

# NEC3 Engineering & Construction Contract (ECC3)

**Between** **ESKOM Rotek Industries SOC Ltd**  
**Reg No. 1990/006897/30**

**and**

**for** **TSS Sand Blast upgrade and completion of Spray Booth for a duration of 12 months.**

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**CONTRACT No.**

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## Part C1: Forms of Agreement and Contract data

### C1.1 Forms of Offer & Acceptance, plus Deviations

#### C1.1.1 Offer

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a Contract for the procurement of:

- **TSS Sand Blast upgrade and completion of Spray Booth for a duration of 12 months.**

The tenderer, identified in the Offer signature block, has examined the documents listed in the Tender Data and addenda thereto and by submitting this Offer has accepted the Conditions of Tender.

By the representative of the tenderer, deemed to be duly authorised, signing this part of this Form of Offer and Acceptance the tenderer offers to perform all of the obligations and liabilities of the *Contractor* under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the *conditions of contract* identified in the Contract Data.

<b>Option B</b>	The offered total of the Prices exclusive of VAT is	
	Sub total	
	Value Added Tax @ 15% is	
	The offered total of the amount due inclusive of VAT is <sup>1</sup>	

This Offer may be accepted by the Employer by signing the Acceptance part of this Form of Offer and Acceptance and returning one copy of this document including the Schedule of Deviations (if any) to the tenderer before the end of the period of validity stated in the Tender Data, or other period as agreed, whereupon the tenderer becomes the party named as the *Contractor* in the *conditions of contract* identified in the Contract Data.

Signature(s)

\_\_\_\_\_

Name(s)

\_\_\_\_\_

Capacity

\_\_\_\_\_

**For the tenderer:**

\_\_\_\_\_

Name &  
signature of  
witness

Date

Tenderer's CIDB registration number (if applicable)

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<sup>1</sup> This total is required by the *Employer* for budgeting purposes only. Actual amounts due will be assessed in terms of the *conditions of Contract*.

### C1.1.2 Acceptance

By signing this part of this Form of Offer and Acceptance, the Employer identified below accepts the tenderer's Offer. In consideration thereof, the Employer shall pay the Contractor the amount due in accordance with the *conditions of Contract* identified in the Contract Data. Acceptance of the tenderer's Offer shall form an agreement between the Employer and the tenderer upon the terms and conditions contained in this agreement and in the Contract that is the subject of this agreement.

The terms of the Contract, are contained in:

Part C1	Agreements and Contract Data, (which includes this Form of Offer and Acceptance)
Part C2	Pricing Data
Part C3	Scope of Work: Works Information
Part C4	Site Information <i>(If applicable)</i>

and drawings and documents (or parts thereof), which may be incorporated by reference into the above listed Parts.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Returnable Schedules as well as any changes to the terms of the Offer agreed by the tenderer and the Employer during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Form of Offer and Acceptance. No amendments to or deviations from said documents are valid unless contained in this Schedule.

The tenderer shall within two weeks of receiving a completed copy of this agreement, including the Schedule of Deviations *(if any)*, contact the Employer's agent (whose details are given in the Contract Data) to arrange the delivery of any securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the *conditions of contract* identified in the Contract Data at, or just after, the date this agreement comes into effect. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed original copy signed between them of this document, including the Schedule of Deviations (if any).

Unless the tenderer (now *Contractor*) within five working days of the date of such receipt notifies the Employer in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the Parties.

Signature(s)

\_\_\_\_\_

Name(s)

\_\_\_\_\_

Capacity

**for the Employer**

\_\_\_\_\_

Name & signature  
of witness

\_\_\_\_\_

Date

\_\_\_\_\_

### **C1.1.3 Schedule of Deviations**

Note:

1. This part of the Offer & Acceptance would not be required if the contract has been developed by negotiation between the Parties and is not the result of a process of competitive tendering.
2. The extent of deviations from the tender documents issued by the Employer prior to the tender closing date is limited to those permitted in terms of the Conditions of Tender.
3. A tenderer's covering letter must not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid be the subject of agreement reached during the process of Offer and Acceptance, the outcome of such agreement shall be recorded here, and the final draft of the contract documents shall be revised to incorporate the effect of it.

<b>No.</b>	<b>Subject</b>	<b>Details</b>
1	[ ]	[ ]

By the duly authorised representatives signing this Schedule of Deviations below, the Employer and the tenderer agree to and accept this Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender Schedules, as well as any confirmation, clarification or changes to the terms of the Offer agreed by the tenderer and the Employer during this process of Offer and Acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the tenderer of a completed signed copy of this Form shall have any meaning or effect in the contract between the parties arising from this Agreement.

	<b>For the tenderer:</b>	<b>For the Employer</b>
Signature	_____	_____
Name	_____	_____
On behalf of	_____	_____
Name & signature of witness	_____ _____	_____ _____
Date	_____	_____

## C1.2 Contract Data

### C1.2.1 Part One – Data provided by *Employer*

Clause	Statement	Data
<b>1</b>	<b>General</b>	
	The <i>conditions of contract</i> are the core clauses and the clauses for main Option	<p><b>Option B: Priced contract with Bill of Quantities</b></p> <p><b>W1: Dispute Resolution Procedure</b></p> <p><b>X1: Contract Price Adjustment</b></p> <p><b>X2: Change in Laws</b></p> <p><b>X5: Sectional Completion</b></p> <p><b>X7: Delay Damages</b></p> <p><b>X15: Limitation of the Contractor's liability for his design to reasonable skill and care.</b></p> <p><b>X16: Retention.</b></p> <p><b>X18: Limitation of Liability</b></p> <p><b>Z: Additional conditions of Contract.</b></p>
	and secondary Options of the NEC3 Engineering and Construction Contract, April 2013 (ECC3)	
10.1	The <i>Employer</i> is (Name):	<b>Eskom Rotek Industries SOC Limited (Reg No: 1990006897/30), a juristic person incorporated in terms of the company laws of the Republic of South Africa</b>
	Address	<b>Roshland Office Park Lower Germiston Road Rosherville Cleveland 2022</b>
10.1	The <i>Project Manager</i> is: (Name)	<b>Humphrey Masikane</b>
	Address	<b>Roshland Office Park</b>
	Tel	<b>+27 11 629 4074</b>
	Fax	<b>Not Applicable</b>
	e-mail	<b>masikahu@eskom.co.za</b>

10.1	The <i>Supervisor</i> is: (Name)	: TBA		
	Address	:TBA		
	Tel No.	:TBA		
	Fax No.	: TBA		
	e-mail	:TBA		
11.2(13)	The <i>works</i> are	<b>TSS Sand Blast upgrade and completion of Spray Booth for a duration of 12 months.</b>		
11.2(14)	The following matters will be included in the Risk Register	<b>Refer to risk register.</b>		
11.2(15)	The boundaries of the site are	<b>Rosherville Farm</b>		
11.2(16)	The Site Information is in	<b>Part 4: Site Information</b>		
11.2(19)	The Works Information is in	<b>Part 3: Scope of Work and all documents and drawings (if any) to which it makes reference.</b>		
12.2	The <i>law of the contract</i> is the law of	<b>the Republic of South Africa</b>		
13.1	The <i>language of this contract</i> is	<b>English</b>		
13.2	The <i>period for reply</i> is	<b>One (1) calendar week</b>		
<b>2</b>	<b>The <i>Contractor's</i> main responsibilities</b>	<b>Data required by this section of the core clauses is provided by the <i>Contractor</i> in Part 2 and terms in italics used in this section are identified elsewhere in this Contract Data.</b>		
<b>3</b>	<b>Time</b>			
11.2(3)	The <i>completion date</i> for the whole of the <i>works</i> is			
11.2(9)	The <i>key dates</i> and the <i>conditions</i> to be met are:	<b><i>Condition to be met</i></b>	<b><i>key date</i></b>	
		1		
31.1	The <i>Contractor</i> is to submit a first programme for acceptance within	<b>One (1) calendar week</b>		
31.2	The Starting Date			
32.2	The <i>Contractor</i> submits revised programmes at intervals no longer than	<b>One (1) calendar month – Monthly progress updates will be accepted by the Employer.</b>		
35.1	The <i>Employer</i> is not willing to take over the <i>works</i> before the Completion Date.	<b>Full handover of the works shall be accepted by the Employer upon the receipt of a fully signed-off Data books. No partial handover shall be accepted by the Employer.</b>		
<b>4</b>	<b>Testing and Defects</b>			
42.2	The <i>defects date</i> is	<b>52 weeks for latent defects after Completion of the whole of the <i>works</i>.</b>		

43.2 The *defect correction period* is **4 Weeks for latent defects**

## 5 Payment

50.1	The <i>assessment interval</i> is	<b>The 25<sup>th</sup> day of each successive month.</b>
51.1	The <i>currency of this contract</i> is the	<b>South African Rand.</b>
51.2	The period within which payments are made is	<b>30 days after receipt of the Contractor's invoice.</b>

## 6 Compensation events

60.1(13)	<p>The place where weather is to be recorded is: (<i>If applicable</i>)</p> <p>The <i>weather measurements</i> to be recorded for each calendar month are,</p> <p>The <i>weather measurements</i> are supplied by</p> <p>The <i>weather data</i> are the records of past <i>weather measurements</i> for each calendar month which were recorded at:</p> <p>and which are available from:</p> <p>Assumed values for the ten-year return <i>weather data</i> for each <i>weather measurement</i> for each calendar month are:</p>	<p><b>The Contractor's Site Establishment Area on site</b></p> <ul style="list-style-type: none"> <li>the cumulative rainfall (mm)</li> <li>the number of days with rainfall more than 10mm.</li> <li>the number of days with minimum air temperature less than 0 degrees Celsius</li> </ul> <p><b>The South African Weather Bureau</b></p> <p><b>Weather station closest to site monitored by South African Weather Bureau</b></p> <p><b>the South African Weather Service 012 3676023 <a href="mailto:info@weathersa.co.za">info@weathersa.co.za</a></b></p> <p><b>N/A.</b></p>
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<b>7</b>	<b>Title</b>	<b>There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.</b>
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## 8 Risks and insurance

80.1	These are additional <i>Employer's</i> risks	<b>As per the insurance table</b>
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84.1 The Employer is to provide insurances as stated in the Insurance Table  
The Contractor will be liable for the applicable deductible, if any

### INSURANCE TABLE A

Insurance against	Minimum amount of cover or minimum limit of indemnity
Assets All Risk	As per the insurance policy document.
Project insurance	As per the insurance policy document.
Environmental Liability	As per the insurance policy document.
General and Public Liability	As per the insurance policy document.
Transportation (Marine)	As per the insurance policy document.
Motor Fleet and Mobile Plant	As per the insurance policy document.
Terrorism	As per the insurance policy document.

Cyber Liability

As per the insurance policy document.

84.2

The insurances provide cover for events which are at the *Contractor's* risk from the *starting date* until the Defects Certificate or a termination certificate has been issued.

**INSURANCE TABLE B**

Insurance against	Minimum amount of cover or minimum limit of indemnity
Loss of or damage to the works, Plant and Materials	The replacement cost where not covered by the <i>Employer's</i> insurance.  The Employer's policy Deductible were covered by the <i>Employer's</i> insurance.
Loss of or damage to Equipment	The replacement cost
Liability for loss of or damage to property (except the works, Plant and Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the <i>Contractor</i> ) caused by activity in connection with this contract	<b><u>Loss of or damage to property</u></b> <b><u>Employer's property</u></b> The replacement cost where not covered by the <i>Employer's</i> insurance.  The Employer's policy Deductible were covered by the <i>Employer's</i> insurance.  <b><u>Other property</u></b> The replacement cost.  <b><u>Bodily injury to or death of a person</u></b> The amount required by applicable law.
Liability for death of or bodily injury to employees of the <i>Contractor</i> arising out of and in the course of their employment in connection with this contract	The amount required by the applicable law.

84.3

The minimum limit of indemnity for insurance in respect of loss of or damage to property (except the works, Plant, Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the *Contractor*) caused by activity in connection with this contract for any one event is

**whatever the *Contractor* deems necessary in addition to that provided by the *Employer*.**

84.4

The minimum limit of indemnity for insurance in respect of death of or bodily injury to employees of the *Contractor* arising out of

**As prescribed by the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993 and the *Contractor's* common law liability for people falling**



	and in the course of their employment in connection with this contract for any one event is	outside the scope of the Act with a limit of Indemnity of not less than R500 000 (Five hundred thousand Rands).						
<b>9</b>	<b>Termination</b>	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.						
<b>10</b>	<b>Data for main Option clause</b>							
	<b>Priced Contract with Bill of quantities.</b>	<b>Option B</b>						
20.4	The <i>Contractor</i> prepares forecasts of Cost for the <i>works</i> at intervals no longer than	<b>Twenty-eight (28) days</b>						
<b>W1</b>	<b>Data for Option W1</b>							
W1.1	The <i>Adjudicator</i> is	the person selected from the ICE-SA Division (or its successor body) of the South African Institution of Civil Engineering Panel of Adjudicators by the Party intending to refer a dispute to him. (see <a href="http://www.ice-sa.org.za">www.ice-sa.org.za</a> ). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA).						
W1.2(3)	The <i>Adjudicator nominating body</i> is:	the Chairman of ICE-SA a joint Division of the South African Institution of Civil Engineering and the London Institution of Civil Engineers. (See <a href="http://www.ice-sa.org.za">www.ice-sa.org.za</a> ) or its successor body.						
W1.4(2)	The <i>tribunal</i> is:	arbitration.						
W1.4(5)	The <i>arbitration procedure</i> is	the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.						
	The place where arbitration is to be held is	South Africa						
	The person or organisation who will choose an arbitrator							
	- if the Parties cannot agree a choice or							
	- if the arbitration procedure does not state who selects an arbitrator, is	the Chairman for the time being or his nominee of the Association of Arbitrators (Southern Africa) or its successor body.						
<b>X</b>	<b>Data for secondary Option clauses</b>							
<b>X1</b>	<b>Contract Price Adjustment</b>	CPA not applicable						
<b>X2</b>	<b>Changes in the law</b>	There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.						
<b>X5</b>	<b>Sectional Completion</b>							
X5.1	The <i>completion date</i> for the <i>works</i> is:							
		<table> <tr> <th>Section</th><th>Description</th><th>Completion date</th></tr> <tr> <td></td><td></td><td></td></tr> </table>	Section	Description	Completion date			
Section	Description	Completion date						

<b>X7</b>	<b>Delay Damages</b>	<b>0.1% daily, to maximum 10% of the Contract Value.</b>
<b>X15</b>	<b>Limitation of the Contractor's liability for his design to reasonable skill &amp; care</b>	<b>Limited to the amount of the deductibles relevant to the event.</b>
<b>X16</b>	<b>Retention</b>	<b>10% of monthly invoice, to maximum 10% of contract price.</b>
<b>X18</b>	<b>Limitation of liability</b>	<b>Limited to the amount stated in the Contract.</b>
<b>Z</b>	<b>The <i>Additional conditions of contract</i> are</b>	<b>Z1 to Z12 are always applicable.</b>

**Z1 Cession delegation and assignment**

- Z1.1 The *Contractor* does not cede, delegate or assign any of its rights or obligations to any person without the written consent of the *Employer*.
- Z1.2 Notwithstanding the above, the *Employer* may on written notice to the *Contractor* cede and delegate its rights and obligations under this Contract to any of its subsidiaries or any of its present divisions or operations which may be converted into separate legal entities as a result of the restructuring of the Electricity Supply Industry.

**Z2 Joint ventures**

- Z2.1 If the *Contractor* constitutes a joint venture, consortium or other unincorporated grouping of two or more persons or organisations then these persons or organisations are deemed to be jointly and severally liable to the *Employer* for the performance of this Contract.
- Z2.2 Unless already notified to the *Employer*, the persons or organisations notify the *Project Manager* within two weeks of the Contract Date of the key person who has the authority to bind the *Contractor* on their behalf.
- Z2.3 The *Contractor* does not alter the composition of the joint venture, consortium or other unincorporated grouping of two or more persons without the consent of the *Employer* having been given to the *Contractor* in writing.

**Z3 Change of Broad Based Black Economic Empowerment (B-BBEE) status**

- Z3.1 Where a change in the *Contractor's* legal status, ownership or any other change to his business composition or business dealings results in a change to the *Contractor's* B-BBEE status, the *Contractor* notifies the *Employer* within seven days of the change.
- Z3.2 The *Contractor* is required to submit an updated verification certificate and necessary supporting documentation confirming the change in his B-BBEE status to the *Project Manager* within thirty days of the notification or as otherwise instructed by the *Project Manager*.
- Z3.3 Where, as a result, the *Contractor's* B-BBEE status has decreased since the Contract Date the *Employer* may either re-negotiate this Contract or alternatively, terminate the *Contractor's* obligation to Provide the Works.
- Z3.4 Failure by the *Contractor* to notify the *Employer* of a change in its B-BBEE status may constitute a reason for termination. If the *Employer* terminates in terms of this clause, the procedures on termination are P1, P2 and P3 as stated in clause 92, and the amount due is A1 and A3 as stated in clause 93.

**Z4 Confidentiality**

- Z4.1 The *Contractor* does not disclose or make any information arising from or in connection with this Contract available to Others. This undertaking does not, however, apply to information which at the time of disclosure or thereafter, without default on the part of the *Contractor*, enters the public domain or to information which was already in the possession of the *Contractor* at the time of disclosure (evidenced by written records in existence at that time). Should the *Contractor* disclose information to Others in terms of clause 25.1, the *Contractor* ensures that the provisions of this clause are complied with by the recipient.

- Z4.2 If the *Contractor* is uncertain about whether any such information is confidential, it is to be regarded as such until notified otherwise by the *Project Manager*.
- Z4.3 In the event that the *Contractor* is, at any time, required by law to disclose any such information which is required to be kept confidential, the *Contractor*, to the extent permitted by law prior to disclosure, notifies the *Employer* so that an appropriate protection order and/or any other action can be taken, if possible, prior to any disclosure. In the event that such protective order is not, or cannot, be obtained, then the *Contractor* may disclose that portion of the information which it is required to be disclosed by law and uses reasonable efforts to obtain assurances that confidential treatment will be afforded to the information so disclosed.
- Z4.4 The taking of images (whether photographs, video footage or otherwise) of the *works* or any portion thereof, in the course of Providing the Works and after Completion, requires the prior written consent of the *Project Manager*. All rights in and to all such images vests exclusively in the *Employer*.
- Z4.5 The *Contractor* ensures that all his subcontractors abide by the undertakings in this clause.

**Z5 Waiver and estoppel: Add to core clause 12.3:**

- Z5.1 Any extension, concession, waiver or relaxation of any action stated in this contract by the Parties, the *Project Manager*, the *Supervisor*, or the *Adjudicator* does not constitute a waiver of rights and does not give rise to an estoppel unless the Parties agree otherwise and confirm such agreement in writing.

**Z6 Health, safety and the environment: Add to core clause 27.4**

- Z6.1 The *Contractor* undertakes to take all reasonable precautions to maintain the health and safety of persons in and about the execution of the *works*. Without limitation the *Contractor*:
- accepts that the *Employer* may appoint him as the "Principal Contractor" (as defined and provided for under the Construction Regulations 2014 (promulgated under the Occupational Health & Safety Act 85 of 1993) ("the Construction Regulations") for the Site.
  - warrants that the total of the Prices as at the Contract Date includes a sufficient amount for proper compliance with the Construction Regulations, all applicable health & safety laws and regulations and the health and safety rules, guidelines and procedures provided for in this contract and generally for the proper maintenance of health & safety in and about the execution of *works*; and
  - undertakes, in and about the execution of the *works*, to comply with the Construction Regulations and with all applicable health & safety laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.
- Z6.2 The *Contractor*, in and about the execution of the *works*, complies with all applicable environmental laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.

**Z7 Provision of a Tax Invoice and interest. Add to core clause 51**

- Z7.1 Within one week of receiving a payment certificate from the *Project Manager* in terms of core clause 51.1, the *Contractor* provides the *Employer* with a tax invoice in accordance with the *Employer's* procedures stated in the Works Information, showing the amount due for payment equal to that stated in the payment certificate.
- Z7.2 If the *Contractor* does not provide a tax invoice in the form and by the time required by this Contract, the time by when the *Employer* is to make a payment is extended by a period equal in time to the delayed submission of the correct tax invoice. Interest due by the *Employer* in terms of core clause 51.2 is then calculated from the delayed date by when payment is to be made.
- Z7.3 The *Contractor* (if registered in South Africa in terms of the companies Act) is required to comply with the requirements of the Value Added Tax Act, no 89 of 1991 (as amended) and to include the *Employer's* VAT number 4740101508 on each invoice he submits for payment.

**Z8 Notifying compensation events**

- Z8.1 Delete from the last sentence in core clause 61.3, “unless the Project Manager should have notified the event to the Contractor but failed to do so”.

**Z9 Employer’s limitation of liability**

- Z9.1 The *Employer’s* liability to the *Contractor* for the *Contractor’s* indirect or consequential loss is limited to R0.00 (zero Rand)
- Z9.2 The *Contractor’s* entitlement under the indemnity in 83.1 is provided for in 60.1(14) and the *Employer’s* liability under the indemnity is limited.

**Z10 Termination: Add to core clause 91.1, at the second main bullet point, fourth sub-bullet point, after the words "against it":**

- Z10.1 or had a business rescue order granted against it.

**Z11 Addition to secondary Option X7 Delay damages.**

- Z11.1 If the amount due for the *Contractor’s* payment of delay damages reaches the limits stated in this Contract Data for Option X7 or Options X5 and X7 used together, the *Employer* may terminate the *Contractor’s* obligation to Provide the Works using the same procedures and payment on termination as those applied for reasons R1 to R15 or R18 stated in the Termination Table.

**Z12 Ethics**

For the purposes of this Z-clause, the following definitions apply:

Affected Party	means, as the context requires, any party, irrespective of whether it is the <i>Contractor</i> or a third party, such party’s employees, agents, or Subcontractors or Subcontractor’s employees, or any one or more of all of these parties’ relatives or friends,
Coercive Action	means to harm or threaten to harm, directly or indirectly, an Affected Party or the property of an Affected Party, or to otherwise influence or attempt to influence an Affected Party to act unlawfully or illegally,
Collusive Action	means where two or more parties co-operate to achieve an unlawful or illegal purpose, including to influence an Affected Party to act unlawfully or illegally,
Committing Party	means, as the context requires, the <i>Contractor</i> , or any member thereof in the case of a joint venture, or its employees, agents, or Subcontractors or the Subcontractor’s employees,
Corrupt Action	means the offering, giving, taking, or soliciting, directly or indirectly, of a good or service to unlawfully or illegally influence the actions of an Affected Party,
Fraudulent Action	means any unlawfully or illegally intentional act or omission that misleads, or attempts to mislead, an Affected Party, in order to obtain a financial or other benefit or to avoid an obligation or incurring an obligation,
Obstructive Action	means a Committing Party unlawfully or illegally destroying, falsifying, altering or concealing information or making false statements to materially impede an investigation into allegations of Prohibited Action.
Prohibited Action	means any one or more of a Coercive Action, Collusive Action Corrupt Action, Fraudulent Action or Obstructive Action.

- Z 12.1 A Committing Party may not take any Prohibited Action during the course of the procurement of this Contract or in execution thereof.

- Z 12.2 The *Employer* may terminate the *Contractor’s* obligation to Provide the Works if a Committing Party has taken such Prohibited Action and the *Contractor* did not take timely and appropriate action to prevent or remedy the situation, without limiting any other rights or remedies the *Employer* has. It is not required that the Committing

**TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.**

CONTRACT NO: \_\_\_\_\_

Party had to have been found guilty, in court or in any other similar process, of such Prohibited Action before the *Employer* can terminate the *Contractor's* obligation to Provide the Works for this reason.

- Z 12.3 If the *Employer* terminates the *Contractor's* obligation to Provide the Works for this reason, the procedures and amounts due on termination are respectively P1, P2 and P3, and A1 and A3.
- Z 12.4 A Committing Party co-operates fully with any investigation pursuant to alleged Prohibited Action. Where the *Employer* does not have a contractual bond with the Committing Party, the *Contractor* ensures that the Committing Party co-operates fully with an investigation.

### C1.2.2 Part Two – Data provided by *Contractor*

Completion of the data in full, according to Options chosen, is essential to create a complete contract.

Clause	Statement	
10.1	The <i>Contractor</i> is (Name): Address Tel No. Fax No.	
11.2(8)	The <i>direct fee percentage</i> is The <i>subcontracted fee percentage</i> is	
11.2(18)	The <i>working areas</i> are the Site and	<b>Rosherville Farm</b>
24.1	The <i>Contractor's</i> key persons are: 1 Name: Job: Responsibilities: Qualifications: Experience: 2 Name: Job: Responsibilities: Qualifications: Experience:	
11.2(3)	The <i>completion date</i> for the whole of the <i>works</i> is	<b>12 months</b>
11.2(11)	The tendered total of the Prices is	
11.2(19)	The Works Information for the <i>Contractor's</i> design is in:	<b>Scope of works supplied by the Client.</b>
31.1	The programme identified in the Contract Data is	<b>Monthly updates on Progress.</b>



## Part C2: Pricing data

Document reference	Title	
C2.1	Pricing assumptions:	
C2.2	First forecast of total Defined Bill of Quantities	

## **C2.1 Pricing Assumptions**

All Prices are to be shown excluding VAT unless instructed otherwise by the Employer in Tender Data or in an instruction the Employer has given before the tenderer enters his Prices.



## C2.2 Price Schedule

### TSS Sand Blast upgrade and completion of Spray Booth for a duration of 12 months.

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<b><u>SECTION NO. 1</u></b>				
	<b><u>BILL NO. 1</u></b>				
	<b><u>PRELIMINARIES</u></b>				
	<b><u>FIXED CHARGES ITEMS</u></b>				
	<b><u>Establish Facilities on Site</u></b>				
1	Contractual Requirements	SUM	1	R	-
2	Site Offices and Storage Sheds including temporary fencing.	SUM	1	R	-
3	Ablution and latrine facilities	SUM	1	R	-
4	Tools and Equipment	SUM	1	R	-
5	Establishment of Plant on Site	SUM	1	R	-
6	Electrical power and communications	SUM	1	R	-
	<b><u>OTHER FIXED CHARGES</u></b>				
7	Remove contractor's site establishment on completion including making good and restoring the site to the satisfaction of the Client/Engineer.	SUM	1	R	-
	<b><u>TIME RELATED ITEMS</u></b>				

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<u>Operate and maintain facilities on site for the duration of construction facilities for contractor</u>				
8	Site Offices and Storage Sheds	Month	8	R	-
9	Security (24/7), two (2) security guards at all times	Month	8	R	-
	<b>Carried Forward</b>			R	-
	Section No.1 PRELIMINARIES Bill No.1 Preliminaries <b>ESKOM ROSHERVILLE TSS SPRAY BOOTH</b>				
	<b>Brought Forward</b>			R	-
10	Ablution and latrine facilities	Month	8	R	-
11	Tools and Equipment	Month	8	R	-
12	Water Supply	Month	8	R	-
13	Electric power and communications / cell phones etc	Month	8	R	-
14	Company/head office overhead cost.	Month	8	R	-
15	Living accommodation	Month	8	R	-
16	Supervision	Month	8	R	-

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<b><u>HEALTH AND SAFETY</u></b>				
19	Prepare, submit and obtain approval of safety plan/file and lodge same on site.	SUM	1		R -
20	Personal Protective Equipment	SUM	1		R -
21	Transportation of Employees	Month	8		R -
22	Medicals and competency Trainings	Sum	1		R -
	<b>Carried Forward</b>				R -
	Section No.1 PRELIMINARIES Bill No.1 Preliminaries <b>ESKOM ROSHERVILLE TSS SPRAY BOOTH</b>				
	<b>Brought Forward</b>				R -
	<b>COC CERTIFICATES</b>				
23	On completion of each distribution board installation etc. as required in terms of the regulations, issue a Certificate of Compliance for each of the installations provided.	item	1		R -
24	As-built Drawings (Sets of Drawings to Scale)	set	3		R -
	<b>Preliminary and General Carried to Main Summary</b>				R -

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<p><b>PART 1: SPRAYBOOTH</b></p> <p><b>STRUCTURAL AND CIVIL WORKS</b></p> <p><b><u>SECTION NO. 2</u></b></p> <p><b><u>BILL NO 1</u></b></p> <p><b><u>ALTERATIONS</u></b></p> <p>For preambles see "Model Preambles for Trades (2008 Edition)" and Supplementary preambles as specified in the Trades.</p> <p>TENDERERS ARE TO NOTE THAT ALL WORK IS TO BE EXECUTED IN EXISTING BUILDINGS IN A COMBINATION OF NEW WORK, WORK IN PATCHES AND WORK IN SMALL QUANTITIES.</p> <p><b><u>Site inspection</u></b></p> <p>The Tenderer is advised to visit the site, inspect the existing premises and acquaint himself thoroughly with the nature of the work specified.</p> <p><b><u>Sizes and dimensions</u></b></p> <p>All sizes and dimensions stated herein are approximate and deemed only sufficient to identify the item of work concerned.</p> <p>No allowance for overbreak has been made to any of the adjoining structures, walls, finishes, etc., where removals or pockets occur (the nett opening size, etc., has been made good in later items of this bill where such making good has not been included with the item) and the Contractor must allow in his prices for making good any overbreak that may occur.</p> <p><b><u>Materials</u></b></p>				

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<p>Old materials from alterations, except were described to be re-used or handed over, become the property of the contractor.</p> <p>Old materials from the alterations, except were described to be re-used or handed over, as well as all rubbish, etc., must be regularly carted from the site and not be allowed to accumulate on or around the site.</p> <p>None of the old materials are to be used for new work except where specifically described as being set aside for re-use.</p> <p>Where certain materials or articles from demolitions or alterations are described as to be handed over by the Contractor to the Client, such materials or articles shall be properly stored by the Contractor, until handing over thereof. The Contractor must obtain an official receipt listing the materials or articles and dates of handing over. If the Contractor fails to submit the receipt when requested to do so, it shall be deemed that the materials or articles are still in his possession and he will be held liable to the Client for the full replacement value thereof, which amount will be deducted from any monies due to the Contractor.</p> <p><b><u>General</u></b></p> <p>All new finishes are measured in the relevant trades for new work.</p> <p>Allow for watering the works sufficiently to prevent nuisance from dust.</p> <p>All alteration works described hereunder shall imply the use of an approved screed or plaster repairing compound and preparing existing surfaces to receive new.</p>				

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<p>Provide all necessary propping, etc., required to ensure the safety and stability of the structure during the contract period and remove at completion.</p> <p>Provide all necessary additional barricades, screens, overhead protections, etc., required to ensure the safety of persons, property, etc., and remove at completion.</p> <p>All alteration work is within an existing facility. The contractor shall take utmost care to minimise damage to existing completed works in the vicinity of the alteration works.</p> <p><b><u>REMOVAL OF EXISTING WORK</u></b></p> <p><b><u>Temporary barriers, screens, etc including removal</u></b></p>				
1	<p>Dust screen 3000mm high between concrete floor and ceiling formed of suitable timber framing with 250-micron polyethylene sheeting / net stapled on including corners, ends, etc</p> <p><b><u>REMOVAL OF EXISTING WORK</u></b></p> <p><b><u>Breaking up and removing mass concrete</u></b></p>	m	80		R -
2	<p>250mm Thick surface bed</p> <p><b><u>Breaking down and removing brickwork etc</u></b></p>	m <sup>2</sup>	10		R -
3	<p>One brick wall</p> <p><b><u>Taking out and removing doors, windows, etc including thresholds, sills, etc, set aside for later re-use at same position.</u></b></p>	m <sup>2</sup>	88		R -
4	<p>Steel roller shutter door</p>	No	2		R -

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<b><u>Taking down and removing roofs, floors, panelling, ceilings, partitions, etc</u></b>				
5	Roof covering	m <sup>2</sup>	200		R -
6	Roof cladding	m <sup>2</sup>	200		R -
7	Steel structure	m <sup>2</sup>	200		R -
	<b><u>TRANSPORT OF MATERIALS</u></b>				
8	Transport removed materials, debris etc to dumping site (Provisional).	SUM	1		R -
	<b>Carried Forward to Summary of Section No. 2</b>				R -
	<b><u>SECTION NO.2</u></b>				
	<b><u>BUILDING WORK</u></b>				
	<b><u>BILL NO.2</u></b>				
	<b><u>EARTHWORKS</u></b>				
	For preambles see "Model Preambles for Trades (2008 Edition)" and Supplementary preambles as specified in the Trades.				
	-----				
	<b><u>SUPPLEMENTARY PREAMBLES</u></b>				
	<u>Nature of ground</u>				
	The nature of the ground is assumed to be sandy weathered granite, therefore "earth", but possibly interspersed with "hard rock"				
	<u>Excavation for working space in rock</u>				

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	Notwithstanding clause 11 page 8 of the Standard System of Measuring Building Work, excavation for working space in rock will be measured in cubic metres to the extent executed and given as "extra over" bulk excavation or trench and hole excavation as the case may be				
	<b>Site Clearance</b>				
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc.	m <sup>2</sup>	105		R -
	<b>Carried Forward</b>				R -
	<b>Brought Forward</b>				R -
	<u>Carting away of excavated material</u>				
	Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stockpiles situated on the building site				
	<u>Filling</u>				
	Notwithstanding the reference to prescribed multiple handling in clause 1 page 6 of the Standard System of Measuring Building Work, prices for filling and backfilling shall include for all selection and any multiple handling of material				
	<u>Soil poisoning</u>				



TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	Ant and weed poisoning will be applied in accordance with SABS specifications by Registered and Approved Specialists who will issue a five (5) year guarantee. The contractor will only be paid for these items once they have produced the said certificate to the Principal Agent				
	<b><u>EXCAVATION, FILLING, ETC</u></b>				
	<u>Excavate in all materials and use for embankment or backfill or dispose, as ordered</u>				
1	Foundation Based	m <sup>3</sup>	5	R	-
2	Strip Foundations	m <sup>3</sup>	10	R	-
3	Bases	m <sup>3</sup>	2	R	-
	<b><u>Extra-over for</u></b>				
4	Intermediate excavation	m <sup>3</sup>	10	R	-
5	Hard rock excavation	m <sup>3</sup>	1	R	-
	<b>Carried Forward</b>			R	-
	<b>Brought Forward</b>			R	-
	<b><u>Restricted excavation</u></b>				
	<b><u>Excavate for restricted foundations, footings and pipe trenches in all materials and use for backfilling or embankment or dispose</u></b>				

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
6	Bases Near Existing Structure  <u>Importing of materials</u>  <b>Extra-over for importation of materials from commercial sources or from borrow pits</b>	m <sup>3</sup>	5		R -
7	From commercial source  <u>Existing services</u>  <u>Location</u>	m <sup>3</sup>	10		R -
8	Supply (unless hired under item (below) of specialist equipment for detection	SUM	1		R -
9	The use or hire of specialist equipment for detection (unit may also be sum)	Hrs	10		R -
10	Excavate by hand in soft material to expose Existing service (also measured as day work)	m <sup>3</sup>	20		R -
	<b>Carried Forward to Summary of Section No. 2</b>				R -
	<b><u>SECTION NO.2</u></b>				
	<b><u>BUILDING WORK</u></b>				
	<b><u>BILL NO.3</u></b>				
	<b><u>CONCRETE, FORMWORK AND REINFORCEMENT</u></b>				

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<p>For preambles see "Model Preambles for Trades (2008 Edition)" and Supplementary preambles as specified in the Trades.</p> <p>-----</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><u>Cost of tests</u></p> <p>The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the architect. The testing shall be undertaken by an independent firm or institution nominated by the contractor and to the approval of the architect. (Test cubes are measured separately)</p> <p>Breeze concrete shall consist of twelve parts clean dry furnace ash, free from coal or other foreign matter to one part cement (12:1), the ash graded up to particles which will pass a 16,5mm ring from a minimum which fails to pass a 4,75mm mesh. The finer materials from the screening are to be first mixed with the cement into a mortar and the ash added afterwards and thoroughly incorporated</p> <p><u>Formwork</u></p> <p>Description of formwork shall be deemed to include use and waste only (except were described as "left in" or "permanent"), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use</p>				

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<p>The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself</p> <p>Formworks to soffits of solid slabs etc shall be deemed to be slabs not exceeding 250mm thick unless otherwise described</p> <p>Formwork to soffits of slabs, beams, etc shall be deemed to be propped up exceeding 1,5m and not exceeding 3,5m high unless otherwise described</p> <p>Formwork to sides of bases, pile caps, ground beams, etc will only be measured where it is prescribed by the engineer for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in "Earthworks"</p> <p><b><u>UNREINFORCED CONCRETE</u></b></p> <p><u>15MPa/19mm concrete</u></p>				
1	50mm thick Blinding layer on Plinths	m <sup>3</sup>	6		R -
	<p><b><u>REINFORCED CONCRETE</u></b></p> <p><u>30 MPa/19mm concrete</u></p>				
2	Strip footing	m <sup>3</sup>	20		R -

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<b>Carried Forward</b>				R -
	<b>Brought Forward</b>				R -
3	Strip foundation	m <sup>3</sup>	10		R -
4	Floor Slab	m <sup>3</sup>	28		R -
	<b><u>JOINTS</u></b>				
5	Saw cut joint on floors	m	204		R -
6	Expansion joints between concrete and walls	m	94		R -
	<b><u>FORMWORK</u></b>				
	<b><u>ROUGH FORMWORK (DEGREE OF ACCURACY II)</u></b>				
	<b><u>Rough formwork to vertical sides</u></b>				
7	Edge of Strip Foundation	m <sup>2</sup>	30		R -
	<b>Carried Forward</b>				R -
	<b>Brought Forward</b>				R -
	<b><u>Smooth formwork to horizontal</u></b>				
8	Power floating on floor slab	m <sup>2</sup>	265		R -
9	Underside of concrete floor slab	m <sup>2</sup>	30		R -

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<b><u>REINFORCEMENT</u></b>				
	<b><u>Steel Reinforcement</u></b>				
	<b><u>High tensile steel reinforcement to structural concrete work</u></b>				
10	All diameters Mild steel reinforcement	t	2	R	-
11	All diameters High-tensile reinforcement	t	2	R	-
	<b><u>Mild steel reinforcement to structural concrete work</u></b>				
12	Type 395 fabric reinforcement in concrete surface beds, slabs, etc	m2	50	R	-
	<b>Carried Forward to Summary of Section No. 2</b>			R	-
	<b><u>SECTION NO.2</u></b>				
	<b><u>BUILDING WORK</u></b>				
	<b><u>BILL NO. 4</u></b>				
	<b><u>MASONRY</u></b>				
	For preambles see "Model Preambles for Trades (2008 Edition)" and Supplementary preambles as specified in the Trades.				
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TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><b><u>BRICKWORK</u></b></p> <p><u>Sizes in descriptions</u></p> <p>Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick</p> <p>Brick sizes shall be 220mm x 110mm x 75mm.</p> <p><u>Linings to concrete</u></p> <p>Descriptions of linings to concrete, unless otherwise described, shall be deemed to include wire ties</p> <p><u>Hollow walls etc</u></p> <p>Descriptions of hollow walls shall be deemed to include wire ties and leaving every fifth perpend of the bottom course of the external skin open as a weep hole</p> <p><u>Reinforced brick lintels</u></p> <p>Lintels shall bear at least 160mm onto adjacent walling. Where such bearing cannot be obtained due to the proximity of adjacent openings the lintel shall be continuous</p> <p><u>Face bricks</u></p> <p>Bricks shall be ordered timeously to obtain uniformity in size and colour</p> <p><u>Pointing</u></p>				

**TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.**

CONTRACT NO:

NO	ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
		Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc  <b>SUPERSTRUCTURE</b>  <u>Brickwork of Cement bricks in class II mortar</u>				
1		One and half brick walls	m <sup>2</sup>	210	R -	
		<u>Brickwork reinforcement</u>				
2		230mm Wide reinforcement built in horizontally	m	1,559	R -	
		<u>"Allied Concrete" prestressed fabricated lintels</u>				
3		110 x 75mm Lintels in lengths not exceeding 3m including 150mm overlapping at both sides over opening (Provisional).	m	20	R -	
		<b>Carried Forward to Summary of Section No. 2</b>			R -	



TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<p><b><u>SECTION NO.2</u></b></p> <p><b><u>BUILDING WORK</u></b></p> <p><b><u>BILL NO.5</u></b></p> <p><b><u>ROOF COVERINGS ETC</u></b></p> <p>For preambles see "Model Preambles for Trades (2008 Edition)" and Supplementary preambles as specified in the Trades.</p> <p>-----</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><u>General</u></p> <p>All roof coverings, etc., to be with a covering of Z275 galvanising. All holes to be drilled and not punched</p> <p>Where described as with "Chromadek" finish, all sheets, flashings, etc., shall be with "Chromadek" silicone polyester paint for exterior use</p> <p><u>Sizes</u></p> <p>All items are measured net unless otherwise described</p> <p><u>Flashings, trimming plates, etc.</u></p> <p>Prices to include for all cutting and waste and relevant fixing material, unless otherwise described</p>				
	<p>All rates for flashings, trimmings, etc., to include for forming drips and closed ends to troughs of sheet steel roof covering where applicable</p>				

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<p>All items are unless otherwise described measured net</p> <p><b><u>PROFILED METAL SHEETING AND ACCESSORIES</u></b></p> <p>0,58mm "Brownbuilt Klip-Lok Light Industrial" galvanised troughed sheeting steel with "Chromadek - Traffic Green" finish on one side, in single lengths fixed to steel purlins or rails and 0,6mm galvanised steel accessories with "Chromadek" finish on one side, fixed to roof members by a firm of Specialists who will give a five (5) year guarantee, all in accordance with the manufacturer's instructions</p>				
1	<p>Roof covering with pitch not exceeding 50 degrees</p> <p><b><u>ROOF DECKING</u></b></p>	m <sup>2</sup>	250	R -	
2	<p>1,2mm Brown Build Bond Deck System</p> <p><b><u>ROOF AND WALL LINING AND INSULATION</u></b></p>	m <sup>2</sup>	90	R -	
3	<p>Insulation laid taut over purlins (at approximately 760mm centres) and fixed concurrent with roof covering including galvanised steel straining wires</p> <p><b><u>PREAMBLES</u></b></p> <p>For preambles refer to "Model Preambles for Trades"</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>	m <sup>2</sup>	43	R -	

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<p><b>Descriptions:</b></p> <p>Items described as nailed shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete</p> <p>Items described as plugged shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and were described as bolted the bolts have been given.</p> <p>Boards must be stacked on a level surface in a dry place on a timber platform. Boards must be carried on edge.</p> <p>Skimmed ceilings must be plastered the same day that the 'Rhino board' has been erected.</p> <p><b>NAILED UP AND SCREW UP CEILINGS</b></p> <p>Gypsum plasterboard with 50mm cover strips of mesh scrim nailed over joints and the whole finished with 6mm minimum Crete stone gypsum skim plaster trowelled to smooth polished surface:</p>				
1	Ceilings fixed to and including 38 x 38mm sawnsoftwood branding at 400mm centres fixed to timbertrusses	m <sup>2</sup>	36		R -

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
2	<p><b>Gypsum plasterboard cornices:</b></p> <p>70mm Coved cornices</p> <p>Carried Forward to Summary of Section No. 2</p>	m	42		<p>R -</p> <p>R -</p>
<p><b><u>SECTION NO.2</u></b></p> <p><b><u>BUILDING WORK</u></b></p> <p><b><u>BILL NO.6</u></b></p> <p><b><u>STRUCTURAL STEELWORK</u></b></p> <p>For preambles see "Model Preambles for Trades (2008 Edition)" and Supplementary preambles as specified in the Trades.</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><b><u>Descriptions</u></b></p> <p>Descriptions of bolts shall be deemed to include nuts and washers</p> <p>Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete</p> <p>Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete</p>					

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<p>Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete. Where anchor bolts are described as embedded in sides or soffits of concrete it shall be deemed to include holes through formwork.</p> <p>Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.</p> <p><b><u>CORROSION PROTECTION OF STRUCTURAL STEELWORK</u></b></p>				
1	Surface dressing and repairs at place of fabrication	t	1.00	R	-
	<b>Carried Forward</b>			R	-
	<b>Brought Forward</b>			R	-
	<b><u>Surface preparation and coating application</u></b>				
2	On site	t	19.50	R	-
	<b><u>Supply and fabrication of steelwork</u></b>				
3	Hot-rolled Steel section	t	1.00	R	-
4	Cold Formed Steel Section	t	1.00	R	-
	<b><u>DELIVERY TO SITE</u></b>				
	<b><u>Normal delivery</u></b>				

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
5	Hot-rolled Steel section	t	1.00		R -
6	Cold Formed Steel Section	t	1.00		R -
	<b><u>Erection on site, etc</u></b>				
7	Hot-rolled and cold formed sections	t	1.00		R -
	<b><u>Bolts to trusses etc</u></b>				
8	High tensile bolts	t	0.25		R -
9	Holding down bolts	t	0.10		R -
	<b>Carried Forward to Summary of Section No. 2</b>				R -
	<b><u>SECTION NO.2</u></b>				
	<b><u>BUILDING WORK</u></b>				
	<b><u>BILL NO. 7</u></b>				
	<b><u>METALWORK</u></b>				
	For preambles see "Model Preambles for Trades (2008 Edition)" and Supplementary preambles as specified in the Trades.				
	-----				
	<u>Descriptions</u>				

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<p>Descriptions of bolts shall be deemed to include nuts and washers Descriptions of expansion anchors and bolts, and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete Metalwork described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described</p> <p><u>Drawings</u></p> <p>Tenderers are referred to architect's drawings annexed to this document for full details of the windows, doors, etc</p> <p><b><u>STEEL ROLLER SHUTTERS ETC</u></b></p> <p>"Thermotek" or Equal Approved Industrial roller shutters fixed to brickwork or concrete</p>				
1	Industrial roll up shutter door to suit opening size 5300 x 5500mm high button or remote operated, including roller box and opening mechanism, rubber weather strips, handles, Roll-A-Guides, hinges, fixing bolts, tracks, 2 no bolts and pad locks, etc, fixed to brickwork or concrete with a minimum of 100mm side room and 350mm headroom and pre-paint to match roof sheeting..	No	1		R -
2	Provisional sum of Hundred and Fifty Thousand Rands (R 150 000) to refurbish and service the existing Crane.	Item	1		R -
	<b>Carried Forward</b>				R -
	<b>Brought Forward</b>				R -

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	Carried Forward to Summary of Section No. 2				R -
	<b><u>SECTION NO.2</u></b>				
	<b><u>BUILDING WORK</u></b>				
	<b><u>BILL NO. 8</u></b>				
	<b><u>PLASTERING</u></b>				
	For preambles see "Model Preambles for Trades (2008 Edition)" and Supplementary preambles as specified in the Trades.				
	-----				
	<b><u>INTERNAL PLASTER</u></b>				
	<u>Cement plaster on brickwork</u>				
1	On walls	m <sup>2</sup>	35		R -
2	On narrow widths	m <sup>2</sup>	15		R -
	Carried Forward to Summary of Section No. 2				R -
	<b><u>SECTION NO.2</u></b>				
	<b><u>BUILDING WORK</u></b>				
	<b><u>BILL NO.9</u></b>				
	<b><u>PLUMBING AND DRAINAGE</u></b>				



TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<p>For preambles see "Model Preambles for Trades (2008 Edition)" and Supplementary preambles as specified in the Trades.</p> <p>-----</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><b><u>Wire gratings</u></b></p> <p>Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings</p> <p><b><u>Exposed concrete surfaces</u></b></p> <p>Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gulley tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster</p> <p><b><u>Excavations</u></b></p> <p>No claim for rock excavation will be entertained unless the contractor has timeously notified the quantity surveyor thereof prior to backfilling</p> <p>"Soft rock" and "hard rock" shall be as defined in "Earthworks"</p> <p><b><u>Laying, backfilling, bedding, etc. of pipes</u></b></p> <p>Pipes shall be laid and bedded, and trenches shall be carefully backfilled in accordance with manufacturers' instructions</p>				

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SABS 1200 L : Medium-pressure pipelines LD : Sewers LE : Stormwater drainage Pipe trenches etc shall be backfilled in accordance with clauses 3, 5.5, 5.6, 5.7 and 7 of SABS 1200 DB : Earthworks (Pipe trenches) Pipes shall be bedded in accordance with clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200 LB : Bedding (Pipes). Unless otherwise described bedding of rigid pipes shall be class B bedding				
7	<b>Waste Course</b> Concrete lined (600mm x 300mm) open channel	m	13		R -
	25 mm galvanized mentis grating (600mm wide)	m	13		R -
	<b>Carried Forward to Summary of Section No. 2</b>				R -
	<b><u>SECTION NO.2</u></b>				
	<b><u>BUILDING WORK</u></b>				
	<b><u>BILL NO. 10</u></b>				
	<b><u>PAINTWORK</u></b>				
	For preambles see "Model Preambles for Trades (2008 Edition)" and Supplementary preambles as specified in the Trades.				
	-----				
	<b><u>SUPPLEMENTARY PREAMBLES</u></b>				
	<u>All paint, complete with undercoat, primer, etc, to be used strictly in accordance with the manufacturer's specification.</u>				

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
1	<b><u>PAINTWORK ETC TO NEW WORK</u></b>	m <sup>2</sup>	435		
	<b><u>ON FLOATED PLASTER</u></b>				
	One coat alkali resistance primer, one under coat and two coats eggshell paint_				
	On internal walls				R -
2	<b><u>ON METAL</u></b>	m <sup>2</sup>	145		
	Plascon Velva Glo Satin to exterior new mild steel (NW 683). Surface to be clean and dry. Remove surface contaminants using Plascon Aqua Solv Degreaser (GR 1) with bristle brush or Brillo pads. Rinse thoroughly with tap water until surface is water break-free. Remove rust and mill scale by abrasive blasting to ISO 8501 - 01:1988 - Sa2½ or by hand/mechanical wire brushing to St3 of the same standard. Allow to dry completely and prime within 4 hours of cleaning. Prime with one coat of Metal Primer (UC 501) with an overcoating time of 16 hours and finish with two coats of Velva Glo Satin (VLO) with 16 hours drying time between coats, for a maintenance cycle of 3 years in a C1 - inland environment.				
	Carried Forward				R -
	Brought Forward				R -
2	On roof trusses	m <sup>2</sup>	145		R -
	<b><u>ON CELINGS</u></b>				
	- Prepare surface and remove all loose material apply one coat primer and to coats paint				

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
4	Ceilings	m <sup>2</sup>	48		R -
	<b>Carried Forward to Summary of Section No. 2</b>				<b>R</b> -
	Section No.2				
	BUILDING WORKS				
	<b>SECTION SUMMARY-BUILDING WORKS</b>				
<b>Bill No</b>					<b>Amount</b>
1	Alterations				R -
2	Earthworks				R -
3	Concrete, Formwork and Reinforcement				R -
4	Masonry				R -
5	Roof Coverings, etc				R -
6	Structural Steelwork				R -
7	Metalwork				R -
8	Plastering				R -
9	Plumbing and Drainage				R -
10	Paintwork				R -

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	Carried to Final Summary				
					R
					-

## ELECTRICAL WORKS

ITEM No	DESCRIPTION	UNIT	QTY		AMOUNT
3	<p><b>SECTION 3</b></p> <p><b>BILL NO. 1</b></p> <p><b>BULK SUPPLY</b></p> <p><b>The complete installation must comply SANS10142 specifications and the Quality specification in this document. Therefore, Tenders are advised to study the specification and drawings before the Bill is to be price.</b></p> <p><b><u>LV RETICULATION</u></b></p> <p>Supply and install a 400A, 380V Tripple Pole feeder circuit breaker in main LV Panel in the miniature substation to provide power supply to the distribution board to be located in the Spray Booth.</p> <p><b>CABLES, CONDUCTORS &amp; SLEEVES</b></p> <p><b>Supply and install PVC insulated armoured copper cables</b></p> <p>240mm<sup>2</sup> 4 x core PVC insulated copper cable (For supply cables from substation to DB-SBO - Spray booth)</p> <p>95mm<sup>2</sup> 4 x core PVC insulated copper cable (For supply cables from DB-SBO Spray booth to DB-SBL Sand blast)</p> <p>50mm<sup>2</sup> 4 x core PVC insulated copper cable</p>	<p>each</p> <p>meter</p> <p>meter</p> <p>meter</p>	<p>1</p> <p>100</p> <p>40</p> <p>20</p>		<p>R -</p> <p>R -</p> <p>R -</p> <p>R -</p>

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	10mm <sup>2</sup> 4 x core PVC insulated copper cable (For supply cables from DB-SBO Spray booth to 3 Phase sockets, heat pump, high pressure washers, fresh air fans and spray booths Panels)	meter	280		R -
	10mm <sup>2</sup> 4 x core PVC insulated copper cable (For supply cables from DB-SBL Sand blast to 3 Phase sockets)	meter	100		R -
	4mm <sup>2</sup> 3 x core PVC insulated copper cable (For supply cables from DB-SBO Spray booth to water tank, circulation pump panels)	meter	60		R -
	<b>Supply and install bare copper earth conductor</b>				R -
	185mm <sup>2</sup> bare copper earth cable	meter	100		R -
	70mm <sup>2</sup> bare copper earth cable	meter	40		R -
	35mm <sup>2</sup> bare copper earth cable	meter	20		R -
	6mm <sup>2</sup> bare copper earth cable	meter	280		R -
	4mm <sup>2</sup> bare copper earth cable	meter	60		R -
	<b>GLANDS AND SHROUDS</b>				R -
	240mm <sup>2</sup> 4 x core PVC insulated copper cable	each	2		R -
	95mm <sup>2</sup> 4 core PVC insulated copper cable	each	2		R -
	50mm <sup>2</sup> 4 core PVC insulated copper cable	each	5		R -
	10mm <sup>2</sup> 4 core PVC insulated copper cable	each	14		R -
	4mm <sup>2</sup> 3 core PVC insulated copper cable	each	6		R -
	<b>GLANDS AND SHROUDS (Earth bare)</b>				R -
	185mm <sup>2</sup> bare copper earth cable	each	2		R -
	70mm <sup>2</sup> bare copper earth cable	each	2		R -
	35mm <sup>2</sup> bare copper earth cable	each	5		R -
	6mm <sup>2</sup> bare copper earth cable	each	14		R -
	4mm <sup>2</sup> bare copper earth cable	each	6		R -
	<b>CABLE MARKERS &amp; WARNING TAPES</b>				R -
	Cable markers for cable routes indication	each	50		R -

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	Cable warning tape	meter	20		R -
	<b>SUPPLY &amp; INSTALL PVC SLEEVES</b>				R -
	110 diameters	meter	40		R -
	50 diameters	meter	40		R -
	<b>TRENCHING AND EXCAVATIONS</b> (600mm wide & 800mm deep). Rate to include bedding and backfilling				R -
	Pickable soil	meter	100		R -
	Provision for removal and re-instating of existing paving	meter	30		R -
	Provision for cutting and re-instating of existing roadway	meter	20		R -
	<b>PERFORATED CABLE TRAY WITH RETURN FLANGE</b>				
	Supply and install galvanized metal cable wire ways including all fixing material, <u>trapeze hangers for single threaded rod</u> , splices, bonding conductors and other accessories required. Prices to include items such as cable ties, nuts, bolts, earthing and bonding, cold galvanising raw cuts, etc.				
	Cab strut or O-line 300mm wide medium duty perforated cable tray with return flanges (50mm rail height, 1,6mm thickness and 375mm rung spacing) medium duty cable ladder including all bolts, screws, clips, P4000 trapeze hanger, threaded rod and other material necessary for fixing:	meter	100		R -
	<b>TOTAL CARRIED TO SECTION SUMMARY</b>				R -
	<b>SECTION 3</b>				
	<b>BILL No 2</b>				
	<b>Supply and install pipes including short lengths jointing, sweeping bends, buses, locknuts, round boxes etc.,</b>	meter	300		R -
	20mm diameter PVC pipe cast into concrete, brick work, suspended in ceiling voids or surface mounted on wall	meter	400		R -

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	25mm diameter PVC pipe cast into concrete, brick work, suspended in ceiling voids or surface mounted on wall	meter	20		R -
	20mm diameter copex conduit				
	<b>Supply and install steel galvanised walls boxes complete with all accessories</b>	each	10		R -
	100mm x 50mm x 50mm deep	each	12		R -
	100mm x 100mm x 50mm deep	meter	720		R -
	Supply and install 1,6mm diameter steel galvanised draw wires drawn into conduit/sleeves:	each	20		R -
	Supply and install 100mm x 100mm blank cover plates	each	120		R -
	Supply and install 4-way PVC round boxes	each	30		R -
	Supply and install 100mm X 50 blank plates				
	<b>ELECTRICAL CABLE MANAGEMENT &amp; TRUNKING</b>				
	<b>Supply, Install, Test and Commission</b>				
	Galvanised Unistrut suspended from structure in the roof. Fixings not to exceed 4m including galvanized steel cover (Rates to include Tees, Bends, 4 ways, ends and all other accessories).	m	100		R -
	<b>P9000 Unistrut</b>	m	100		R -
	<b>P8000 Unistrut</b>	m	60		R -
	<b>P2000 Unistrut</b>		<b>40</b>		R -
	<b>DISTRIBUTION BOARDS (Refer to schematic diagrams)</b>				
	Refurbish and modify existing main distribution boards as per the schematic diagram. The distribution boards will be surface mounted on wall. The distribution board doors must have a neat and professionally manufactured cut-out, with reinforced and properly finished edges, so that the main isolator of the distribution board can be switched without opening the door in case of emergency. . Distribution boards must be lockable, and padlocks must be supplied with the distribution board	each	1		R -
	DB-SBO (Spray Booth Distribution Board)	each	1		R -
	DB-SDO-1 (HVAC Controller unit)				



TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<b>CONDUCTORS</b>				
	<b>Supply and install 600/1000Volt PVC insulated stranded copper conductors drawn into conduits, etc.</b> (Wiring for lighting circuits is to be carried out with 2,5mm <sup>2</sup> conductors and 2,5mm <sup>2</sup> earth conductors. For socket outlet circuits the wiring shall comprise of 4 mm <sup>2</sup> conductors with 2, 5mm <sup>2</sup> earth conductors)	meter	1200		R -
	2.5mm <sup>2</sup>	meter	600		R -
	4mm <sup>2</sup>	meter	300		R -
	6mm <sup>2</sup>				
	<b>Earth Wire</b>	meter	300		R -
	2.5mm <sup>2</sup>	meter	150		R -
	4mm <sup>2</sup>				
	<b>SOCKETS OUTLETS</b>				
	<b>Supply, install and connect socket outlets in flush wall mounted boxes, power skirting, trunking or surface if required complete with cover plates and all necessary accessories:</b>	each	10		R -
	Supply and install 230V, 16A combination switched socket outlets (with 1 x standard 16A round 3 pin socket + 1 x 3 pin ZA plug socket combined) flush mounted on the wall c/w steel cover plate (white) suitable to accommodate SANS 164-1 & SANS 164-2 socket outlets. Outlets should be explosion proof.	each	2		R -
	Supply and install 400V, 63A 3Phase switched socket outlets with weatherproof (IP44) box surface mounted on the wall c/w explosion proof capabilities.				
	<b>SWITCHES</b>				
	<b>Supply, install and connect light switches in flush wall mounted boxes, complete with cover plates and all necessary accessories:</b>	each	2		R -
	Supply and install 16A one lever one-way light switch flush mounted on the wall	each	2		R -
	Supply and install 16A one lever two-way light switch flush mounted on the wall	each	1		R -
	Supply and install motion detectors				
	<b>ISOLATORS</b>				

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<b>Supply, install and connect isolators in flush wall mounted boxes or surface, complete with cover plates and all necessary accessories ( Isolators to be mounted within one meter of the equipment to be controlled).</b>	each	2		R -
	Supply and install 230V, 10A double pole isolator surface mounted weatherproof IP64. Rates to include 4-inch x 4-inch extension box	each	6		R -
	Supply and install 230V, 20A double pole isolator surface mounted weatherproof IP64. Rates to include 4 inch x 4-inch extension box	each	4		R -
	<b>LUMINAIRES</b>				
	<b>Supply, install and connect luminaires complete with lamps, fixings, brass screws, washers, etc. All recessed light fittings should be supplied with 3m connection lead</b>	each			
	Type B (Ceiling mounted 21W LED round bulkhead IP65 light fitting with prismatic acrylic diffuser)	each	15		R -
	Type C (Wall mounted 18W LED round bulkhead IP65 light fitting with prismatic acrylic diffuser)	each	10		R -
	Type D (Surface mounted bulkhead 18W LED with 2400LM, 4000K die-cast aluminium body and high-impact acrylic diffuser.)	each	25		R -
	Type F (Explosion proof light, 100W, White steel frame mounted from roof with stainless steel wire)	each	10		R -
	Type L (Suspended LED Industrial High Bay luminaire IP64 150W, 4000K colour IP64)	each	8		R -
	Type G (Surface mounted Vapour proof 48W LED Luminaire IP66 BEKA VAPOURLINE OR SIMILAR APPROVED)		10		R -
	<b>TESTING AND COMMISSIONING</b>	item	1		R -
	Inspections, testing and handing over of the complete installation in the presence of the Engineer and certify the results on the <i>Certificate of compliances by an accredited person.</i>				
	<b>EARTHING</b>				

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	Earthing of all buildings to comply with the latest SANS1 0142, <i>Code of Practice for The Wiring of Premises</i> as amended. Bonding of all hot, cold and waste pipes complete with 12,5mm x 1mm thick solid or perforated copper tape including fixings, brass screws, nuts, washers etc.: Also include for the earth mat with earth spikes	item	2		R -
	<b>TOTAL CARRIED TO SECTION SUMMARY</b>				R -

#### MECHANICAL WORKS

ITEM No	DESCRIPTION	UNIT	QTY		AMOUNT
	<b>PAINT BAY MECHANICAL EQUIPMENT</b>  Supply and installation of fresh air plenums c/w filters and bifurcated fans for 16m <sup>3</sup> /s @1000 Pa c/w flame/ explosion proof isolators, 2 x 1.5D sound attenuators to suit. Power: 400V/3PH/50Hz. Plenums must structurally be designed to carry weight of fan, sound attenuators, ducting etc.	No.	2		R -
	Supply and installation of extract air plenums c/w filters and bifurcated fans for 16m <sup>3</sup> /s @1000 Pa c/w flame/ explosion proof isolators, 2 x 1.5D sound attenuators to suit. Power: 400V/3PH/50Hz. Plenums must structurally be designed to carry weight of fan, sound attenuators, ducting etc.	No.	2		R -
	Supply and installation of supply air and extract air ducting for ventilation of paint booth. Ducting to be supplied c/w supports from walls/ roof. Duct labelling and colour coding as per client specs.	No.	4		R -

**TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.**

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	Supply and installation of Exhaust Filter Manometer for monitoring pressure drop across the exhaust filters, indicating the filters' condition (Pressure Differential Gauge with accessories). [Maximum Pressure - 200 kPa (2 Bar), Permissible Temperature - -40°C to +60°C]	No.	2		R -
	Supply and installation of Air Solenoid valve to cut off the supply of compressed air to painting equipment under specific conditions and prevent painting when the booth is not functioning correctly or if any booth doors are open. [Working Pressure - 1 to 10 Bar, Temperature Range - Max +60°C]	No.	2		R -
	Supply and installation of Control Panel to regulate and monitor airflow, temperature, and other settings.	No.	2		R -
	Supply and installation of Air Curtain to direct a stream of air downward and prevent contaminants and other debris from infiltrating interior space. Air Flow - 15900 m³/h, 4.20 kw, 18 A, 69 dB(A), 211 kg]	No.	2		R -
	Supply and installation of Door Limit Switch to signal when a door is open in the booth.	No.	2		R -
	Roller Shutter Doors - 3729mm (W) x 5668mm (H). [3mm thick cold rolled galvanised steel] - 120-minute fire rated roller shutter door c/w decent control, fusible links and dust seals.	No.	1		R -
	Roller Shutter Doors - 5035mm (W) x 7293mm (H). [3mm thick cold rolled galvanised steel] - 120-minute fire rated roller shutter door c/w decent control, fusible links and dust seals.	No.	1		R -
	FIRE PROTECTION EQUIPMENT				

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	25mm Dia Fire Hose Reels SANS approved and supplied and fitted including, stop valves, hose reel base, clamps, nozzle brackets, fixing brackets, pressure gauge etc including length of 30m connecting pipe per reel as per the specification and tender drawings.	No.	1		R -
	Supply and install fire extinguishers SANS approved. Complete with meranti backing boards, steel bases, mounting brackets and wall anchors as per the detailed specifications. 4.5 kg DCP	No.	2		R -
	Supply and install fire extinguishers SANS approved. Complete with meranti backing boards, steel bases, mounting brackets and wall anchors as per detailed specifications. 5 kg CO2	No.	2		R -
	Fire detection system c/w 1 loop panel, devices, mcps, sirens, strobes, etc. System to be class A wired and linked to ventilation equipment, roller shutter doors, etc	No.	1		R -
	Deluge System c/w 150mm deluge valve, extinguishant panel, piping nozzles, pilot sprinklers, etc. Entire system to be installed over existing crane. All access equipment, included. Connection point almost 160m away	No.	1		R -
	Supply and install SABS approved fire and evacuation signage as per drawing	Item	Lot		R -
	<b>CARRIED TO SECTION SUMMARY</b>				R -
	<b>WASH BAY &amp; HOT WATER STORAGE</b>				
	<b>MECHANICAL EQUIPMENT</b>				

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<p>1200 Litre vertical storage water heater c/w heat pump and circulating pump, safety valves, thermostat, Anode, manhole, vacuum breakers and all accessories and mounting brackets. Heat Pump unit c/w onboard circulation pump. Heat pump power Input: 2 x 7.5kW 400V/3PH/50Hz each air-cooled unit, Max Temp 65°C. Working pressure, 400kPa and testing pressure, 600kPa. Storage to meet the requirements of SANS347 or equal approved. Storage tank to be plumbed directly into the cold-water inlet, hot water supply piping and wastewater reticulation. Backup heating elements, 48kW, 400V/3PH/50Hz</p>	No.	1		R -
	<p>Hot water circulation pump c/w corrosion-free stainless-steel housing for 0.5 l/s @ 2.0 Bar. 0.165kW 230V/1PH/50Hz. Pump guard dual circulation pump controller,</p>	No.	1		R -
	<p>High pressure washer - 6 kW, Pressure - 2 Bar, Airflow - 15 L/min @ 150Bar</p>	No.	2		R - R -
	<p>Hot water piping, copper class 2 installed complete</p>	No.	1		R -
	<p>Spray Gun, Hoses and Fittings</p>	No.	2		R -
	<p><b>FIRE PROTECTION EQUIPMENT</b></p> <p>25mm Dia Fire Hose Reels SANS approved and supplied and fitted including, stop valves, hose reel base, clamps, nozzle brackets, fixing brackets, pressure gauge etc including length of 30m connecting pipe per reel as per the specification and tender drawings.</p>	No.	1		R -
	<p>Supply and install fire extinguishers SANS approved. Complete with meranti backing boards, steel bases, mounting brackets and wall anchors as per the detailed specifications. 4.5 kg DCP</p>	No.	2		R -

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	Supply and install fire extinguishers SANS approved. Complete with meranti backing boards, steel bases, mounting brackets and wall anchors as per detailed specifications. 5 kg CO2	No.	1		R -
	<b>TOTAL CARRIED TO SECTION SUMMARY</b>				R -

## PART 2 SAND BLASTING

<p><b><u>SECTION NO. 2 SAND BLASTING</u></b></p> <p><b><u>BILL NO 1</u></b></p> <p><b><u>ALTERATIONS</u></b></p> <p>For preambles see "Model Preambles for Trades (2008 Edition)" and Supplementary preambles as specified in the Trades.</p> <p>TENDERERS ARE TO NOTE THAT ALL WORK IS TO BE EXECUTED IN EXISTING BUILDINGS IN A COMBINATION OF NEW WORK, WORK IN PATCHES AND WORK IN SMALL QUANTITIES.</p> <p><b><u>Site inspection</u></b></p> <p>The Tenderer is advised to visit the site, inspect the existing premises and acquaint himself thoroughly with the nature of the work specified.</p> <p><b><u>Sizes and dimensions</u></b></p> <p>All sizes and dimensions stated herein are approximate and deemed only sufficient to identify the item of work concerned.</p>					

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<p>No allowance for overbreak has been made to any of the adjoining structures, walls, finishes, etc., where removals or pockets occur (the nett opening size, etc., has been made good in later items of this bill where such making good has not been included with the item) and the Contractor must allow in his prices for making good any overbreak that may occur.</p> <p><b><u>Materials</u></b></p> <p>Old materials from alterations, except were described to be re-used or handed over, become the property of the contractor.</p> <p>Old materials from the alterations, except were described to be re-used or handed over, as well as all rubbish, etc., must be regularly carted from the site and not be allowed to accumulate on or around the site.</p> <p style="text-align: right;"><b>Carried Forward</b></p> <p>Section No.2 BUILDING WORKS Bill No.1 Alterations <b>ESKOM ROSHERVILLE TSS SANDBLASTING ROOM</b></p> <p style="text-align: right;"><b>Brought Forward</b></p> <p>None of the old materials are to be used for new work except where specifically described as being set aside for re-use.</p>				



TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<p>Where certain materials or articles from demolitions or alterations are described as to be handed over by the Contractor to the Client, such materials or articles shall be properly stored by the Contractor, until handing over thereof. The Contractor must obtain an official receipt listing the materials or articles and dates of handing over. If the Contractor fails to submit the receipt when requested to do so, it shall be deemed that the materials or articles are still in his possession and he will be held liable to the Client for the full replacement value thereof, which amount will be deducted from any monies due to the Contractor.</p> <p><b><u>General</u></b></p> <p>All new finishes are measured in the relevant trades for new work.</p> <p>Allow for watering the works sufficiently to prevent nuisance from dust.</p> <p>All alteration works described hereunder shall imply the use of an approved screed or plaster repairing compound and preparing existing surfaces to receive new.</p> <p>Provide all necessary propping, etc., required to ensure the safety and stability of the structure during the contract period and remove at completion.</p> <p>Provide all necessary additional barricades, screens, overhead protections, etc., required to ensure the safety of persons, property, etc., and remove at completion.</p> <p>All alteration work is within an existing facility. The contractor shall take utmost care to minimise damage to existing completed works in the vicinity of the alteration works.</p> <p><b><u>REMOVAL OF EXISTING WORK</u></b></p>				

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<b><u>TEMPORARY BARRIERS, SCREENS, ETC</u></b>				
	<b>Carried Forward</b>				
	Section No.2 BUILDING WORKS Bill No.1 Alterations <b>ESKOM ROSHERVILLE TSS SANDBLASTING ROOM</b>				
	<b>Brought Forward</b>				
	<b><u>Temporary barriers, screens, etc including removal</u></b>				
1	Dust screen 3000mm high between concrete floor and ceiling formed of suitable timber framing with 250-micron polyethylene sheeting / net stapled on including corners, ends, etc	m	150		R -
	<b><u>REMOVAL OF EXISTING WORK</u></b>				
	<b><u>Breaking up and removing mass concrete</u></b>				
2	250mm Thick surface bed	m <sup>2</sup>	100		R -
	<b><u>Taking out and removing doors, windows, etc including thresholds, sills, etc, set aside for later re-use at same position.</u></b>				
3	Steel roller shutter door	SUM	1		R -
4	Railway track	SUM	1		R -
	<b><u>Taking down and removing roofs, floors, panelling, ceilings, partitions, etc</u></b>				
5	Roof covering	m <sup>2</sup>	400		R -
6	Roof cladding	m <sup>2</sup>	120		R -

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
7	<p><b><u>TRANSPORT OF MATERIALS</u></b></p> <p>Transport removed materials, debris etc to dumping site (Provisional).</p> <p><b>Carried Forward to Summary of Section No. 2</b></p> <p><b><u>SECTION NO.2</u></b></p> <p><b><u>BUILDING WORK</u></b></p> <p><b><u>BILL NO.2</u></b></p> <p><b><u>EARTHWORKS</u></b></p> <p><b><u>EARTHWORKS</u></b></p> <p>For preambles see "Model Preambles for Trades (2008 Edition)" and Supplementary preambles as specified in the Trades.</p> <p>-----</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><u>Nature of ground</u></p> <p>The nature of the ground is assumed to be sandy weathered granite, therefore "earth", but possibly interspersed with "hard rock"</p> <p><u>Excavation for working space in rock</u></p>	SUM	1		<p>R</p> <p>-</p> <p>R</p> <p>-</p>
	<p>Notwithstanding clause 11 page 8 of the Standard System of Measuring Building Work, excavation for working space in rock will be measured in cubic metres to the extent executed and given as "extra over" bulk excavation or trench and hole excavation as the case may be</p>				

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<p style="text-align: right;"><b>Carried Forward</b></p> <p>Bill No.2 Earthworks</p> <p style="text-align: right;"><b>Brought Forward</b></p> <p><u>Carting away of excavated material</u></p> <p>Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stockpiles situated on the building site</p> <p><u>Filling</u></p> <p>Notwithstanding the reference to prescribed multiple handling in clause 1 page 6 of the Standard System of Measuring Building Work, prices for filling and backfilling shall include for all selection and any multiple handling of material</p> <p><u>Soil poisoning</u></p>				<p>R -</p> <p>R -</p>
	<p>Ant and weed poisoning will be applied in accordance with SABS specifications by Registered and Approved Specialists who will issue a five (5) year guarantee. The contractor will only be paid for these items once they have produced the said certificate to the Principal Agent.</p> <p><b><u>EXCAVATION, FILLING, ETC</u></b></p>				

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<u>Excavate in all materials and use for embankment or backfill or dispose, as ordered</u>				
1	Existing Fill Material Between Existing Building and Access Road	m <sup>3</sup>	105		R -
2	Foundation Based	m <sup>3</sup>	50		R -
	<b><u>Extra-over for</u></b>				
3	Intermediate excavation	m <sup>3</sup>	50		R -
4	Hard rock excavation	m <sup>3</sup>	10		R -
	<b>Carried Forward</b>				R -
	Bill No.2 Earthworks				
	<b>Brought Forward</b>				R -
	<b><u>Restricted excavation</u></b>				
	<b><u>Excavate for restricted foundations, footings and pipe trenches in all materials and use for backfilling or embankment or dispose</u></b>				
5	Bases Near Existing Structure	m <sup>3</sup>	25		R -
	<u>Importing of materials</u>				
	<b>Extra-over for importation of materials from commercial sources or from borrow pits</b>				
6	From commercial source	m <sup>3</sup>	194		R -

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<p><b>Carried Forward to Summary of Section No. 2</b></p> <p><b>R</b> <b>-</b></p> <p><b><u>SECTION NO.2</u></b></p> <p><b><u>BUILDING WORK</u></b></p> <p><b><u>BILL NO.3</u></b></p> <p><b><u>CONCRETE, FORMWORK AND REINFORCEMENT</u></b></p> <p>For preambles see "Model Preambles for Trades (2008 Edition)" and Supplementary preambles as specified in the Trades.</p> <p>-----</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><u>Cost of tests</u></p> <p>The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the architect. The testing shall be undertaken by an independent firm or institution nominated by the contractor and to the approval of the architect. (Test cubes are measured separately)</p>				
	<p>Breeze concrete shall consist of twelve parts clean dry furnace ash, free from coal or other foreign matter to one part cement (12:1), the ash graded up to particles which will pass a 16,5mm ring from a minimum which fails to pass a 4,75mm mesh. The finer materials from the screening are to be first mixed with the cement into a mortar and the ash added afterwards and thoroughly incorporated</p>				

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<p style="text-align: right;"><b>Carried Forward</b></p> <p>Bill No.3 Concrete, Formwork and Reinforcement</p> <p style="text-align: right;"><b>Brought Forward</b></p> <p><u>Formwork</u> Description of formwork shall be deemed to include use and waste only (except where described as "left in" or "permanent"), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use</p> <p>The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself</p> <p>Formworks to soffits of solid slabs etc shall be deemed to be slabs not exceeding 250mm thick unless otherwise described</p> <p>Formwork to soffits of slabs, beams, etc shall be deemed to be propped up exceeding 1,5m and not exceeding 3,5m high unless otherwise described</p> <p>Formwork to sides of bases, pile caps, ground beams, etc will only be measured where it is prescribed by the engineer for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in "Earthworks"</p>				<p style="text-align: right;">R -</p> <p style="text-align: right;">R -</p>

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
1	<b><u>UNREINFORCED CONCRETE</u></b>				
	<u>15MPa/19mm concrete</u>				
	50mm thick Blinding layer	m <sup>3</sup>	55		R -
	<b>Carried Forward</b>				R -
	-----				
	Bill No.3 Concrete, Formwork and Reinforcement				
	<b>Brought Forward</b>				R -
2	Floor Slab	m <sup>3</sup>	78		R -
3	Floor screed	m <sup>3</sup>	40		R -
	<b><u>JOINTS</u></b>				
4	Saw cut joint on floors	m	64		R -
5	Expansion joints between concrete and walls	m	55		R -
	<b><u>FORMWORK</u></b>				
	<b><u>ROUGH FORMWORK (DEGREE OF ACCURACY II)</u></b>				
	<b><u>Rough formwork to horizontal</u></b>				
6	Hand floating on top of plinths	m <sup>2</sup>	100		R -



TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<b>Carried Forward</b>				R -
	Bill No.3 Concrete, Formwork and Reinforcement				
	<b>Brought Forward</b>				R -
	<b><u>Smooth formwork to horizontal</u></b>				
7	Power floating on floor slab	m <sup>2</sup>	208		R -
	<b><u>REINFORCEMENT</u></b>				
	<b><u>Steel Reinforcement</u></b>				
	<u>High tensile steel reinforcement to structural concrete work</u>				
8	All diameters Mild steel reinforcement	t	1		R -
9	All diameters High-tensile reinforcement	t	2		R -
	<b>Carried Forward to Summary of Section No. 2</b>				R -
	Bill No.3 Concrete, Formwork and Reinforcement				
	<b><u>SECTION NO.2</u></b>				
	<b><u>BUILDING WORK</u></b>				
	<b><u>BILL NO. 4</u></b>				

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<p><b><u>MASONRY</u></b></p> <p>For preambles see "Model Preambles for Trades (2008 Edition)" and Supplementary preambles as specified in the Trades.</p> <p>-----</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><b><u>BRICKWORK</u></b></p> <p><u>Sizes in descriptions</u></p> <p>Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick</p> <p>Brick sizes shall be 220mm x 110mm x 75mm.</p> <p><u>Linings to concrete</u></p> <p>Descriptions of linings to concrete, unless otherwise described, shall be deemed to include wire ties</p> <p><u>Hollow walls etc</u></p>				
	<p>Descriptions of hollow walls shall be deemed to include wire ties and leaving every fifth perpend of the bottom course of the external skin open as a weep hole</p> <p><u>Reinforced brick lintels</u></p> <p>Lintels shall bear at least 160mm onto adjacent walling. Where such bearing cannot be obtained due to the proximity of adjacent openings the lintel shall be continuous</p>				

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<b>Carried Forward</b>				R -
	Bill No.4 Masonry				
	<b>Brought Forward</b>				R -
1	<u>"Allied Concrete" prestressed fabricated lintels</u> 110 x 75mm Lintels in lengths not exceeding 3m including 150mm overlapping at both sides over opening (Provisional).	m	30		R -
	<b>Carried Forward to Summary of Section No. 2</b>				R -
	Bill No.4 Masonry				
	<b><u>SECTION NO.2</u></b>				
	<b><u>BUILDING WORK</u></b>				
	<b><u>BILL NO.5</u></b>				
	<b><u>ROOF COVERINGS ETC</u></b>				
	For preambles see "Model Preambles for Trades (2008 Edition)" and Supplementary preambles as specified in the Trades.				
	-----				
	<b><u>SUPPLEMENTARY PREAMBLES</u></b>				

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<u>General</u>  All roof coverings, etc., to be with a covering of Z275 galvanising. All holes to be drilled and not punched  Where described as with "Chromadek" finish, all sheets, flashings, etc., shall be with "Chromadek" silicone polyester paint for exterior use  <u>Sizes</u>  All items are measured net unless otherwise described  <u>Flashings, trimming plates, etc.</u>  Prices to include for all cutting and waste and relevant fixing material, unless otherwise described  All rates for flashings, trimmings, etc., to include for forming drips and closed ends to troughs of sheet steel roof covering where applicable  All items are unless otherwise described measured net  <b><u>PROFILED METAL SHEETING AND ACCESSORIES</u></b>				
	<p style="text-align: right;"><b>Carried Forward</b></p>  Bill No.5 Roof Coverings, etc  <p style="text-align: right;"><b>Brought Forward</b></p>				<p style="text-align: right;">R -</p>  <p style="text-align: right;">R -</p>

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
1	<p>0,58mm "Brownbuilt Klip-Lok Light Industrial" galvanised troughed sheeting steel with "Chromadek - Traffic Green" finish on one side, in single lengths fixed to steel purlins or rails and 0,6mm galvanised steel accessories with "Chromadek" finish on one side, fixed to roof members by a firm of Specialists who will give a five (5) year guarantee, all in accordance with the manufacturer's instructions</p> <p>Roof covering with pitch not exceeding 50 degrees</p> <p><b>Carried Forward to Summary of Section No. 2</b></p> <p>Bill No.5 Roof Coverings, etc</p> <p><b><u>SECTION NO.2</u></b></p> <p><b><u>BUILDING WORK</u></b></p> <p><b><u>BILL NO.6</u></b></p>	m <sup>2</sup>	278		<p>R -</p> <p>R -</p>
	<p><b><u>CARPENTRY AND JOINERY</u></b></p> <p>For preambles see "Model Preambles for Trades (2008 Edition)" and Supplementary preambles as specified in the Trades.</p> <p>-----</p> <p><b>Carried Forward</b></p> <p>Bill No.6 Carpentry and Joinery</p>				<p>R -</p>

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<b>Brought Forward</b>				R -
	<b><u>FIRE DOORS AND FRAMES, ETC</u></b>				
	<b><u>"Bitcon Industrial" fire doors with commercial veneer</u></b>				
1	Rubidor Class B, fire double door size 813 x 2032mm high with timber veneer and rebated meeting stiles, viewing panel of 100 x 300mm including pressed steel frame for 230mm brick wall and including door closer and lockset.	No	1		R -
	<b>Carried Forward to Summary of Section No. 2</b>				R -
	Bill No.6 Carpentry and Joinery				
	<b><u>SECTION NO.2</u></b>				
	<b><u>BUILDING WORK</u></b>				
	<b><u>BILL NO.7</u></b>				
	<b><u>STRUCTURAL STEELWORK</u></b>				
	For preambles see "Model Preambles for Trades (2008 Edition)" and Supplementary preambles as specified in the Trades.				
	<b><u>SUPPLEMENTARY PREAMBLES</u></b>				
	<b><u>Descriptions</u></b>				
	Descriptions of bolts shall be deemed to include nuts and washers				

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<p>Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete</p> <p>Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete</p> <p>Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete. Where anchor bolts are described as embedded in sides or soffits of concrete it shall be deemed to include holes through formwork.</p> <p>Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.</p> <p><b><u>CORROSION PROTECTION OF STRUCTURAL STEELWORK</u></b></p>				
1	Surface dressing and repairs onsite	t	4.00		R -
	<p style="text-align: right;"><b>Carried Forward</b></p> <p>Bill No.7 Structural Steelwork</p> <p style="text-align: right;"><b>Brought Forward</b></p> <p><b><u>Surface preparation and coating application</u></b></p>				R -

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
2	<p>On site</p> <p>Carried Forward to Summary of Section No. 2</p> <p>Bill No.7 Structural Steelwork</p> <p><b><u>SECTION NO.2</u></b></p> <p><b><u>BUILDING WORK</u></b></p> <p><b><u>BILL NO. 8</u></b></p> <p><b><u>METALWORK</u></b></p> <p>For preambles see "Model Preambles for Trades (2008 Edition)" and Supplementary preambles as specified in the Trades.</p> <p>-----</p> <p><u>Descriptions</u></p>	t	4.00		<p>R</p> <p>-</p> <p>R</p> <p>-</p>
	<p>Descriptions of bolts shall be deemed to include nuts and washers Descriptions of expansion anchors and bolts, and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete Metalwork described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described</p> <p><u>Drawings</u></p> <p>Tenderers are referred to architect's drawings annexed to this document for full details of the windows, doors, etc</p> <p><b><u>STEEL ROLLER SHUTTERS ETC</u></b></p>				



TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
1	<p>"Thermotek" or Equal Approved Industrial roller shutters fixed to brickwork or concrete</p> <p>Industrial roll up shutter door to suit opening size 3500 x 7000mm high button or remote operated, including roller box and opening mechanism, rubber weather strips, handles, Roll-A-Guides, hinges, fixing bolts, tracks, 2 no bolts and pad locks, etc, fixed to brickwork or concrete with a minimum of 100mm side room and 350mm headroom and pre-paint to match roof sheeting..</p> <p style="text-align: right;"><b>Carried Forward</b></p> <p>Bill No.8 Metalwork</p> <p style="text-align: right;"><b>Brought Forward</b></p> <p style="text-align: right;"><b>Carried Forward to Summary of Section No. 2</b></p>	No	1		<p>R -</p> <p>R -</p> <p>R -</p> <p>R -</p>
	<p>Bill No.8 Metalwork</p> <p><b><u>BUILDING WORK</u></b></p> <p><b><u>BILL NO. 9</u></b></p> <p><b><u>PLASTERING</u></b></p> <p>For preambles see "Model Preambles for Trades (2008 Edition)" and Supplementary preambles as specified in the Trades.</p> <p>-----</p>				

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<b><u>INTERNAL PLASTER</u></b>				
	<u>Cement plaster on brickwork</u>				
1	On walls	m <sup>2</sup>	550		R -
2	On narrow widths	m <sup>2</sup>	40		R -
	<b><u>WALL PROTECTIVE COVERING</u></b>				
3	Provisional sum of Hundred and fifty Thousand rands (R150 000) Industrial protective rubber mats	sum	1		R -
	<b>Carried Forward to Summary of Section No. 2</b>				R -
	Bill No.9 Plastering				
	<b>Section No.2</b>				
	BUILDING WORKS				
	<b>SECTION SUMMARY-BUILDING WORKS</b>				
<b>Bill No</b>					<b>Amount</b>
1	Alterations				R -
2	Earthworks				R -
3	Concrete, Formwork and Reinforcement				R -
4	Masonry				R -
5	Roof Coverings, etc				R -

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
6	Carpentry and Joinery				R -
7	Structural Steelwork				R -
8	Metalwork				R -
9	Plastering				R -
	<b>Carried to Final Summary</b>				R -
	<b>ELECTRICAL WORKS</b> <b>SECTION 3</b> BILL NO 1				
	<b>The complete installation must comply SANS10142 specifications and the Quality specification in this document. Therefore, Tenders are advised to study the specification and drawings before the Bill is to be price.</b>				
<b>1</b>	<b><u>LV RETICULATION</u></b> Supply and install a 250A , 380V Tripple Pole feeder circuit breaker in the existing nearby distribution board to provide power supply to the new Sand Blast distribution board location as shown on drawings.	each	1		R -
1.2					
<b>2</b>	<b>CABLES, CONDUCTORS &amp; SLEEVES</b> <b>Supply and install PVC insulated armoured copper cables</b>				
2.1					
	95mm <sup>2</sup> 4 x core PVC insulated copper cable (For supply cables from DB-SBO Spray booth to DB-SBL Sand blast)	meter	30		R -
2.1.1	50mm <sup>2</sup> 4 x core PVC insulated copper cable (For supply cables from DB-SBL Sand blast to 3ph Isolator, compressor, blasting equipment compressor Panel)	meter	60		R -
2.1.4					
	10mm <sup>2</sup> 4 x core PVC insulated copper cable (For supply cables from DB-SBL Sand blast to 3 Phase sockets)	meter	100		R -
2.1.5					
	10mm <sup>2</sup> 4 x core PVC insulated copper cable (For supply cables from DB-SBL Sand blast to Blasting Pots)	meter	60		R -
2.1.5					

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
<b>2.2</b>	<b>Supply and install bare copper earth conductor</b>				
2.2.1	70mm <sup>2</sup> bare copper earth cable	meter	30		R -
2.2.2	50mm <sup>2</sup> bare copper earth cable	meter	60		R -
2.2.3	6mm <sup>2</sup> bare copper earth cable	meter	160		R -
<b>2.3</b>	<b>GLANDS AND SHROUDS</b>				
2.3.1	95mm <sup>2</sup> 4 x core PVC insulated copper cable	each	2		R -
2.3.3	50mm <sup>2</sup> 4 core PVC insulated copper cable	each	2		R -
2.3.4	10mm <sup>2</sup> 4 core PVC insulated copper cable	each	2		R -
<b>2.4</b>	<b>GLANDS AND SHROUDS (Earth bare)</b>				
2.4.1	70mm <sup>2</sup> bare copper earth cable	each	2		R -
2.4.3	50mm <sup>2</sup> bare copper earth cable	each	2		R -
2.4.4	6mm <sup>2</sup> bare copper earth cable	each	2		R -
<b>3</b>	<b>CABLE MARKERS &amp; WARNING TAPES</b>				
3.1	Cable markers for cable routes indication	each	0		R -
3.2	Cable warning tape	meter	0		R -
<b>4</b>	<b>SUPPLY &amp; INSTALL PVC SLEEVES</b>				
4.1	110 diameters	meter	0		R -
4.2	50 diameters	meter	0		R -
<b>5</b>	<b>TRENCHING AND EXCAVATIONS</b> (600mm wide & 800mm deep). Rate to include bedding and backfilling				
5.1	Pickable soil	meter	25		R -
5.2	Provision for removal and re-instating of existing paving	m <sup>2</sup>	155		R -
5.3	Provision for cutting and re-instating of existing roadway	m <sup>2</sup>	201		R -
<b>5</b>	<b>PERFORATED CABLE TRAY WITH RETURN FLANGE</b> Supply and install galvanized metal cable wire ways including all fixing material, <u>trapeze hangers for single threaded rod</u> , splices, bonding conductors and other accessories required. Prices to include items such as cable ties, nuts, bolts, earthing and bonding, cold galvanising raw cuts, etc.				

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
5.1	Cab strut or O-line 300mm wide medium duty perforated cable tray with return flanges (50mm rail height, 1,6mm thickness and 375mm rung spacing) medium duty cable ladder including all bolts, screws, clips, P4000 trapeze hanger, threaded rod and other material necessary for fixing:	meter	100		R -
	<b>TOTAL CARRIED TO SECTION SUMMARY</b>				R -
	<b>SECTION 3 BILL NO 2</b>				
1	<b>The complete installation must comply SANS 10142 specifications and the Quality specification in this document. Therefore, Tenders are advised to study the specification and drawings before the Bill is to be price.</b>				
1.1	<b>CONDUITS</b> <b>Supply and install pipes including short lengths jointing, sweeping bends, buses, locknuts, round boxes etc.:</b>				
1.1.1	20mm diameter PVC pipe cast into concrete, brick work, suspended in ceiling voids or surface mounted on wall	meter	200		R -
1.1.2	25mm diameter PVC pipe cast into concrete, brick work, suspended in ceiling voids or surface mounted on wall	meter	100		R -
1.1.3	20mm diameter copex conduit	meter	20		R -
1.2	<b>Supply and install steel galvanised walls boxes complete with all accessories</b>				
1.2.1	100mm x 50mm x 50mm deep	each	5		R -
1.2.2	100mm x 100mm x 50mm deep	each	5		R -
1.2.3	Supply and install 1,6mm diameter steel galvanised draw wires drawn into conduit/sleeves:	meter	320		R -
1.2.4	Supply and install 100mm x 100mm blank cover plates	each	5		R -
1.2.5	Supply and install 4-way PVC round boxes	each	60		R -
1.2.6	Supply and install 100mm X 50 blank plates	each	20		R -
<b>2</b>	<b>ELECTRICAL CABLE MANAGEMENT &amp; TRUNKING</b>				
	<b>Supply, Install, Test and Commission</b>				

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
2.1	Galvanised Unistrut suspended from structure in the roof. Fixings not to exceed 4m including galvanized steel cover (Rates to include Tees, Bends, 4 ways, ends and all other accessories.				
2.1.1	<b>P9000 Unistrut</b>	m	60		R
2.1.2	<b>P8000 Unistrut</b>	m	60		- R
2.1.3	<b>P2000 Unistrut</b>	m	30		- R
2.2	<b>Power Skirting Aluminium:(To include All: elbows, corners sections, T-sections &amp; end caps)</b>				-
2.2.1	Cab strut N8/P803, 2-way with 2 cover plates & divider	m	0		R
3	<b>DISTRIBUTION BOARDS (Refer to schematic diagrams)</b>				-
3.1	Supply and install main distribution boards as per the schematic diagram. The distribution boards will be surface mounted on wall. The distribution board doors must have a neat and professionally manufactured cut-out, with reinforced and properly finished edges, so that the main isolator of the distribution board can be switched without opening the door in case of emergency. Distribution boards must be lockable, and padlocks must be supplied with the distribution board				
3.1.1	DB-SBL (Sand Blast)	each	1		R
4	<b>CONDUCTORS</b>				-
4.1	<b>Supply and install 600/1000Volt PVC insulated stranded copper conductors drawn into conduits, etc.</b> (Wiring for lighting circuits is to be carried out with 2,5mm <sup>2</sup> conductors and 2,5mm <sup>2</sup> earth conductors. For socket outlet circuits the wiring shall comprise of 4 mm <sup>2</sup> conductors with 2, 5mm <sup>2</sup> earth conductors)				
4.1.1	2.5mm <sup>2</sup>	meter	800		R
4.1.2	4mm <sup>2</sup>	meter	300		- R
4.1.3	6mm <sup>2</sup>	meter	300		- R
4.2	<b>Earth Wire</b>				-
4.2.1	2.5mm <sup>2</sup>	meter	150		R
4.2.2	4mm <sup>2</sup>	meter	150		- R
5	<b>SOCKETS OUTLETS</b>				- R

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<b>Supply, install and connect socket outlets in flush wall mounted boxes, power skirting, trunking or surface if required complete with cover plates and all necessary accessories:</b>				
5.1	Supply and install 230V, 16A combination switched socket outlets (with 1 x standard 16A round 3 pin socket + 1 x 3 pin ZA plug socket combined) flush mounted on the wall c/w steel cover plate (white) suitable to accommodate SANS 164-1 & SANS 164-2 socket outlets. Outlets should be explosion proof.	each	6		R -
5.2	Supply and install 400V, 63A 3Phase switched socket outlets with weatherproof (IP44) box surface mounted on the wall c/w explosion proof capabilities.	each	2		R -
<b>6</b>	<b>SWITCHES</b>				
	<b>Supply, install and connect light switches in flush wall mounted boxes, complete with cover plates and all necessary accessories:</b>				
6.1	Supply and install 16A one lever one-way light switch flush mounted on the wall	each	2		R -
6.2	Supply and install 16A two lever two-way light switch flush mounted on the wall	each	5		R -
6.3	Supply and install 16A one lever two-way light switch flush mounted on the wall	each	22		R -
6.5	Supply and install motion detectors	each	16		R -
<b>7</b>	<b>ISOLATORS</b>				
	<b>Supply, install and connect isolators in flush wall mounted boxes or surface, complete with cover plates and all necessary accessories ( Isolators to be mounted within one meter of the equipment to be controlled).</b>				
7.1	Supply and install 230V, 20A double pole isolator surface mounted weatherproof IP64. Rates to include 4-inch x 4-inch extension box	each	2		R -
7.2	Supply and install 380V, 20A tripple pole isolator surface mounted weatherproof IP64. Rates to include 4-inch x 4-inch extension box	each	2		R -
7.2	Supply and install 380V, 150A tripple pole isolator surface mounted weatherproof IP64. Rates to include 4-inch x 4-inch extension box	each	1		R -
<b>8</b>	<b>LUMINAIRES</b>				
	<b>Supply, install and connect luminaires complete with lamps, fixings, brass screws, washers, etc. All recessed light fittings should be supplied with 3m connection lead</b>				
8.1	Type B (Ceiling mounted 21W LED round bulkhead IP65 light fitting with prismatic acrylic diffuser)	each	5		R -

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CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
8.2	Type C (Wall mounted 18W LED round bulkhead IP65 light fitting with prismatic acrylic diffuser)	each	4		R -
8.3	Type D (Surface mounted bulkhead 18W LED with 2400LM, 4000K die-cast aluminium body and high-impact acrylic diffuser.)	each	22		R -
8.4	Type F (Explosion proof light, 100W, White steel frame mounted from roof with stainless steel wire)	each	13		R -
8.5	Type L (Suspended LED Industrial High Bay luminaire IP64 150W, 4000K colour IP64)	each	10		R -
8.6	Type G (Surface mounted Vapour proof 48W LED Luminaire IP66 BEKA VAPOURLINE OR SIMILAR APPROVED)	each	3		R -
9	<b>TESTING AND COMMISSIONING</b>				
9.1	Inspections, testing and handing over of the complete installation in the presence of the Engineer and certify the results on the <i>Certificate of compliances by an accredited person.</i>	item	1		R -
10	<b><u>EARTHING</u></b>				R - R -
10.1	Earthing of all buildings to comply with the latest SANS1 0142, <i>Code of Practice for The Wiring of Premises</i> as amended. Bonding of all hot, cold and waste pipes complete with 12,5mm x 1mm thick solid or perforated copper tape including fixings, brass screws, nuts, washers etc.: Also include for the earth mat with earth spikes	item	2		R -
	<b>TOTAL CARRIED TO SECTION SUMMARY</b>				R -
	<b>MECHANICAL WORKS</b>				
	SECTION 4				
	BILL NO.1				
	<b>SANDBLASTING</b>				
	<b>MECHANICAL EQUIPMENT</b>				



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CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
0.001	Supply and installation of Dust Collection System to remove airborne dust and pollutants by channelling fresh air from one end of the room towards exhaust plenums on the opposite side. [Filter area up to 266 m <sup>2</sup> and airflow up to approx. 30.000 m <sup>3</sup> /h (depending on duct characteristics), High temperature versions up to 200°C]	No.	1		R -
0.002	Supply and installation of Breathing Air Compressor to provide operators with access to clean breathing air while working. [10 L/s]	No.	1		R -
0.003	Supply and installation of Blast Machine Air Compressor. Nominal effective working pressure - 10 Bar, Sound pressure level (LpA) at 7 m for 50Hz - 50 dB(A), Max. ambient temperature - 50°C, Power - 75 kW, Voltage - 400 V/3Ph/50Hz	No.	1		R -
0.004	Supply and installation of Blast Pot or Pressure Blast Tank. [Blasting pressure - 0 to 12 Bar, Operating temperature - 0°C to 50°C]	No.	2		R -
0.005	Supply and installation of Blast Nozzle.	No.	2		R -
0.006	Supply and installation of Blast Hose, Couplings and Safety Cables.	No.	2		R -
0.007	Supply and installation of Moisture trap and separator. [Rated for up to 23m <sup>3</sup> /min airflow volume at 10 Bar]	No.	1		R -
0.008	Supply and installation of Deadman Switch. [Blasting pressure of 0-12 bar and an operating temperature range of -15°C to +50°C]	No.	2		R -
0.009	Supply and installation of Operators Breathing Filter. [Maximum air pressure - 8 Bar, Restrictions - no carbon monoxide (CO)]	No.	1		R -

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CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
0.010	Air Storage Vessel (Air Receiver) (To supply air to blast pot). [0.8 m <sup>3</sup> ]	No.	1		R -
0.011	Air Compressor Dryer. [Capacity - 2.75 kW, Pressure - 1 Bar, Airflow - 125 L/s]	No.	1		R -
0.012	Roller Shutter Doors - 5236mm (W) x 7000mm (H). [3mm thick cold rolled galvanised steel] - 120-minute fire rated roller shutter door c/w decent control, fusible links and dust seals.	No.	1		R -
	<b>FIRE PROTECTION EQUIPMENT</b>				
0.013	25mm Dia Fire Hose Reels SANS approved and supplied and fitted including, stop valves, hose reel base, clamps, nozzle brackets, fixing brackets, pressure gauge etc including length of 30m connecting pipe per reel as per the specification and tender drawings.	No.	1		R -
0.014	Supply and install fire extinguishers SANS approved. Complete with meranti backing boards, steel bases, mounting brackets and wall anchors as per the detailed specifications. 4.5 kg DCP	No.	2		R -
0.015	Supply and install fire extinguishers SANS approved. Complete with meranti backing boards, steel bases, mounting brackets and wall anchors as per detailed specifications. 5 kg CO2	No.	1		R -
	<b>CARRIED TO FINAL SUMMARY</b>				R -
	<b>PROVISIONAL SUM</b>				
	Provisional sum of Five hundred and fifty thousand rands for unforeseen and or unclear information during tender stage.	sum	1		R -

TSS SAND BLAST UPGRADE AND COMPLETION OF SPRAY BOOTH FOR A DURATION OF 12 MONTHS.

CONTRACT NO: \_\_\_\_\_

NO ITEM	DESCRIPTION	UNIT	QTY	Rate	AMOUNT
	<b>CARRIED TO FINAL SUMMARY</b>				R -
	<b>FINAL SUMMARY</b>				
1	<b>PRELIMINARY AND GENERAL</b>				R -
2	<b>PART 1: PAINT BAY</b>				R
2.1	Building works				- R
	Electrical Works				-
	Mechanical Works				R -
3	<b>PART 2: SAND BLASTING</b>				R
	Building works				- R
	Electrical Works				-
	Mechanical Works				R -
4	<b>PROVISIONAL SUM</b>				R -
	<b>SUBTOTAL</b>				R -

## Part C3: Scope of Work

### C3.1 Works Information

This section of the Works Information will always be contract specific depending on the nature of the *works*. It is most likely to be required for design and construct contracts where the tendering *Contractor* will have proposed specifications and schedules for items of Plant and Materials and workmanship, which once accepted by the *Employer* prior to award of contract now become obligations of the *Contractor* per core clause 20.1.

The Scope will be divided into the following sections.

- Section A: Structural
- Section B: Mechanical and
- Section C: Electrical.

#### EXTENT OF WORK

The extent of the work can be summarized as follows:

#### SECTION A: STRUCTURAL

- Construction of a brick wall between the spray booth and the adjacent workshop to satisfy fire protection requirements.
- Installation of side cladding sheeting and roof sheeting where required.
- Installation of a 50mm reinforced concrete screed.
- Construction of draining channels in the washing bay area with metal grating covers.
- Replacing of required rafter on the portal frame to satisfy design requirements. Remove and replace the existing roof sheeting.
- Demolish and replace the existing surface bed.
- Installation of industrial grade mats on walls for sandblasting protection.
- Refurbish and service existing roller shutter door.
- Remove and reinstate the existing rail.

#### SECTION B: MECHANICAL

- i) Ventilation: Mechanical ventilation must be installed to function during spray and sandblast operations and for an adequate duration afterward to effectively exhaust vapours. Proper airflow is essential to prevent the build-up of flammable vapours.
- ii) Electrical Safety: Explosion-proof lighting and electrical fixtures should be employed. Additionally, all electrically conductive objects within the spray and sandblast area must be properly earthed.

## SECTION C: ELECTRICAL

Electrical works will include but are not limited to:

- Installation of a new switchgear in existing LV Panel in an existing Miniature substation.
- Installation of a new LV Power distribution panel in the spraying booth.
- Installation of a new sub-distribution board in the Sand blast
- Earth bonding of mechanical equipment.
- Small power and lighting installation.
- The following installations for all associated services include:
  - Cables, cable baskets,
  - P8000 trucking, P9000 trunking,
  - Unwired conduits fitted with draw-wires, with all required accessories, draw-boxes and outlet boxes, as indicated on the drawings,
  - Air Conditioning Thermostat and control circuit
  - Power supplies to HVAC Equipment including re-heater points and Power supplies to Fire Dampers
  - Fire Alarm and Detection power supplies and conduits to control Fire Doors.

## Certificate of Compliance

On completion of the service, a Certificate of Compliance, for every Distribution Board including the total installation reticulated from the distribution board, must be issued to the Engineer's Representative/Agent in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), and SANS 10142: "Code of Practice for the Wiring of Premises". **It is to be noted that all work undertaken is to be under the continuous supervision of a registered Master Electrician who is to be made known at the time of tender and who is to be in the permanent employ of the Tenderer.**

## Part C4: Site Information

As supplied by *Employer*.