is installed on the vehicle/equipment/unit by eThekweni City Fleet.

8. Metal Preparation and Painting Procedure

The following procedure must be adhered to:

- 8.1 Descale all metal surfaces
- 8.2 Grind down & smooth all rough edges
- 8.3 Thoroughly clean all surfaces
- 8.4 Prime the unit using a two component self-curing inorganic zinc ethyl silicate or two component zinc rich polyamide cured epoxy primer.
- 8.5 Thereafter paint using two coats of premium quality twin pack automotive paint.
- 8.6 The bucket should have a polyurethane protective final coat.

8.7 Paint film thickness must not be less than 80 microns each. Two coats of primer and one colour coat.

9. Colors

Underside of Body	Black
Cab	Yellow
Bucket	Black

10. Electrical

All additional electrical circuits are to be suitably fused and must not interfere with or adversely affect the existing electrical system.

- 10.1 Reversing camera, buzzer and warning light to be installed when reverse gear is engaged.
- 10.2 Aerial mounted camera for viewing the rear should use same monitor as in 10.1 with dual viewing feature.
- 10.3 Battery isolator switch.
- 10.4 Uninterrupted power supply points shall be made available for the vehicle tracking and fuel master monitoring system.
- 10.5 All exposed electrical wiring looms of the vehicle/equipment/unit and superstructure shall be full encased in a flexible protective metallic conduit and securely clamped with fasteners to the chassis or the structure.

11. Signage and Markings

11.1 Data plates shall be fitted labelling the storage areas and capacity. Safe working loads should be labelled where necessary:

- a) The hydraulic system indicating tank capacity, system pressure, fluid type/grade, hydraulic cylinder specifications and test criteria.
- b) Safe working loads to be clearly labeled on the structure on both sides.
- c) Safety, operation, technical data, dates of manufacture, manufacturer's details etc.

11.2 Chevron board to be fitted at the rear conforming with the appropriate SABS/SANS standard.

11.4 Durable, ultraviolet resistant and weather resistant warning signs shall be provided at all locations of the vehicle that impose a danger to persons.

11.5 Durable, ultraviolet resistant and weather resistant information signs shall be provided in specific locations to assist the driver/maintenance staff with the operation/maintenance of the vehicle.

11.6 Retro-reflective tape shall be fitted to both sides and the rear of the vehicle as well as the rear bumper.

11.7 Registration number to be clearly marked on roof.

12. Miscellaneous items

12.1 The batteries to have a weather proof cover to prevent debris and moisture ingress or built within the vehicle chassis.

12.2 Fuel tank, batteries, pneumatic cylinders and hydraulic tank to have structures built around them for safety or built within the vehicle.

12.3 Bolt on covers for safety where parts are rotating, swinging or of high temperature.

12.4 A fire extinguisher should be supplied and fitted in an accessible position close to the driver when exiting the cab.

12.5 One complete spare wheel and one set of emergency changing tools shall be supplied per vehicle.

12.6 Bolt on head and tail light guards.

12.7 Front and rear mud guards constructed from a suitable material for the application.

Item 5: Technical specification for a site dumper

1.Scope

The intent of this specification is to provide for a fully operational tipping vehicle, which has the capability to offload various commodities including landfill waste, sludge, gravel, asphalt and stone.

The loading box shall have a minimum volumetric capacity of at least 1.8-4 m³ and a minimum tipping/lifting capacity of 4-7 500 kg.

2. Vehicle

- 2.1 The chassis/body shall have a minimum Gross Vehicle Mass (GVM) of 6 000 kg
- 2.2 Transmission shall be fully automatic incorporating two speeds and forward and reverse directions.
- 2.3 Minimum diesel engine requirements shall be: Euro 3 to 5, 35 kW of power and 150 Nm of torque.
- 2.4 Vehicle shall be 4x4 and have a limited top speed of not more than 40 km/hr.
- 2.5 Minimum wheelbase of 900 mm.
- 2.6 Fitment of a steel under belly plate to protect the radiator & engine.
- 2.7 Driver's cab shall be ROPS/FOPS compliant.
- 2.8 Clear visibility through all sides of the cab.
- 2.9 Park and emergency braking to be independent systems.
- 2.10 A fully laden minimum grade ability of 30 % shall be expected. .
- 2.11 To safely and comfortably accommodate driver using an equal levelling suspended type seat. To be fully adjustable.
- 2.12 Side mirrors and driver assist mirrors shall be installed to aid viewing of surroundings.
- 2.13 Heater, windscreen demister and air-conditioning system should be adequate for the cab and its occupant.
- 2.14 12v charger socket.
- 2.15 Front windscreen wipers with washer spray.
- 2.16 Aerial mounted camera to assist with viewing of the rear.
- 2.17 Fuel tank shall be fitted with a lockable fuel cap and anti-siphon device.

3. Material specification

The load bearing items including the booms and goose neck shall be made out of structural steel to withstand the payload. Corten steel and Domex for the structural rolled sections and flat plate is recommended. Whilst Hardox for the wear pads in the tipping body. For handling sludge applications, the wear plates shall be a suitable chromium/stainless steel/composite liner shall be used with adequate strength and corrosion properties.

4. Construction requirements

- 4.1 Areas of the floor that shall be used as access walkways shall have a hard wearing, slip resistant material (Vastrap).
- 4.2 The hydraulic cylinder/s shall be suitable for the application and lift the laden bucket at the applicable angle to offload. Maintenance free bushings/bearings shall be used.
- 4.3 Tipping angle of 45° or better shall be required.
- 4.4 The load box shall have wear plates installed in the interior over the primary structure. It shall be installed such that it can be removed for replacement when minimum thickness is reached. It must have properties to withstand the various commodities the vehicle is expected to handle.

All items in chapter 4 must be thoroughly sealed with an approved sealer to prevent rusting between mating surfaces and drain holes must be provided in areas where water can accumulate. Any floor that persons will use on the body should be coated with a hard wearing, slip resistant material (Vastrap).

5. Lighting

- 5.1 An LED emergency light viewable in all directions shall be mounted on the roof of the cab
- 5.2 A pair of rubber encased spotlights shall be installed to the front and rear top of the cab facing the driving and work area. Switch shall be located on the interior panel.
- 5.3 Interior controls and cabin to illuminated for use in poor light conditions.

6. Hydraulic system

- 6.1 In respect of the hydraulic tank the following shall be required:
 - 6.1.1 To be constructed of steel.
 - 6.1.2 To be fitted with a bump guard from externalities.
 - 6.1.3 To be fitted with a front mounted sight glass for visual oil level inspection. Glass should be marked minimum and maximum accordingly with levels of fluid in the tank.
 - 6.1.4 Must have a filler cap strainer & filter into filler base and filler cap assembly.
 - 6.1.5 Oil capacity shall be sufficient, and a cooler added if necessary.
 - 6.1.6 To be fitted to an accessible side on the chassis, low enough that the body height does not impede the maintenance staff or driver of filling oil to tank.
- 6.2 Must have an inline filter with a blockage indicator fitted onto the pressure side of hydraulic pump, before the tipper / solenoid valve system.
- 6.3 The hydraulic valves shall be grouped together for ease of maintenance.
- 6.4 Test points for testing hydraulic pressures shall be fitted and grouped together.
- 6.5 Where possible steel tubing, which shall be treated with suitable corrosion protection, in lieu of rubber hosing shall be used for hydraulic lines.
- 6.6 All hydraulic fittings shall be wrapped with a petrolatum impregnated tape or sprayed with a petrolatum primer to prevent corrosion.
- 6.7 Safety hold valve for cylinder in case of hydraulic failure.
- 6.8 Hydraulic controls for the operation of the loading/offloading shall be fitted in a user-friendly manner in the driver's cab and behind the cab allowing for ease of operation. The outside controls shall be protected by means of an enclosure.
- 6.9 The controls shall where possible be electronic and activate the necessary servos (either pneumatic or hydraulic) that will activate the operation. All actions will be fully adjustable at variable speeds for the operation of the hydraulics. A plug in, modular type, control panel is preferred for ease of maintenance.

7. Power Take Off (PTO)

- 7.1 The PTO drive assembly shall be approved by the OEM mechanically and electrically for use on the engine and the wiring systems of the vehicle for the engagement of the PTO drive. Any modifications to the vehicle to accommodate the P.T.O. must be approved by the truck manufacturer and not affect the trucks warranty in any way.
- 7.2 The engine and transmission must not be harmed by use of the PTO.
- 7.3 The fitment of the P.T.O. should not negatively impact on the vehicles ground clearance.
- 7.4 Electronic control module and wiring harness which incorporates the "Rev Up Limiter" must be integrated into the existing OEM vehicle using the OEM 12/24 Volt system.

7.5 The PTO must only run when the PTO switch is engaged. The system will not allow the PTO to be engaged if the vehicle is in gear or if the handbrake is not engaged.

7.6 The accelerator pedal cannot be used, while the PTO is engaged.

7.7 PTO calibration shall be performed by the bidder after tracking device is installed on the vehicle/equipment/unit by eThekweni City Fleet.

8. Metal Preparation and Painting Procedure

The following procedure must be adhered to:

8.1 Descale all metal surfaces

8.2 Grind down & smooth all rough edges

8.3 Thoroughly clean all surfaces

8.4 Prime the unit using a two component self-curing inorganic zinc ethyl silicate or two component zinc rich polyamide cured epoxy primer.

8.5 Thereafter paint using one coat of premium quality twin pack automotive paint.

8.6 The load box should have a polyurethane protective final coat.

8.7 Paint film thickness must not be less than 80 microns each. Two coats of primer and one colour coat.

9. Colors

Underside of Body	Black
Cab and tipping body exterior	Safety Yellow
Tipping body interior	Black

10. Electrical

All additional electrical circuits are to be suitably fused and must not interfere with or adversely affect the existing electrical system.

10.1 Battery isolator switch.

10.2 Uninterrupted power supply points shall be made available for the vehicle tracking and fuel master monitoring system.

10.3 All exposed electrical wiring looms of the vehicle/equipment/unit and superstructure shall be full encased in a flexible protective metallic conduit and securely clamped with fasteners to the chassis or the structure.

11. Signage and Markings

11.1 Data plates shall be fitted labelling the storage areas and capacity. Safe working loads should be labelled where necessary:

a) The hydraulic system indicating tank capacity, system pressure, fluid type/grade, hydraulic cylinder specifications and test criteria.

b) Safe working loads to be clearly labeled on the structure on both sides.

c) Safety, operation, technical data, dates of manufacture, manufacturer's details etc.

11.2 Chevron board to be fitted at the rear conforming with the appropriate SABS/SANS standard.

11.4 Durable, ultraviolet resistant and weather resistant warning signs shall be provided at all locations of the vehicle that impose a danger to persons.

11.5 Durable, ultraviolet resistant and weather resistant information signs shall be provided in specific locations to assist the driver/maintenance staff with the operation/maintenance of the vehicle.

11.6 Retro-reflective tape shall be fitted to both sides and the rear of the vehicle as well as the rear bumper.

11.7 Registration number to be clearly marked on roof.

12. Miscellaneous items

12.1 The batteries to have a weather proof lockable cover to prevent debris and moisture ingress or built within the vehicle chassis.

12.2 Fuel tank, batteries, pneumatic cylinders and hydraulic tank to have structures built around them for safety or built within the vehicle.

12.3 Bolt on covers for safety where parts are rotating, swinging or of high temperature.

12.4 A fire extinguisher should be supplied and fitted in an accessible position close to the driver when exiting the cab.

12.5 One complete spare wheel and one set of emergency changing tools shall be supplied per vehicle.

12.6 Bolt on head and tail light guards.

12.7 Front and rear mud guards constructed from a suitable material for the application.

Item 6: Technical specification for a Beach Cleaning Vehicle

1. Scope

The intent of this specification is to provide for a fully functional vehicle which has the capability to collect debris and litter on a beach. Vehicle shall be self-propelled with either a fuel driven or a renewable energy. Bidder shall provide bids on the following options;

Item 6.1 Engine driven beach cleaning vehicle (small)

Item 6.2 Engine driven beach cleaning vehicle (medium)

Item 6.3 Engine driven beach cleaning vehicle (large)

Item 6.4 Electric driven beach cleaning vehicle

Item 6.5 Electric driven beach cleaning robot/remote vehicle

Item 6.6 Beach cleaning Implement for coupling to a tractor/plant equipment

2. Unit

2.1 The unit shall have a minimum operating mass of 400 kg.

2.2 Drive system shall be suitable for beach sand (AWD,4WD, 2WD Tracks etc.)

2.3 Motion shall be fully automatic with forward and reverse motion.

2.4 Unit shall be preferably powered with solar panels on top to self charge batteries.

2.5 Minimum cleaning width of 1 000 mm.

2.6 Minimum cleaning depth of 50 mm.

2.7 Suspension suitable for the terrain.

2.8 Fitment of under belly protection for critical parts.

3. Material specification

High anti-corrosive material suitable for continuous use on the coast environment. Aluminium, stainless steel, galvanised steel, automotive grade stainless steel or non-metallic composites are recommended.

4. Construction requirements

4.1 Unit

- 4.1.1 Cleaning system shall be able to sift sand to collect litter and sea debris.
- 4.1.2 To level/compact sand.
- 4.1.3 Rake or sift for algae, seaweed and other flora items.
- 4.1.4 Collection hopper to hold at least 60 litres of waste. Robot shall be powerful enough to draw the load.
- 4.1.5 Tool kit for operation and maintenance.
- 4.1.6 Controller for remote operation.
- 4.1.7 Camera on robot unit with screen on controller for distance operation if available.
- 4.1.8 One set of controller and unit batteries to be included. Chargers for both to be included as well for South African plug receptacle and voltage.
- 4.1.9 For Item 6.6: A collector attachment with an enclosed collection hopper/tank with a working width of 2 000 mm or better. Collection tank shall have a capacity of 2 000- 3 000 litres with a tank capacity indicator. The system should be able to handle applications for the beaches and coastal shorelines of the eThekweni region. It is expected to handle refuse litter as well. It shall be able to offload itself into a trailer or truck with a discharge reach of 2 000 mm or better. The lid/s shall automatically open and close and hold the position when loading and off-loading. It shall have levelling capabilities before collection of litter (tool attachments shall be included). Collection shall be done preferably by a rotating system with replaceable blades and filtration of finer particles. It shall be height adjustable. Wheels to be placed for transporting the unit at tractor top speed (40km/hr). Due to the nature of the operation this system shall be preferably made with automotive grade stainless steel especially for the working parts.

5. Metal Preparation and Painting Procedure

The following procedure must be adhered to:

- 5.1 Descale all metal surfaces
- 5.2 Grind down & smooth all rough edges
- 5.3 Thoroughly clean all surfaces and shot blast mild steel surfaces.
- 5.4 Prime the body and other components using a two component self-curing inorganic zinc ethyl silicate or two component zinc rich polyamide cured epoxy primer.
- 5.5 Thereafter paint using premium quality automotive paint.
- 5.6 The rake should have a polyurethane protective final coat.
- 5.7 Paint film thickness must not be less than 80 microns each. Two coats of primer and one colour coat.

6. Electrical

All additional electrical circuits are to be suitably fused and must not interfere with or adversely affect the existing electrical system.

- 6.1 LED lights for identification in low light conditions.
- 6.2 Emergency shut down.
- 6.3 Battery indicator.
- 6.4 Spare battery to be included for longer shifts.
- 6.5 Thermal shut off protection for electronics and motor.
- 6.6 Warning alarm and speaker for operator controlling the unit when approaching obstacles/persons.
- 6.7 All exposed electrical wiring looms of the vehicle/equipment/unit and superstructure shall be full encased in a flexible protective metallic conduit and securely clamped with fasteners to the chassis or the structure.

7. Signage and Markings

7.1 Data plates shall be fitted labelling the storage areas and capacity. Safe working loads should be labelled where necessary:

- a) The electric system indicating battery capacity, system voltage, type/grade, specifications and test criteria.
- b) Safe working loads to be clearly labeled on the structure on both sides.
- c) Safety, operation, technical data, dates of manufacture, manufacturer's details etc.

7.2 Durable, ultraviolet resistant and weather resistant warning signs shall be provided at all locations of the unit that impose a danger to persons.

11.5 Durable, ultraviolet resistant and weather resistant information signs shall be provided in specific locations to assist the driver/maintenance staff with the operation/maintenance of the unit.

11.6 Retro-reflective tape shall be fitted to both sides and the rear of the unit.

Item 7.1 -7.3: Technical specification for Diesel Forklifts

Bidder shall bid on item 7.1 a diesel 3 Ton forklift, item 7.2 a diesel 5 Ton forklift and item 7.3 a diesel 7 Ton forklift. Item 7.4 shall be a Rough Terrain Diesel forklift.

1. SPECIFICATIONS for diesel forklifts:

Machine Type:	Counterbalance Forklift – 4 wheeler only
Load Capacity:	3 000/5 000/7 000 kg
Load Centre:	500-600 mm
Max Fork Height:	3 000-6 000 mm
Power Type:	Diesel engine
Control Type:	Sit Down – Ride on
Tyres:	Airless type (super elastic) or Solid
Fork Size:	1000-1150 mm x 100-145 mm x 40-55 mm (L x W x T)
One set extension forks	3 m (fabricated and certified-SANS 10388)
Turning Radius (approx.):	2 000-3 000 mm
Approx. Gradeability (with / without load):	10/25%
Service Brakes:	Hydraulic Foot Pedal
Parking Brakes:	Mechanical Hand Lever

2. TRANSMISSION:

Fully automatic variable speed.

3.STANDARD EQUIPMENT INCLUSIVE:

- 2 Stage Wide View Masts

- Integral Side Shift
- Load Backrest
- Electric Shift Control
- LED Front Working Lights & Rear Combination Lights
- Adjustable Suspension Seat with Safety Belt
- Mounted fire extinguisher
- Reverse Alarm
- High Mounted Strobe Light
- Side View Mirror
- Auto shut off
- In compliance with the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and Driven Regulation 18.6.
- Load testing services is accredited with the Department of Labour as a Lifting Machine Entity, certified inspector and test certificate for the equipment.
- Equipment supplied according to SANS 10388.

Item 7.4: Technical specification for Rough Terrain Forklift

1. SPECIFICATIONS for diesel forklifts:

Machine Type:	Counterbalance Forklift – 4 wheeler only
Load Capacity:	3 000 kg
Load Centre:	500-600 mm
Max Fork Height:	3 000-6 000 mm
Power Type:	Diesel engine with 4x4 drive
Control Type:	Sit Down – Ride on
Tyres (preferred): same size	Rough/All terrain airless type (super elastic) or Solid -all
Fork Size:	1000-1150 mm x 100-145 mm x 40-55 mm (L x W x T)
One set extension forks	3 m (fabricated and certified-SANS 10388)
Turning Radius (approx.):	1500-4500 mm
Minimum Gradeability (with load):	30%
Service Brakes:	Hydraulic Foot Pedal
Parking Brakes:	Mechanical Hand Lever

2. TRANSMISSION:

Fully automatic variable speed.

3.STANDARD EQUIPMENT INCLUSIVE:

- Enclosed driver's cabin with a two speed fan and heater/demister.
- Glass to be tinted for protection and cooling of the cabin.
- Under protection of chassis including fastened belly plates for critical components (engine, cooling system, fuel tank, prop shaft, drive motors and axles etc.)
- Windscreen washer and wiper system
- Mounted fire extinguisher
- 2 Stage Wide View Masts
- Spare set of wheels with tool kit
- Integral Side Shift
- Load Backrest
- Shift Control
- LED Front Working Lights & Rear Combination Lights
- Adjustable Suspension Seat with Safety Belt
- Reverse Alarm
- High Mounted Strobe Light
- Side View Mirror
- Auto shut off
- Jump start receptacle
- In compliance with the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and Driven Regulation 18.6.
- Load testing services is accredited with the Department of Labour as a Lifting Machine Entity, certified inspector and test certificate for the equipment.
- Equipment supplied according to SANS 10388.

Item 8.1: Technical specification for a Road milling machine**1.Scope**

The intent of this specification is to provide for a fully operational vehicle, which has the capability to undertake typical road rehabilitation applications. It should be able to operate on urban motorways and rural roads.

The vehicle and equipment with the customisation shall be supplied complete and fully assembled in all respects, including standard equipment supplied by the manufacturer and shall comply with the South African Occupational Health and Safety Act, Act 85 of 1993/as amended and the applicable current Road Traffic Legislation. All work on the vehicle including the customisation is to be constructed by an SABS/SANS approved body/coach/vehicle manufacturer/ builder. The total operating mass of the vehicle and its customisation should not exceed the vehicles legal V rating less 1000 kg. The layout should also ensure that the laden individual axle loads do not exceed the legal limits.

The bodywork should be designed to enhance the aesthetics of the vehicle. The vehicle and its customisation must be operationally friendly, easy to operate and maintain. All replaceable items including (but not limited to) critical components shall be designed for easy access, removal and replacement.

The vehicle and its customisation shall be to I.S.O. Metric Standards, and instrumentation gauges, dials, etc. shall be in Systeme International (S.I.) units.

2. Vehicle

- 2.1 The unit shall be a vehicle, with a minimum operating Gross Vehicle Mass (GVM) of 15 000 kg.
- 2.2 Minimum diesel engine requirements shall be of Euro 3, 150 kW of power.
- 2.3 Park and effective braking systems.
- 2.4 Vehicle speed should be easily adjustable with an adequate speed range.
- 2.5 360° degree vision is required from within the cab to allow for operator clear visibility.
- 2.6 Hard top canopy with windshield (if available).
- 2.7 To safely and comfortably accommodate driver using a comfortable type seat. To be adjustable for optimal visibility while operating the vehicle.
- 2.8 Adjustable mirrors including driver assist mirrors for sides of vehicle.
- 2.9 Water tank with a minimum capacity of 1000 liters.
- 2.10 Fuel tank with minimum capacity of 500 liters shall be fitted with an anti-siphon device and a lockable fuel cap.
- 2.11 An efficient fuel filter shall be fitted, and the tank shall have a viewable filter screen at the filler cap with an easily accessible drain plug.
- 2.12 Vehicle fuel management system to remove access water and dirt before delivery to the engine.
- 2.13 Heat sensing engine protection device, mechanical monitoring system to safely shut down engine if engine cylinder head increases to an unsafe temperature, no water in the cooling system and upon low oil level and low oil pressure.
- 2.14 Turbo safety system to prevent damage if vehicle is switched off prematurely or turbo has not reached safe operation.
- 2.15 Automated water separator to keep pneumatic system functioning efficiently.
- 2.16 Oil sampling/pressure valve to be fitted on all critical components and subsystems of the unit were OEM recommends for monitoring purposes.

3. Material specification

The load bearing items shall be made out of structural steel to withstand the loads from the operational environments' terrain and application. Corten steel and Domex for the structural rolled sections and flat plate is recommended. Whilst Hardox for the wearing items, Hardox shall be applied over the primary structure such that it can be replaced as a wearing item for any surface items that can be worn.

4. Construction requirements

4.1 Features and systems

- 4.1.1 Control panel should have an accurate read out of milling depth.
- 4.1.2 Automatic/Self adjusting levelling system.
- 4.1.3 Various incremental height adjustments.
- 4.1.4 Feeder system adjustment from the screed.
- 4.1.5 Easily accessible components for maintenance.
- 4.1.6 Water proof control panel with LCD display and control displays for day and night use.
- 4.1.7 Automatic emergency shut off and a manual emergency shut off.
- 4.1.8 Health status check of vehicle before starting up.

4.2 Capacities and milling

- 4.2.1 Milling depth range of 0-320 mm or closest.
- 4.2.2 Milling width of 1000-1300 mm.
- 4.2.3 Cutting diameter 900 mm or closest.
- 4.2.4 Milling speed of at least 1.5 km/hr is expected.
- 4.2.5 Travel speed of at least 5 km/hr is expected.
- 4.2.6 Discharge conveyor width to be a minimum of 500 mm.
- 4.2.7 Discharge rate of conveyor should be at least 75 m³/ hr.
- 4.2.8 Conveyor should be at least 5 000 mm long and of sufficient elevation as it will be used with 8x4 tipper trucks.
- 4.2.9 Diamond cutting bits shall be fitted if offered.

4.3 Access stairways

To be fitted with suitable guard rails and user-friendly access.

All items must be thoroughly sealed with an approved sealer to prevent rusting between mating surfaces and drain holes must be provided in areas where water can accumulate. Any floor that persons will use on the body should be coated with a hard wearing, slip resistant material (Vastrap).

5. Lighting

5.1 A waterproof amber coloured LED warning light to be fitted on the canopy roof with on/off switch with random flash pattern positioned in the cab.

5.2 Rubber encased waterproof spotlights (minimum of two pairs) shall be installed to the top of the cab facing the surrounding areas of the machine illuminating the work area and its surroundings. Switches shall be located in the cab.

All lights to be bracket mounted for easy removal and lenses protected from damage.

6. Colors

Underside of Body	Black
Cab	Yellow
Deck and structures	Yellow

7. Electrical

All additional electrical circuits are to be suitably fused and must not interfere with or adversely affect the existing electrical system.

- 7.1 Battery isolator switch.
- 7.2 Audible hooter.
- 7.3 Batteries shall be maintenance free variant that will last the warranty period.
- 7.4 Solar panel to be installed to aid the charge of the batteries when not in use.
- 7.5 Uninterrupted power supply points shall be made available for the vehicle tracking and fuel master monitoring system.
- 7.6 Jump start receptacle.
- 7.7 Reverse buzzer to be installed when reverse gear is engaged.

8. Signage and Markings

8.1 Data plates shall be fitted labelling the storage areas and capacity. Safe working loads should be labelled where necessary:

a) The hydraulic system indicating tank capacity, system pressure, fluid type/grade, hydraulic cylinder specifications and test criteria.

b) Safe working loads to be clearly labeled on the structure on both sides.

c) Safety, operation, technical data, dates of manufacture, manufacturer's details etc.

8.2 Safety, operation, technical data, dates of manufacture, manufacturer's details etc.

8.3 Durable, ultraviolet resistant and weather resistant warning signs shall be provided at all locations of the vehicle that impose a danger to persons.

8.4 Durable, ultraviolet resistant and weather resistant information signs shall be provided in specific locations to assist the driver/maintenance staff with the operation/maintenance of the vehicle.

8.5 Retro-reflective tape shall be fitted to both sides and the rear of the vehicle as well as the rear.

9. Miscellaneous items

9.1 The batteries to have a weather proof cover to prevent debris and moisture ingress.

9.2 Fuel tank, batteries, pneumatic cylinders and hydraulic tank to have structures built around them for safety if not integrated into the body of the unit.

9.3 Bolt on covers for safety where parts are rotating, swinging or of high temperature including and not limited to engine manifolds, turbocharger and exhaust.

9.4 A pair of 6 kg fire extinguisher should be supplied and fitted in an accessible position close to the driver when exiting the cab.

9.5 Automatic fire suppression system to be installed covering the engine and cab in case of an emergency. Engine can be either liquid or powder system whilst cab shall have a liquid system.

Item 8.2: Technical specification for a Cold planer machine/vehicle

1. Scope

The intent of this specification is to provide for a fully operational vehicle, which has the capability to undertake typical road rehabilitation applications. It should be able to operate on urban motorways and rural roads.

The vehicle and equipment with the customisation shall be supplied complete and fully assembled in all respects, including standard equipment supplied by the manufacturer and shall comply with the South African Occupational Health and Safety Act, Act 85 of 1993/as amended and the applicable current Road Traffic Legislation. All work on the vehicle including the customisation is to be constructed by an SABS/SANS approved body/coach/vehicle manufacturer/ builder. The total operating mass of the vehicle and its customisation should not exceed the vehicles legal V rating less 1000 kg. The layout should also ensure that the laden individual axle loads do not exceed the legal limits.

The bodywork should be designed to enhance the aesthetics of the vehicle. The vehicle and its customisation must be operationally friendly, easy to operate and maintain. All replaceable items including (but not limited to) critical components shall be designed for easy access, removal and replacement.

The vehicle and its customisation shall be to I.S.O. Metric Standards, and instrumentation gauges, dials, etc. shall be in Systeme International (S.I.) units.

2. Vehicle

2.1 The unit shall be a tracked vehicle, with a minimum operating Gross Vehicle Mass (GVM) of 30 000 kg.

2.2 Minimum diesel engine requirements shall be of Euro 3, 350 kW of power.

2.3 Park and effective braking systems.

2.4 Vehicle speed should be easily adjustable with an adequate speed range.

2.5 360° degree vision is required from within the cab to allow for operator clear visibility.

2.6 Hard top canopy with windshield (if available).

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- 2.7 To safely and comfortably accommodate driver using a comfortable type seat. To be adjustable for optimal visibility while operating the vehicle.
 - 2.8 Adjustable mirrors including driver assist mirrors for sides of vehicle.
 - 2.9 Water tank with a minimum capacity of 3000 liters.
 - 2.10 Fuel tank with minimum capacity of 750 liters shall be fitted with an anti-siphon device and a lockable fuel cap.
 - 2.11 An efficient fuel filter shall be fitted, and the tank shall have a viewable filter screen at the filler cap with an easily accessible drain plug.
 - 2.12 Vehicle fuel management system to remove access water and dirt before delivery to the engine.
 - 2.13 Heat sensing engine protection device, mechanical monitoring system to safely shut down engine if engine cylinder head increases to an unsafe temperature, no water in the cooling system and upon low oil level and low oil pressure.
 - 2.14 Turbo safety system to prevent damage if vehicle is switched off prematurely or turbo has not reached safe operation.
 - 2.15 Automated water separator to keep pneumatic system functioning efficiently.
 - 2.16 Oil sampling/pressure valve to be fitted on all critical components and subsystems of the unit were OEM recommends for monitoring purposes.

3. Material specification

The load bearing items shall be made out of structural steel to withstand the loads from the operational environments' terrain and application. Corten steel and Domex for the structural rolled sections and flat plate is recommended. Whilst Hardox for the wearing items, Hardox shall be applied over the primary structure such that it can be replaced as a wearing item for any surface items that can be worn.

4. Construction requirements

4.1 Features and systems

- 4.1.1 Control panel should have an accurate read out of milling depth.
- 4.1.2 Automatic/Self adjusting levelling system.
- 4.1.3 Various incremental height adjustments.
- 4.1.4 Feeder system adjustment from the screed.
- 4.1.5 Easily accessible components for maintenance.
- 4.1.6 Water proof control panel with LCD display and control displays for day and night use.
- 4.1.7 Automatic emergency shut off and a manual emergency shut off.
- 4.1.8 Health status check of vehicle before starting up.

4.2 Capacities and milling

- 4.2.1 Milling depth range of 0-320 mm or closest.
- 4.2.2 Milling width of 2000 mm or closest.
- 4.2.3 Cutting diameter 1 000 mm or closest.
- 4.2.4 Milling speed of at least 2 km/hr is expected.
- 4.2.5 Travel speed of at least 3 km/hr is expected.
- 4.2.6 Discharge conveyor width to be a minimum of 650 mm.
- 4.2.7 Discharge rate of conveyor should be at least 75 m³/ hr.
- 4.3.1 Conveyor should be at least 7 000 mm long and of sufficient elevation as it will be used with 8x4 tipper trucks.
- 4.2.8 Diamond cutting as it will be used with 8x4 high volumetric capacity tipper trucks.
- 4.2.9 Diamond cutting bits shall be fitted if offered.

4.3 Access stairways

To be fitted with suitable guard rails and user-friendly access.

All items must be thoroughly sealed with an approved sealer to prevent rusting between mating surfaces and drain holes must be provided in areas where water can accumulate. Any floor that persons will use on the body should be coated with a hard wearing, slip resistant material (Vastrap).

5. Lighting

5.1 A waterproof amber coloured LED warning light to be fitted on the canopy roof with on/off switch with random flash pattern positioned in the cab.

5.2 Rubber encased waterproof spotlights (minimum of two pairs) shall be installed to the top of the cab facing the surrounding areas of the machine illuminating the work area and its surroundings. Switches shall be located in the cab.

All lights to be bracket mounted for easy removal and lenses protected from damage.

6. Colors

Underside of Body	Black
Cab	Yellow
Deck and structures	Yellow

7. Electrical

All additional electrical circuits are to be suitably fused and must not interfere with or adversely affect the existing electrical system.

- 7.1 Battery isolator switch.
- 7.2 Audible hooter.
- 7.3 Batteries shall be maintenance free variant that will last the warranty period.
- 7.4 Solar panel to be installed to aid the charge of the batteries when not in use.
- 7.5 Uninterrupted power supply points shall be made available for the vehicle tracking and fuel master monitoring system.
- 7.6 Jump start receptacle.
- 7.7 Reverse buzzer to be installed when reverse gear is engaged.

8. Signage and Markings

8.1 Data plates shall be fitted labelling the storage areas and capacity. Safe working loads should be labelled where necessary:

- a) The hydraulic system indicating tank capacity, system pressure, fluid type/grade, hydraulic cylinder specifications and test criteria.

b) Safe working loads to be clearly labeled on the structure on both sides.

c) Safety, operation, technical data, dates of manufacture, manufacturer's details etc.

8.2 Safety, operation, technical data, dates of manufacture, manufacturer's details etc.

8.3 Durable, ultraviolet resistant and weather resistant warning signs shall be provided at all locations of the vehicle that impose a danger to persons.

8.4 Durable, ultraviolet resistant and weather resistant information signs shall be provided in specific locations to assist the driver/maintenance staff with the operation/maintenance of the vehicle.

8.5 Retro-reflective tape shall be fitted to both sides and the rear of the vehicle as well as the rear.

9. Miscellaneous items

9.1 The batteries to have a weather proof cover to prevent debris and moisture ingress.

9.2 Fuel tank, batteries, pneumatic cylinders and hydraulic tank to have structures built around them for safety if not integrated into the body of the unit.

9.3 Bolt on covers for safety where parts are rotating, swinging or of high temperature including and not limited to engine manifolds, turbocharger and exhaust.

9.4 A pair of 6 kg fire extinguisher should be supplied and fitted in an accessible position close to the driver when exiting the cab.

9.5 Automatic fire suppression system to be installed covering the engine and cab in case of an emergency. Engine can be either liquid or powder system whilst cab shall have a liquid system.

Item 9: Technical specification for an Electric reach truck and an Extended reach truck

Bidder shall bid on item 9.1 an electric reach truck and item 9.2 an electric extended reach truck.

1. SPECIFICATIONS OF EQUIPMENT:

Machine Type:	Reach truck
Load Capacity:	1600-1800 kg
Load Centre:	500-700 mm
Lift Height:	7 000 mm or better
Power Type:	Electric
Control Type:	Sit Down
Tyres:	Airless type (super elastic) or Solid
Fork Size:	1000-1150 mm x 100-125 mm x 40-55 mm (L x W x T)
Turning Radius (approx.):	1 500-1 850 mm
Extended reach truck penetration (item 9.2 only):	1 300-1 500 mm
Approx. Gradeability (with / without load):	10% -15%
Service Brakes:	Hydraulic Foot Pedal

Parking Brakes:	Mechanical Hand Lever
Minimum Battery Voltage / Capacity	48V / 600Ah
Current Battery Change over system:	Lift out only
Quantity of complete Battery packs:	x 2
Battery Monitoring Unit Qty:	1 unit per battery (must also communicate to charger)
Charger Type:	High Frequency Smart Charger 3 phase
Charger Qty:	x 1
Electrical Motors:	AC Drive 7.5-11 kw per 60 minutes per motor (minimum)

2.TRANSMISSION:

Fully automatic variable speed.

3.STANDARD EQUIPMENT INCLUSIVE:

- 2-3 Stage Wide View Masts
- Integral Side Shift
- Load Backrest
- Electric Shift Control
- LED Front Working Lights & Rear Combination Lights
- Adjustable Suspension Seat with Safety Belt
- Mounted fire extinguisher
- Reverse Alarm
- High Mounted Strobe Light
- Side View Mirror
- Auto shut off
- In compliance with the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and Driven Regulation 18.6.
- Load testing services is accredited with the Department of Labour as a Lifting Machine Entity, certified inspector and test certificate for the equipment.
- Equipment supplied according to SANS 10388.

Item 10: Technical specification for a vibratory roller

1. Scope

The intent of this specification is to provide for a fully operational vehicle, which has the capability to operate on a landfill site for levelling of terrain or roads for compaction of asphalt. A smooth drum roller (Item 10.1) and padfoot option (Item 10.2) shall be offered by the bidder. The bidder can also provide the option of tandem smooth drum roller (Item 10.3).

2. Unit

2.1 The unit shall be an articulated front roller vehicle, with a minimum Gross Vehicle Mass (GVM) of 12 000 kg.

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- 2.2 Transmission shall be infinitely adjustable, power shift, fully automatic or automatic manual with at least three forward and three reverse gears.
 - 2.3 Minimum diesel engine requirements shall be of Euro 3-5 emission level with a minimum of 100 kW of power.
 - 2.4 Steel suspension.
 - 2.5 Final drives to be fitted with dual cone seal protection.
 - 2.6 Fitment of a steel under belly plate (minimum of 6 mm) to protect the radiator and engine. Rest of the vehicle shall have removable under chassis guards for keeping away landfill debris.
 - 2.7 Park and emergency braking systems.
 - 2.8 360° degree vision is required from within the cab to allow for operator clear visibility.
 - 2.9 To safely and comfortably accommodate driver using an equal levelling suspended type seat. To be fully adjustable for optimal visibility while operating the vehicle.
 - 2.10 Fully adjustable mirrors including driver assist mirrors for sides of vehicle.
 - 2.11 Heater, windscreen demister and air-conditioning system should be adequate for the cab and its occupants.
 - 2.12 Windscreen wipers and washer system.
 - 2.13 12v charger sockets.
 - 2.14 Aerial mounted camera to assist with viewing of the rear whilst in operation.
 - 2.15 Two stage dry type air cleaner with auto cleaner function and air restrictor indicator.
 - 2.16 Fuel tank with minimum capacity of 200 liters shall be fitted with an anti siphon device and a lockable fuel cap.
 - 2.17 An efficient fuel filter shall be fitted and the tank shall have a viewable filter screen at the filler cap with an easily accessible drain plug.
 - 2.18 Vehicle fuel management system to remove access water and dirt before delivery to the engine.
 - 2.19 Heat sensing engine protection device, mechanical monitoring system to safely shut down engine if engine cylinder head increases to an unsafe temperature, no water in the cooling system and upon low oil level and low oil pressure.
 - 2.20 Turbo safety system to prevent damage if vehicle is switched off prematurely or turbo has not reached safe operation.
 - 2.21 Water separator to keep pneumatic system functioning efficiently.
 - 2.22 Oil sampling/pressure valve to be fitted on all critical components and subsystems of the unit were OEM recommends for monitoring purposes.
 - 2.23 The vehicle and the customisation shall be designed according to these critical specifications (summary of evidence shall be provided):
 - a) Driver's cab shall be ROPS/FOPS compliant (ISO 3471 and ISO 3449).
 - b) Comply to sound levels as laid out in ISO6395 and ISO63956.
 - c) SANS 12944-4, 5:1998 Corrosion protections.
 - d) SANS 1506:1994 (2000-07-25) Brake systems.

3. Material specification

The load bearing items shall be made out of structural steel to withstand the loads from the operational environments terrain and application. Corten steel and Domex for the structural rolled sections and flat plate is recommended. Whilst Hardox or a wear resistant steel for the wearing items (roller and roller pads), the wear liner shall be applied over the primary structure such that it can be replaced as a wearing item.

4. Construction requirements

4.1 Roller

- 4.1.1 The padfoot front roller must be either suited for levelling and agitation of terrain on a landfill waste site. The smooth/tandem roller should compact and densify newly laid asphalt on road surfaces. The minimum lateral width should be 2000 mm and the diameter should be 1500 mm.

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- 4.1.2 The padfoot roller shall be fitted with an oval/elliptical face pads around the entire face. The design shall also be tapered and should have multiple direction compaction force with minimal waste accumulation on the pads/roller.
 - 4.1.3 The smooth roller shall be able to withstand the chemical and heat composition of asphalt and preferably have a wear plate on the exterior diameter that is replaceable.
 - 4.1.4 The roller shall have a low frequency (approx. 30Hz) vibration system with adjustable amplitude settings to assist the compaction process at the landfill site. Centrifugal force should be approx. 130-300 kN.
 - 4.1.5 The surface in direct contact with the waste shall have the wear resistant face pads mentioned in 4.1.2.
 - 4.1.6 An adjustable levelling blade to be fitted at the front of the roller. It should be the same or better lateral width of the roller/unit.
 - 4.1.7 Mounting of the blade shall be done in user friendly manner preferably with maintenance free fastening methods.

4.1 Smooth cover for footpad roller

- 4.1.1 There shall be a smooth cover included that can enclose the padfoot drum to use the padfoot roller as a smooth drum roller when and as required.

4.2 Access stairways

To be fitted with suitable guard rails and user-friendly access.

All items must be thoroughly sealed with an approved sealer to prevent rusting between mating surfaces and drain holes must be provided in areas where water can accumulate. Any floor that persons will use on the body should be coated with a hard wearing, slip resistant material (Vastrap).

5. Lighting

5.1 A waterproof amber coloured polycarbonate lenses LED warning light to be fitted on the cab roof with on/off switch with random flash pattern positioned in the cab.

5.2 Rubber encased spotlights shall be installed to the top of the cab facing the surrounding areas of the unit. Two forward facing and at least one rear. Switch shall be located in the cab.

All lights to be bracket mounted for easy removal and lenses protected from damage.

6 Hydraulic system

6.1 In respect of the hydraulic tank the following shall be required:

- I. To be constructed of steel.
- II. To be fitted to an accessible part of the chassis, such that it does not impede the maintenance staff or driver of filling oil to tank.
- III. To be fitted with a bump guard from externalities.
- IV. To be fitted with a front mounted sight glass for visual oil level inspection. Glass should be marked minimum and maximum accordingly with levels of fluid in the tank.
- V. Must have a lockable filler cap strainer & filter into filler base and filler cap assembly.
- VI. Oil capacity shall be sufficient and a cooler added if necessary.

6.2 Must have an inline filter with a blockage indicator fitted onto the pressure side of hydraulic pump, before the solenoid valve system.

6.3 The hydraulic valves shall be grouped together for ease of maintenance.

6.4 Test points for testing hydraulic pressures shall be fitted and grouped together.

6.5 Where possible steel tubing, which shall be treated with suitable corrosion protection, in lieu of rubber hosing shall be used for hydraulic lines.

6.6 All hydraulic fittings shall be wrapped with a petrolatum impregnated tape or sprayed with a petrolatum primer to prevent corrosion.

- 6.7 Safety hold valve for cylinder in case of hydraulic failure.
- 6.8 Hydraulic controls for the operation of the equipment shall be fitted in a user friendly manner in the driver's cab for ease of operation.
- 6.9 The controls shall where possible be electronic, and activate the necessary servos (either pneumatic or hydraulic) that will activate the operation. All actions will be fully adjustable at variable speeds for the operation of the hydraulics. A plug in, modular type, control panel is preferred for ease of maintenance.

7. Metal Preparation and Painting Procedure

The following procedure must be adhered to:

- 7.1 Descale all metal surfaces
- 7.2 Grind down & smooth all rough edges
- 7.3 Thoroughly clean all surfaces
- 7.4 Prime the unit and other components using a two component self-curing inorganic zinc ethyl silicate or two component zinc rich polyamide cured epoxy primer.
- 7.5 Thereafter paint using one coat of premium quality twin pack automotive paint
- 7.6 Paint film thickness must not be less than 80 microns each. Two coats of primer and one colour coat.

8. Colors

Underside of Body	Black
Padfoot roller unit	White with Cleansing Solid Waste (CSW) branding with white, blue and green stripes across the front of the cab
Smooth roller unit	Safety Yellow

9.

Electrical

All additional electrical circuits are to be suitably fused and must not interfere with or adversely affect the existing electrical system.

- 9.1 The rear aerial mounted camera shall remain ON and a buzzer and warning light to be installed when reverse gear is engaged.
- 9.2 Battery isolator switch.
- 9.3 Audible hooter.
- 9.4 Batteries shall be maintenance free variant that will last the warranty period.
- 9.5 Uninterrupted power supply points shall be made available for the vehicle tracking and fuel master monitoring system.
- 9.6 Jump start receptacle.

10. Signage and Markings

10.1 Data plates shall be fitted labelling the storage areas and capacity. Safe working loads should be labelled where necessary:

- a) The hydraulic system indicating tank capacity, system pressure, fluid type/grade, hydraulic cylinder specifications and test criteria.
- b) Safe working loads to be clearly labeled on the structure on both sides.
- c) Safety, operation, technical data, dates of manufacture, manufacturer's details etc.

10.2 Safety, operation, technical data, dates of manufacture, manufacturer's details etc.

10.3 Durable, ultraviolet resistant and weather resistant warning signs shall be provided at all locations of the vehicle that impose a danger to persons.

10.4 Durable, ultraviolet resistant and weather resistant information signs shall be provided in specific locations to assist the driver/maintenance staff with the operation/maintenance of the vehicle.

10.5 Retro-reflective tape shall be fitted to both sides and the rear of the vehicle as well as the rear.

10.6 Striping: Green, Blue, Green & White – on L/H/S roof and across the front panel, Grille and bottom valance. Green (58 mm), Blue (72 mm), Green (118 mm), White spacing, 1st White (35 mm), 2nd White (45 mm) for the padfoot roller unit only.

11. Miscellaneous items

11.1 The batteries to have a weather proof cover to prevent debris and moisture ingress.

11.2 Fuel tank, batteries, pneumatic cylinders and hydraulic tank to have structures built around them for safety.

11.3 Bolt on covers for safety where parts are rotating, swinging or of high temperature including and not limited to engine manifolds, turbocharger and exhaust.

11.4 A pair of 6 kg fire extinguisher should be supplied and fitted in an accessible position close to the driver when exiting the cab.

11.5 Automatic fire suppression system to be installed covering the engine and cab in case of an emergency for the padfoot roller unit only.

Item 11: Technical specification for an Asphalt Road Paver

1.Scope

The intent of this specification is to provide for a fully operational vehicle, which has the capability to undertake typical road rehabilitation applications. It should be able to operate on urban motorways and rural roads.

The vehicle and equipment with the customisation shall be supplied complete and fully assembled in all respects, including standard equipment supplied by the manufacturer and shall comply with the South African Occupational Health and Safety Act, Act 85 of 1993/as amended and the applicable current Road Traffic Legislation. All work on the vehicle including the customisation is to be constructed by an SABS/SANS approved body/coach/vehicle manufacturer/ builder. The total operating mass of the vehicle and its customisation should not exceed the vehicles legal V rating less 1000 kg. The layout should also ensure that the laden individual axle loads do not exceed the legal limits.

The bodywork should be designed to enhance the aesthetics of the vehicle. The vehicle and its customisation must be operationally friendly, easy to operate and maintain. All replaceable items including (but not limited to) critical components shall be designed for easy access, removal and replacement.

The vehicle and its customisation shall be to I.S.O. Metric Standards, and instrumentation gauges, dials, etc. shall be in Systeme International (S.I.) units.

2. Vehicle

2.1 The unit shall be a tracked vehicle, with a minimum Gross Vehicle Mass (GVM) of 15 000 kg.

2.2 Minimum diesel engine requirements shall be of Euro 3, 150 kW of power.

2.3 Park and emergency braking systems.

2.4 360° degree vision is required from within the cab to allow for operator clear visibility.

2.5 Hard top canopy with windshield

2.6 To safely and comfortably accommodate driver using an equal levelling suspended type seat. To be fully adjustable for optimal visibility while operating the vehicle.

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- 2.7 Adjustable mirrors including driver assist mirrors for sides of vehicle.
 - 2.8 Windscreen wipers and washer system.
 - 2.9 12v charger sockets.
 - 2.10 Aerial mounted camera to assist with viewing of the rear whilst in operation.
 - 2.11 Fuel tank with minimum capacity of 250 liters shall be fitted with an anti-siphon device and a lockable fuel cap.
 - 2.12 An efficient fuel filter shall be fitted, and the tank shall have a viewable filter screen at the filler cap with an easily accessible drain plug.
 - 2.13 Vehicle fuel management system to remove access water and dirt before delivery to the engine.
 - 2.14 Heat sensing engine protection device, mechanical monitoring system to safely shut down engine if engine cylinder head increases to an unsafe temperature, no water in the cooling system and upon low oil level and low oil pressure.
 - 2.15 Turbo safety system to prevent damage if vehicle is switched off prematurely or turbo has not reached safe operation.
 - 2.16 Automated water separator to keep pneumatic system functioning efficiently.
 - 2.17 Oil sampling/pressure valve to be fitted on all critical components and subsystems of the unit were OEM recommends for monitoring purposes.
 - 2.18 The vehicle and the customisation shall be designed according to these critical specifications (summary of evidence shall be provided):
 - a) Driver's cab shall be ROPS/FOPS compliant (ISO 3471 and ISO 3449).
 - b) Comply to sound levels as laid out in ISO6395 and ISO63956.
 - c) SANS 12944-4, 5:1998 Corrosion protections.
 - d) SANS 1506:1994 (2000-07-25) Brake systems.

3. Material specification

The load bearing items shall be made out of structural steel to withstand the loads from the operational environments' terrain and application. Corten steel and Domex for the structural rolled sections and flat plate is recommended. Whilst Hardox for the wearing items, Hardox shall be applied over the primary structure such that it can be replaced as a wearing item.

4. Construction requirements

4.4 Features and systems

- 4.4.1 Quick heating screeds should reach operating temperature in approx. 15-40 minutes.
- 4.4.2 Various engine speed and operating control modes including economical-mode.
- 4.4.3 Feeder system adjustment from the screed.
- 4.4.4 Easily accessible heating components for maintenance.
- 4.4.5 Water proof control panel with LCD display and control displays for day and night use.
- 4.4.6 Remote controls for key items.

4.5 Capacities and paving

- 4.5.1 Vibratory screed with a range of 0-3000 vpm.
- 4.5.2 Paving range of 3-6 metres with a paving width of 8 metres and depth of 300 mm.
- 4.5.3 Hopper capacity to cater for 6x4 and 8x4 tipper trucks with a minimum throughput capacity of 1250 tonnes/hr.

4.6 Access stairways

To be fitted with suitable guard rails and user-friendly access.

All items must be thoroughly sealed with an approved sealer to prevent rusting between mating surfaces and drain holes must be provided in areas where water can accumulate. Any floor that persons will use on the body should be coated with a hard wearing, slip resistant material (Vastrap).

5. Lighting

5.1 A waterproof amber coloured LED warning light to be fitted on the canopy roof with on/off switch with random flash pattern positioned in the cab.

5.2 Rubber encased spotlights (minimum of two pairs) shall be installed to the top of the cab facing the surrounding areas of the grader. Switches shall be located in the cab.

All lights to be bracket mounted for easy removal and lenses protected from damage.

6. Colors

Underside of Body	Black
Cab	Yellow
Deck and structures	Yellow

7. Electrical

All additional electrical circuits are to be suitably fused and must not interfere with or adversely affect the existing electrical system.

7.1 Battery isolator switch.

7.2 Audible hooter.

7.3 Batteries shall be maintenance free variant that will last the warranty period.

7.4 Solar panel to be installed to aid the charge of the batteries when not in use.

7.5 Uninterrupted power supply points shall be made available for the vehicle tracking and fuel master monitoring system.

7.6 Jump start receptacle

10. Signage and Markings

10.1 Data plates shall be fitted labelling the storage areas and capacity. Safe working loads should be labelled where necessary:

a) The hydraulic system indicating tank capacity, system pressure, fluid type/grade, hydraulic cylinder specifications and test criteria.

b) Safe working loads to be clearly labeled on the structure on both sides.

c) Safety, operation, technical data, dates of manufacture, manufacturer's details etc.

10.2 Safety, operation, technical data, dates of manufacture, manufacturer's details etc.

10.3 Durable, ultraviolet resistant and weather resistant warning signs shall be provided at all locations of the vehicle that impose a danger to persons.

10.4 Durable, ultraviolet resistant and weather resistant information signs shall be provided in specific locations to assist the driver/maintenance staff with the operation/maintenance of the vehicle.

10.5 Retro-reflective tape shall be fitted to both sides and the rear of the vehicle as well as the rear.

11. Miscellaneous items

11.1 The batteries to have a weather proof cover to prevent debris and moisture ingress.

11.2 Fuel tank, batteries, pneumatic cylinders and hydraulic tank to have structures built around them for safety if not integrated into the body of the unit.

11.3 Bolt on covers for safety where parts are rotating, swinging or of high temperature including and not limited to engine manifolds, turbocharger and exhaust.

11.4 A pair of 6 kg fire extinguisher should be supplied and fitted in an accessible position close to the driver when exiting the cab.

11.6 Automatic fire suppression system to be installed covering the engine and cab in case of an emergency. Engine can be either liquid or powder system whilst cab shall have a liquid system.

Item 12.1 and 12.2: Technical specification for a Motor Grader

1.Scope

The intent of this specification is to provide for a fully operational vehicle, which has the capability to operate on either a landfill site for levelling of terrain or for road rehabilitation processes. Item 12.1 shall be for a Landfill Grader and Item 12.2 shall be for an Asphalt Grader. There shall also be the option of an extended width blade with levelling system and tracks for beach application.

2. Vehicle

- 2.1 The grader shall be a 4x4 articulated vehicle, with a minimum Gross Vehicle Mass (GVM) of 16 000 kg.
- 2.2 Transmission shall be power shift, infinitely adjustable or fully automatic or automatic manual with at least three forward and three reverse gears. Manual/Low speed high torque setting selection must be available when grading.
- 2.3 Minimum diesel engine requirements shall be of Euro 3-5 emission level, 120 kW of power and 800 Nm of torque.
- 2.4 Steel suspension.
- 2.5 Final drive to be fitted with dual cone seal protection.
- 2.6 Fitment of a steel under belly plate (minimum of 6 mm) to protect the radiator and engine. Rest of the vehicle shall have removable under chassis guards for keeping away debris.
- 2.7 Pneumatic ABS braking. Park and emergency braking systems.
- 2.8 360° degree vision is required from within the cab to allow for operator clear visibility.
- 2.9 To safely and comfortably accommodate driver using an equal levelling suspended type seat. To be fully adjustable for optimal visibility while operating the vehicle.
- 2.10 Adjustable mirrors including driver assist mirrors for sides of vehicle.
- 2.11 Heater, windscreen demister and air-conditioning system should be adequate for the cab and its occupants.
- 2.12 Windscreen wipers and washer system.
- 2.13 12v charger sockets.
- 2.14 Aerial mounted camera to assist with viewing of the rear whilst in operation.
- 2.15 Two stage dry type air cleaner with auto cleaner function and air restrictor indicator.
- 2.16 Fuel tank with minimum capacity of 250 liters shall be fitted with an anti-siphon device and a lockable fuel cap.
- 2.17 An efficient fuel filter shall be fitted, and the tank shall have a viewable filter screen at the filler cap with an easily accessible drain plug.
- 2.18 Vehicle fuel management system to remove access water and dirt before delivery to the engine.
- 2.19 Heat sensing engine protection device, mechanical monitoring system to safely shut down engine if engine cylinder head increases to an unsafe temperature, no water in the cooling system and upon low oil level and low oil pressure.
- 2.20 Turbo safety system to prevent damage if vehicle is switched off prematurely or turbo has not reached safe operation.
- 2.21 Water separator to keep pneumatic system functioning efficiently.
- 2.22 Oil sampling/pressure valve to be fitted on all critical components and subsystems of the unit were OEM recommends for monitoring purposes.
- 2.23 The vehicle and the customisation shall be designed according to these critical specifications (summary of evidence shall be provided):

- a) SANS 20474-11: – Earthmoving Machinery Safety Part:11 Requirements for Earth and Landfill Compactors
- b) Driver’s cab shall be ROPS/FOPS compliant (ISO 3471 and ISO 3449).
- c) Comply to sound levels as laid out in ISO6395 and ISO63956.
- d) SANS 12944-4, 5:1998 Corrosion protections.
- e) SANS 1506:1994 (2000-07-25) Brake systems.

3. Material specification

The load bearing items shall be made out of structural steel to withstand the loads from the operational environments’ terrain and application. Corten steel and Domex for the structural rolled sections and flat plate is recommended. Whilst Hardox for the wearing items (blade), the Hardox shall be applied over the primary structure such that it can be replaced as a wearing item.

4. Construction requirements

4.1 Grader Blade

- 4.1.1 The front blade must be suited for levelling terrain on a landfill waste site or asphalt for road construction. The minimum lateral width should be 3 500 mm and the height should be 500 mm.
- 4.1.2 The blade must have a lift and dig of approx. 400 mm and 700 mm respectively.
- 4.1.3 Minimum blade range of 40-degrees or better is required.
- 4.1.4 The surface in direct contact with the commodity shall have a Hardox wear plate mounted over the structural steel. The Hardox wear plate shall be a minimum of 12 mm in thickness.
- 4.1.5 Mounting of the blade shall be done in user friendly manner preferably with maintenance free fastening methods.

4.2 Rippers and Scarifier

- 4.2.1 Adjustable multi-shank rippers that can penetrate typical landfill/road materials and can be used with shanks adjusted to vertical positions. To be mounted on rear of vehicle.
- 4.2.2 Adjustable scarifier that can loosen typical landfill/road terrain and can be adjusted to various vertical positions. To be mounted on front of vehicle.

4.3 Access stairways

To be fitted with suitable guard rails and user-friendly access.

All items must be thoroughly sealed with an approved sealer to prevent rusting between mating surfaces and drain holes must be provided in areas where water can accumulate. Any floor that persons will use on the body should be coated with a hard wearing, slip resistant material (Vastrap).

5. Lighting

5.1 A waterproof amber coloured polycarbonate lenses LED warning light to be fitted on the cab roof with on/off switch with random flash pattern positioned in the cab.

5.2 Rubber encased spotlights shall be installed to the top of the cab facing the surrounding areas of the grader. Switches shall be located in the cab.

All lights to be bracket mounted for easy removal and lenses protected from damage.

6. Hydraulic system

6.1 In respect of the hydraulic tank the following shall be required:

- a) To be constructed of steel.
- b) To be fitted to an accessible part of the chassis, such that it does not impede the maintenance staff or driver of filling oil to tank.
- c) To be fitted with a bump guard from externalities.

- d) To be fitted with a front mounted sight glass for visual oil level inspection. Glass should be marked minimum and maximum accordingly with levels of fluid in the tank.
- e) Must have a lockable filler cap strainer & filter into filler base and filler cap assembly.
- f) Oil capacity shall be sufficient and a cooler added if necessary.
- 6.2 Must have an inline filter with a blockage indicator fitted onto the pressure side of hydraulic pump, before the solenoid valve system.
- 6.3 The hydraulic valves shall be grouped together for ease of maintenance.
- 6.4 Test points for testing hydraulic pressures shall be fitted and grouped together.
- 6.5 Where possible steel tubing, which shall be treated with suitable corrosion protection, in lieu of rubber hosing shall be used for hydraulic lines.
- 6.6 All hydraulic fittings shall be wrapped with a petrolatum impregnated tape or sprayed with a petrolatum primer to prevent corrosion.
- 6.7 Safety hold valve for cylinder in case of hydraulic failure.
- 6.8 Hydraulic controls for the operation of the equipment shall be fitted in a user friendly manner in the driver's cab for ease of operation.
- 6.9 The controls shall where possible be electronic, and activate the necessary servos (either pneumatic or hydraulic) that will activate the operation. All actions will be fully adjustable at variable speeds for the operation of the hydraulics. A plug in, modular type, control panel is preferred for ease of maintenance.

7. Metal Preparation and Painting Procedure

The following procedure must be adhered to:

- 7.1 Descale all metal surfaces
- 7.2 Grind down & smooth all rough edges
- 7.3 Thoroughly clean all surfaces
- 7.4 Prime the tip body and other components using a two component self-curing inorganic zinc ethyl silicate or two component zinc rich polyamide cured epoxy primer.
- 7.5 Thereafter paint using two coats of premium quality twin pack automotive paint
- 7.6 Paint film thickness (color coat) must not be less than 80 microns each.

8. Colors

Underside of Body	Black
Cab	White and Cleansing Solid Waste (CSW) branding with white, blue and green stripes across the front of the cab or Safety Yellow
Deck and structures	CSW Blue or Safety Yellow
Striping	Green, Blue, Green & White – on L/H/S roof and across the front panel, Grille and bottom valance. Green (58 mm), Blue (72 mm), Green (118 mm), White spacing, 1 st White (35 mm), 2 nd White (45 mm).

9. Electrical

All additional electrical circuits are to be suitably fused and must not interfere with or adversely affect the existing electrical system.

- 9.1 The rear aerial mounted camera shall remain ON and a buzzer and warning light to be installed when reverse gear is engaged.
- 9.2 Battery isolator switch.

9.3 Audible hooter.

9.4 Batteries shall be maintenance free variant that will last the warranty period.

9.5 Solar panel to be installed to aid the charge of the batteries when not in use.

9.6 Uninterrupted power supply points shall be made available for the vehicle tracking and fuel master monitoring system.

9.7 Jump start receptacle

10. Signage and Markings

10.1 Data plates shall be fitted labelling the storage areas and capacity. Safe working loads should be labelled where necessary:

a) The hydraulic system indicating tank capacity, system pressure, fluid type/grade, hydraulic cylinder specifications and test criteria.

b) Safe working loads to be clearly labeled on the structure on both sides.

c) Safety, operation, technical data, dates of manufacture, manufacturer's details etc.

10.2 Safety, operation, technical data, dates of manufacture, manufacturer's details etc.

10.3 Durable, ultraviolet resistant and weather resistant warning signs shall be provided at all locations of the vehicle that impose a danger to persons.

10.4 Durable, ultraviolet resistant and weather resistant information signs shall be provided in specific locations to assist the driver/maintenance staff with the operation/maintenance of the vehicle.

10.5 Retro-reflective tape shall be fitted to both sides and the rear of the vehicle as well as the rear.

11. Miscellaneous items

11.1 The batteries to have a weather proof cover to prevent debris and moisture ingress.

11.2 Fuel tank, batteries, pneumatic cylinders and hydraulic tank to have structures built around them for safety.

11.3 Bolt on covers for safety where parts are rotating, swinging or of high temperature including and not limited to engine manifolds, turbocharger and exhaust.

11.4 A pair of 6 kg fire extinguisher should be supplied and fitted in an accessible position close to the driver when exiting the cab.

11.5 Automatic fire suppression system to be installed covering the engine and cab in case of an emergency.

Item 13: Technical specification for Self powered Aerial/Scissor Platforms

1. SPECIFICATIONS for unit:

Machine Type:	4 wheel or track driven unit
Load Capacity:	250 kg
Power Type:	Diesel engine (low noise) or Electric driven
Control Type:	Standing ride on
Tyres (preferred): same size	Rough/All terrain airless type (super elastic) or Solid -all
Minimum Gradeability (with load):	10%

Service Brakes:	Hydraulic/Electric controlled
Parking Brakes:	Mechanical Hand Lever

Aerial Platform

- 10-12m/14-18m/20-24m aerial/scissors platform, with a two-man basket with a minimum safe working load of 250 kg.
- To be designed according to SANS 16368 Mobile elevating work Platforms-Design calculations, safety requirements and test methods (latest revision).
- Opening access to have a safety gate with a safety type slam/latch lock and safety handles for ease of entry and exiting.
- Floor of bucket/platform to be lined with a non-slip material and to have drain holes for easy drainage of water.
- The bucket/platform or boom shall have safety points for connections of safety restraining harnesses (included).
- Controls available on the bucket/platform with emergency stop at base and platform locations.
- Outriggers shall be fit around the unit to allow stable operation of the aerial platform for entire movement range if required.

2. TRANSMISSION:

Fully automatic variable speed.

3. STANDARD EQUIPMENT INCLUSIVE:

- Cover for the unit
- In compliance with the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and Driven Regulation 18.6.
- Load testing services is accredited with the Department of Labour as a Lifting Machine Entity, certified inspector and test certificate for the equipment.
- Equipment supplied according to SANS 10388.

Item 14: Technical specification for Electric Pallet Stacker

1. SPECIFICATIONS for pallet stacker:

Machine Type:	Counterbalance Pallet Stacker
Load Capacity:	1 500 kg
Load Centre:	500-600 mm
Max Fork Height:	3 000-6 000 mm
Power Type:	Electric
Control Type:	Walk behind
Tyres:	Airless type (super elastic) or Solid
Fork Size:	1000-1150 mm x 100-125 mm x 40-55 mm (L x W x T)
Turning Radius (approx.):	1 200-1 850 mm

Service Brakes:	Lever/Hand/Foot control
Parking Brakes:	Mechanical Hand/Foot Lever
Minimum Battery Voltage / Capacity	12V / 120Ah
Current Battery Change over system:	Lift out only
Quantity of complete Battery packs:	x 2
Battery Monitoring Unit Qty:	1 unit per battery (must also communicate to charger)
Charger Type:	High Frequency Smart Charger
Charger Qty:	x 1
Electrical Motors:	AC Drive 1.5-4.5 kw

2.TRANSMISSION:

Fully automatic variable speed.

3.STANDARD EQUIPMENT INCLUSIVE:

- Reverse Alarm
- High Mounted Strobe Light
- Auto shut off
- In compliance with the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and Driven Regulation 18.6.
- Load testing services is accredited with the Department of Labour as a Lifting Machine Entity, certified inspector and test certificate for the equipment.
- Equipment supplied according to SANS 10388.

Item 15: Technical specification for Manual Pallet Stacker

1. SPECIFICATIONS for pallet stacker:

Machine Type:	Counterbalance Pallet Stacker
Load Capacity:	1 000 kg
Load Centre:	500-600 mm
Max Fork Height:	1 500- 1700 mm
Power Type:	Hydraulic for lift mechanism
Control Type:	Walk behind
Tyres:	Airless type (super elastic) or Solid
Fork Size:	1000-1150 mm x 100-125 mm x 40-55 mm (L x W x T)

Turning Radius (approx.):	1 200-1 850 mm
Service Brakes:	Lever/Hand/Foot control
Parking Brakes:	Mechanical Hand/Foot Lever

3.STANDARD EQUIPMENT INCLUSIVE:

- In compliance with the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and Driven Regulation 18.6.
- Load testing services is accredited with the Department of Labour as a Lifting Machine Entity, certified inspector and test certificate for the equipment.
- Equipment supplied according to SANS 10388.

Item 16: Technical specification for a Mobile Crane

1. Scope

The intent of this specification is to provide for a fully operational mobile crane, which has the capability to load and off-load various items and equipment.

The mobile crane shall have a minimum lifting capacity of 15 000kg and a boom outreach/height of 15 meters. It should have a good ground clearance such that it can also be used for rough terrain applications.

2. Vehicle

- 2.1 The unit shall have a minimum Gross Vehicle Mass (GVM) of 7 500 kg
- 2.2 Transmission shall be fully automatic, with at least two forward and one reverse gears. Shall have a high and low range selector.
- 2.3 Minimum diesel engine requirements shall be: Euro 3 to 5, 50 kW of power.
- 2.4 Vehicle should have a limited top speed of not more than 50 km/hr.
- 2.5 ABS brakes are preferable with a parking brake.
- 2.6 Minimum wheelbase of 2 500 mm.
- 2.7 Fitment of a steel under belly plate to protect the radiator & engine.
- 2.8 Driver's cab shall be ROPS/FOPS compliant.
- 2.9 Clear visibility through all sides of the cab.
- 2.10 Servicing platform.
- 2.11 To safely and comfortably accommodate driver using an equal levelling suspended type seat. To be fully adjustable.
- 2.12 Wide angle adjustable mirrors.
- 2.13 Driver assist mirrors for front and sides of vehicle.
- 2.14 Heater, windscreen demister and air-conditioning system should be adequate for the cab and its occupant.
- 2.15 12v charger socket.
- 2.16 Aerial mounted camera to assist with viewing of the rear.
- 2.17 Fuel tank shall be at least 30 liters with a lockable fuel cap and anti-siphon device.
- 2.18 Fuel management system to remove access water and dirt before delivery to the engine.
- 2.19 Heat sensing engine protection device, mechanical monitoring system to safely shut down engine if engine cylinder head increases to an unsafe temperature.
- 2.20 Auto lubrication system.
- 2.21 The vehicle and the customisation shall be designed according to these critical specifications (summary of evidence shall be provided):

- a) Lifting tackle (SANS 10388) for various rigging and hoisting purposes; A pair of slings 10 meters in length to lift heavy pallet equipment. Two pairs of lifting slings with tyre clamps to lift a light motor vehicle off the ground to the rear load bed. Hydraulic outriggers to be supplied for stability.
- b) Shall comply to DIN 15018.
- c) Shall comply to shall the South African Occupational Health and Safety Act, Act 85 of 1993, Driven Machinery Regulations 2015.
- d) Shall comply to SANS 1599 with particular attention to Part 2: Power driven mobile cranes.
- e) The end of Section 7 covers other specifications/standards that shall be adhered to.

3. Material specification

The load bearing items including the booms and goose neck shall be made out of structural steel to withstand the payload. Corten steel and Domex for the structural rolled sections and flat plate is recommended. Whilst Hardox for the wear pads.

4. Construction requirements

4.1 Body

- 4.1.1 Areas of the floor that shall be used as access walkways shall have a hard wearing, slip resistant material (Vastrap).
- 4.1.2 Access ladder and railings/grabs shall be installed in a suitable position behind the cab and rear/side.
- 4.1.3 The hydraulic cylinder/s shall be suitable for the application and lift the boom and hoist at the applicable angle to load and offload. Maintenance free bushings/bearings shall be used.
- 4.1.4 The main hoist shall incorporate a hook mount system with safety catch. The hook shall be bolt on type to be easily replaced and shall expected to handle the tonnage of the rated crane's capacity.
- 4.1.5 Articulation angle of 40-60° or better shall be required for the boom.
- 4.1.6 Hydraulic extendable outriggers for each corner of the chassis.
- 4.1.7 Load/Lifting cell with digital read out and logger to read mass in kilograms.

All items in chapter 4 must be thoroughly sealed with an approved sealer to prevent rusting between mating surfaces and drain holes must be provided in areas where water can accumulate. Any floor that persons will use on the body should be coated with a hard wearing, slip resistant material (Vastrap).

5. Lighting

- 5.1 A waterproof slim line bar light 1200 mm in length and 200 mm in width to be installed on bracket on the front of the cab without drilling into the roof. Generation 3 type LED consisting of 1 watt, 6x4 modules to the front with end cap modules consisting of 1x2 head modules with amber coloured polycarbonate lenses to be fitted to the bracket on the cab roof with on/off switch with random flash pattern positioned in the cab.
- 5.2 A pair of rubber encased spotlights shall be installed to the front and rear top of the cab facing the driving and work area. Switch shall be located on the interior panel.
- 5.3 Interior controls and cabin to illuminated for use in poor light conditions.

6. Hydraulic system

- 6.1 In respect of the hydraulic tank the following shall be required:
 - 6.1.1 To be constructed of steel.
 - 6.1.2 To be fitted with a bump guard from externalities.
 - 6.1.3 To be fitted with a front mounted sight glass for visual oil level inspection. Glass should be marked minimum and maximum accordingly with levels of fluid in the tank.
 - 6.1.4 Must have a filler cap strainer & filter into filler base and filler cap assembly.
 - 6.1.5 Oil capacity shall be sufficient and a cooler added if necessary.

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- 6.1.6 To be fitted to an accessible side on the chassis, low enough that the body height does not impede the maintenance staff or driver of filling oil to tank.
- 6.2 Must have an inline filter with a blockage indicator fitted onto the pressure side of hydraulic pump, before the tipper / solenoid valve system.
- 6.3 The hydraulic valves shall be grouped together for ease of maintenance.
- 6.4 Test points for testing hydraulic pressures shall be fitted and grouped together.
- 6.5 Where possible steel tubing, which shall be treated with suitable corrosion protection, in lieu of rubber hosing shall be used for hydraulic lines.
- 6.6 All hydraulic fittings shall be wrapped with a petrolatum impregnated tape or sprayed with a petrolatum primer to prevent corrosion.
- 6.7 Safety hold valve for cylinder in case of hydraulic failure.
- 6.8 Hydraulic controls for the operation of the loading/offloading shall be fitted in a user friendly manner in the driver's cab and behind the cab allowing for ease of operation. The outside controls shall be protected by means of an enclosure.
- 6.9 The controls shall where possible be electronic, and activate the necessary servos (either pneumatic or hydraulic) that will activate the operation. All actions will be fully adjustable at variable speeds for the operation of the hydraulics. A plug in, modular type, control panel is preferred for ease of maintenance.

7. Power Take Off (PTO)

- 7.1 The PTO drive assembly shall be approved by the OEM mechanically and electrically for use on the engine and the wiring systems of the vehicle for the engagement of the PTO drive. Any modifications to the vehicle to accommodate the P.T.O. must be approved by the truck manufacturer and not affect the trucks warranty in any way.
- 7.2 The engine and transmission must not be harmed by use of the PTO.
- 7.3 The fitment of the P.T.O. should not negatively impact on the vehicles ground clearance.
- 7.4 Electronic control module and wiring harness which incorporates the "Rev Up Limiter" must be integrated into the existing OEM vehicle using the OEM 12/24 Volt system.
- 7.5 The PTO must only run when the PTO switch is engaged. The system will not allow the PTO to be engaged if the vehicle is in gear or if the handbrake is not engaged.
- 7.6 The accelerator pedal cannot be used, while the PTO is engaged.
- 7.7 PTO calibration shall be performed by the bidder after tracking device is installed on the vehicle/equipment/unit by eThekweni City Fleet.

8. Metal Preparation and Painting Procedure

The following procedure must be adhered to:

- 8.1 Descale all metal surfaces
- 8.2 Grind down & smooth all rough edges
- 8.3 Thoroughly clean all surfaces and shot blast to primer specification
- 8.4 Prime the trailer using a two component self-curing inorganic zinc ethyl silicate or two component zinc rich polyamide cured epoxy primer.
- 8.5 Thereafter paint using a coat of premium quality twin pack automotive paint.
- 8.6 The bucket should have a polyurethane protective final coat.
- 8.7 Paint film thickness must not be less than 80 microns each. Two coats of primer and one colour coat.

9. Colors

Underside of Body	Black
Cab and Crane	Yellow

10. Electrical

All additional electrical circuits are to be suitably fused and must not interfere with or adversely affect the existing electrical system.

- 10.1 Tailight units to be premium quality equal light unit incorporating 30 LEDs or more of minimum 100 mm in diameter that are screwed into position with a stainless steel flange.
- 10.2 Reversing buzzer and warning light to be installed when reverse gear is engaged.
- 10.3 Battery isolator switch.
- 10.4 Uninterrupted power supply points shall be made available for the vehicle tracking and fuel master monitoring system.
- 10.5 All exposed electrical wiring looms of the vehicle/equipment/unit and superstructure shall be full encased in a flexible protective metallic conduit and securely clamped with fasteners to the chassis or the structure.

11. Signage and Markings

11.1 Data plates shall be fitted labelling the storage areas and capacity. Safe working loads should be labelled where necessary:

- a) The hydraulic system indicating tank capacity, system pressure, fluid type/grade, hydraulic cylinder specifications and test criteria.
- b) Safe working loads to be clearly labeled on the structure on both sides.
- c) Safety, operation, technical data, dates of manufacture, manufacturer's details etc.

11.2 Chevron board to be fitted at the rear conforming with the appropriate SABS/SANS standard.

11.4 Durable, ultraviolet resistant and weather resistant warning signs shall be provided at all locations of the vehicle that impose a danger to persons.

11.5 Durable, ultraviolet resistant and weather resistant information signs shall be provided in specific locations to assist the driver/maintenance staff with the operation/maintenance of the vehicle.

11.6 Retro-reflective tape shall be fitted to both sides and the rear of the vehicle as well as the rear bumper.

11.7 Registration number to be clearly marked on roof (if applicable).

12. Miscellaneous items

12.1 The batteries to have a weather proof cover to prevent debris and moisture ingress or built within the vehicle chassis.

12.2 Fuel tank, batteries, pneumatic cylinders and hydraulic tank to have structures built around them for safety or built within the vehicle.

12.3 Bolt on covers for safety where parts are rotating, swinging or of high temperature.

12.4 A 4.5 kg fire extinguisher should be supplied and fitted in an accessible position close to the driver when exiting the cab.

12.6 One complete spare wheel and one set of emergency changing tools shall be supplied per vehicle.

12.7 Bolt on head and tail light guards.

12.8 Front and rear mud guards constructed from a suitable material for the application.

Item 17: Technical specification for an Asphalt sweeper/broom

1. Scope

The intent of this specification is to provide for a fully operational self-propelled asphalt sweeper/broom, which has the capability to be used for cleaning and preparing road surfaces.

It shall have a rotating broom which can articulate in different angles for the operation. An option of a soft broom shall also be offered for use with lighter commodities like beach sand.

2. Vehicle

- 2.1 The unit shall have a minimum Gross Vehicle Mass (GVM) of 3 000 kg
- 2.2 Transmission shall be fully automatic with reverse.
- 2.3 Minimum diesel engine requirements shall be: Euro 3 to 5, 50 kW of power.
- 2.4 Vehicle should have a limited top speed of not more than 40 km/hr.
- 2.5 ABS/Anti-lock brakes are preferable with a parking brake.
- 2.6 Minimum wheelbase of 1 500 mm.
- 2.7 Fitment of a steel under belly plate to protect the radiator & engine.
- 2.8 Driver's cab shall be ROPS/FOPS compliant.
- 2.9 Clear visibility through all sides of the cab.
- 2.10 Servicing platform.
- 2.11 To safely and comfortably accommodate driver using a fully adjustable seat.
- 2.12 Wide angle adjustable mirrors.
- 2.13 Driver assist mirrors for front and sides of vehicle.
- 2.14 Heater, windscreen demister and air-conditioning system should be adequate for the cab and its occupant.
- 2.15 12v charger socket.
- 2.16 Aerial mounted camera to assist with viewing of the rear.
- 2.17 Fuel tank shall be at least 100 liters with a lockable fuel cap and anti-siphon device.
- 2.18 Fuel management system to remove access water and dirt before delivery to the engine.
- 2.19 Heat sensing engine protection device, mechanical monitoring system to safely shut down engine if engine cylinder head increases to an unsafe temperature.
- 2.20 Auto lubrication system.
- 2.21 The vehicle and the customisation shall be designed according to these critical specifications (summary of evidence shall be provided):
 - a) Shall comply to DIN 15018.
 - b) Shall comply to shall the South African Occupational Health and Safety Act, Act 85 of 1993, Driven Machinery Regulations 2015.
 - c) The end of Section 7 covers other specifications/standards that shall be adhered to.

3. Material specification

The load bearing items shall be made out of structural steel to withstand the payload. Corten steel and Domex for the structural rolled sections and flat plate is recommended. Whilst Hardox for the wear pads.

4. Construction requirements

4.1 Body and operating system

4.1.1 Areas of the floor that shall be used as access walkways shall have a hard wearing, slip resistant material (Vastrap).

4.1.2 Access ladder and railings/grabs shall be installed in a suitable position behind the cab and rear/side.

- 4.1.3 The hydraulic cylinder/s shall be suitable for the application and lift the boom and hoist at the applicable angle to load and offload. Maintenance free bushings/bearings shall be used.
- 4.1.4 The rotating brush shall be a minimum width of 2 400 mm. Minimum diameter of 250 mm. The upper side of the brush shall have a shield to protect spatter onto the vehicle and in the air. Cover shall be easily removable for cleaning and maintenance.
- 4.1.5 Articulation angle of the broom should be minimum of 30° or better in both sides.
- 4.1.6 Water tank with a minimum capacity of 400 L with a spray system to be incorporated in the path of cleaning.

All items in chapter 4 must be thoroughly sealed with an approved sealer to prevent rusting between mating surfaces and drain holes must be provided in areas where water can accumulate. Any floor that persons will use on the body should be coated with a hard wearing, slip resistant material (Vastrap).

5. Lighting

- 5.1 A waterproof slim line bar light 1200 mm in length and 200 mm in width to be installed on bracket on the front of the cab without drilling into the roof. Generation 3 type LED consisting of 1 watt, 6x4 modules to the front with end cap modules consisting of 1x2 head modules with amber coloured polycarbonate lenses to be fitted to the bracket on the cab roof with on/off switch with random flash pattern positioned in the cab.
- 5.2 A pair of rubber encased spotlights shall be installed to the front and rear top of the cab facing the driving and work area. Switch shall be located on the interior panel.
- 5.3 Interior controls and cabin to illuminated for use in poor light conditions.

6. Hydraulic system

- 6.1 In respect of the hydraulic tank the following shall be required:
 - 6.1.1 To be constructed of steel.
 - 6.1.2 To be fitted with a bump guard from externalities.
 - 6.1.3 To be fitted with a front mounted sight glass for visual oil level inspection. Glass should be marked minimum and maximum accordingly with levels of fluid in the tank.
 - 6.1.4 Must have a filler cap strainer & filter into filler base and filler cap assembly.
 - 6.1.5 Oil capacity shall be sufficient and a cooler added if necessary.
 - 6.1.6 To be fitted to an accessible side on the chassis, low enough that the body height does not impede the maintenance staff or driver of filling oil to tank.
- 6.2 Must have an inline filter with a blockage indicator fitted onto the pressure side of hydraulic pump, before the tipper / solenoid valve system.
- 6.3 The hydraulic valves shall be grouped together for ease of maintenance.
- 6.4 Test points for testing hydraulic pressures shall be fitted and grouped together.
- 6.5 Where possible steel tubing, which shall be treated with suitable corrosion protection, in lieu of rubber hosing shall be used for hydraulic lines.
- 6.6 All hydraulic fittings shall be wrapped with a petrolatum impregnated tape or sprayed with a petrolatum primer to prevent corrosion.
- 6.7 Safety hold valve for cylinder in case of hydraulic failure.
- 6.8 Hydraulic controls for the operation of the loading/offloading shall be fitted in a user friendly manner in the driver's cab and behind the cab allowing for ease of operation. The outside controls shall be protected by means of an enclosure.
- 6.9 The controls shall where possible be electronic, and activate the necessary servos (either pneumatic or hydraulic) that will activate the operation. All actions will be fully adjustable at variable speeds for the operation of the hydraulics. A plug in, modular type, control panel is preferred for ease of maintenance.

7. Metal Preparation and Painting Procedure

The following procedure must be adhered to:

- 7.1 Descale all metal surfaces
- 7.2 Grind down & smooth all rough edges
- 7.3 Thoroughly clean all surfaces and shot blast to primer specification
- 7.4 Prime the trailer using a two component self-curing inorganic zinc ethyl silicate or two component zinc rich polyamide cured epoxy primer.
- 7.5 Thereafter paint using a coat of premium quality twin pack automotive paint.
- 7.6 The bucket should have a polyurethane protective final coat.
- 7.7 Paint film thickness must not be less than 80 microns each. Two coats of primer and one colour coat.

8. Colors

Underside of Body	Black
Cab and Body	Safety Yellow

10. Electrical

All additional electrical circuits are to be suitably fused and must not interfere with or adversely affect the existing electrical system.

- 10.1 Taillight units to be premium quality equal light unit incorporating 30 LEDs or more of minimum 100 mm in diameter that are screwed into position with a stainless-steel flange.
- 10.2 Bolt on taillight guards to be installed.
- 10.3 Reversing buzzer and warning light to be installed when reverse gear is engaged.
- 10.4 Battery isolator switch.
- 10.5 Uninterrupted power supply points shall be made available for the vehicle tracking and fuel master monitoring system.
- 10.6 All exposed electrical wiring looms of the vehicle/equipment/unit and superstructure shall be full encased in a flexible protective metallic conduit and securely clamped with fasteners to the chassis or the structure.

11. Signage and Markings

11.1 Data plates shall be fitted labelling the storage areas and capacity. Maintenance data should be labelled where necessary:

- a) The hydraulic system indicating tank capacity, system pressure, fluid type/grade, hydraulic cylinder specifications and test criteria.
- b) Safety, operation, technical data, dates of manufacture, manufacturer's details etc.

11.2 Chevron board to be fitted at the rear conforming with the appropriate SABS/SANS standard.

11.4 Durable, ultraviolet resistant and weather resistant warning signs shall be provided at all locations of the vehicle that impose a danger to persons.

11.5 Durable, ultraviolet resistant and weather resistant information signs shall be provided in specific locations to assist the driver/maintenance staff with the operation/maintenance of the vehicle.

11.6 Retro-reflective tape shall be fitted to both sides and the rear of the vehicle as well as the rear bumper.

11.7 Registration number to be clearly marked on roof (if applicable).

12. Miscellaneous items

- 12.1 The batteries to have a weather proof cover to prevent debris and moisture ingress or built within the vehicle chassis.
- 12.2 Fuel tank, batteries, pneumatic cylinders and hydraulic tank to have structures built around them for safety or built within the vehicle.
- 12.3 Bolt on covers for safety where parts are rotating, swinging or of high temperature.
- 12.4 A 4.5 kg fire extinguisher should be supplied and fitted in an accessible position close to the driver when exiting the cab.
- 12.6 One complete spare wheel and one set of emergency changing tools shall be supplied per vehicle.
- 12.7 Bolt on head and tail light guards.
- 12.8 Front and rear mud guards constructed from a suitable material for the application.

Item 18: Technical specification for a Quad Bike

1. SPECIFICATIONS for the unit:

Machine Type:	ATV AWD/4x4
Minimum Load Capacity:	200 kg
Minimum Tow Hitch Capacity:	500 kg with tow hitch included.
Minimum Engine capacity:	600 cc
Power Type:	Electronic ignition (key start) 4 stroke fuel powered engine with 4x4 drive
Control Type:	Sit Down – Ride on
Wheels (tyres and rims):	Beach application wheels (tyres and rims) fitted and supplied as standard with all terrain wheels (tyres and rims) as an option.
Construction:	Aluminium/galvanised steel/automotive grade stainless steel chassis and parts with suitable corrosion protection for beach application.
Storage:	To include a lockable cargo box mounted on the vehicle of suitable dimensions with tie down points on top.
Wheel base (approx.):	1100-1400 mm
Service Brakes:	Hydraulic Lever and/or Foot Pedal
Parking Brakes:	Mechanical Hand Lever
Colour:	Yellow/White/Red with RESCUE signage. Final colour will be communicated at the time of order.

2. TRANSMISSION:

Fully automatic variable speed with forward, reverse, park and low range.

3.STANDARD EQUIPMENT INCLUSIVE:

- Under protection of chassis including fastened belly plates for critical components (engine, cooling system, fuel tank, prop shaft, drive motors and axles etc.)
- Mounted fire extinguisher
- Spare wheel with tool kit
- LED Front & Rear Lights
- Reverse Alarm
- High Mounted LED Red/Amber strobe Light
- Side View Mirrors
- 12V charge socket
- Jump start receptacle
- Solar panel and regulator connected for battery charging
- Gauge pack/Monitor panel including odometer and/or hour meter, speed, temperature and level for oil and coolant, battery, fuel, emergency warning and auto shut off in case of emergency or damage.

4.TRAILER:

- Lightweight aluminium, galvanised steel or automotive grade stainless steel with suitable corrosion protection.
- Load area should be large enough for general purpose applications. Should have holders for paddle skis and paddles with tie down points.
- Tow eye for use with quad bike supplied.
- Manual landing leg and automatic rotatable jockey wheel.
- Stop at the front of the trailer with rear tie points. Ratchet to be included.
- Beach application tyres
- Lockable storage compartment for a tool box and jerry can (to be supplied).
- Fire extinguisher.
- Wheel arches.
- Corrosion protection and final paint colour to be Red.
- Spare wheel with tool kit.

Item 19: Technical specification for a Rescue Ski with paddle**1. SPECIFICATIONS for the unit:**

Unit Type:	Lifesaving specification rescue ski with paddles
Minimum Load Capacity:	100 kg
Control Type:	Sit Down or Standing operation
Construction:	Fibreglass composite construction deck and hull with aluminium /automotive grade stainless steel fasteners and parts with suitable corrosion protection.
Dimensions (approx.):	3200 x 600 x 200 mm

Colour: Yellow/White/Red with RESCUE signage. Final colour will be communicated at the time of order.

2. PADDLES WITH PADDLE STRAPS:

To include one conventional rescue paddle;

Blades: Durable nylon conventional paddle blades

Shaft: Fibreglass fixed length shaft

Length: 210cm

Feather angle: 45 degrees.

And one performance wing paddle;

Blades: Epoxy fibreglass wing shaped paddle blades

Shaft: Fibreglass fixed length shaft

Length: 210cm

Feather angle: 60 degrees

Material and dimensions can be of similar/better/closest within tolerances.

3. STANDARD EQUIPMENT INCLUSIVE:

- Ski to have 4 grab on webbing handles and two foot straps.
- Knee pads.
- Pair of solid safety fixed fins.
- Drain valve.
- Repair kit included.
- A storage compartment containing, or Velcro attached lifesaving first aid kit.
- Two lifesaving lifejackets/PFDs included.
- One helmet included.

Item 20: Technical specification for an Inflatable Rescue Boat with trailer

1. SPECIFICATIONS FOR THE RESCUE BOAT:

Machine Type:	Inflatable Rescue Boat with outboard motor
Minimum Load Capacity:	600 kg
Construction:	Hypalon tubes to upgraded material and thickness 1500 DTEX or better. Double skinning for wearing sections of the deck and hull. Double seam taping. In line with requirements of South African Maritime Authority (SAMSA) and safety equipment.

Storage: To include at least two storage pockets for PFDs, first aid kit, tow rope and other rescue items listed below.

Colour: Red and yellow with large Rescue decals

2.STANDARD EQUIPMENT INCLUSIVE:

- Deck to be self draining or have an adequate drain valve.
- Wear guard on the engine mounting for preventing damage to the unit.
- Heavy duty fin.
- 2 rescue paddles with paddle straps
- Rescue floating tube attached to the hull via a holder or Velcro for fast deployment in line with SAMSA.
- Speaker system with an announcement microphone for the boat preferably waterproof.
- LED spot/search light.
- Capsize rope and a tow rope.
- High grip deck mats.
- High Mounted LED Red strobe Light
- Four lifesaving lifejackets/PFDs included.
- Two rescue helmets.
- Anchor and anchor rope.
- Application specific first aid kit (bag valve mask, gloves, oropharyngeal airway-OPA etc.) that can fit in the storage box.
- Powered double action pump and manual emergency pump.
- Full length grab handles around the top of the boat.
- Towing points at the front and rear.
- Lifting points and lifting slings.
- Maintenance tool kit and repair kit for boat.

3.OUTBOARD MOTOR:

- Minimum power of 50HP. The motor shall be preferably be a motor used for rescue applications and approved by a rescue body nationally or internationally.
- Motor shall be sealed in accordance with a recognised sealing process.
- Reinforced steering bracket and swivel holder.
- Solid or performance specification engine mounts.
- Waterproof spark plugs boots.
- Tilt kit with sleeving and washers for extra durability and robust operation.
- Kill switch.
- Cowling restraints.
- Stainless steel spin clamps.
- Sea-doo lanyard connection for auto shut down, two sets to be provided.
- Heavy duty propeller option.
- Trolling RPM switch/adaptor option.
- Engine water flush device option.
- Fuel gauge.
- Electric start.

4. TRAILER:

- Lightweight aluminium, galvanised steel or automotive grade stainless steel with suitable corrosion protection.
- Guides for the boat hull shall have rollers on the trailer for the entire hull length. Minimum of four longitudinal roller guides (two central and two outward mounted).
- Manual winch mounted at the front of the trailer for assisting loading the boat.
- Interchangeable tow eye for ball and socket coupling for LDV or to use with quad bikes.
- Manual landing leg and automatic rotatable jockey wheel.
- Stop at the front of the trailer with rear tie points. Ratchet to be included.
- Rear lights and indicators
- Beach application tyres
- Lockable storage compartment for a tool box and jerry can (to be supplied).
- Fire extinguisher.
- Wheel arches.
- Corrosion protection and final paint colour to be Red.
- Spare wheel with tool kit.

All fasteners, brackets and items being used for this item 21 shall be anti-corrosive (galvanised, stainless steel etc.)

Item 21: Technical specification for a Rescue Jet Ski/Wave runner with trailer**1. SPECIFICATIONS for the unit:**

Machine Type:	2-3 person Rescue Jet Ski/Wave Runner
Minimum Load Capacity:	2-3 adults
Minimum Engine capacity:	1250 cc
Power Type:	Electronic ignition/key start with Sea-doo lanyard connection for auto shut down. Two sets to be included.
Control Type:	Sit Down – Ride on
Construction:	In line with requirements of South African Maritime Authority (SAMSA) and safety equipment
Storage:	To include a waterproof lockable cargo box mounted on the unit of suitable dimensions for PPE, first aid kit, tow rope and other rescue items
Colour:	Red and yellow with large Rescue decals

2.STANDARD EQUIPMENT INCLUSIVE:

- Two rescue sleds with three point tow ropes and couplers for each. One sled shall be rigid whilst the other inflatable. Inflatable sled shall be supplied with a 12V pump and an emergency manual hand pump. Both sleds to have ample grab and hold points.
- Wear guard on the jet ski for preventing damage from the rescue sled.
- Hand straps on the jet ski sides to easily grab out of the water onto the crafts sides. Minimum of four per side.
- Rescue floating tube attached to the hull via a holder or Velcro for fast deployment in line with SAMSA.
- Speaker system with an announcement microphone for the jet ski preferably waterproof.
- LED Front and rear lights
- Side mirrors
- High grip deck mats with footwell drains
- High Mounted LED Red strobe Light
- 12V charge socket
- Jump start receptacle
- Solar panel and regulator connected for battery charging
- Gauge pack/Monitor panel including speed, temperature (oil and coolant), battery, fuel, emergency shut off.
- Provision for a 2 way radio.
- Tow rope
- One lifesaving PFD and helmet.
- Application specific first aid kit (bag valve mask, gloves, oropharyngeal airway-OPA etc.) that can fit in the storage box.
- Maintenance tool kit and consumables for jet ski.

3.Trailer:

- Lightweight aluminium, galvanised steel or automotive grade stainless steel with suitable corrosion protection.
- Guides for the jet ski hull shall have rollers on the trailer for the entire hull length.
- Design shall allow the jet ski unit to be forward or rear facing in case of quick deployment.
- Manual winch mounted at the front of the trailer for assisting loading the jet ski unit.
- Interchangeable tow eye for ball and socket coupling for LDV or to use with quad bikes.
- Manual landing leg and automatic rotatable jockey wheel.
- Stop at the front of the trailer with rear tie points. Ratchet to be included.
- Rear lights and indicators
- Beach application tyres
- Lockable storage compartment for a tool box and jerry can (to be supplied).
- Fire extinguisher.
- Wheel arches.
- Corrosion protection and final paint colour to be Red.
- Spare wheel with tool kit.

All fasteners, brackets and items being used for this item 21 shall be anti-corrosive (galvanised, stainless steel etc.)

Item 22: Technical specification for a Golf cart

1. SPECIFICATIONS for the unit:

Machine Type:	4 seater Golf Cart with canopy and side curtains/covers
Load Capacity:	4 adult seater
Seats:	All forward facing with armrests. Seats and backrests to be padded with a robust polyurethane/vinyl covering.
Wheelbase:	2 200- 2 700 mm
Power Type:	Electric
Control Type:	Seated driver-right hand drive
Tyres:	Airless type (super elastic) or Solid
Service Brakes:	Foot control
Parking Brakes:	Mechanical Hand/Foot Lever
Minimum Battery Voltage / Capacity	48-60V / 100Ah system
Current Battery Change over system:	Lift out
Battery Monitoring Unit Qty:	1 unit per battery (must also communicate to charger)
Charger Type:	High Frequency Smart Charger for RSA voltage and plug
Charger Qty:	x 1
Electrical Motors:	AC Drive 3.8-5 kw
Range:	Minimum 60 km on full charge
Gradeability:	Minimum of 10%

2. TRANSMISSION:

Fully automatic variable forward and reverse speed.

3. STANDARD EQUIPMENT INCLUSIVE:

- Reverse Alarm
- Mounted fire extinguisher
- Solar panel and regulator connected for battery charging
- Protective treaded floor mat
- Driver and passenger storage caddy/shelf
- High Mounted Strobe Light
- Auto shut off/standby mode
- Rear enclosed lockable storage utility box
- Spare wheel and tool changing kit to be supplied

- Windshield
- Side mirrors
- Front and rear LED lights
- 12V charge socket and/or usb charging sockets on dash
- Instrument panel to show speed, odometer/hour meter and battery charge level.
- Front and rear safety belts

Item 23: Technical specification for Ride on Mowers

The intent of this specification is to provide for a fully operational self powered ride on mower, which has the capability to be used in a professional/commercial application for large grounds, parks, stadiums and sport fields. It shall have all attachments including blades, protective shields around the cutting system, engine and any other rotating items.

Bidder shall provide different options based on the options below describing the engine performance and cutting width.

1. SPECIFICATIONS for all units:

Machine Type:	Hydrostatic Ride on Mower
Minimum Load Capacity:	One adult with an adjustable robust padded seat and backrest
Power Type:	Electronic ignition (key start) fuel powered engine
Control Type:	Sit Down – Ride on
Wheels (tyres and rims):	All terrain wheels (tyres and rims) fitted and supplied as standard with the unit.
Construction:	Chromium steel/Aluminium/galvanised steel/automotive grade stainless steel chassis and parts with suitable corrosion protection for high corrosive environment.
Wheel base (approx.):	1100-1400 mm
Service Brakes:	Hydraulic Lever and/or Foot Pedal
Parking Brakes:	Mechanical Hand Lever

2. TRANSMISSION:

Automatic variable speed with forward, reverse and park.

3. STANDARD EQUIPMENT INCLUSIVE:

- Mounted fire extinguisher
- Sun canopy
- ROPS to be added for all mowers where an option.
- Spare wheel with tool kit
- LED work Light

- Reverse Alarm
- Jump start receptacle
- Non slip floor mat
- Solar panel and regulator connected for battery charging
- Gauge pack/Monitor panel including odometer and/or hour meter, temperature and level for oil and coolant, battery, fuel, emergency warning and auto shut off in case of emergency or damage.

Chapters 1 to 3 of Item 24 cover the standard items for all mowers that shall be supplied. The bidder shall provide options on the mowers as classified below. Section 8 will also allow for the bid of attachments if available for the particular mower. Closest dimensions/ratings/specifications will be allowed dependent on the tolerance.

Item 24	Min. Engine power	Cutting width	Mower
24.1 2WD mower (1-1.1 m cutting width)	11 kW	1-1.1 metres	Variable cutting depth via adjustment
24.2 2WD mower (1.2-1.3 m cutting width)	13 kW	1.2-1.3 metres	Variable cutting depth via adjustment
24.3 2WD mower (1.3-1.6 m cutting width)	14 kW	1.3-1.6 metres	Variable cutting depth via adjustment
24.4 AWD mower (1-1.1 m cutting width)	12 kW	1-1.1 metres	Variable cutting depth via adjustment
24.5 AWD mower (1.2-1.3 m cutting width)	14 kW	1.2-1.3 metres	Variable cutting depth via adjustment
24.6 AWD mower (1.3-1.6 m cutting width)	15 kW	1.3-1.6 metres	Variable cutting depth via adjustment
24.7 Heavy duty mower (1.7 m or greater)	16 kW	1.7 metres or better	Variable cutting depth via adjustment

Item 24: Technical specification for an Electric Quad Bike

1. SPECIFICATIONS for the unit:

Machine Type:	ATV AWD/4x4
Minimum Load Capacity:	180 kg
Wheelbase:	1 100- 1 400 mm
Power Type:	Electric
Control Type:	Sit Down – Ride on
Service Brakes:	Hand/lever control
Parking Brakes:	Mechanical Hand/Foot Lever

Minimum Battery Voltage / Capacity	48-60V / 50Ah system
Current Battery Change over system:	Lift out
Battery Monitoring Unit Qty:	1 unit per battery (must also communicate to charger)
Charger Type:	High Frequency Smart Charger for RSA voltage and plug
Charger Qty:	x 1
Electrical Motors:	DC Brushless/AC Drive 1.5-2 kw per motor
Range:	Minimum 60 km on full charge
Gradeability:	Minimum of 10%
Wheels (tyres and rims):	Beach application wheels (tyres and rims) fitted and supplied as standard with all terrain wheels (tyres and rims) as an option.
Construction:	Aluminium/galvanised steel/automotive grade stainless steel chassis and parts with suitable corrosion protection for beach application.
Storage:	To include a lockable cargo box mounted on the vehicle of suitable dimensions with tie down points on top.
Colour:	Yellow/White/Red with signage. Final colour will be communicated at the time of order.

2. TRANSMISSION:

Fully automatic variable speed with forward, reverse and park.

3. STANDARD EQUIPMENT INCLUSIVE:

- Mounted fire extinguisher
- Spare wheel with tool kit
- LED Front & Rear Lights
- Reverse Alarm
- High Mounted LED Red/Amber strobe Light
- Side View Mirrors
- 12V charge socket
- Solar panel and regulator connected for battery charging
- Gauge pack/Monitor panel including odometer and/or hour meter, speed, temperature and level for oil and coolant, battery, fuel, emergency warning and auto shut off in case of emergency or damage.

Item 25: Technical specification for a Personal Transporter

1. SPECIFICATIONS for the unit:

Machine Type:	2WD/RWD
Minimum Load Capacity:	120 kg
Power Type:	Electric
Control Type:	Sit Up ride on
Service Brakes:	Any
Parking Brakes:	Any
Speed:	Min 15 km/hr
Minimum Battery Voltage / Capacity	6 hours life
Battery Monitoring Unit Qty:	1 unit per battery (must also communicate to charger)
Charger Type:	High Frequency Smart Charger for RSA voltage and plug
Charger Qty:	x 1
Range:	Minimum 40 km on full charge
Gradeability:	Minimum of 10%
Wheels (tyres and rims):	All terrain application wheels (tyres and rims) fitted and supplied as standard
Construction:	Aluminium/galvanised steel/automotive grade stainless/composite steel chassis and parts with suitable corrosion protection for beach application.
Storage:	To include a lockable cargo box option if offered

2. TRANSMISSION:

Fully automatic variable speed with forward, reverse and park.

Item 26: Technical specification for a Front-end loader

1.Scope

The intent of this specification is to provide for a fully operational vehicle, which has the capability to load and offload primarily asphalt, sand, rubble and other similar commodities.

The lifting bucket shall have a volumetric capacity of 2.5-4 m³ and a lifting capacity of 4-6 000 kg.

2. Vehicle

2.1 The chassis/body shall have a minimum Gross Vehicle Mass (GVM) of 15 000 kg

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- 2.2 Transmission shall be fully automatic incorporating a torque converter, with at least four forward and three reverse gears.
 - 2.3 Minimum diesel engine requirements shall be: Euro 3 emission level and 130 kW of power.
 - 2.4 Vehicle should have a limited top speed of not more than 60 km/hr.
 - 2.5 Minimum wheelbase of 3 000 mm.
 - 2.6 Steel suspension.
 - 2.7 Fitment of a steel under belly plate (minimum 6 mm) to protect the radiator & engine.
 - 2.8 Driver's cab shall be ROPS/FOPS compliant. Windscreen guard shall be installed for waste application.
 - 2.9 Clear visibility through all sides of the cab.
 - 2.10 Park and emergency braking to be independent systems.
 - 2.11 A fully laden minimum grade ability of 30 % shall be expected.
 - 2.12 Rear axle with hub reduction gearing and differential lock to provide all wheel drive.
 - 2.13 Servicing platform.
 - 2.14 To safely and comfortably accommodate driver using an equal levelling suspended type seat.
To be fully adjustable.
 - 2.15 Wide angle adjustable mirrors.
 - 2.16 Driver assist mirrors for front and sides of vehicle.
 - 2.17 Heater, windscreen demister and air-conditioning system should be adequate for the cab and its occupant.
 - 2.18 12v charger socket.
 - 2.19 Rear and front windscreen wipers with washer spray.
 - 2.20 Aerial mounted camera to assist with viewing of the rear.
 - 2.21 Fuel tank shall be at least 250 liters with a lockable fuel cap and anti-siphon device.
 - 2.22 Automated truck fuel filtration management system to remove water and dirt before delivery to the engine. This system shall be in a lockable enclosure (lock to be provided).
 - 2.23 Heat sensing engine protection device, mechanical monitoring system to safely shut down engine if engine cylinder head increases to an unsafe temperature.
 - 2.24 Auto lubrication system where maintenance free bushings/bearings cannot be used.
 - 2.25 Turbo safety system to prevent damage if vehicle is switched off prematurely or turbo has not reached safe operation. Heat shield to be wrapped around the turbo and manifolds.
 - 2.26 Oil sampling/pressure valve to be fitted on all critical components and subsystems of the unit where OEM recommends for monitoring purposes.
 - 2.27 The vehicle and the customisation shall be designed according to these critical specifications (summary of evidence shall be provided):
 - a. SANS 1506:1994 (2000-07-25) Brake systems.
 - b. SANS 20474-11: – Earthmoving Machinery Safety Part:11 Requirements for Earth and Landfill Compactors
 - c. The end of section 7 other specifications/standards that shall be adhered to.

3. Material specification

The load bearing items shall be made out of structural steel to withstand the payload. Corten steel and Domex for the structural rolled sections and flat plate is recommended. Whilst Hardox for the wear pads in the lifting bucket.

4. Construction requirements

4.1 Body and Bucket

- 4.1.1 Areas of the floor that shall be used as access walkways shall have a hard wearing, slip resistant material (Vastrap).
- 4.1.2 Access ladder and railings/grabs shall be installed in a suitable position behind the cab and rear/side.

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- 4.1.3 The hydraulic cylinder/s shall be suitable for the application and lift the laden bucket at the applicable angle to load and offload. Maintenance free bushings/bearings shall be used.
 - 4.1.4 The main hoist shall incorporate a hook mount system. The hook shall be bolt on type to be easily replaced.
 - 4.1.5 Articulation angle of 40° or better shall be required.
 - 4.1.6 The high capacity waste bucket shall have wear plates installed in the interior over the primary structure. It shall be installed such that it can be removed for replacement when minimum thickness is reached. It must have properties to withstand the various commodities the vehicle is expected to handle.
 - 4.1.7 The bucket shall have a replaceable reversible cutting edge or forks installed for the lateral width of the entire bucket. The preferred option for the unit shall be communicated at the time of order.
 - 4.1.8 Load cell or sensing hydraulics for the bucket payload capacity. System should allow logging and display of the payload capacity over a period.

All items in chapter 4 must be thoroughly sealed with an approved sealer to prevent rusting between mating surfaces and drain holes must be provided in areas where water can accumulate. Any floor that persons will use on the body should be coated with a hard wearing, slip resistant material (Vastrap).

5. Lighting

5.1 A pair of waterproof amber coloured polycarbonate lenses LED warning lights to be fitted on the cab roof with on/off switch with random flash pattern positioned in the cab.

5.2 Rubber encased spotlights shall be installed to the top of the cab facing the surrounding areas of the unit. Switches shall be in the cab.

All lights to be bracket mounted for easy removal and lenses protected from damage.

5.3 Interior controls and cabin to illuminated for use in poor light conditions.

6. Hydraulic system

6.1 In respect of the hydraulic tank the following shall be required:

- 6.1.1 To be constructed of steel.
- 6.1.2 To be fitted to an accessible side on the chassis, low enough that the body height does not impede the maintenance staff or driver of filling oil to tank.
- 6.1.3 To be fitted with a bump guard from externalities.
- 6.1.4 To be fitted with a front mounted sight glass for visual oil level inspection. Glass should be marked minimum and maximum accordingly with levels of fluid in the tank.
- 6.1.5 Must have a filler cap strainer & filter into filler base and filler cap assembly.
- 6.1.6 Oil capacity shall be sufficient, and a cooler added if necessary.
- 6.2 Must have an inline filter with a blockage indicator fitted onto the pressure side of hydraulic pump, before the tipper / solenoid valve system.
- 6.3 The hydraulic valves shall be grouped together for ease of maintenance.
- 6.4 Test points for testing hydraulic pressures shall be fitted and grouped together.
- 6.5 Where possible steel tubing, which shall be treated with suitable corrosion protection, in lieu of rubber hosing shall be used for hydraulic lines.
- 6.6 All hydraulic fittings shall be wrapped with a petrolatum impregnated tape or sprayed with a petrolatum primer to prevent corrosion.
- 6.7 Safety hold valve for cylinder in case of hydraulic failure.

- 6.8 Hydraulic controls for the operation of the loading/offloading shall be fitted in a user friendly manner in the driver's cab and behind the cab allowing for ease of operation. The outside controls shall be protected by means of an enclosure.
- 6.9 The controls shall where possible be electronic, and activate the necessary servos (either pneumatic or hydraulic) that will activate the operation. All actions will be fully adjustable at variable speeds for the operation of the hydraulics. A plug in, modular type, control panel is preferred for ease of maintenance.

7. Power Take Off (PTO)

- 7.1 The close coupled PTO drive assembly shall be approved by the OEM mechanically and electrically for use on the engine and the wiring systems of the vehicle for the engagement of the PTO drive. Any modifications to the vehicle to accommodate the P.T.O. must be approved by the truck manufacturer and not affect the trucks warranty in any way.
- 7.2 The engine and transmission must not be harmed by use of the PTO.
- 7.3 The fitment of the P.T.O. should not negatively impact on the vehicles ground clearance.
- 7.4 Electronic control module and wiring harness which incorporates the "Rev Up Limiter" must be integrated into the existing OEM vehicle using the OEM 12/24 Volt system.
- 7.5 The PTO must only run when the PTO switch is engaged. The system will not allow the PTO to be engaged if the vehicle is in gear or if the handbrake is not engaged.
- 7.6 The accelerator pedal cannot be used, while the PTO is engaged.
- 7.7 PTO calibration shall be performed after tracking device is installed on the vehicle by eThekweni City Fleet.

8. Metal Preparation and Painting Procedure

The following procedure must be adhered to:

- 8.1 Descale all metal surfaces
- 8.2 Grind down & smooth all rough edges
- 8.3 Thoroughly clean all surfaces
- 8.4 Prime the unit and other components using a two component self-curing inorganic zinc ethyl silicate or two component zinc rich polyamide cured epoxy primer.
- 8.5 Thereafter paint using two coats of premium quality twin pack automotive paint.
- 8.6 The bucket should have a polyurethane protective final coat.
- 8.7 Paint film thickness (color coat) must not be less than 80 microns each.

9. Colors

Underside of Body	Black
Cab	White/Yellow
Bucket	Black

10. Electrical

All additional electrical circuits are to be suitably fused and must not interfere with or adversely affect the existing electrical system.

- 10.1 LED taillight and headlights.
- 10.2 Bolt on guards to be installed for 10.1.
- 10.3 Reversing camera, buzzer and warning light to be installed when reverse gear is engaged.
- 10.4 Aerial mounted camera for viewing the rear should use same monitor as in 10.3 with dual viewing feature.
- 10.5 Battery isolator switch.
- 10.6 Audible hooter.

- 10.7 Uninterrupted power supply points shall be made available for the vehicle tracking and fuel master monitoring system.
- 10.8 Jump start receptacle.
- 10.9 All exposed electrical wiring looms of the vehicle and superstructure shall be fully encased in a flexible protective metallic conduit and securely clamped with fasteners.

11. Signage and Markings

11.1 Data plates shall be fitted labelling the storage areas and capacity. Safe working loads should be labelled where necessary:

- a) The hydraulic system indicating tank capacity, system pressure, fluid type/grade, hydraulic cylinder specifications and test criteria.
- b) Safe working loads to be clearly labeled on the structure on both sides.
- c) Safety, operation, technical data, dates of manufacture, manufacturer's details etc.

11.2 Chevron board to be fitted at the rear conforming with the appropriate SABS/SANS standard.

11.4 Durable, ultraviolet resistant and weather resistant warning signs shall be provided at all locations of the vehicle that impose a danger to persons.

11.5 Durable, ultraviolet resistant and weather resistant information signs shall be provided in specific locations to assist the driver/maintenance staff with the operation/maintenance of the vehicle.

11.6 Retro-reflective tape shall be fitted to both sides and the rear of the vehicle as well as the rear bumper.

11.7 Registration number to be clearly marked on roof (left to right, 80-90% size of the roof).

12. Miscellaneous items

12.1 The batteries to have a weather proof cover to prevent debris and moisture ingress or built within the vehicle chassis.

12.2 Fuel tank, batteries, pneumatic cylinders and hydraulic tank to have structures built around them for safety or built within the vehicle.

12.3 Bolt on covers for safety where parts are rotating, swinging or of high temperature.

12.4 A pair of 6 kg fire extinguisher should be supplied and fitted in an accessible position close to the driver when exiting the cab.

12.5 Tyres shall be E4 type tubeless radial articulated hauler type with specified load ratings for the application.

12.6 One complete spare wheel as in 12.5 and one set of emergency changing tools shall be supplied per vehicle.

12.8 Bolt on head and tail light guards.

Item 27: Technical specification for a Patrol Boat with trailer

1. SPECIFICATIONS FOR THE RESCUE BOAT:

Machine Type:	Patrol Boat with walk around enclosed cabin and twin outboard motors
Minimum Operating Capacity:	5 000 kg
Construction:	Metal/Composite suitable for the application. Double skinning for wearing sections of the deck and hull.
Cabin:	Main Cabin to have three weather tight entrance/exit doors. Two sliding windows on the side of the cabin.

Overhead spotter window. Tempered glass shall be used and be tinted. Cabin to be suitable for 4 occupants and fully upholstered with sound deadening. Four 12V DC power points to be installed for aux items/charging.

Colour: White and Blue with Metro Police decals

2.STANDARD EQUIPMENT INCLUSIVE:

- Anchor storage locker on deck with anchor and anchor rope/chain.
- Wear guard on the engine mounting for preventing damage to the unit.
- Inspection hatch
- Rescue floating tube attached to the hull via a holder or Velcro for fast deployment in line with SAMSA.
- Speaker/Loudhailer system with an announcement microphone for the boat preferably fully waterproof.
- Pair of LED spot/search light.
- Capsize rope and a tow rope.
- High grip deck mats.
- High Mounted LED Blue strobe Lights visible in all directions
- Four lifesaving lifejackets/PFDs included.
- Two rescue helmets.
- Application specific first aid kit (bag valve mask, gloves, oropharyngeal airway-OPA etc.) that can fit in the storage box.
- Full length grab handles around the top of the boat.
- Towing points at the front and rear.
- Lifting points and lifting slings.
- Maintenance tool kit and repair kit.
- Docking kit.
- Jerry cans and holders for outboard motors.

3.CABIN ITEMS:

- Navigation system
- Side Scan Sonar
- Heater and air-conditioning system
- Low light/Infrared camera system
- Underwater lights
- Dive lights
- Dedicated recharging points for lights and equipment in storage point
- Workstation for laptop
- Crew seats shall be configurable to a bed if required
- Fold out tables
- Bar Fridge
- Hot water caddy system
- Fresh water caddy
- Solar panels, inverter and dual battery power system for 220/240V AC for the cabin
- Fold out table and storage spaces.
- Gun and ammunition safe
- Firefighting rescue kit

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- Furnishing, lighting and seating shall be done to customer requirements at the time of order.
 - Radio/CD/USB head-unit with marine speakers.

4.OUTBOARD MOTOR:

- Minimum power of 250HP each. The motors shall be preferably be a motor used for rescue applications and approved by a rescue body nationally or internationally.
- Motor shall be sealed in accordance with a recognised sealing process.
- Reinforced steering bracket and swivel holder.
- Solid or performance specification engine mounts.
- Waterproof spark plugs boots.
- Tilt kit with sleeving and washers for extra durability and robust operation.
- Kill switch.
- Cowling restraints.
- Stainless steel spin clamps.
- Sea-doo lanyard connection for auto shut down, two sets to be provided.
- Heavy duty propeller option.
- Trolling RPM switch/adaptor option.
- Engine water flush device option.
- Fuel gauge.
- Electric start.
- Power assist steering.

4.TRAILER:

- Lightweight aluminium, galvanised steel or automotive grade stainless steel with suitable corrosion protection.
- Guides for the boat hull shall have rollers on the trailer for the entire hull length. Minimum of four longitudinal roller guides (two central and two outward mounted).
- Electric winch and power supply mounted at the front of the trailer for assisting loading the boat.
- Interchangeable tow eye for ball and socket coupling for LDV or to use with quad bikes.
- Manual landing leg and automatic rotatable jockey wheel.
- Stop at the front of the trailer with rear tie points. Ratchet to be included.
- Rear lights and indicators
- Application specific tyres
- Lockable storage compartment for a tool box.
- Fire extinguisher.
- Wheel arches.
- Corrosion protection and final paint colour to be safety yellow.
- Spare wheel with tool kit.

All fasteners, brackets and items being used for this item 27 shall be anti-corrosive (galvanised, stainless steel etc.)

Item 28: Technical specification for a shipping container loader

1. Scope

The intent of this specification is to provide for a fully operational vehicle/unit, which has the capability to load and off-load various shipping containers that are 20 foot and 40 foot in dimensions. It shall be able to handle a minimum load of 40 000 kg.

It shall be supplied complete with an enclosed cab and an adjustable spreader.

2. Vehicle

- 1.1 The unit shall have a minimum Gross Vehicle Mass (GVM) of 50 000 kg
- 1.2 Transmission shall be fully automatic incorporating a torque converter.
- 1.3 Minimum diesel engine requirements shall be: Euro 3 to 5, 200 kW of power and 1200 Nm of torque.
- 1.4 Vehicle should have a limited top speed of not more than 40 km/hr.
- 1.5 ABS brakes are mandatory. Integrated auxiliary braking to be provided through an integrated retarder which shall immediately activated upon deceleration.
- 1.6 Minimum wheelbase of 2 000 mm.
- 1.7 Steel suspension.
- 1.8 Fitment of a steel under belly plate to protect the radiator & engine.
- 1.9 Driver's cab shall be ROPS/FOPS compliant.
- 1.10 Clear visibility through all sides of the cab.
- 1.11 Park and emergency braking to be independent systems.
- 1.12 A fully laden minimum gradeability of 20 % shall be expected.
- 1.13 Rear axle with hub reduction gearing and differential lock to provide all wheel drive.
- 1.14 Servicing platform.
- 1.15 To safely and comfortably accommodate driver using an equal levelling suspended type seat. To be fully adjustable.
- 1.16 Wide angle adjustable mirrors.
- 1.17 Driver assist mirrors for front and sides of vehicle.
- 1.18 Heater, windscreen demister and air-conditioning system should be adequate for the cab and its occupant.
- 1.19 12v charger socket.
- 1.20 Rear and front windscreen wipers with washer spray.
- 1.21 Aerial mounted camera to assist with viewing of the rear.
- 1.22 Fuel tank shall be at least 200 liters with a lockable fuel cap and anti-siphon device.
- 1.23 Fuel management system to remove access water and dirt before delivery to the engine.
- 1.24 Heat sensing engine protection device, mechanical monitoring system to safely shut down engine if engine cylinder head increases to an unsafe temperature.
- 1.25 Auto lubrication system.
- 1.26 Reverse engine fan.
- 1.27 Tyre pressure monitoring system.
- 1.28 The vehicle and the customisation shall be designed according to these critical specifications (summary of evidence shall be provided):
 - a) SANS 1506:1994 (2000-07-25) Brake systems.
 - b) SANS 20474: Earthmoving Machinery Safety.
 - c) ISO 6015: Earth-moving machinery, Hydraulic excavators and backhoe loaders, Methods of determining tool forces.
 - d) The end of Section 7 covers other specifications/standards that shall be adhered to.

3. Material specification

The load bearing items including the spreader shall be made out of structural steel to withstand the payload. Corten steel and Domex for the structural rolled sections and flat plate is recommended. Whilst Hardox for the wear pads.

4. Construction requirements

4.1 Vehicle and Spreader system

4.1.1 Areas of the floor that shall be used as access walkways shall have a hard wearing, slip resistant material (Vastrap).

4.1.2 Access ladder and railings/grabs shall be installed in a suitable position behind the cab and rear/side.

4.1.3 Spreader shall be able to easily adjust to all 20 and 40 foot ISO containers available on the market.

4.1.4 Load detection for optimum lifting.

4.1.5 Twist lock safety system to prevent lifting if all locks are not correctly secure.

All items in chapter 4 must be thoroughly sealed with an approved sealer to prevent rusting between mating surfaces and drain holes must be provided in areas where water can accumulate. Any floor that persons will use on the body should be coated with a hard wearing, slip resistant material (Vastrap).

5. Lighting

5.1 A pair of rubber encased spotlights shall be installed to the front and rear top of the cab facing the driving and work area. Switch shall be located on the interior panel.

5.2 Interior controls and cabin to illuminated for use in poor light conditions.

6. Hydraulic system

6.1 In respect of the hydraulic tank the following shall be required:

6.1.1 To be constructed of steel.

6.1.2 To be fitted with a bump guard from externalities.

6.1.3 To be fitted with a front mounted sight glass for visual oil level inspection. Glass should be marked minimum and maximum accordingly with levels of fluid in the tank.

6.1.4 Must have a filler cap strainer & filter into filler base and filler cap assembly.

6.1.5 Oil capacity shall be sufficient, and a cooler added if necessary.

6.1.6 To be fitted to an accessible side on the chassis, low enough that the body height does not impede the maintenance staff or driver of filling oil to tank.

6.2 Must have an inline filter with a blockage indicator fitted onto the pressure side of hydraulic pump, before the tipper / solenoid valve system.

6.3 The hydraulic valves shall be grouped together for ease of maintenance.

6.4 Test points for testing hydraulic pressures shall be fitted and grouped together.

6.5 Where possible steel tubing, which shall be treated with suitable corrosion protection, in lieu of rubber hosing shall be used for hydraulic lines.

6.6 All hydraulic fittings shall be wrapped with a petrolatum impregnated tape or sprayed with a petrolatum primer to prevent corrosion.

6.7 Safety hold valve for cylinder in case of hydraulic failure.

6.8 Hydraulic controls for the operation of the loading/offloading shall be fitted in a user friendly manner in the driver's cab and behind the cab allowing for ease of operation. The outside controls shall be protected by means of an enclosure.

6.9 The controls shall where possible be electronic, and activate the necessary servos (either pneumatic or hydraulic) that will activate the operation. All actions will be fully adjustable at variable speeds for the operation of the hydraulics. A plug in, modular type, control panel is preferred for ease of maintenance.

7. Power Take Off (PTO)

7.1 The PTO drive assembly shall be approved by the OEM mechanically and electrically for use on the engine and the wiring systems of the vehicle for the engagement of the PTO drive. Any modifications to the vehicle to accommodate the P.T.O. must be approved by the truck manufacturer and not affect the trucks warranty in any way.

7.2 The engine and transmission must not be harmed by use of the PTO.

7.3 The fitment of the P.T.O. should not negatively impact on the vehicles ground clearance.

7.4 Electronic control module and wiring harness which incorporates the "Rev Up Limiter" must be integrated into the existing OEM vehicle using the OEM 12/24 Volt system.

7.5 The PTO must only run when the PTO switch is engaged. The system will not allow the PTO to be engaged if the vehicle is in gear or if the handbrake is not engaged.

7.6 The accelerator pedal cannot be used, while the PTO is engaged.

7.7 PTO calibration shall be performed by the bidder after tracking device is installed on the vehicle/equipment/unit by eThekweni City Fleet.

8. Metal Preparation and Painting Procedure

The following procedure must be adhered to:

8.1 Descale all metal surfaces

8.2 Grind down & smooth all rough edges

8.3 Thoroughly clean all surfaces and shot blast to primer specification

8.4 Prime the trailer using a two component self-curing inorganic zinc ethyl silicate or two component zinc rich polyamide cured epoxy primer.

8.5 Thereafter paint using a coat of premium quality twin pack automotive paint.

8.6 The bucket should have a polyurethane protective final coat.

8.7 Paint film thickness must not be less than 80 microns each. Two coats of primer and one colour coat.

9. Colors

Underside of Body	Black
Cab	Yellow or White (Will be finalized at time of the order)
Spreader	Black

10. Electrical

All additional electrical circuits are to be suitably fused and must not interfere with or adversely affect the existing electrical system.

10.1 Reversing buzzer and warning light to be installed when reverse gear is engaged.

10.2 Battery isolator switch.

10.3 Uninterrupted power supply points shall be made available for the vehicle tracking and fuel master monitoring system.

10.4 All exposed electrical wiring looms of the vehicle/equipment/unit and superstructure shall be full encased in a flexible protective metallic conduit and securely clamped with fasteners to the chassis or the structure.

11. Signage and Markings

11.1 Data plates shall be fitted labelling the storage areas and capacity. Safe working loads should be labelled where necessary:

- a) The hydraulic system indicating tank capacity, system pressure, fluid type/grade, hydraulic cylinder specifications and test criteria.
- b) Safe working loads to be clearly labeled on the structure on both sides.
- c) Safety, operation, technical data, dates of manufacture, manufacturer's details etc.
- 11.2 Chevron board to be fitted at the rear conforming with the appropriate SABS/SANS standard.
- 11.4 Durable, ultraviolet resistant and weather resistant warning signs shall be provided at all locations of the vehicle that impose a danger to persons.
- 11.5 Durable, ultraviolet resistant and weather resistant information signs shall be provided in specific locations to assist the driver/maintenance staff with the operation/maintenance of the vehicle.
- 11.6 Retro-reflective tape shall be fitted to both sides and the rear of the vehicle as well as the rear bumper.
- 11.7 Registration number to be clearly marked on roof.

12. Miscellaneous items

- 12.1 The batteries to have a lockable weather proof cover to prevent debris and moisture ingress or built within the vehicle chassis.
- 12.2 Fuel tank, batteries, pneumatic cylinders and hydraulic tank to have structures built around them for safety or built within the vehicle.
- 12.3 Bolt on covers for safety where parts are rotating, swinging or of high temperature.
- 12.4 A 4.5 kg fire extinguisher should be supplied and fitted in an accessible position close to the driver when exiting the cab.
- 12.5 Automatic fire suppression system for the engine and driver/operator cab.
- 12.5 Tyres shall be E4 type tubeless radial articulated hauler type with specified load ratings for the application.
- 12.6 One complete spare wheel as in 12.5 and one set of emergency changing tools shall be supplied per vehicle.
- 12.7 Bolt on head and tail light guards.

Item 29: Technical specification for a pneumatic tyre roller

1.Scope

The intent of this specification is to provide for a fully operational vehicle, which has the capability to operate on a site for levelling of terrain or roads for compaction of asphalt.

2. Unit

- 2.1 The unit shall be a front pneumatic tyre roller vehicle, with a minimum Gross Vehicle Mass (GVM) of 8 000 kg with the option of being ballasted up to a minimum of 20 000 kg.
- 2.2 Transmission shall be infinitely adjustable, power shift, fully automatic or automatic manual.
- 2.3 Minimum diesel engine requirements shall be of Euro 3-5 emission level with a minimum of 75 kW of power.
- 2.4 Steel suspension.
- 2.5 Fitment of a steel under belly plate (minimum of 6 mm) to protect the radiator and engine. Rest of the vehicle shall have removable under chassis guards for keeping away landfill debris.
- 2.6 Park and emergency braking systems.
- 2.7 360° degree vision is required from within the cab to allow for operator clear visibility.
- 2.8 To safely and comfortably accommodate driver using an equal levelling suspended type seat. To be fully adjustable for optimal visibility while operating the vehicle.

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- 2.9 Fully adjustable mirrors including driver assist mirrors for sides of vehicle.
- 2.10 Heater, windscreen demister and air-conditioning system should be adequate for the cab and its occupants.
- 2.11 Windscreen wipers and washer system.
- 2.12 12v charger sockets.
- 2.13 Aerial mounted camera to assist with viewing of the rear whilst in operation.
- 2.14 Two stage dry type air cleaner with auto cleaner function and air restrictor indicator.
- 2.15 Fuel tank with minimum capacity of 200 liters shall be fitted with an anti siphon device and a lockable fuel cap.
- 2.16 An efficient fuel filter shall be fitted and the tank shall have a viewable filter screen at the filler cap with an easily accessible drain plug.
- 2.17 Vehicle fuel management system to remove access water and dirt before delivery to the engine.
- 2.18 Heat sensing engine protection device, mechanical monitoring system to safely shut down engine if engine cylinder head increases to an unsafe temperature, no water in the cooling system and upon low oil level and low oil pressure.
- 2.19 Turbo safety system to prevent damage if vehicle is switched off prematurely or turbo has not reached safe operation.
- 2.20 Water separator to keep pneumatic system functioning efficiently.
- 2.21 Oil sampling/pressure valve to be fitted on all critical components and subsystems of the unit were OEM recommends for monitoring purposes.
- 2.22 The vehicle and the customisation shall be designed according to these critical specifications (summary of evidence shall be provided):
- Driver's cab shall be ROPS/FOPS compliant (ISO 3471 and ISO 3449).
 - Comply to sound levels as laid out in ISO6395 and ISO63956.
 - SANS 12944-4, 5:1998 Corrosion protections.
 - SANS 1506:1994 (2000-07-25) Brake systems.

3. Material specification

The load bearing items shall be made out of structural steel to withstand the loads from the operational environments terrain and application. Corten steel and Domex for the structural rolled sections and flat plate is recommended. Whilst Hardox or a wear resistant steel for the wearing items, the wear liner shall be applied over the primary structure such that it can be replaced as a wearing item.

4. Construction requirements

4.1 Tyre roller

- 4.1.1 Minimum of four tyres at the front and four at the rear of the vehicle. Centralised tyre inflation system to monitor and adjust tyre contact area with asphalt surface. Interface to be in the driver's cab.
- 4.1.2 Pressurised adjustable speed water spray system shall be installed for the width of the vehicle, minimum one spray nozzle per tyre (front and rear). Tank should be a minimum of 350 litres. Water tank should have a level indicator which can be monitored from the driver's cab including a low level indicator/warning alarm and safety cut off.
- 4.1.3 Body shall be able to be ballasted with commodity such as water or sand. These tanks must be lined with a non corrosive liner in case of wear and corrosion. Easy drain and discharging of the commodity instruments must be fitted such as valves, chutes etc.

4.2 Access stairways

To be fitted with suitable guard rails and user-friendly access.

All items must be thoroughly sealed with an approved sealer to prevent rusting between mating surfaces and drain holes must be provided in areas where water can accumulate. Any floor that persons will use on the body should be coated with a hard wearing, slip resistant material (Vastrap).

5. Lighting

5.1 A waterproof amber coloured polycarbonate lenses LED warning light to be fitted on the cab roof with on/off switch with random flash pattern positioned in the cab.

5.2 Rubber encased spotlights shall be installed to the top of the cab facing the surrounding areas of the unit. Switches shall be located in the cab.

All lights to be bracket mounted for easy removal and lenses protected from damage.

6. Hydraulic system

6.1 In respect of the hydraulic tank the following shall be required:

To be constructed of steel.

To be fitted to an accessible part of the chassis, such that it does not impede the maintenance staff or driver of filling oil to tank.

To be fitted with a bump guard from externalities.

To be fitted with a front mounted sight glass for visual oil level inspection. Glass should be marked minimum and maximum accordingly with levels of fluid in the tank.

Must have a lockable filler cap strainer & filter into filler base and filler cap assembly.

Oil capacity shall be sufficient and a cooler added if necessary.

6.2 Must have an inline filter with a blockage indicator fitted onto the pressure side of hydraulic pump, before the solenoid valve system.

6.3 The hydraulic valves shall be grouped together for ease of maintenance.

6.4 Test points for testing hydraulic pressures shall be fitted and grouped together.

6.5 Where possible steel tubing, which shall be treated with suitable corrosion protection, in lieu of rubber hosing shall be used for hydraulic lines.

6.6 All hydraulic fittings shall be wrapped with a petrolatum impregnated tape or sprayed with a petrolatum primer to prevent corrosion.

6.7 Safety hold valve for cylinder in case of hydraulic failure.

6.8 Hydraulic controls for the operation of the equipment shall be fitted in a user friendly manner in the driver's cab for ease of operation.

6.9 The controls shall where possible be electronic, and activate the necessary servos (either pneumatic or hydraulic) that will activate the operation. All actions will be fully adjustable at variable speeds for the operation of the hydraulics. A plug in, modular type, control panel is preferred for ease of maintenance.

7. Metal Preparation and Painting Procedure

The following procedure must be adhered to:

7.1 Descale all metal surfaces

7.2 Grind down & smooth all rough edges

7.3 Thoroughly clean all surfaces

7.4 Prime the unit and other components using a two component self-curing inorganic zinc ethyl silicate or two component zinc rich polyamide cured epoxy primer.

7.5 Thereafter paint using one coat of premium quality twin pack automotive paint

7.6 Paint film thickness must not be less than 80 microns each. Two coats of primer and one colour coat.

8. Colors

Underside of Body	Black
Unit	Safety Yellow
Ballast tanks interior	Epoxy tar/protective coating

9.

Electrical

All additional electrical circuits are to be suitably fused and must not interfere with or adversely affect the existing electrical system.

- 9.1 The rear aerial mounted camera shall remain ON and a buzzer and warning light to be installed when reverse gear is engaged.
- 9.2 Battery isolator switch.
- 9.3 Audible hooter.
- 9.4 Batteries shall be maintenance free variant that will last the warranty period.
- 9.5 Uninterrupted power supply points shall be made available for the vehicle tracking and fuel master monitoring system.
- 9.6 Jump start receptacle.

10. Signage and Markings

10.1 Data plates shall be fitted labelling the storage areas and capacity. Safe working loads should be labelled where necessary:

- a) The hydraulic system indicating tank capacity, system pressure, fluid type/grade, hydraulic cylinder specifications and test criteria.
- b) Safe working loads to be clearly labeled on the structure on both sides.
- c) Safety, operation, technical data, dates of manufacture, manufacturer's details etc.

10.2 Safety, operation, technical data, dates of manufacture, manufacturer's details etc.

10.3 Durable, ultraviolet resistant and weather resistant warning signs shall be provided at all locations of the vehicle that impose a danger to persons.

10.4 Durable, ultraviolet resistant and weather resistant information signs shall be provided in specific locations to assist the driver/maintenance staff with the operation/maintenance of the vehicle.

10.5 Retro-reflective tape shall be fitted to both sides and the rear of the vehicle as well as the rear.

11. Miscellaneous items

11.1 The batteries to have a weather proof cover to prevent debris and moisture ingress.

11.2 Fuel tank, batteries, pneumatic cylinders and hydraulic tank to have structures built around them for safety.

11.3 Bolt on covers for safety where parts are rotating, swinging or of high temperature including and not limited to engine manifolds, turbocharger and exhaust.

11.4 A pair of 6 kg fire extinguisher should be supplied and fitted in an accessible position close to the driver when exiting the cab.

11.5 Automatic fire suppression system to be installed covering the engine and cab in case of an emergency.

Item 30: Technical specification for Three- and Five-Ton Electric Forklifts

Bidder shall bid on item 30.1 an electric 3 Ton forklift and item 30.2 an electric 5 Ton forklift.

1. SPECIFICATIONS for electric forklifts:

Machine Type:	Counterbalance Forklift – 4 wheeler only
Load Capacity:	3 000 / 5 000 kg
Load Centre:	500-600 mm
Max Fork Height:	3 000-6 000 mm
Power Type:	Electric motors
Control Type:	Sit Down – Ride on
Tyres:	Airless type (super elastic) or Solid
Fork Size:	1000-1150 mm x 100-145 mm x 40-55 mm (L x W x T)
One set extension forks	3 m (fabricated and certified-SANS 10388)
Turning Radius (approx.):	2 000-3 000 mm
Approx. Gradeability (with / without load):	10/25%
Service Brakes:	Electric and/or Hydraulic/Pneumatic Foot Pedal
Parking Brakes:	Mechanical Hand Lever
Minimum Battery Voltage / Capacity	80V / 700Ah
Current Battery Change over system:	Lift out only
Quantity of complete Battery packs:	x 2
Battery Monitoring Unit Qty:	1 unit per battery (must also communicate to charger)
Charger Type:	High Frequency Smart Charger 3 phase
Charger Qty:	x 1
Electrical Drive system:	11 kw per 60 minutes per motor (minimum)

2. TRANSMISSION:

Fully automatic variable speed.

3. STANDARD EQUIPMENT INCLUSIVE:

- 2 Stage Wide View Masts
- Integral Side Shift
- Load Backrest
- Electric Shift Control
- LED Front Working Lights & Rear Combination Lights
- Adjustable Suspension Seat with Safety Belt
- Mounted fire extinguisher

- Reverse Alarm
- High Mounted Strobe Light
- Side View Mirror
- Auto shut off
- In compliance with the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and Driven Regulation 18.6.
- Load testing services is accredited with the Department of Labour as a Lifting Machine Entity, certified inspector and test certificate for the equipment.
- Equipment supplied according to SANS 10388.

Applicable standards and specifications to all items in Section 7;

The following, not necessarily comprehensive, list of standard specifications are relevant (latest revisions to be adhered to):

ANSI/AWS D1.1 Structural Welding Code

Steel BS-EN 287 Part 1 Approval testing of welders/fusion welding

BS-EN 288 Part 3 Specification and approval of welding procedures for metallic materials

BS 5135 Metal arc welding of carbon and carbon manganese steels

BS 3923 Methods for ultrasonic examination of welds

BS 2600 Radiographic examination of fusion welded butt joints in steel

BS 5493 Code of practice for protective coating of iron and steel structures against corrosion

DIN 1026 Metric channels

ISO R657 Angles

SANS 135 ISO metric bolts, screws and nuts (hexagon and square) (coarse thread, free fit series)

SANS 136 ISO metric precision hexagon-head bolts and screws, and hexagon nuts (coarse thread medium fit series)

SANS 064 Preparation of steel surfaces for coating

SANS 763 Hot-dip (galvanized) zinc coatings

SANS 1091 National colour standards for paint

SANS 1431 Weldable structural steels

SABS 1046, SABS 1376 Lights and retro-reflective devices

SABS 1051, 1447, SANS 20013, SANS 6292 Brakes and braking equipment

SABS 1329 Rear warning sign (chevron)

SANS 1055 Rear underrun protection device

SANS 1496 Wheel flaps

SABS 1447 Pneumatic braking connections

SANS 3779 Vehicle identification number

Vehicle dimensions NRTA Act no.93 of 1996

Data plates Compulsory Vehicle Standards

COMPULSORY QUESTIONNAIRE FOR TECHNICAL SPECIFICATIONS

Questionnaire forms part of the tender documents and must be completed in its entirety. Where proof is provided the bidder shall clearly mark these as appendices and highlight in the submission the sections that are valid.

<u>Can your company adhere to the following specifications when manufacturing and supplying various plant and specialized equipment/vehicles?</u>	Yes / No	If Yes, please provide proof. Appendix no. with submission.
<p><u>Compulsory items:</u></p> <ul style="list-style-type: none"> • Are you an OEM/Certified agent/SABS/SANS certified manufacturer of the vehicles/equipment/unit being bid for? (Certified proof provided) • If you are a third-party supplier have you provided letters of accreditation from an agent and certification from an OEM? (Certified proof provided) • Can the relevant documents be provided for Section 6, SCC 10.1 and ACC1 with the vehicles? <ul style="list-style-type: none"> ○ Detailed maintenance manual ○ Operating manual ○ Training manual ○ Spares manual ○ Electrical wiring circuit/diagram ○ Design report showing that the criteria for SANS 1518 has been met. ○ The vehicle complies to SANS 20013 (where applicable). ○ A CAD model in .STEP format for the customisation either on CD or USB (where applicable). ○ Quality management plan and documents • Has Section 6, SCC 10.1.2 been submitted for the tender? <ul style="list-style-type: none"> ○ An assembly drawing indicating the general arrangement of the body and the subassemblies making up the customization. ○ A product catalogue showing the specifications of the make and model bid on. • Can the warranty obligations be met in Section 6, 15.2 (Terms and conditions shall be submitted); <ul style="list-style-type: none"> ○ 2 years standard warranty including all subsystems and parts on equipment/vehicle/unit? ○ 5 years on steel/customisation construction? ○ 10 years anti corrosion warranty? • Have the returnable documents from Sections 3 and 4 being provided? 		

<p><u>Specifications and standards</u></p> <ul style="list-style-type: none"> Are supplied products and system/s in accordance and recognised by the relevant SABS/SANS specification/standard? 		
<p><u>Item 1: Backhoe loader (TLB)</u></p>		
<p><u>Vehicle items</u></p> <ul style="list-style-type: none"> What make and model vehicle is being provided (technical catalogue shall be submitted)? <ul style="list-style-type: none"> Item 1.1 (TLB) Item 1.2 (TLB with extendable boom) GVM minimum of 7.5 tons (specify amount)? Engine minimum power and torque requirements of 65kW and 350Nm (specify amount)? <ul style="list-style-type: none"> Item 1.1 (TLB) Item 1.2 (TLB with extendable boom) Can all other criteria in Section 7, chapter 2 be met without any exclusions? 		
<p><u>Operating capacity</u></p> <ul style="list-style-type: none"> Is Corten and Hardox/corrosive resistive steel or better used for the bucket? What is the volumetric and payload capacity (recommended 1m³/3 tons and 0.3 m³/2 tons)? Tipping angle 40° and 160° for front end bucket and back bucket respectively (specify amount)? Safety access ladders, walkways (lined with non-slip material) with safety railings? Item 1.1 minimum digging depth of 4.5m? Item 1.2 minimum digging depth of 6.0m with an extendable boom? Can Section 7, chapters 4 and 5 be met without any exclusions? Can you supply implements and have you included a brochure? 		
<p><u>Sub systems and miscellaneous items</u></p> <ul style="list-style-type: none"> Can items in section 7, chapter 6-12 in the technical specification be met without any exclusions? 		
<p><u>Specifications and standards</u></p> <p>Are supplied products and system/s in accordance and recognized by the relevant SABS/SANS specification/standard?</p>		

Item 2.1: 2WD Tractor with various implements		
<p><u>Vehicle items</u></p> <ul style="list-style-type: none"> • What make and model vehicle is being provided (technical catalogue shall be submitted)? • GVM 3000 kg (specify amount)? • Engine minimum power and torque requirements of 60kW and 350Nm (specify amount)? • Can all other criteria in Item 2.1, Section 7, chapter 2 be met without any exclusions? • Enclosed driver cab option? 		
<p><u>Operating capacity</u></p> <ul style="list-style-type: none"> • What structural steel is used (Corten or Domex recommended)? • Safety access ladders, walkways (lined with non-slip material) with safety railings? • Can Section 7, chapters 4 and 5 be met without any exclusions? 		
<p><u>Sub systems and miscellaneous items</u></p> <ul style="list-style-type: none"> • Attachments (specify details of each including materials, guards and finishes in a catalogue)? <ul style="list-style-type: none"> 4.3.1 Rotary grass cutting? 4.3.2 Dual rotary grass cutting? 4.3.3 Roller Mower? 4.3.4 Collection chutes and bags for 4.3.1-4.3.3? 4.4 Mowing collector? 4.5 Beach collector? 4.6 Coupling details? 4.7 Road clearance system (crane, flail, power pack)? 4.8 Offset flail mower? • Can items in section 7, chapter 8-10 in the technical specification be met without any exclusions? 		
<p><u>Specifications and standards</u></p> <p>Are supplied products and system/s in accordance and recognized by the relevant SABS/SANS specification/standard?</p>		

<u>Item 2.2: 4WD Tractor with various implements</u>		
<p><u>Vehicle items</u></p> <ul style="list-style-type: none"> • What make and model vehicle is being provided (technical catalogue shall be submitted)? • GVM of 4000 kg (specify amount)? • Engine minimum power and torque requirements of 80kW and 500Nm (specify amount)? • Can all other criteria in Item 2.2, Section 7, chapter 2 be met without any exclusions? 		
<p><u>Operating capacity</u></p> <ul style="list-style-type: none"> • What structural steel is used (Corten or Domex recommended)? • Safety access ladders, walkways (lined with non-slip material) with safety railings? • Can Section 7, chapters 4 and 5 be met without any exclusions? 		
<p><u>Sub systems and miscellaneous items</u></p> <ul style="list-style-type: none"> • Attachments (specify details of each including materials, guards and finishes in a catalogue)? <ul style="list-style-type: none"> 4.3.1 Rotary grass cutting? 4.3.2 Dual rotary grass cutting? 4.3.3 Roller Mower? 4.3.4 Collection chutes and bags for 4.3.1-4.3.3? 4.4 Mowing collector? 4.5 Beach collector? 4.6 Coupling details? 4.7 Road clearance system (crane, flail, power pack)? 4.8 Mouldboard plough? 4.9 Disc Plough? 4.10 Hydraulic reversible plough? 4.11 Mouldboard Ridger? 4.12 Ripper? 4.13 Bed former with rotovator? 4.15 Boom sprayer with tank and pump? 4.16 Disc Harrow? 4.17 Planter? 4.18 Offset flail mower? 		

<ul style="list-style-type: none"> Can items in section 7, chapter 8-10 in the technical specification be met without any exclusions? 		
<p><u>Specifications and standards</u></p> <p>Are supplied products and system/s in accordance and recognized by the relevant SABS/SANS specification/standard?</p>		

<u>Item 2.3: High powered 4WD Tractor with various implements</u>		
<p><u>Vehicle items</u></p> <ul style="list-style-type: none"> What make and model vehicle is being provided (technical catalogue shall be submitted)? GVM of 5500 kg (specify amount)? Engine minimum power and torque requirements of 100kW and 600Nm (specify amount)? Can all other criteria in Item 2.2, Section 7, chapter 2 be met without any exclusions? 		
<p><u>Operating capacity</u></p> <ul style="list-style-type: none"> What structural steel is used (Corten or Domex recommended)? Safety access ladders, walkways (lined with non-slip material) with safety railings? Can Section 7, chapters 4 and 5 be met without any exclusions? 		
<p><u>Sub systems and miscellaneous items</u></p> <ul style="list-style-type: none"> Attachments (specify details of each including materials, guards and finishes in a catalogue)? <ul style="list-style-type: none"> 4.3.1 Rotary grass cutting? 4.3.2 Dual rotary grass cutting? 4.3.3 Roller Mower? 4.3.4 Collection chutes and bags for 4.3.1-4.3.3? 4.4 Mowing collector? 4.5 Beach collector? 4.6 Coupling details? 4.7 Road clearance system (crane, flail, power pack)? 4.8 Mouldboard plough? 4.9 Disc Plough? 4.10 Hydraulic reversible plough? 4.11 Mouldboard Ridger? 		

<p>4.12 Ripper?</p> <p>4.13 Bed former with rotovator?</p> <p>4.15 Boom sprayer with tank and pump?</p> <p>4.16 Disc Harrow?</p> <p>4.17 Planter?</p> <p>4.18 Offset flail mower?</p> <ul style="list-style-type: none"> • Can items in section 7, chapter 8-10 in the technical specification be met without any exclusions? 		
<p><u>Specifications and standards</u></p> <p>Are supplied products and system/s in accordance and recognized by the relevant SABS/SANS specification/standard?</p>		

<u>Item 2.4: Electric 2WD/4WD Tractor</u>		
<p><u>Vehicle items</u></p> <ul style="list-style-type: none"> • What make and model vehicle is being provided (technical catalogue shall be submitted)? <ul style="list-style-type: none"> ○ Item 2.4.1 2WD Tractor with a canopy ○ Item 2.4.2 2WD Tractor with a cab ○ Item 2.4.3 4WD Tractor • Minimum GVM of 2000 kg (specify amount)? <ul style="list-style-type: none"> ○ Item 2.4.1 2WD Tractor with a canopy ○ Item 2.4.2 2WD Tractor with a cab ○ Item 2.4.3 4WD Tractor • AWD power of 40kW and 25kWh battery rating (specify amount)? • Transmission type and gear capabilities? • Can all other criteria in Item 2.3, Section 7, chapter 2 be met without any exclusions? 		
<p><u>Operating capacity</u></p> <ul style="list-style-type: none"> • What structural steel is used (Corten or Domex recommended)? • Safety access ladders, walkways (lined with non-slip material) with safety railings? • Can Section 7, chapters 4 and 5 be met without any exclusions? 		
<p><u>Sub systems and miscellaneous items</u></p> <ul style="list-style-type: none"> • Attachments (specify details of each including materials, guards and finishes in a catalogue)? <ul style="list-style-type: none"> 4.3.1 Rotary grass cutting? 4.3.2 Dual rotary grass cutting? 		

<p>4.3.3 Roller Mower?</p> <p>4.3.4 Collection chutes and bags for 4.3.1-4.3.3?</p> <p>4.4 Mowing collector?</p> <p>4.5 Beach collector?</p> <p>4.6 Coupling details?</p> <p>4.7 Road clearance system (crane, flail, power pack)?</p> <p>4.8 Offset flail mower?</p> <ul style="list-style-type: none"> • Can items in section 7, chapter 8-10 in the technical specification be met without any exclusions? 		
<p><u>Specifications and standards</u></p> <p>Are supplied products and system/s in accordance and recognized by the relevant SABS/SANS specification/standard?</p>		

<u>Item 3.1: Small Excavator</u>		
<p><u>Vehicle items</u></p> <ul style="list-style-type: none"> • What make and model vehicle is being provided (technical catalogue shall be submitted)? • GVM minimum of 13-21 tons (specify amount)? • Engine minimum power and torque requirements of 70-100 kW and 300-800 Nm (specify amount)? • Can all other criteria in Item 3.1, Section 7, chapter 2 be met without any exclusions? 		
<p><u>Operating capacity</u></p> <ul style="list-style-type: none"> • Is Corten, Hardox steel and corrosive resistant wear steel or better used for the bucket (specify details and bucket capacity 0.5-1.5m³)? • What is the volumetric and payload capacity at the various reach/distances of the boom (specify amounts)? • Tipping angle of 160° (specify amount)? • Safety access ladders, walkways (lined with non-slip material) with safety railings? • Dig depth of 6 000 mm (specify amount)? • Dig height of 8 000 mm (specify amount)? • Ground clearance, min. of 450 mm (specify amount)? • Can Section 7, chapters 4 and 5 be met without any exclusions? • Can you supply implements and have you included a brochure? 		

<p><u>Sub systems and miscellaneous items</u></p> <ul style="list-style-type: none"> • Can items in section 7, chapter 6-12 in the technical specification be met without any exclusions? 		
<p><u>Specifications and standards</u></p> <p>Are supplied products and system/s in accordance and recognized by the relevant SABS/SANS specification/standard?</p>		

<u>Item 3.2: Medium Excavator</u>		
<p><u>Vehicle items</u></p> <ul style="list-style-type: none"> • What make and model vehicle is being provided (technical catalogue shall be submitted)? • GVM minimum of 22-26 tons (specify amount)? • Engine minimum power and torque requirements of 110-180 kW and 600-900 Nm (specify amount)? • Can all other criteria in Item 3.2, Section 7, chapter 2 be met without any exclusions? 		
<p><u>Operating capacity</u></p> <ul style="list-style-type: none"> • Is Corten, Hardox steel and corrosive resistant wear steel or better used for the bucket (specify details and bucket capacity 1.5-2.2m³)? • What is the volumetric and payload capacity at the various reach/distances of the boom (specify amounts)? • Tipping angle of 160° (specify amount)? • Safety access ladders, walkways (lined with non-slip material) with safety railings? • Dig depth of 6 000 mm (specify amount)? • Dig height of 9 000 mm (specify amount)? • Ground clearance, min. of 450 mm (specify amount)? • Can Section 7, chapters 4 and 5 be met without any exclusions? • Can you supply implements and have you included a brochure? 		
<p><u>Sub systems and miscellaneous items</u></p> <ul style="list-style-type: none"> • Can items in section 7, chapter 6-12 in the technical specification be met without any exclusions? 		
<p><u>Specifications and standards</u></p> <p>Are supplied products and system/s in accordance and recognized by the relevant SABS/SANS specification/standard?</p>		

<u>Item 3.3: Large Excavator</u>		
<u>Vehicle items</u>		
<ul style="list-style-type: none"> • What make and model vehicle is being provided (technical catalogue shall be submitted)? • GVM minimum of 30-36 tons (specify amount)? • Engine minimum power and torque requirements of 180-260 kW and 800-1200 Nm (specify amount)? • Can all other criteria in Item 3.3, Section 7, chapter 2 be met without any exclusions? 		
<u>Operating capacity</u>		
<ul style="list-style-type: none"> • Is Corten, Hardox steel and corrosive resistant wear steel or better used for the bucket (specify details and bucket capacity 1.8-2.5m³)? • What is the volumetric and payload capacity at the various reach/distances of the boom (specify amounts)? • Tipping angle of 160° (specify amount)? • Safety access ladders, walkways (lined with non-slip material) with safety railings? • Dig depth of 6 000 mm (specify amount)? • Dig height of 9 000 mm (specify amount)? • Ground clearance, min. of 450 mm (specify amount)? • Can Section 7, chapters 4 and 5 be met without any exclusions? • Can you supply implements and have you included a brochure? 		
<u>Sub systems and miscellaneous items</u>		
<ul style="list-style-type: none"> • Can items in section 7, chapter 6-12 in the technical specification be met without any exclusions? 		
<u>Specifications and standards</u>		
Are supplied products and system/s in accordance and recognized by the relevant SABS/SANS specification/standard?		

<u>Item 4: Skid loader with various implements</u>		
<u>Vehicle items</u>		
<ul style="list-style-type: none"> • What make and model vehicle is being provided (technical catalogue shall be submitted)? • GVM minimum of 1750 kg (specify amount)? • Engine minimum power and torque requirements of 35 kW and 150 Nm (specify amount)? • Two speed motion (specify details)? 		

<ul style="list-style-type: none"> Can all other criteria in Section 7, chapter 2 be met without any exclusions? 		
<p><u>Operating capacity</u></p> <ul style="list-style-type: none"> What structural and wear steel is used (Corten or Domex and Hardox recommended)? Safety access ladders, walkways (lined with non-slip material) with safety railings? Can Section 7, chapters 4 be met without any exclusions? 		
<p><u>Sub systems and miscellaneous items</u></p> <ul style="list-style-type: none"> Can items in section 7, chapter 5-12 in the technical specification be met without any exclusions? Is the attachment catalogue included with pricing? 		
<p><u>Specifications and standards</u></p> <p>Are supplied products and system/s in accordance and recognized by the relevant SABS/SANS specification/standard?</p>		

<u>Item 5: Site dumper</u>		
<p><u>Vehicle items</u></p> <ul style="list-style-type: none"> What make and model vehicle is being provided (technical catalogue shall be submitted)? GVM minimum of 6 tons (specify amount)? Engine minimum power and torque requirements of 35kW and 150Nm (specify amount)? Gear capabilities of two forward and reverse? Can all other criteria in Section 7, chapter 2 be met without any exclusions? 		
<p><u>Operating capacity</u></p> <ul style="list-style-type: none"> Is Corten, Hardox steel and corrosive resistant wear steel or better used for the bucket? What is the volumetric and payload capacity (recommended 1.8-4m³ and 4-7.5 tons respectively)? Tipping angle 45° or better (specify amount)? Can Section 7, chapters 4 and 5 be met without any exclusions? 		
<p><u>Sub systems and miscellaneous items</u></p> <ul style="list-style-type: none"> Can items in section 7, chapter 6-12 in the technical specification be met without any exclusions? 		

<u>Specifications and standards</u>		
Are supplied products and system/s in accordance and recognized by the relevant SABS/SANS specification/standard?		

<u>Item 6: Beach cleaning vehicles</u>		
<u>Vehicle items</u>		
<ul style="list-style-type: none"> • What make and model unit is being provided (technical catalogue shall be submitted)? • Item 6.1 Engine driven beach cleaning vehicle (small) • Item 6.2 Engine driven beach cleaning vehicle (medium) • Item 6.3 Engine driven beach cleaning vehicle (large) • Item 6.4 Electric driven beach cleaning vehicle • Item 6.5 Electric driven beach cleaning robot/remote vehicle • Item 6.6 Beach cleaning implement for a tractor/plant equipment • Attachments available? (please submit catalogue) 		

<u>Item 7: Diesel Forklifts</u>		
<u>Forklift</u>		
<ul style="list-style-type: none"> • What make and model are the forklifts (technical brochure included)? <ul style="list-style-type: none"> ○ 3 Ton ○ 5 Ton ○ 7 Ton ○ Rough Terrain forklift • Supply of extension forks? 		
<u>Standard Equipment</u>		
<ul style="list-style-type: none"> • Can all the standard equipment items in section 7 in the technical specification be met without any exclusions? 		

<u>Item 8.1 and 8.2 Road Milling Machine and Cold Planar Machine</u>		
<u>Item 8.1:</u>		
<ul style="list-style-type: none"> • What is the vehicle make and model? (technical catalogue to be supplied) • and can criteria in Section 7, chapter 2 be met without any exclusions? • Has the GVM being met (min. 15 000kg) ? (specify amount) • Euro rating? (minimum 3) • Engine power of 150 kW? (specify amount) 		

<p><u>Item 8.2:</u></p> <ul style="list-style-type: none"> • What is the vehicle make and model? (technical catalogue to be supplied) • and can criteria in Section 7, chapter 2 be met without any exclusions? • Has the GVM being met (min. 30 000kg)? (specify amount) • Euro rating? (minimum 3) • Engine power of 350 kW? (specify amount) 		
<p><u>Loading and operating system:</u></p> <ul style="list-style-type: none"> • Is Corten and Hardox steel or similar/better used? (provide details and where used) • What material are the cutting bits provided? <p><u>Item 8.1:</u></p> <ul style="list-style-type: none"> • Milling depth range? (0-320 mm or closest) • Milling width? (1000-1300 mm or closest) • Cutting diameter? (900 mm or closest) • Milling speed? of at least 1.5 km/hr is expected. • Travel speed? of at least 5 km/hr is expected. • Discharge conveyor width? (minimum of 500 mm) • Discharge rate of conveyor? (at least 75 m3/ hr) • Conveyor should be at least 5 000 mm long? • Safety access ladders, walkways (lined with non-slip material) with safety railings? • Auto levelling system? • All controls clearly marked? <p><u>Item 8.2:</u></p> <ul style="list-style-type: none"> • Milling depth range? (0-320 mm or closest) • Milling width? (2000 mm or closest) • Cutting diameter? (1000 mm or closest) • Milling speed? of at least 2 km/hr is expected. • Travel speed? of at least 3 km/hr is expected. • Discharge conveyor width? (minimum of 650 mm) • Discharge rate of conveyor? (at least 75 m3/ hr) • Conveyor should be at least 7 000 mm long? • Safety access ladders, walkways (lined with non-slip material) with safety railings? • Auto levelling system? • All controls clearly marked? 		
<p><u>Sub systems and miscellaneous items</u></p> <ul style="list-style-type: none"> • Can items in section 7, chapter 5,9,10,11 and 12 in the technical specification be met without any exclusions? 		

<p><u>Specifications and standards</u></p> <p>Are supplied products and system/s in accordance and recognised by the relevant SABS/SANS specification/standard?</p>		
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<u>Item 9: Electric Reach trucks</u>		
<p><u>Reach truck</u></p> <ul style="list-style-type: none"> • What brand and model are the Reach trucks (technical brochure included)? <ul style="list-style-type: none"> ○ Electric Reach Truck ○ Electric Extended Reach Truck • Load capacity (1 600-1 800 Kg)? • What tyres are being supplied? • Minimum hours of use? • Extended reach (1300-1500 mm or better)? 		
<p><u>Standard Equipment</u></p> <ul style="list-style-type: none"> • Can all the standard equipment items in section 7, item 9 in the technical specification be met without any exclusions? 		

<u>Item 10.1,10.2 and 10.3: Vibratory roller</u>		
<p><u>Vehicle items</u></p> <ul style="list-style-type: none"> • What is the vehicle make and model (technical brochure included)? <ul style="list-style-type: none"> ○ Item 10.1 ○ Item 10.2 ○ Item 10.3 • and can criteria in Section 7, chapter 2, Item 10 be met without any exclusions? • Has the GVM (12 Tons) being met or bettered? (specify amount) <ul style="list-style-type: none"> ○ Item 10.1 ○ Item 10.2 ○ Item 10.3 • Park and emergency braking? • Engine make, model, power? (specify amount) • Transmission make, model and specifications? • Fully adjustable mirrors? 		
<p><u>Application system:</u></p> <ul style="list-style-type: none"> • Is Corten and Hardox steel or better used? • Footpad specifications submitted? • Smooth roller specifications submitted? 		

<ul style="list-style-type: none"> Blade specifications submitted? Surface wear pads specifications submitted? 		
<p><u>Sub systems and miscellaneous items</u></p> <ul style="list-style-type: none"> Can items in section 7, Item 10, chapter 4-11 in the technical specification be met without any exclusions? 		
<p><u>Specifications and standards</u></p> <p>Are supplied products and system/s in accordance and recognised by the relevant SABS/SANS specification/standard?</p> <p>Have specifications in Section 7, Item10, chapter 2, point 2.23 being met?</p>		

<u>Item 11: Asphalt Road Paver</u>		
<p><u>Vehicle items</u></p> <ul style="list-style-type: none"> What is the vehicle make and model? (technical catalogue to be supplied) and can criteria in Section 7, chapter 2 be met without any exclusions? Has the GVM being met (min. 15 000kg) ? (specify amount) Engine power of 150 kW? (specify amount) 		
<p><u>Loading and operating system:</u></p> <ul style="list-style-type: none"> Is Corten and Hardox steel or similar/better used? (provide details and where used) Screed heating time? (specify amount) Vibratory screed of 0-3000 vpm? (specify amount) Paving range 3-6 meters or better? (specify amount) Paving width of 8 meters or better? (specify amount) Depth of 300 mm or better? (specify amount) Minimum hopper capacity and throughput capacity? (specify amount) Safety access ladders, walkways (lined with non-slip material) with safety railings? All controls clearly marked? 		
<p><u>Sub systems and miscellaneous items</u></p> <ul style="list-style-type: none"> Can items in section 7, chapter 5,9,10,11 and 12 in the technical specification be met without any exclusions? 		
<p><u>Specifications and standards</u></p> <p>Are supplied products and system/s in accordance and recognised by the relevant SABS/SANS specification/standard?</p>		

<u>Item 12.1 and 12.2: Landfill and Asphalt Grader</u>		
<u>Vehicle items</u> <ul style="list-style-type: none"> • What is the vehicle make and model (technical brochure included)? • and can criteria in Section 7, chapter 2 be met without any exclusions? • Has the GVM being met? (specify amount) • Pneumatic braking with anti-lock system? • Park and emergency braking? • Engine make, model, power and torque met? (specify amount) • Transmission make, model and requirements? 		
<u>Item 12.1 Landfill application system:</u> <ul style="list-style-type: none"> • Is Corten and Hardox steel or better used? • Front blade specifications submitted? • Ripper and scarifier specifications submitted? <u>Item 12.2 Asphalt application system:</u> <ul style="list-style-type: none"> • Is Corten and Hardox steel or better used? • Front blade specifications submitted? • Ripper and scarifier specifications submitted? • Extended width blade and levelling system specification submitted? • Tracks for beach application? 		
<u>Sub systems and miscellaneous items</u> <ul style="list-style-type: none"> • Can items in section 7, chapter 4-11 in the technical specification be met without any exclusions? 		
<u>Specifications and standards</u> <p>Are supplied products and system/s in accordance and recognised by the relevant SABS/SANS specification/standard?</p> <p>Have specifications in Section 7, chapter 2, point 2.23 being met?</p>		

<u>Item 13: Self powered Aerial/Scissors Platforms</u>		
<u>Forklift</u> <ul style="list-style-type: none"> • What brand and model are the units (technical brochure included)? • Are they electric or diesel powered? • What heights are you offering; <ul style="list-style-type: none"> ○ 10-12m ○ 14-18m ○ 20-24m 		

<u>Standard Equipment</u>		
<ul style="list-style-type: none"> Can all the standard equipment items in section 7 in the technical specification be met without any exclusions? 		

<u>Item 14: Electric pallet stacker</u>		
<u>Pallet stacker</u>		
<ul style="list-style-type: none"> What brand and model are the pallet stackers (technical brochure included)? Minimum hours of use? Minimum lifting capacity? Types of brakes the item has? Hydraulic lifting system? Safety mechanisms? 		
<u>Standard Equipment</u>		
<ul style="list-style-type: none"> Can all the standard equipment items in section 7 in the technical specification be met without any exclusions? 		

<u>Item 15: Manual pallet stacker</u>		
<u>Pallet stacker</u>		
<ul style="list-style-type: none"> What brand and model are the pallet stackers (technical brochure included)? Minimum lifting capacity? Types of brakes the item has? Hydraulic lifting system? Safety mechanisms? 		

<u>Item 16: Mobile Crane</u>		
<u>Vehicle items</u>		
<ul style="list-style-type: none"> What vehicle is being provided (technical catalogue shall be submitted)? GVM minimum of 7.5 tons (specify amount)? Engine minimum power and Euro requirements of 50kW, Euro 3-5 (specify amount)? Gear capabilities of two forward and one reverse or better? Rough terrain usability? Can all other criteria in Section 7, chapter 2 be met without any exclusions? 		

<p><u>Operating capacity</u></p> <ul style="list-style-type: none"> • Is Corten and Hardox/corrosive resistive steel or better used for the items? • What is the payload capacity (recommended 15 tons)? • Telescopic angle 40° to 60° (specify amount)? • Safety access ladders, walkways (lined with non-slip material) with safety railings? • Height/Reach of boom 15 meters or better? • Can Section 7, chapters 4 and 5 be met without any exclusions? 		
<p><u>Sub systems and miscellaneous items</u></p> <ul style="list-style-type: none"> • Can items in section 7, chapter 6-12 in the technical specification be met without any exclusions? 		
<p><u>Specifications and standards</u></p> <p>Are supplied products and system/s in accordance and recognized by the relevant SABS/SANS specification/standard?</p>		

Item 17: Asphalt broom/sweeper

<p align="center"><u>Item 17: Asphalt broom/sweeper</u></p>		
<p><u>Vehicle items</u></p> <ul style="list-style-type: none"> • What vehicle is being provided (technical catalogue shall be submitted)? • GVM minimum of 3 tons (specify amount)? • Engine minimum power and Euro requirements of 50 kW, Euro 3-5 (specify amount)? • Can all other criteria in Section 7, chapter 2 be met without any exclusions? 		
<p><u>Operating capacity</u></p> <ul style="list-style-type: none"> • Is Corten and Hardox/corrosive resistive steel or better used for the items? • What are the dimensions of the broom? <ul style="list-style-type: none"> ○ Width (2 400 mm) ○ Diameter (250 mm) • Articulation angle of 30° (specify amount)? • Safety access ladders, walkways (lined with non-slip material) with safety railings? • Soft broom option for beach sand application? • Collection hopper for debris option? • Can Section 7, chapters 4 and 5 be met without any exclusions? 		

<p><u>Sub systems and miscellaneous items</u></p> <ul style="list-style-type: none"> • Can items in section 7, chapter 6-12 in the technical specification be met without any exclusions? 		
<p><u>Specifications and standards</u></p> <p>Are supplied products and system/s in accordance and recognized by the relevant SABS/SANS specification/standard?</p>		

<u>Item 18: Quad Bike</u>		
<p><u>Unit items</u></p> <ul style="list-style-type: none"> • What ATV is being provided (technical catalogue shall be submitted)? • Load minimum capacity of 200 kg? (specify amount) • Engine minimum capacity of 600 cc? (specify amount) • Is the ATV for beach application with high anti-corrosive construction and protection? (specify details) • Automatic transmission? • AWD/4WD? • Can all other criteria in Section 7, chapter 3 be met without any exclusions? 		
<p><u>Specifications and standards</u></p> <p>Are supplied products and system/s in accordance and recognized by the relevant SABS/SANS specification/standard where applicable?</p>		

<u>Item 19: Rescue Ski with paddles</u>		
<p><u>Unit items</u></p> <ul style="list-style-type: none"> • What make and model Rescue Ski is being provided (technical catalogue shall be submitted)? • Load minimum capacity? (specify amount) • Lifesaving Rescue application? (supported in product catalogue) • Can the paddles be provided as specified? • Can all other criteria in Section 7, chapter 3 be met without any exclusions? 		
<p><u>Specifications and standards</u></p> <p>Are supplied products and system/s in accordance and recognized by the relevant SABS/SANS specification/standard where applicable?</p>		

<u>Item 20: Inflatable Rescue Boat with trailer</u>		
<u>Unit items</u>		
<ul style="list-style-type: none"> • What make and model IRB is being provided (technical catalogue shall be submitted)? • Is it for sea rescue application? (Provide proof in catalogue submitted) • Load minimum capacity? (specify amount) • Engine minimum capacity 50HP? (specify amount and technical catalogue shall be submitted) • Can the engine be configured with the options as requested? • In line with SAMSA for sea rescue craft and/or recognised for quality/construction bodies? (please specify) • Can all other criteria in Section 7, chapter 2 be met without any exclusions? (please provide an accessory catalogue for the items) • Is the trailer for beach application with high anti-corrosive construction and protection? (specify details) • Can the trailer be constructed as requested? 		
<u>Specifications and standards</u>		
Are supplied products and system/s in accordance and recognized by the relevant SABS/SANS/SAMSA specification/standard where applicable?		
<u>Item 21: Rescue Jet Ski/Wave runner with trailer</u>		
<u>Unit items</u>		
<ul style="list-style-type: none"> • What make and model Jet ski/Wave runner is being provided (technical catalogue shall be submitted)? • Is it for sea rescue application? (Provide proof in catalogue submitted) • Load minimum capacity of 2-3 persons? (specify amount) • Engine minimum capacity of 1250 cc? (specify amount) • In line with SAMSA for sea rescue craft and/or recognised for quality/construction bodies? (please specify) • Can all other criteria in Section 7, chapter 2 be met without any exclusions? (please provide an accessory catalogue for the items) • Is the trailer for beach application with high anti-corrosive construction and protection? (specify details) • Can the trailer be constructed as requested? 		
<u>Specifications and standards</u>		
Are supplied products and system/s in accordance and recognized by the relevant SABS/SANS/SAMSA specification/standard where applicable?		

<u>Item 22: Golf Cart</u>		
<u>Unit items</u>		
<ul style="list-style-type: none"> • What make and model Golf cart is being provided (technical catalogue shall be submitted)? • Load minimum capacity? (specify amount) • Electric motor capacity? (specify amount) • Speed and range? (specify amount) • Can all other criteria in Section 7, chapter 3 be met without any exclusions? 		
<u>Specifications and standards</u>		
Are supplied products and system/s in accordance and recognized by the relevant SABS/SANS specification/standard where applicable?		

<u>Item 23: Ride on Mowers</u>		
<u>Unit items</u>		
<ul style="list-style-type: none"> • What make and model mowers are being provided (technical catalogue shall be submitted for each of the below bid on)? <ul style="list-style-type: none"> ○ 23.1 2WD mower (1-1.1 m cutting width) ○ 23.2 2WD mower (1.2-1.3 m cutting width) ○ 23.3 2WD mower (1.3-1.6 m cutting width) ○ 23.4 AWD mower (1-1.1 m cutting width) ○ 23.5 AWD mower (1.2-1.3 m cutting width) ○ 23.6 AWD mower (1.3-1.6 m cutting width) ○ 23.7 Heavy duty mower (1.7 m or greater) • Can all other criteria in Section 7, chapter 3 be met without any exclusions? • Have you provided a catalogue of compatible attachments for the above mowers? • Have you considered all equipment that is required to couple, use and power the attachments? (indicate if this is included in the main mower or incorporated in the attachment) 		
<u>Specifications and standards</u>		
Are supplied products and system/s in accordance and recognized by the relevant SABS/SANS specification/standard where applicable?		

<u>Item 24: Electric Quad Bike</u>		
<u>Unit items</u>		
<ul style="list-style-type: none"> • What make and model ATV is being provided (technical catalogue shall be submitted)? • Load minimum capacity? (specify amount) • Electric motor capacity? (specify amount) • Speed and range? (specify amount) • Can all other criteria in Section 7, chapter 3 be met without any exclusions? 		
<u>Specifications and standards</u>		
Are supplied products and system/s in accordance and recognized by the relevant SABS/SANS specification/standard where applicable?		

<u>Item 25: Personal Transporter</u>		
<u>Unit items</u>		
<ul style="list-style-type: none"> • What make and model unit is being provided (technical catalogue shall be submitted)? • Load minimum capacity? (specify amount) • Electric motor capacity? (specify amount) • Speed and range? (specify amount) 		
<u>Specifications and standards</u>		
Are supplied products and system/s in accordance and recognized by the relevant SABS/SANS specification/standard where applicable?		

<u>Item 26: Front End Loader</u>		
<u>Vehicle items</u>		
<ul style="list-style-type: none"> • What vehicle is being provided (technical catalogue shall be submitted)? • GVM minimum of 15 tons (specify amount)? • Engine Euro rating and minimum power; Euro 3 and 130kW (specify amount)? • Gear capabilities of four forward and three reverse or better? • Can all other criteria in Section 7, chapter 2 be met without any exclusions? 		

<p><u>Operating capacity</u></p> <ul style="list-style-type: none"> • Is Corten and Hardox steel or better used for the bucket? • What is the volumetric and payload capacity (recommended 2.5-4 m³ and 4-6 tons)? • Tipping angle 40° (specify amount)? • Wear plates in bucket installed? (specify material and details) • Reversible cutting edge installed to the bucket? • Load monitoring system for bucket payload (specify details)? • Safety access ladders, walkways (lined with non-slip material) with safety railings? • Can Section 7, chapters 4 and 5 be met without any exclusions? 		
<p><u>Sub systems and miscellaneous items</u></p> <ul style="list-style-type: none"> • Can items in section 7, chapter 6-12 in the technical specification be met without any exclusions? 		
<p><u>Specifications and standards</u></p> <p>Are supplied products and system/s in accordance and recognized by the relevant SABS/SANS specification/standard?</p>		

<u>Item 27: Patrol Boat with trailer</u>		
<p><u>Unit items</u></p> <ul style="list-style-type: none"> • What make and model of boat is being provided (technical catalogue shall be submitted)? • Is it for protection/law enforcement application? (Provide proof in catalogue submitted) • Load minimum capacity? (specify amount) • Engine minimum capacity 250HP? (specify amount and technical catalogue shall be submitted) • Can the engine be configured with the options as requested? • In line with SAMSA for sea rescue craft and/or recognised for quality/construction bodies? (please specify) • Can all other criteria in Section 7, chapter 2 be met without any exclusions? (please provide an accessory catalogue for the items) • Is the trailer for the application with high anti-corrosive construction and protection? (specify details) • Can the trailer be constructed as requested? 		
<p><u>Specifications and standards</u></p> <p>Are supplied products and system/s in accordance and recognized by the relevant SABS/SANS/SAMSA specification/standard where applicable?</p>		

<u>Item 28: Shipping Container Loader</u>		
<u>Vehicle items</u>		
<ul style="list-style-type: none"> • What make and model vehicle is being provided (technical catalogue shall be submitted)? • Engine minimum euro rating (3)? • Can all other criteria in Section 7, chapter 2 be met without any exclusions? 		
<u>Operating capacity</u>		
<ul style="list-style-type: none"> • Is Corten and Hardox/corrosive resistive steel or better used for the spreader? • What is the shipping container size and payload capacity (recommended 20 and 40 foot and 40 tons)? • Safety access ladders, walkways (lined with non-slip material) with safety railings? • Automatic Fire suppression system? 		
<u>Sub systems and miscellaneous items</u>		
<ul style="list-style-type: none"> • Can items in section 7, chapter 6-12 in the technical specification be met without any exclusions? 		
<u>Specifications and standards</u>		
Are supplied products and system/s in accordance and recognized by the relevant SABS/SANS specification/standard?		

<u>Item 29: Pneumatic tyre roller</u>		
<u>Vehicle items</u>		
<ul style="list-style-type: none"> • What is the vehicle make and model (technical brochure included)? • and can criteria in Section 7, chapter 2, Item 29 be met without any exclusions? • Has the GVM (8 Tons) being met or bettered? (specify amount) • Has the ballast mass (20 Tons) being met or bettered? (specify amount) • Park and emergency braking? • Engine make, model, power ? (specify amount) • Transmission make, model and specifications? 		
<u>Application system:</u>		
<ul style="list-style-type: none"> • Four tyres front and rear? • Tyre specifications submitted? • Water sprinkler specifications submitted? 		

<ul style="list-style-type: none"> • Tyre pressure monitoring/inflating system specifications submitted? 		
<p><u>Sub systems and miscellaneous items</u></p> <ul style="list-style-type: none"> • Can items in section 7, Item 29, chapter 4-11 in the technical specification be met without any exclusions? 		
<p><u>Specifications and standards</u></p> <p>Are supplied products and system/s in accordance and recognised by the relevant SABS/SANS specification/standard?</p> <p>Have specifications in Section 7, Item 29, chapter 2, point 2.23 being met?</p>		

<u>Item 30.1 and 30.2: Electric Forklifts (3 and 5 Ton)</u>		
<p><u>Forklift</u></p> <ul style="list-style-type: none"> • What make and model are the forklifts (technical brochure included)? <ul style="list-style-type: none"> ○ 3 Ton ○ 5 Ton • Minimum hours of use? • What tyres are being supplied? • Supply of extension forks? 		
<p><u>Standard Equipment</u></p> <ul style="list-style-type: none"> • Can all the standard equipment items in section 7 in the technical specification be met without any exclusions? 		

SECTION 8: BILL OF QUANTITIES / SCHEDULE OF RATES / ACTIVITIES

Bidders shall provide pricing in the below options;

Where option A-C is denoted it shall be the complete unit (with the different Euro engines as choices if offered) including, accessories and all components and systems to complete the subsystems to provide a fully operational specialised unit.

Where attachments are requested please provide and note the coupling mechanisms that are required if not already included in the main unit price. Please note and state this as such in the Make and Model column also. Where other attachments are available please use the blank spaces to fill it in and quote a price.

All price quoted shall exclude value added tax (VAT).

<u>Item 1.1: Backhoe loader (TLB)</u>	Price per item	Make and Model
Unit		
Buckets		
Electrical systems (lights, reverse camera etc.)		
All relevant miscellaneous items and consumables.		
Delivery, licensing, homologation and commissioning.		
Item 1.1A: Complete vehicle (Euro 3) with buckets and customisation		
Item 1.1B: Complete vehicle (Euro 4) with buckets and customisation		
Item 1.1C: Complete vehicle (Euro 5) with buckets and customisation		
Spare set of tyres		
Implements;		
Earth Drills		
Auger		
Auger with an extension		
Auger for rocks		
Hammer with a set of chisels		
Screw torque head		
Trencher		

Mulcher		
Hedge Trimmer		
Stump Planer		
Concrete Mixer		
Crusher Bucket		
Log Splitter		
Pallet forks		
Broom		
Sludge pump		
Other:		

Maintenance for Item 1.1	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 1.2: Backhoe loader (TLB) with extendable boom</u>	Price per item	Make and Model
Unit		
Buckets		
Electrical systems (lights, reverse camera etc.)		
All relevant miscellaneous items and consumables.		
Delivery, licensing, homologation and commissioning.		
Item 1.2A: Complete vehicle (Euro 3) with buckets and customisation		
Item 1.2B: Complete vehicle (Euro 4) with buckets and customisation		
Item 1.2C: Complete vehicle (Euro 5) with buckets and customisation		
Spare set of tyres		

Implements;		
Earth Drills		
Auger		
Auger with an extension		
Auger for rocks		
Hammer with a set of chisels		
Screw torque head		
Trencher		
Mulcher		
Hedge Trimmer		
Stump Planer		
Concrete Mixer		
Crusher Bucket		
Log Splitter		
Pallet forks		
Broom		
Sludge pump		
Other:		

Maintenance for Item 1.2	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 2.1.1: 2WD Tractor with driver's canopy</u>	Price per item	Make and Model
Vehicle		
Electrical systems		
All relevant miscellaneous items and consumables.		
Delivery, licensing, homologation and commissioning.		
Item 2.1.1 A: Complete vehicle (Euro 3) with customisation		
Item 2.1.1 B: Complete vehicle (Euro 4) with customisation		
Item 2.1.1 C: Complete vehicle (Euro 5) with customisation		
Set of sensitive terrain wheels (rims and tyres) for stadiums and sports grounds application		
Set of wheels (rims and tyres) for beach application		
Spare set of all terrain tyres only (front and rear)		
Attachments:		
4.3.1 Rotary grass cutting		
4.3.2 Dual rotary grass cutting		
4.3.3 Roller mower		
4.3.4 Collection chutes and bags for 4.3.1-4.3.3		
4.4 Mowing collector		
4.5 Beach collector		
4.6 Coupling components		
4.7.1 Road clearance system with grass cutting flail;		
4.7.1.1 Flail, 5m crane and power pack		
4.7.1.2 Flail, 7m crane and power pack		
4.7.1.3 Flail, 10m crane and power pack		

4.7.2 Road clearance system with uneven/rural terrain flail;		
4.7.2.1 Flail, 5m crane and power pack		
4.7.2.2 Flail, 7m crane and power pack		
4.7.2.3 Flail, 10m crane and power pack		
4.7.3 Road clearance system with general purpose highway flail;		
4.7.3.1 Flail, 5m crane and power pack		
4.7.3.2 Flail, 7m crane and power pack		
4.7.3.3 Flail, 10m crane and power pack		
4.7.4 Road clearance aerial mounted camera and monitor for driver's cab		
4.8.1 Offset flail mower (minimum 1.5 m width)		
4.8.2 Offset flail mower (minimum 1.8 m width)		
4.8.3 Offset flail mower (minimum 2.0 m width)		
4.8.4 Offset flail mower (minimum 2.2 m width)		

Maintenance Schedule for Item 2.1.1	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 2.1.2: 2WD Tractor with fully enclosed driver's cab</u>	Price per item	Make and Model
Vehicle		
Electrical systems		

All relevant miscellaneous items and consumables.		
Delivery, licensing, homologation and commissioning.		
Item 2.1.2 A: Complete vehicle (Euro 3) with customisation		
Item 2.1.2 B: Complete vehicle (Euro 4) with customisation		
Item 2.1.2 C: Complete vehicle (Euro 5) with customisation		
Set of sensitive terrain wheels (rims and tyres) for stadiums and sports grounds application		
Set of wheels (rims and tyres) for beach application		
Spare set of all terrain tyres only (front and rear)		
Attachments:		
4.3.1 Rotary grass cutting		
4.3.2 Dual rotary grass cutting		
4.3.3 Roller mower		
4.3.4 Collection chutes and bags for 4.3.1-4.3.3		
4.4 Mowing collector		
4.5 Beach collector		
4.6 Coupling components		
4.7.1 Road clearance system with grass cutting flail;		
4.7.1.1 Flail, 5m crane and power pack		
4.7.1.2 Flail, 7m crane and power pack		
4.7.1.3 Flail, 10m crane and power pack		
4.7.2 Road clearance system with uneven/rural terrain flail;		
4.7.2.1 Flail, 5m crane and power pack		

4.7.2.2 Flail, 7m crane and power pack		
4.7.2.3 Flail, 10m crane and power pack		
4.7.3 Road clearance system with general purpose highway flail;		
4.7.3.1 Flail, 5m crane and power pack		
4.7.3.2 Flail, 7m crane and power pack		
4.7.3.3 Flail, 10m crane and power pack		
4.7.4 Road clearance aerial mounted camera and monitor for driver's cab		
4.8.1 Offset flail mower (minimum 1.5 m width)		
4.8.2 Offset flail mower (minimum 1.8 m width)		
4.8.3 Offset flail mower (minimum 2.0 m width)		
4.8.4 Offset flail mower (minimum 2.2 m width)		

Maintenance Schedule for Item 2.1.2	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

Item 2.2: 4WD Tractor	Price per item	Make and Model
Vehicle		
Electrical systems		
All relevant miscellaneous items and consumables.		
Delivery, licensing, homologation and commissioning.		
Item 2.2 A: Complete vehicle (Euro 3) with customisation		

Item 2.2 B: Complete vehicle (Euro 4) with customisation		
Item 2.2 C: Complete vehicle (Euro 5) with customisation		
Set of sensitive terrain wheels (rims and tyres) for stadiums and sports grounds application		
Set of wheels (rims and tyres) for beach application		
Spare set of all terrain tyres only (front and rear)		
Attachments:		
4.3.1 Rotary grass cutting		
4.3.2 Dual rotary grass cutting		
4.3.3 Roller mower		
4.3.4 Collection chutes and bags for 4.3.1-4.3.3		
4.4 Mowing collector		
4.5 Beach collector		
4.6 Coupling components		
4.7.1 Road clearance system with grass cutting flail;		
4.7.1.1 Flail, 5m crane and power pack		
4.7.1.2 Flail, 7m crane and power pack		
4.7.1.3 Flail, 10m crane and power pack		
4.7.2 Road clearance system with uneven/rural terrain flail;		
4.7.2.1 Flail, 5m crane and power pack		
4.7.2.2 Flail, 7m crane and power pack		
4.7.2.3 Flail, 10m crane and power pack		

4.7.3 Road clearance system with general purpose highway flail;		
4.7.3.1 Flail, 5m crane and power pack		
4.7.3.2 Flail, 7m crane and power pack		
4.7.3.3 Flail, 10m crane and power pack		
4.7.4 Road clearance aerial mounted camera and monitor for driver's cab		
4.8.1 Mouldboard Plough (3 furrow)		
4.8.2 Mouldboard Plough (4 furrow)		
4.8.3 Mouldboard Plough (5 furrow)		
4.8.4 Wear Plate for plough board (per/each furrow)		
4.9.1 Disc Plough (3 disc)		
4.9.2 Disc Plough (4 disc)		
4.9.3 Disc Plough (5 disc)		
4.9.4 High tensile steel disc option (per/each disc)		
4.10.1 Hydraulic reversible plough (3 furrow)		
4.10.2 Hydraulic reversible plough (4 furrow)		
4.10.3 Hydraulic reversible plough (5 furrow)		
4.10.4 Wear Plate for plough (per/each furrow)		
4.11.1 Mouldboard Ridger (3 ridger)		
4.11.2 Mouldboard Ridger (4 ridger)		

4.11.3 Mouldboard Ridger (5 ridger)		
4.11.4 Wear Plate for furrow board (per/each furrow)		
4.12.1 Ripper (3 tine)		
4.12.2 Ripper with crumbler (3 tine)		
4.12.3 Ripper (4 tine)		
4.12.4 Ripper with crumbler (4 tine)		
4.12.5 Ripper (5 tine)		
4.12.6 Ripper with crumbler (5 tine)		
4.12.7 High tensile steel tine option (per/each tine)		
4.13.1 Bed former with rotovator		
4.13.2 Option of a 3 furrow cultivator for Item 4.13.1		
4.14.1 6-8 meter boom sprayer with tank and pump		
4.14.2 10-12 meter boom sprayer with tank and pump		
4.15.1 Disc Harrow (minimum 22 disc and 2.5m width)		
4.15.2 Disc Harrow (minimum 28 disc and 3m width)		
4.15.3 High tensile steel disc option (per/each disc)		
4.16.1 Two Row planter		
4.16.2 Three Row planter		
4.16.3 Four Row planter		

4.17.1 Offset flail mower (minimum 1.5 m width)		
4.17.2 Offset flail mower (minimum 1.8 m width)		
4.17.3 Offset flail mower (minimum 2.0 m width)		
4.17.4 Offset flail mower (minimum 2.2 m width)		

Maintenance Schedule for Item 2.2	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

Item 2.3: High Powered 4WD Tractor	Price per item	Make and Model
Vehicle		
Electrical systems		
All relevant miscellaneous items and consumables.		
Delivery, licensing, homologation and commissioning.		
Item 2.3 A: Complete vehicle (Euro 3) with customisation		
Item 2.3 B: Complete vehicle (Euro 4) with customisation		
Item 2.3 C: Complete vehicle (Euro 5) with customisation		
Set of sensitive terrain wheels (rims and tyres) for stadiums and sports grounds application		
Set of wheels (rims and tyres) for beach application		
Spare set of all terrain tyres only (front and rear)		
Attachments:		
4.3.1 Rotary grass cutting		
4.3.2 Dual rotary grass cutting		
4.3.3 Roller mower		

4.3.4 Collection chutes and bags for 4.3.1-4.3.3		
4.4 Mowing collector		
4.5 Beach collector		
4.6 Coupling components		
4.7.1 Road clearance system with grass cutting flail;		
4.7.1.1 Flail, 5m crane and power pack		
4.7.1.2 Flail, 7m crane and power pack		
4.7.1.3 Flail, 10m crane and power pack		
4.7.2 Road clearance system with uneven/rural terrain flail;		
4.7.2.1 Flail, 5m crane and power pack		
4.7.2.2 Flail, 7m crane and power pack		
4.7.2.3 Flail, 10m crane and power pack		
4.7.3 Road clearance system with general purpose highway flail;		
4.7.3.1 Flail, 5m crane and power pack		
4.7.3.2 Flail, 7m crane and power pack		
4.7.3.3 Flail, 10m crane and power pack		
4.7.4 Road clearance aerial mounted camera and monitor for driver's cab		
4.8.1 Mouldboard Plough (3 furrow)		
4.8.2 Mouldboard Plough (4 furrow)		

4.8.3 Mouldboard Plough (5 furrow)		
4.8.4 Wear Plate for plough board (per/each furrow)		
4.9.1 Disc Plough (3 disc)		
4.9.2 Disc Plough (4 disc)		
4.9.3 Disc Plough (5 disc)		
4.9.4 High tensile steel disc option (per/each disc)		
4.10.1 Hydraulic reversible plough (3 furrow)		
4.10.2 Hydraulic reversible plough (4 furrow)		
4.10.3 Hydraulic reversible plough (5 furrow)		
4.10.4 Wear Plate for plough (per/each furrow)		
4.11.1 Mouldboard Ridger (3 ridger)		
4.11.2 Mouldboard Ridger (4 ridger)		
4.11.3 Mouldboard Ridger (5 ridger)		
4.11.4 Wear Plate for furrow board (per/each furrow)		
4.12.1 Ripper (3 tine)		
4.12.2 Ripper with crumbler (3 tine)		
4.12.3 Ripper (4 tine)		
4.12.4 Ripper with crumbler (4 tine)		
4.12.5 Ripper (5 tine)		
4.12.6 Ripper with crumbler (5 tine)		

4.12.7 High tensile steel tine option (per/each tine)		
4.13.1 Bed former with rotovator		
4.13.2 Option of a 3 furrow cultivator for Item 4.13.1		
4.14.1 6-8 meter boom sprayer with tank and pump		
4.14.2 10-12 meter boom sprayer with tank and pump		
4.15.1 Disc Harrow (minimum 22 disc and 2.5m width)		
4.15.2 Disc Harrow (minimum 28 disc and 3m width)		
4.15.3 High tensile steel disc option (per/each disc)		
4.16.1 Two Row planter		
4.16.2 Three Row planter		
4.16.3 Four Row planter		
4.17.1 Offset flail mower (minimum 1.5 m width)		
4.17.2 Offset flail mower (minimum 1.8 m width)		
4.17.3 Offset flail mower (minimum 2.0 m width)		
4.17.4 Offset flail mower (minimum 2.2 m width)		

Maintenance Schedule for Item 2.3	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 2.4.1: Electric 2WD Tractor with driver's canopy</u>	Price per item	Make and Model
Vehicle		
Electrical systems		
All relevant miscellaneous items and consumables.		
Delivery, licensing, homologation and commissioning.		
Item 2.4.1: Complete vehicle with customisation		
Set of sensitive terrain wheels (rims and tyres) for stadiums and sports grounds application		
Set of wheels (rims and tyres) for beach application		
Spare set of all terrain tyres only (front and rear)		
Attachments:		
4.3.1 Rotary grass cutting		
4.3.2 Dual rotary grass cutting		
4.3.3 Roller mower		
4.3.4 Collection chutes and bags for 4.3.1-4.3.3		
4.4 Mowing collector		
4.5 Beach collector		
4.6 Coupling components		
4.7.1 Road clearance system with grass cutting flail;		
4.7.1.1 Flail, 5m crane and power pack		
4.7.1.2 Flail, 7m crane and power pack		
4.7.1.3 Flail, 10m crane and power pack		
4.7.2 Road clearance system with uneven/rural terrain flail;		

4.7.2.1 Flail, 5m crane and power pack		
4.7.2.2 Flail, 7m crane and power pack		
4.7.2.3 Flail, 10m crane and power pack		
4.7.3 Road clearance system with general purpose highway flail;		
4.7.3.1 Flail, 5m crane and power pack		
4.7.3.2 Flail, 7m crane and power pack		
4.7.3.3 Flail, 10m crane and power pack		
4.7.4 Road clearance aerial mounted camera and monitor for driver's cab		
4.8.1 Offset flail mower (minimum 1.5 m width)		
4.8.2 Offset flail mower (minimum 1.8 m width)		
4.8.3 Offset flail mower (minimum 2.0 m width)		
4.8.4 Offset flail mower (minimum 2.2 m width)		

Maintenance Schedule for Item 2.4.1	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 2.4.2: Electric 2WD Tractor with enclosed driver's cab</u>	Price per item	Make and Model
Vehicle		
Electrical systems		
All relevant miscellaneous items and consumables.		
Delivery, licensing, homologation and commissioning.		

Item 2.4.2: Complete vehicle with customisation		
Set of sensitive terrain wheels (rims and tyres) for stadiums and sports grounds application		
Set of wheels (rims and tyres) for beach application		
Spare set of all terrain tyres only (front and rear)		
Attachments:		
4.3.1 Rotary grass cutting		
4.3.2 Dual rotary grass cutting		
4.3.3 Roller mower		
4.3.4 Collection chutes and bags for 4.3.1-4.3.3		
4.4 Mowing collector		
4.5 Beach collector		
4.6 Coupling components		
4.7.1 Road clearance system with grass cutting flail;		
4.7.1.1 Flail, 5m crane and power pack		
4.7.1.2 Flail, 7m crane and power pack		
4.7.1.3 Flail, 10m crane and power pack		
4.7.2 Road clearance system with uneven/rural terrain flail;		
4.7.2.1 Flail, 5m crane and power pack		
4.7.2.2 Flail, 7m crane and power pack		
4.7.2.3 Flail, 10m crane and power pack		
4.7.3 Road clearance system with general purpose highway flail;		

4.7.3.1 Flail, 5m crane and power pack		
4.7.3.2 Flail, 7m crane and power pack		
4.7.3.3 Flail, 10m crane and power pack		
4.7.4 Road clearance aerial mounted camera and monitor for driver's cab		
4.8.1 Offset flail mower (minimum 1.5 m width)		
4.8.2 Offset flail mower (minimum 1.8 m width)		
4.8.3 Offset flail mower (minimum 2.0 m width)		

Maintenance Schedule for Item 2.4.2	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 2.4.3: Electric 4WD Tractor with enclosed driver's cab</u>	Price per item	Make and Model
Vehicle		
Electrical systems		
All relevant miscellaneous items and consumables.		
Delivery, licensing, homologation and commissioning.		
Item 2.4.3: Complete vehicle with customisation		
Set of sensitive terrain wheels (rims and tyres) for stadiums and sports grounds application		
Set of wheels (rims and tyres) for beach application		
Spare set of all terrain tyres only (front and rear)		
Attachments:		
4.3.1 Rotary grass cutting		

4.3.2 Dual rotary grass cutting		
4.3.3 Roller mower		
4.3.4 Collection chutes and bags for 4.3.1-4.3.3		
4.4 Mowing collector		
4.5 Beach collector		
4.6 Coupling components		
4.7.1 Road clearance system with grass cutting flail;		
4.7.1.1 Flail, 5m crane and power pack		
4.7.1.2 Flail, 7m crane and power pack		
4.7.1.3 Flail, 10m crane and power pack		
4.7.2 Road clearance system with uneven/rural terrain flail;		
4.7.2.1 Flail, 5m crane and power pack		
4.7.2.2 Flail, 7m crane and power pack		
4.7.2.3 Flail, 10m crane and power pack		
4.7.3 Road clearance system with general purpose highway flail;		
4.7.3.1 Flail, 5m crane and power pack		
4.7.3.2 Flail, 7m crane and power pack		
4.7.3.3 Flail, 10m crane and power pack		
4.7.4 Road clearance aerial mounted camera and monitor for driver's cab		

4.8.1 Offset flail mower (minimum 1.5 m width)		
4.8.2 Offset flail mower (minimum 1.8 m width)		
4.8.3 Offset flail mower (minimum 2.0 m width)		

Maintenance Schedule for Item 2.4.3	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

Item 3.1: Small excavator	Price per item	Make and Model
Vehicle		
Bucket		
Electrical systems (lights, cameras etc.)		
All relevant miscellaneous items and consumables.		
Delivery, licensing, homologation and commissioning.		
Item 3.1A: Complete vehicle (Euro 3) with bucket and customisation		
Item 3.1B: Complete vehicle (Euro 4) with bucket and customisation		
Item 3.1C: Complete vehicle (Euro 5) with bucket and customisation		
Spare set of tracks		
Rubber tracks option for use on beach sand or river beds		
Implements;		
Earth Drills		
Auger		
Auger with an extension		
Auger for rocks		
Hammer with a set of chisels		

Screw torque head		
Trencher		
Mulcher		
Hedge Trimmer		
Stump Planer		
Concrete Mixer		
Crusher Bucket		
Log Splitter		
Pallet forks		
Broom		
Sludge pump		
Other:		

Maintenance Schedule for Item 3.1	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 3.2: Medium excavator</u>	Price per item	Make and Model
Vehicle		
Bucket		
Electrical systems (lights, cameras etc.)		
All relevant miscellaneous items and consumables.		
Delivery, licensing, homologation and commissioning.		
Item 3.2A: Complete vehicle (Euro 3) with bucket and customisation		
Item 3.2B: Complete vehicle (Euro 4) with bucket and customisation		

Item 3.2C: Complete vehicle (Euro 5) with bucket and customisation		
Spare set of tracks		
Rubber tracks option for use on beach sand or river beds		
Implements;		
Earth Drills		
Auger		
Auger with an extension		
Auger for rocks		
Hammer with a set of chisels		
Screw torque head		
Trencher		
Mulcher		
Hedge Trimmer		
Stump Planer		
Concrete Mixer		
Crusher Bucket		
Log Splitter		
Pallet forks		
Broom		
Sludge pump		
Other:		

Maintenance Schedule for Item 3.2	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 3.3: Large excavator</u>	Price per item	Make and Model
Vehicle		
Bucket		
Electrical systems (lights, cameras etc.)		
All relevant miscellaneous items and consumables.		
Delivery, licensing, homologation and commissioning.		
Item 3.3A: Complete vehicle (Euro 3) with bucket and customisation		
Item 3.3B: Complete vehicle (Euro 4) with bucket and customisation		
Item 3.3C: Complete vehicle (Euro 5) with bucket and customisation		
Spare set of tracks		
Rubber tracks option for use on beach sand or river beds		
Implements;		
Earth Drills		
Auger		
Auger with an extension		
Auger for rocks		
Hammer with a set of chisels		
Screw torque head		
Trencher		
Mulcher		
Hedge Trimmer		
Stump Planer		
Concrete Mixer		
Crusher Bucket		

Log Splitter		
Pallet forks		
Broom		
Sludge pump		
Other:		

Maintenance Schedule for Item 3.3	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

Item 4: Skid loader	Price per item	Make and Model
Vehicle		
Bucket		
Electrical systems (lights, cameras etc.)		
All relevant miscellaneous items and consumables.		
Delivery, licensing, homologation and commissioning.		
Item 4A: Complete vehicle (Euro 3) with bucket and customisation		
Item 4B: Complete vehicle (Euro 4) with bucket and customisation		
Item 4C: Complete vehicle (Euro 5) with bucket and customisation		
Set of sensitive terrain wheels (rims and tyres) for stadiums and sports grounds application		
Set of wheels (rims and tyres) for beach application		
Set of tracks option for use on beach sand or river beds		
Spare set of all terrain tyres only (front and rear)		
4.1 Attachments;		
4.1.1 Skid hoe		

4.1.2 Auger		
4.1.3 Grapple		
4.1.4 Tree spade		
4.1.5 Stump grinder		
4.1.6 Beach cleaner or snow blower converted for use with beach sand		
4.1.7 Agricultural rake/sower		
4.1.8 Soil roller		
4.1.9 Vibratory roller		
4.1.10 Compactor		
4.1.11 Brush mower		
4.1.12 Hydraulic breaker		
4.1.13 Sweeper		
4.1.14 Plow		
4.1.15 Trencher		
4.1.16 Pavement/Road miller		
4.1.17 Asphalt broom/sweeper		
4.1.18 Wood chipper		
4.1.19 Rotary cutter		
4.1.20 Mower		
4.1.21 Grader		

Maintenance Schedule for Item 4	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 5: Site dumper</u>	Price per item	Make and Model
Vehicle		
Load box		
Electrical systems (lights etc.)		
All relevant miscellaneous items and consumables.		
Delivery, licensing, homologation and commissioning.		
Item 5A: Complete vehicle (Euro 3) and customisation		
Item 5B: Complete vehicle (Euro 4) and customisation		
Item 5C: Complete vehicle (Euro 5) and customisation		
Set of sensitive terrain wheels (rims and tyres) for stadiums and sports grounds application		
Set of wheels (rims and tyres) or tracks for beach application		
Spare set of all terrain tyres only (front and rear)		

Maintenance Schedule for Item 5	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 6.1: Engine driven beach cleaning vehicle (small)</u>	Price per item	Make and Model
Unit		
All relevant miscellaneous items and consumables.		
Delivery and commissioning.		
Item 6.1: Complete unit with items		
Spare set of wheels/tracks		
Implements;		
Rake		

Collection Hopper		
Tracks		
Other:		

Maintenance Schedule for Item 6.1	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 6.2: Engine driven beach cleaning vehicle (medium)</u>	Price per item	Make and Model
Unit		
All relevant miscellaneous items and consumables.		
Delivery and commissioning.		
Item 6.2: Complete unit with items		
Spare set of wheels/tracks		
Implements;		
Rake		
Collection Hopper		
Tracks		
Other:		

Maintenance Schedule for Item 6.2	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 6.3: Engine driven beach cleaning vehicle (large)</u>	Price per item	Make and Model
Unit		

All relevant miscellaneous items and consumables.		
Delivery and commissioning.		
Item 6.3: Complete unit with items		
Spare set of wheels/tracks		
Implements;		
Rake		
Collection Hopper		
Tracks		
Other:		

Maintenance Schedule for Item 6.3	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 6.4: Electric driven beach cleaning vehicle</u>	Price per item	Make and Model
Unit		
All relevant miscellaneous items and consumables.		
Delivery and commissioning.		
Item 6.4: Complete unit with items		
Spare set of wheels/tracks		
Implements;		
Rake		
Collection Hopper		
Tracks		
Other:		

Maintenance Schedule for Item 6.4	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 6.5: Electric driven beach cleaning robot/remote vehicle</u>	Price per item	Make and Model
Unit		
All relevant miscellaneous items and consumables.		
Delivery and commissioning.		
Item 6.5: Complete unit with items		
Spare set of wheels/tracks		
Implements;		
Rake		
Collection Hopper		
Tracks		
Other:		

Maintenance Schedule for Item 6.5	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 6.6: Beach Cleaning Implement for a tractor/plant equipment</u>	Price per item	Make and Model
Main Unit		
All relevant miscellaneous items and consumables.		
Delivery and commissioning.		
Item 6.6: Complete unit with items		

Spare set of wheels/tracks		
Implements;		
Rake		
Collection Hopper		
Tracks		
Other:		

Maintenance Schedule for Item 6.6	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 7.1: Diesel Forklift 3-Ton</u>	Price per item	Make and Model
Forklift		
Set of extension forks		
Annual safety inspection and load testing with report and certificate within the standard warranty period		
Delivery and commissioning		
Item 7.1: Total		
Spare set of tyres		

<u>Item 7.2: Diesel Forklift 5-Ton</u>	Price per item	Make and Model
Forklift		
Set of extension forks		
Annual safety inspection and load testing with report and certificate within the standard warranty period		
Delivery and commissioning		
Item 7.2: Total		

Spare set of tyres		
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<u>Item 7.3: Diesel Forklift 7-Ton</u>	Price per item	Make and Model
Forklift		
Set of extension forks		
Annual safety inspection and load testing with report and certificate within the standard warranty period		
Delivery and commissioning		
Item 7.3: Total		
Spare set of tyres		

<u>Item 7.4: Rough Terrain Diesel Forklift</u>	Price per item	Make and Model
Forklift		
Set of extension forks		
Annual safety inspection and load testing with report and certificate within the standard warranty period		
Delivery and commissioning		
Item 7.4: Total		
Spare set of tyres		

Maintenance Schedule for Item 7.1-7.4	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 8.1: Milling Machine:</u>	Price per item	Make and Model
Primary vehicle/unit		
Vehicle accessories (as specified in Section 7, chapter 2)		
Electrical systems (additional lights etc.)		
Oil cooler (if necessary)		
Fuel management system and heat sensing device.		
Fire suppression system		
Finishing, relevant consumables and hydraulic oil.		
Delivery, training and commissioning.		
Item 8.1.1: Complete unit (Euro 3) excl. VAT.		
Item 8.1.2: Complete unit (Euro 4) excl. VAT.		
Item 8.1.3: Complete unit (Euro 5) excl. VAT.		
Spare set of tracks		
Complete set of road transport wheels		
Option of a Lowbed semi-trailer for a milling machine including delivery and licence		

Maintenance Schedule for Item 8.1	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 8.2: Cold Planar Machine:</u>	Price per item	Make and Model
Primary vehicle/unit		
Vehicle accessories (as specified in Section 7, chapter 2)		
Electrical systems (additional lights etc.)		

Oil cooler (if necessary)		
Fuel management system and heat sensing device.		
Fire suppression system		
Finishing, relevant consumables and hydraulic oil.		
Delivery, training and commissioning.		
Item 8.2.1: Complete unit (Euro 3) excl. VAT.		
Item 8.2.2: Complete unit (Euro 4) excl. VAT.		
Item 8.2.3: Complete unit (Euro 5) excl. VAT.		
Spare set of tracks		
Complete set of road transport wheels		
Option of a Lowbed semi-trailer for a cold planar including delivery and licence		

Maintenance Schedule for Item 8.2	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 9.1: Electric reach truck</u>	Price per item	Make and Model
Reach truck and charger		
Annual safety inspection and load testing with report and certificate within the standard warranty period		
Delivery and commissioning		
Item 9.1: Total		
Spare set of tyres		
Spare charger		
Spare set of batteries		

<u>Item 9.2: Electric Extended reach truck</u>	Price per item	Make and Model
Extended reach truck and charger		
Annual safety inspection and load testing with report and certificate within the standard warranty period		
Delivery and commissioning		
Item 9.2: Total		
Spare set of tyres		
Spare charger		
Spare set of batteries		

Maintenance Schedule for Item 9.1-9.2	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 10.1: Vibratory smooth roller</u>	Price per item	Make and Model
Unit		
Smooth roller/drum		
Levelling blade (if available)		
Electrical systems (lights, rear camera etc.)		
All relevant miscellaneous items and consumables.		
Delivery, training, licensing, homologation and commissioning.		
Item 10.1A: Complete vehicle (Euro 3) with roller and customisation		
Item 10.1B: Complete vehicle (Euro 4) with roller and customisation		
Item 10.1C: Complete vehicle (Euro 5) with roller and customisation		
Spare set of tyres		

Maintenance Schedule for Item 10.1	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 10.2: Vibratory padfoot roller</u>	Price per item	Make and Model
Unit		
Padfoot roller/drum with smooth metal cover for drum		
Levelling blade (if available)		
Electrical systems (lights, rear camera etc.)		
Automatic fire suppression system		
All relevant miscellaneous items and consumables.		
Delivery, training, licensing, homologation and commissioning.		
Item 10.2A: Complete vehicle (Euro 3) with roller and customisation		
Item 10.2B: Complete vehicle (Euro 4) with roller and customisation		
Item 10.2C: Complete vehicle (Euro 5) with roller and customisation		
Spare set of tyres		

Maintenance Schedule for Item 10.2	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 10.3: Tandem roller</u>	Price per item	Make and Model
Unit		
Rollers		
Levelling blade (if available)		

Electrical systems (lights, rear camera etc.)		
Automatic fire suppression system		
All relevant miscellaneous items and consumables.		
Delivery, training, licensing, homologation and commissioning.		
Item 10.3A: Complete vehicle (Euro 3) with rollers and customisation		
Item 10.3B: Complete vehicle (Euro 4) with rollers and customisation		
Item 10.3C: Complete vehicle (Euro 5) with rollers and customisation		
Spare set of Rollers		

Maintenance Schedule for Item 10.3	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

Item 11: Asphalt Road Paver	Price per item	Make and Model
Vehicle/Unit		
Vehicle accessories (as specified in Section 7, chapter 2)		
Close coupled power take off (PTO) unit		
Electrical systems (additional lights, camera, monitor)		
Oil cooler (if necessary)		
Fuel management system and heat sensing device.		
Fire suppression system		
Finishing, relevant consumables and hydraulic oil.		
Delivery, training and commissioning.		
Item 11.1: Complete unit (Euro 3) excl. VAT.		
Item 11.2: Complete unit (Euro 4) excl. VAT.		

Item 11.3: Complete unit (Euro 5) excl. VAT.		
Spare set of tracks		
Complete set of road transport wheels		
Option of a Lowbed semi-trailer for an asphalt paver including delivery and licence		

Maintenance Schedule for Item 11	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 12.1: Landfill Grader</u>	Price per item	Make and Model
Landfill Motor Grader		
Motor Grader accessories		
Front Blade		
Rippers		
Scarifier		
Hydraulic system (pump, tank, cylinder/s, valves, filters, piping and accessories)		
Hydraulic controls		
Power take off (PTO) unit		
Electrical systems (lights, camera, monitor, etc.)		
Oil cooler (if necessary)		
Fuel management system and heat sensing device.		
Automatic Fire suppression system		
Finishing, relevant consumables and hydraulic oil.		
Delivery, training, licensing, homologation and commissioning.		
Item 12.1A: Complete vehicle (Euro 3) and customisation		

Item 12.1B: Complete vehicle (Euro 4) and customisation		
Item 12.1C: Complete vehicle (Euro 5) and customisation		
Extra width blade with levelling system		
Set of tracks option for use on beach sand or river beds		
Spare set of tyres		

Maintenance Schedule for Item 12.1	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 12.2: Asphalt Grader</u>	Price per item	Make and Model
Landfill Motor Grader		
Motor Grader accessories		
Front Blade		
Rippers		
Scarifier		
Hydraulic system (pump, tank, cylinder/s, valves, filters, piping and accessories)		
Hydraulic controls		
Power take off (PTO) unit		
Electrical systems (lights, camera, monitor, etc.)		
Oil cooler (if necessary)		
Fuel management system and heat sensing device.		
Automatic Fire suppression system		
Finishing, relevant consumables and hydraulic oil.		
Delivery, training, licensing, homologation and commissioning.		

Item 12.2A: Complete vehicle (Euro 3) and customisation		
Item 12.2B: Complete vehicle (Euro 4) and customisation		
Item 12.2C: Complete vehicle (Euro 5) and customisation		
Extra width blade with levelling system		
Set of tracks option for use on beach sand or river beds		
Spare set of tyres		

Maintenance Schedule for Item 12.2	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 13.1: Self powered Aerial/Scissors Platform 10-12m</u>	Price per item	Make and Model
Platform unit		
Set of safety harnesses		
Annual safety inspection and load testing with report and certificate within the standard warranty period		
Delivery, training and commissioning		
Item 13.1: Total		
Spare set of tyres/tracks		
Replacement battery/batteries (if electric powered)		
Replacement charger (if electric powered)		

Maintenance Schedule for Item 13.1	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 13.2: Self powered Aerial/Scissors Platform 14-18m</u>	Price per item	Make and Model

Platform unit		
Set of safety harnesses		
Annual safety inspection and load testing with report and certificate within the standard warranty period		
Delivery, training and commissioning		
Item 13.2: Total		
Spare set of tyres/tracks		
Replacement battery/batteries (if electric powered)		
Replacement charger (if electric powered)		

Maintenance Schedule for Item 13.2	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 13.3: Self powered Aerial/Scissors Platform 20-24m</u>	Price per item	Make and Model
Platform unit		
Set of safety harnesses		
Annual safety inspection and load testing with report and certificate within the standard warranty period		
Delivery, training and commissioning		
Item 13.3: Total		
Spare set of tyres/tracks		
Replacement battery/batteries (if electric powered)		
Replacement charger (if electric powered)		

Maintenance Schedule for Item 13.3	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 14: Electric pallet stacker</u>	Price per item	Make and Model
Electric pallet stacker		
Battery and charger		
Annual safety inspection and load testing with report and certificate within the standard warranty period		
Delivery and commissioning		
Item 14: Total		

Maintenance Schedule for Item 14	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 15: Manual pallet stacker</u>	Price per item	Make and Model
Manual Pallet stacker		
Annual safety inspection and load testing with report and certificate within the standard warranty period		
Delivery and commissioning		
Item 15: Total		

Maintenance Schedule for Item 15	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 16: Mobile Crane</u>	Price per item	Make and Model
Unit		
Crane hook and lifting equipment		
Electrical systems (lights, reverse camera etc.)		

All relevant miscellaneous items and consumables.		
Delivery, licensing, homologation and commissioning.		
Item 16A: Complete vehicle (Euro 3) and customisation		
Item 16B: Complete vehicle (Euro 4) and customisation		
Item 16C: Complete vehicle (Euro 5) and customisation		
Spare set of tyres		

Maintenance Schedule for Item 16	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

Item 17: Asphalt broom/sweeper	Price per item	Make and Model
Unit		
Asphalt Broom		
Electrical systems (lights, reverse camera etc.)		
Hopper/collector (if available as an option)		
All relevant miscellaneous items and consumables.		
Delivery, licensing, homologation and commissioning.		
Item 17A: Complete vehicle (Euro 3) and customisation		
Item 17B: Complete vehicle (Euro 4) and customisation		
Item 17C: Complete vehicle (Euro 5) and customisation		
Soft broom option for beach sand		
Spare set of tyres		

Maintenance Schedule for Item 17	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
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Service provider name:			
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<u>Item 18: Quad Bike</u>	Price per item	Make and Model
Main unit		
Accessories (lights, fire extinguisher, solar panel, jump start receptacle, charge socket etc.)		
Spare wheel		
Delivery and commissioning		
Item 18: Total		
Spare set of tyres		
Set of wheels (tyres and rims) for all terrain application		
Trailer for quad bike with delivery, licensing and homologation		

Maintenance Schedule for Item 18	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 19: Rescue Ski with paddles</u>	Price per item	Make and Model
Rescue ski		
Accessories (protective/wear pads, first aid kit, life jackets, repair kit etc.)		
Paddles <ul style="list-style-type: none"> • Standard • Performance 		
Delivery and commissioning		
Item 19: Total		

Maintenance Schedule for Item 19	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT

Service provider name:			
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<u>Item 20: Inflatable rescue boat with trailer</u>	Price per item	Make and Model
IRB		
Outboard motor		
Accessories (buoyancy aid, first aid kit, speakers and microphone, solar panel, lights, PFDs etc.)		
Delivery and commissioning (please include any registration fees that maybe required for SAMSA)		
Item 20: Total		
Trailer with delivery, licensing and homologation		

Maintenance Schedule for Item 20	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 21: Rescue jet ski/wave runner with trailer</u>	Price per item	Make and Model
Jet Ski/Wave runner main unit		
Rescue sleds <ul style="list-style-type: none"> • Rigid • Inflatable with pumps (12v and hand operated) 		
Accessories (buoyancy aid, first aid kit, speakers and microphone, solar panel, jump start receptacle, strobe light, tow rope etc.)		
Delivery and commissioning (please include any registration fees that maybe required for SAMSA)		
Item 21: Total		
Trailer with delivery, licensing and homologation		

Maintenance Schedule for Item 21	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

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Item 22: Golf Cart	Price per item	Make and Model
Main unit with batteries and charger		
Accessories (lights, fire extinguisher, solar panel, charge socket etc.)		
Spare wheel		
Delivery and commissioning		
Item 22: Total		
Trailer for golf cart with delivery, licensing and homologation		

Maintenance Schedule for Item 22	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

Item 23.1: 2WD Ride on Mower (1-1.1m cutting width)	Price per item	Make and Model
Main unit		
Accessories (lights, fire extinguisher, solar panel, etc.)		
Spare wheel		
Delivery and commissioning		
Item 23.1: Total		
Spare/replacement blade for lawnmower		
Set of wheels for lawnmower		
Attachments;		
23.1.1 Collector		
23.1.2 Combi Cutting deck		

23.1.3 Edge/Side trimmer		
23.1.4 Broom		
23.1.5 Flail Mower		
23.1.6 Gravel Harrow		
23.1.7 Rake		

Maintenance Schedule for Item 23.1	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 23.2: 2WD Ride on Mower (1.2-1.3m cutting width)</u>	Price per item	Make and Model
Main unit		
Accessories (lights, fire extinguisher, solar panel, etc.)		
Spare wheel		
Delivery and commissioning		
Item 23.2: Total		
Spare/replacement blade for lawnmower		
Set of wheels for lawnmower		
Attachments;		
23.2.1 Collector		
23.2.2 Combi Cutting deck		
23.2.3 Edge/Side trimmer		
23.2.4 Broom		
23.2.5 Flail Mower		
23.2.6 Gravel Harrow		

23.2.7 Rake		
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Maintenance Schedule for Item 23.2	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 23.3: 2WD Ride on Mower (1.3-1.6m cutting width)</u>	Price per item	Make and Model
Main unit		
Accessories (lights, fire extinguisher, solar panel, etc.)		
Spare wheel		
Delivery and commissioning		
Item 23.3: Total		
Spare/replacement blade for lawnmower		
Set of wheels for lawnmower		
Attachments;		
23.3.1 Collector		
23.3.2 Combi Cutting deck		
23.3.3 Edge/Side trimmer		
23.3.4 Broom		
23.3.5 Flail Mower		
23.3.6 Gravel Harrow		
23.3.7 Rake		
23.3.8 Enclosed Cab		

Maintenance Schedule for Item 23.3	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
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Service provider name:			
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<u>Item 23.4: AWD Ride on Mower (1-1.1m cutting width)</u>	Price per item	Make and Model
Main unit		
Accessories (lights, fire extinguisher, solar panel, etc.)		
Spare wheel		
Delivery and commissioning		
Item 23.4: Total		
Spare/replacement blade for lawnmower		
Set of wheels for lawnmower		
Attachments;		
23.4.1 Collector		
23.4.2 Combi Cutting deck		
23.4.3 Edge/Side trimmer		
23.4.4 Broom		
23.4.5 Flail Mower		
23.4.6 Gravel Harrow		
23.4.7 Rake		

Maintenance Schedule for Item 23.4	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 23.5: AWD Ride on Mower (1.2-1.3m cutting width)</u>	Price per item	Make and Model
Main unit		

Accessories (lights, fire extinguisher, solar panel, etc.)		
Spare wheel		
Delivery and commissioning		
Item 23.5: Total		
Spare/replacement blade for lawnmower		
Set of wheels for lawnmower		
Attachments;		
23.5.1 Collector		
23.5.2 Combi Cutting deck		
23.5.3 Edge/Side trimmer		
23.5.4 Broom		
23.5.5 Flail Mower		
23.5.6 Gravel Harrow		
23.5.7 Rake		

Maintenance Schedule for Item 23.5	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

Item 23.6: AWD Ride on Mower (1.3-1.6m cutting width)	Price per item	Make and Model
Main unit		
Accessories (lights, fire extinguisher, solar panel, etc.)		
Spare wheel		
Delivery and commissioning		
Item 23.6: Total		

Spare/replacement blade for lawnmower		
Set of wheels for lawnmower		
Attachments;		
23.6.1 Collector		
23.6.2 Combi Cutting deck		
23.6.3 Edge/Side trimmer		
23.6.4 Broom		
23.6.5 Flail Mower		
23.6.6 Gravel Harrow		
23.6.7 Rake		
23.6.8 Enclosed Cab		

Maintenance Schedule for Item 23.6	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 23.7: Heavy Duty Ride on Mower (1.7m cutting width or better)</u>	Price per item	Make and Model
Main unit		
Accessories (lights, fire extinguisher, solar panel, etc.)		
Spare wheel		
Delivery and commissioning		
Item 23.7: Total		
Spare/replacement blade for lawnmower		
Set of wheels for lawnmower		
Attachments;		

23.7.1 Collector		
23.7.2 Combi Cutting deck		
23.7.3 Edge/Side trimmer		
23.7.4 Broom		
23.7.5 Flail Mower		
23.7.6 Gravel Harrow		
23.7.7 Rake		
23.7.8 Enclosed Cab		

Maintenance Schedule for Item 23.7	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 24: Electric Quad Bike</u>	Price per item	Make and Model
Main unit with batteries and charger		
Accessories (lights, fire extinguisher, solar panel, charge socket etc.)		
Spare wheel		
Delivery and commissioning		
Item 24: Total		
Spare set of tyres		
Set of wheels (tyres and rims) for all terrain application		

Maintenance Schedule for Item 24	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 25: Personal Transporter</u>	Price per item	Make and Model
Main unit with batteries and charger		
Delivery and commissioning		
Item 25: Total		
Spare set of tyres		

Maintenance Schedule for Item 25	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 26: Front End Loader</u>	Price per item	Make and Model
Front End Loader		
Bucket with wear plates		
Reversible cutting edge/forks for bucket		
Electrical systems (lights, camera, monitor, etc.)		
Finishing, relevant consumables and hydraulic oil.		
Delivery, training and commissioning.		
Item 26A: Complete vehicle (Euro 3) with customisation		
Item 26B: Complete vehicle (Euro 4) with customisation		
Item 26C: Complete vehicle (Euro 5) with customisation		
Spare set of tyres		

Maintenance Schedule for Item 26	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

Item 27: Patrol boat with trailer	Price per item	Make and Model
Boat		
Outboard motors		
Accessories		
Delivery and commissioning (please include any registration fees that maybe required)		
Item 27: Total		
Trailer with delivery, licensing and homologation		

Maintenance Schedule for Item 27	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

Item 28: Shipping container Loader	Price per item	Make and Model
Unit		
Spreader		
Electrical systems (lights, reverse camera etc.)		
All relevant miscellaneous items and consumables.		
Delivery, licensing, homologation and commissioning.		
Item 28A: Complete vehicle (Euro 3) with spreader and customisation		
Item 28B: Complete vehicle (Euro 4) with spreader and customisation		
Item 28C: Complete vehicle (Euro 5) with spreader and customisation		
Spare set of tyres		

Maintenance Schedule for Item 28	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 29: Pneumatic tyre roller</u>	Price per item	Make and Model
Unit		
Set of tyres for the unit (8)		
Electrical systems (lights, rear camera etc.)		
All relevant miscellaneous items and consumables.		
Delivery, training, licensing, homologation and commissioning.		
Item 29A: Complete vehicle (Euro 3) with tyres and customisation		
Item 29B: Complete vehicle (Euro 4) with tyres and customisation		
Item 29C: Complete vehicle (Euro 5) with tyres and customisation		

Maintenance Schedule for Item 29	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

<u>Item 30.1: Electric Forklift 3-Ton</u>	Price per item	Make and Model
Forklift and charger		
Set of extension forks		
Annual safety inspection and load testing with report and certificate within the standard warranty period		
Delivery and commissioning		
Item 30.1: Total		

Item 30.2: Electric Forklift 5-Ton	Price per item	Make and Model
Forklift and charger		
Set of extension forks		
Annual safety inspection and load testing with report and certificate within the standard warranty period		
Delivery and commissioning		
Item 30.2: Total		

Maintenance Schedule for Item 30.1-30.2	Parts mark up (%)	Price Rate for labour per hour excl. VAT	Price Rate for labour per hour incl. VAT
Service provider name:			

SECTION 9 : OFFICIAL TENDER FORM

Part A: OFFER BY TENDERER - In response to **Tender Number : 31891 - 1J** I / we hereby offer to supply the goods / services detailed hereunder in accordance with the Technical Specification, and subject to the Standard and Special Conditions of Tender (Goods/Services), and General and Special Conditions of Contract, which accompanied your Tender (with which I / we acknowledge myself / ourselves to be fully acquainted) at the price stated below, or in the case of individual rates are indicated in Section 8 : Bill Of Quantities / Schedule of Rates / Activities.

I / We hereby agree that this tender will hold good and remain open for acceptance as specified in the Conditions of Tender or during such other period as may be specified in the Special Conditions of Tender.

eThekwini Vendor Portal Registration Number:

PR

C.S.D Registration Number:

MAAA

S.A.R.S Pin Number:

Completion of the following is compulsory. Failure to declare the following will invalidate your offer.

Declaration of Interest

Are any of the entity's directors, managers, principle shareholder or stakeholders currently in the service of the state or have been in the service of the state in the past twelve (12) months?					<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
Is any spouse, child or parent of the entity's directors, managers, principle shareholder or stakeholder currently in the service of the state or have been in the service of the state in the past twelve (12) months?					<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
Name of entity's member	Position in Entity	Name of Relative (if applicable)	Name of State Institution	Nature of Relationship				
Do you or any other directors, managers, principle shareholder or stakeholder of your entity have any relationship (spouse, family, friend, associate) with persons in the service of the state and/or who may be involved with the evaluation of this quotation? If yes please furnish particulars below					<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
Name of entity's member	Position in Entity	Name of Relative (if applicable)	Name of State Institution	Nature of Relationship				

Refer to the Consolidated MBD Documents in Section 4(d) for the definition of "in service of the State"

* Signature :

* Name (*capitals*):

Date:

Capacity:

* Name of Business:

Tel:

Address:

Fax:

* Denotes Mandatory Information

Failure to complete the Mandatory Information and sign this Tender Form will invalidate the tender

Part B: ACCEPTANCE BY PURCHASER - The Purchaser, as represented by the following Official, hereby accepts the Tenderer's offer in terms of the Conditions of Tender, Specifications, and Conditions of Contract.

Signature:

Name (*capitals*):

Date:

Capacity:

SECTION 10: ANNEXURES**Annexure A:**

This Section comprises of the site requirements that shall be confirmed when inspected by eThekweni Municipality officials. The site requirements are compulsory and are to determine whether the bidder can undertake the safe storage and work on the vehicles based on their premises and workshop capacity including tools and equipment.

Site Requirements		
Description	YES/NO	Remarks
General items		
Secure overnight parking		
Security measures		
Demarcation of working areas		
Adequate lighting		
Adequate ventilation		
Enclosed working area		
Safety items (fire extinguisher, First aid, trained persons etc.)		
Personal Protective Equipment		
Workshop items		
Quality/Data Management System to record service details, invoices and vehicle history		
Minimum of 2 working bays		
Torque Wrench		
Overhead/Under-chassis lifting apparatus		
Multi-meter		