

# **DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN SETTLEMENT & TRADITIONAL AFFAIRS**



LERATO PARK INTEGRATED HOUSING DEVELOPMENT

**CONTRACT 2334-50-02/03**

Remedial work to 491 RDP Houses

August 2021

Volume 1 (1 of 2)

TENDER SUBMITTED BY:

Name of Company: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone No: \_\_\_\_\_

*Issued by:*

NORTHERN CAPE DEPARTMENT: CO-OPERATIVE  
GOVERNANCE, HUMAN SETTLEMENTS AND  
TRADITIONAL AFFAIRS  
Larry Moleko Louw Building,  
9 Cecil Sussman Road,  
Kimberley,  
8301  
Tel: +27(0)53 830 9400  
Fax: +27(0)53 831 4308

Attention: Mr M Pretorius

*Compiled by:*

BIGEN AFRICA LAND DEVELOPMENT DIVISION  
4 Jacobus Smit Avenue, Labram, Kimberley, 8301  
PO Box 2892, Kimberley, 8300  
Tel: +27(0)53 831 2935  
Fax: +27(0)86 518 5094  
e-mail: [Marthinus.Pretorius@bigenafrica.com](mailto:Marthinus.Pretorius@bigenafrica.com)

**Enquiries: Marthinus Pretorius**  
**CLOSING DATE: 10 September 2021 @ 11:00**

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**


LERATO PARK INTEGRATED HOUSING DEVELOPMENT

**CONTRACT 2334-50-02/03**


Remedial work to 491 RDP Houses

**LOCALITY PLAN  
&  
SECTIONS/PHASES**


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Contractor




Witness 1




Witness 2



Employer

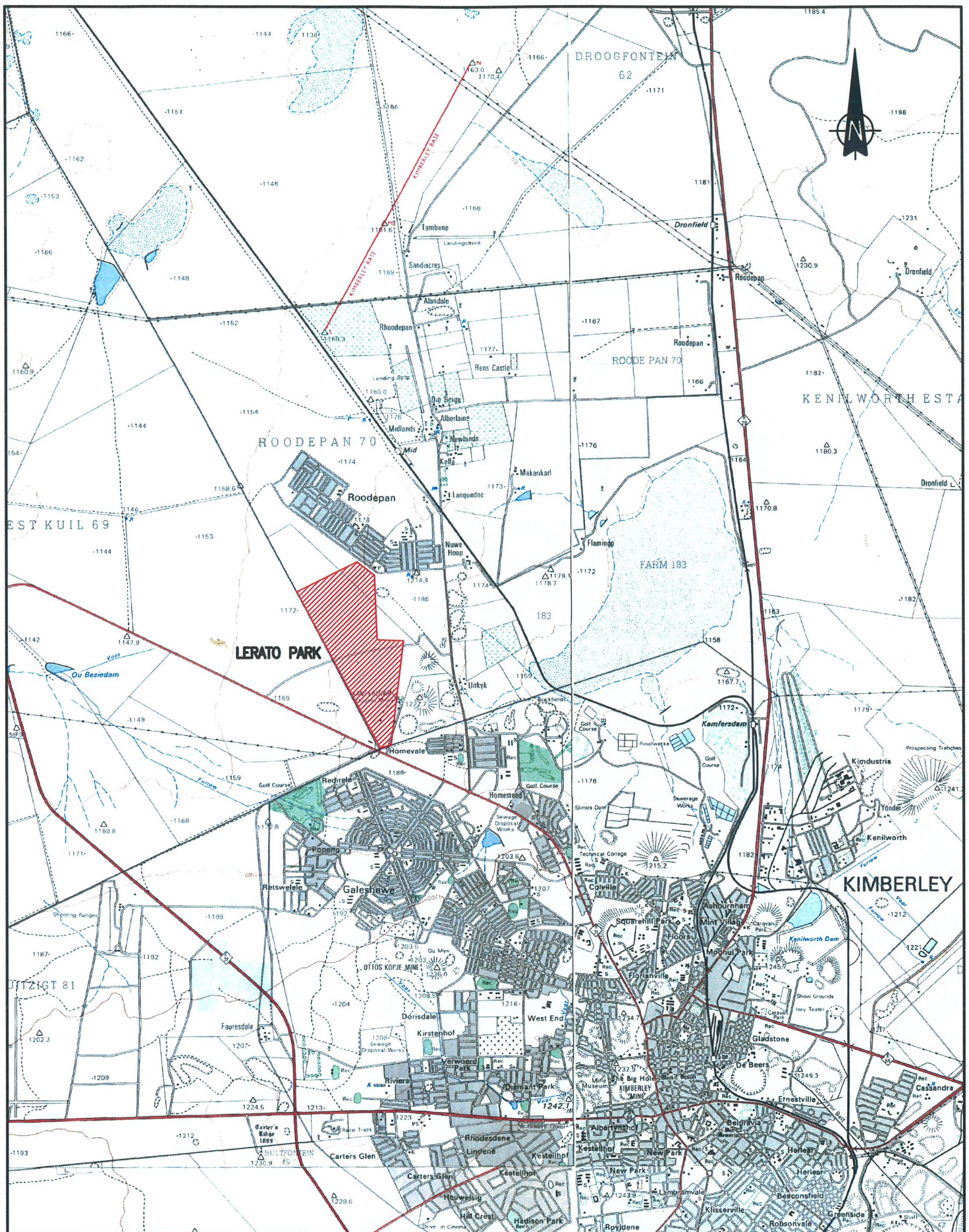


Witness 1



Witness 2





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The Innovation Hub  
Perseus  
Pretoria

Phone: +27 (0) 12 842 8700  
pretoria@bigengroup.com

PROJECT:

**LERATO PARK**

DWG TITLE:

**LOCALITY PLAN**

DRAWN:  
**F du Toit**

CHECKED:  
**F de Kock**

APPROVED:  
**D Strydom**

SCALE:

DATE:  
**Apr 2019**

DWG No:  
**2334.50.02.ZA.01.A003**

VER:  
**A.0**

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

LERATO PARK INTEGRATED HOUSING DEVELOPMENT

**CONTRACT 2334-50-02/03**

Remedial work to 491 RDP Houses

**VOLUME 1  
PORTION 1: TENDER**

**Part T1  
Tendering Procedures**

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**TENDERING PROCEDURES**

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**END OF SECTION**

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**VOLUME 1  
PORTION 1: TENDER**

**Section T1.1  
Tender Notice and Invitation to Tender**

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**TENDER NOTICE AND INVITATION TO TENDER**

1. Tenders are invited by The Department of Co-operative Governance, Human Settlements and Traditional Affairs of the Northern Cape Province ("COGHSTA") for the Remedial work to 491 RDP Houses which form part of the Lerato Park Project.
2. It is mandatory that tenderers are registered with the NHBRC and it is estimated that tenderers should have a CIDB contractor grading of 8GB or higher.
3. Tender documents will be made available electronically from 13 August 2021 by the Northern Cape Department of Co-operative Governance, Human Settlements and Traditional Affairs.  
(<http://www.coghsta.ncpg.gov.za/index.php/tenders>)
4. Tenders close on 10 September 2021 at 11:00am.  
Tender box location opening of tenders:  
Physical address: Department of Co-operative Governance,  
Human Settlements and Traditional Affairs  
Larry Moleko Louw Building  
9 Cecil Sussman Road  
Kimberley  
8301
6. A compulsory site visit and clarification meeting will be held on 18 August 2021 at 9:00. Tenderers are requested to meet the Employers Representative at GPS coordinates: 28°40'31.10"S and 24°43'8.69"E or the closest street crossing being Eagle and Papegaai Street (Kimberley).

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

7. Enquiries relating to this tender should be addressed to Marthinus Pretorius at the Kimberley Office of Bigen Africa Services, Tel. +27(0)53 831 2935.
8. Construction period: 455 working days

**Additional Requirements:**

- Documents to be submitted with the tender document: An original valid Tax Clearance Certificate or certified copy inclusive of verification PIN, NHBRC certificate, Copy of CSD Registration summary report, Audited financial statements for the last three years, B-BBEE Status Level Certificates or certified copies thereof. Exempted Micro Enterprises must in terms of B-BBEE Act, submit a certificate issued by an Accounting Officer as contemplated in the Close Corporation Act or Verification Agency accredited by SANAS or Registered Auditor, an implementation plan and cashflow
- Preference will be given to construction companies who are owned by women, youth and persons with disability.
- The requirements of the Preferential Procurement Policy Framework Act, 2000: Preferential Procurement Regulations, 2017 (Government Gazette No. 40553) shall also apply, together with all other requirements as set out in the Tender Data.
- No faxed, e-mailed and/or scanned bid proposals will be considered.
- Bids will not be disqualified from the bidding process if the bidder does not submit a certificate substantiating the B – BBEE status level of contribution or is a compliant contributor.
- CoGHSTA reserves the right to withdraw any invitation to tender and/or re-advertise or to reject any tender or to accept a part of it. CoGHSTA does not bind itself to accepting the lowest tender or award a contract to the bidder scoring the highest number of points.
- Functionality will be applied during the bidding process. Based on functionality the tenderer should score 70% or more on the following criteria to be further evaluated. Functionality criteria: experience of tenderer; project staff experience; companies which are owned by women, youth and people with disabilities; and companies which are based in Northern Cape.
- Tenders will be opened directly after closing. Tender prices will NOT be read.
- The tenderer must subcontract a minimum of 30% of the contract value to an
  - i. EME or QSE which is at least 51% owned by black people;
  - ii. EME or QSE which is at least 51% owned by black people who are youth;

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

- iii. EME or QSE which is at least 51% owned by black people who are women;
- iv. EME or QSE which is at least 51% owned by black people with disabilities;
- v. EME or QSE which is 51% owned by black people living in rural or underdeveloped areas or townships;
- vi. a cooperative which is at least 51% owned by black people;
- vii. EME or QSE which is at least 51% owned by black people who are military veterans;
- viii. EME or QSE.

Tenderers must submit proof of subcontracting arrangement between the main tenderer and the subcontractor. Proof of subcontracting arrangement may include a subcontracting arrangement between main tenderer and the subcontractor.

A list of proposed subcontractors will be provided by the employer at the tender clarification meeting, from which the main contractor will need to select subcontractors to fulfil the requirement of subcontracting 30% of the contract value. The responsibility to sub-contract with competent and capable subcontractors rests with the tenderer. The list of subcontractor will be/has been sourced from the Northern Cape Department: COGHSTA sub-consultant database and National Treasury Central Supply Database (CSD). Any tenderer who responds by saying they will subcontract on appointment without listing and submitting supporting documents will be disqualified.

- Only CSD registered service provider will be invited to bid.
- Failure by bidders to comply with the minimum specification will result in automatic disqualifying of the bidder.
- Tenders shall be submitted in an original hard copy format and included with a complete scanned copy in electronic format (pdf). The soft copy shall be loaded onto a flash dish and submitted with the hard copy.

**END OF SECTION**

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

LERATO PARK INTEGRATED HOUSING DEVELOPMENT

**CONTRACT 2334-50-02/03**

Remedial work to 491 RDP Houses

**VOLUME 1  
PORTION 1: TENDER**

**Section T1.2  
Tender Data**

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**TENDER DATA**

The conditions of tender are the Standard Conditions of Tender as contained in Annex C of the Construction Industry Development Board's Board Notice 423 of 2019 (contained in Government Gazette No. 42622 of 08 August 2019), bound into section T1.3.

The Standard Conditions of Tender makes several references to the Tender Data. The Tender Data also contains project specific amendments to the Standard Conditions of Tender applicable to this document. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions of Tender.

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

<b>Clause</b>	<b>Addition or Variation to Standard Conditions of Tender</b>
1.1	The Employer is Northern Cape Department of Co-operative Governance, Human Settlements and Traditional Affairs (COGHSTA).
1.2	<p>The tender documents issued by the Employer comprise two volumes.</p> <p>Volume 1: Contract Document contains the parts and sections (contained in each part) as listed in the Contents List of Volume 1 bound in the front of this document.</p> <p>Volume 2: Book of Drawings contains the drawings listed in the Drawing Register bound in the front of that volume.</p>
1.3.2	<p>Replace this sub-clause with the following:</p> <p>These Conditions of Tender, the Tender Data, List of Returnable Documents and Returnable Schedules which are required for tender evaluation purposes, shall form part of the Contract arising from the invitation to tender.</p>

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Clause	Addition or Variation to Standard Conditions of Tender
1.4	<p>The Employer's agent is (also known as the Principal agent):  Bigen Africa Services (Pty) Ltd ("Bigen"),  PO Box 2892,  Kimberley,  8300  Tel: +27(0)53 831 2935  Fax: +27(0)86 518 5094  e-mail: <a href="mailto:Marthinus.Pretorius@bigenafrica.com">Marthinus.Pretorius@bigenafrica.com</a>  Attention: Marthinus Pretorius</p>
2.1	<p>Only those tenderers who are registered with the CIDB, or are capable of being registered prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, for a 8GB class of construction work, are eligible to have their tenders evaluated.</p> <p>Joint ventures are eligible to submit tenders provided that:</p> <ol style="list-style-type: none"> <li>every member of the joint venture is registered with the CIDB;</li> <li>the lead partner has a contractor grading designation in the GB class of construction work; not lower than one level below the required grading designation in the class of works construction works under consideration and possess the required recognition status; and</li> <li>the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a 8GB class of construction work, or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations.</li> </ol>
2.1	<p>Only CSD registered service providers and who were specifically invited for this tender will be eligible to tender.</p>

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

Clause	Addition or Variation to Standard Conditions of Tender
2.2.1	<p>Add the following to the clause:</p> <p>Accept that the Employer will not compensate the tenderer for any costs incurred in attending interviews in the office of the employer or the employer's agent (if required).</p>
2.7	<p>A compulsory site visit and clarification meeting will be held as follows:</p> <p>Location : Tenderers are requested to meet the Employer's Representative at GPS coordinates: 28° 40' 31,62" S and 24° 43' 08,36" E or the closest street crossing being Eagle and Papegaai Street (Kimberley).</p> <p>Date : 18 August 2021</p> <p>Time : 9:00am</p> <p>Confirmation of attendance will be recorded, on site, in the Site Inspection Certificate included in Section T2.2 of the Document.</p> <p>Tender documents will not be made available at the site visit or clarification meeting. Detail relating to the collection of tender documents is indicated in the Tender Notice and Invitation to Tender (Section T1.1 of the document)</p>
2.10	<p>Replace sub-clause 2.10.2 with the following:</p> <p>VAT (Value added tax) shall not be applicable to this project.</p> <p>Add the following sub-clause 2.10.5:</p> <p>A digital copy of the Bill of Quantities can be obtained from the office of the Principal Agent upon sufficient notice.</p>
2.11	<p>Replace the last sentence of the clause with the following:</p> <p>To correct errors made, draw a line through the incorrect entry and write the correct entry above in black ink and place the full signatures of the authorised signatories next to the correct entry.</p>
2.12.1	<p>Add the following to the clause:</p> <p>All alternative tender offers shall be referred to in Section T2.2.1 – Alterations to</p>

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2



Clause	Addition or Variation to Standard Conditions of Tender
	Tender.
2.12.2	<p>Add the following to the clause:</p> <p>Should the Tenderer wish to offer alternative designs and/or construction materials, he shall include with this Tender full details thereof, including a complete bill of quantities, formal design calculations, and full details of all alternative components proposed to be included in the Works. Refer also to the Contract Data in this regard.</p> <p>Failure to properly comply with this clause, thereby preventing the Employer and/or the Engineer/Principal Agent to properly assess the full implications of the alternative tender, is likely to disqualify the alternative offered from further consideration.</p> <p>No submission by the Contractor after award for additional payment or time for completion of Works relating to the alternative offer will be considered, the tendered rates submitted shall be considered to reflect the full and final cost implications of the alternative offer.</p>
2.12.3	Delete this clause.
2.13.2	<p>Replace the contents of the clause with the following:</p> <p>Return all volumes of the tender document to the Employer after completion of the relevant sections of each volume in their entirety, by writing in black ink.</p> <p>All volumes are to be left intact in its original format and no pages shall be removed or re-arranged.</p> <p>Tenders shall be submitted in an original hard copy format and included with a complete scanned copy in electronic format (pdf). The soft copy shall be loaded onto a flash dish and submitted with the hard copy.</p>
2.13.3	1 copy of the tender offer is required.
2.13.4	<p>Add the following to the clause:</p> <p>Only authorised signatories may sign the original and all copies of the tender offer</p>

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Clause	Addition or Variation to Standard Conditions of Tender
	where required in terms of 2.13.3.
2.13.5	<p>Add the following to the clause:</p> <p>The address for delivery of tender offers and identification details to be shown on each tender offer package are:</p> <p>Tender box location : Larry Moleko Louw Building  Physical address : Department of Co-operative Governance,  Human Settlements and Traditional Affairs  Larry Moleko Louw Building  9 Cecil Sussmen Road  Kimberley</p> <p>Identification details : Contract 2334-50-02/03 – Remedial work to 491 RDP Houses</p> <p>The name and address of the tender shall be entered on the back of the envelope.</p>
2.13.6	A two-envelope procedure will not be followed.
2.13.10	<p>Add the following to the clause:</p> <p>Accept that all conditions, which are printed or written upon any stationary used by the Tenderer for the purpose of or in connection with the submission of a tender offer for this Contract, which are in conflict with the conditions laid down in this document shall be waived, renounced and abandoned.</p>
2.14	<p>Add the following to the clause:</p> <p>The Tenderer is required to enter information in the following sections of the document:</p> <p>Section T2.2 : Returnable Schedules</p> <p>Section C1.1 : Form of Offer and Acceptance (Incl. Addendum no.1)</p> <p>Section C1.2 : Contract Data (Part 2) (Incl. Addendum no.2 &amp; 3 and Annexure A, B &amp; C)</p>

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Clause	Addition or Variation to Standard Conditions of Tender
	<p>Section C2.2 : Bill of Quantities</p> <p>The above sections shall be signed by the Tenderer (and witnesses where required). Individual pages should only be initialled by the successful Tenderer and by the witnesses after acceptance by the Employer of the Tender Offer.</p> <p>The Tenderer shall complete and sign the Form of Offer prior to the submission of a Tender Offer.</p> <p>The Schedule of Deviations (if applicable) shall be signed by the successful Tenderer after acceptance by the Employer of the Tender Offer.</p> <p>Accept that failure on the part of the Tenderer to submit any one of the Returnable Documents listed in clause 2.23 within the period stipulated, shall be just cause for the Employer to consider the tender offer as being regarded as non-responsive.</p> <p>Accept that the Employer shall in the evaluation of tender offers take due account of the Tenderer's past performance in the execution of similar engineering works of comparable magnitude, and the degree to which he possesses the necessary technical, financial and other resources to enable him to complete the Works successfully within the contract period. Satisfy the Employer and the Engineer as to his ability to perform and complete the Works timeously, safely and with satisfactory quality, and furnish details in section T2.2.2 of contracts of a similar nature and magnitude which they have successfully executed in the past.</p> <p>Accept that the Employer is restricted in accordance with clause 5 (1) of the Construction Regulations, 2014, to only appoint a contractor whom he is satisfied has the necessary competencies and resources to carry out the work safely. Accept that submitting inferior and inadequate information relating to health and safety (as required in clause 2.23) shall be regarded as justifiable and compelling reasons not to accept the Tender Offer of the Tenderer scoring the highest number of tender evaluation points.</p>
2.15.1	<p>The closing time for the submission of tender offers is:</p> <p>Date &amp; Time: 10 September 2021 at 11:00am</p>

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

Clause	Addition or Variation to Standard Conditions of Tender
	<p>Location : Tender box location</p> <p>Department of Co-operative Governance, Human Settlements and Traditional Affairs Larry Moleko Louw Building 9 Cecil Sussman Road Kimberley 8301</p>
2.16.1	The tender offer validity period is 90 days.
2.16.1	<p>Add the following to the clause:</p> <p>If the tender validity expires on a Saturday, Sunday or public holiday, the tender shall remain valid and open for acceptance until the closure of business on the following working day.</p>
2.16.5	<p>Add the following new clause:</p> <p>Accept that should the Tenderer unilaterally withdraw his tender during the tender validity period, the Employer shall, without prejudice to any other rights he may have, be entitled to accept any less favourable tender for the Works from those received, or to call for fresh tenders, or to otherwise arrange for execution of the Works, and the Tenderer shall pay on demand any additional expense incurred by the Employer on account of the adoption of the said courses, as well as either the difference in cost between the tender withdrawn (as corrected in terms of clause 3.9 of the Conditions of Tender) and any less favourable tender accepted by the Employer, or the difference between the tender withdrawn (as corrected) and the cost of execution of the Works by the Employer as well as any other amounts the Employer may have to pay to have the Works completed.</p>
2.18.1	<p>Add the following to the clause:</p> <p>Audited financial statements for the last three years shall be submitted with the tender document.</p> <p>The Employer may, in its discretion, and subject to the provisions of Section 4(1)(d) of the State Tender Board Act 86 of 1968, condone any failure to comply</p>

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Clause	Addition or Variation to Standard Conditions of Tender
	<p>with the foregoing condition.</p> <p>Accept that the Employer or his agent, reserves the right to approach the Tenderer's banker or guarantor(s) as indicated in the tender document, or the bankers of each of the individual members of any joint venture that is constituted for purposes of this Contract, with a view to ascertaining whether the required guarantee will be furnished, and for purposes of ascertaining the financial strength of the Tenderer or of the individual member of such venture.</p>
2.22	<p>Replace the contents of the clause with the following:</p> <p>Return all retained tender documents prior to the closing time for the submission of Tender Offers.</p>
2.23	<p>The following certificates / information are to be provided with the tender offer or within three days of receipt of the Employer's or his Agent's written request to submit same:</p> <ul style="list-style-type: none"> <li>a. CIDB registration certificate in the grading designation stipulated in clause 2.1 above,</li> <li>b. BBEE status level certificate as issued by accredited measurement entity. (See form MBD6.1 for details),</li> <li>c. Original valid Tax Clearance Certificate, or a unique security personal identification number (PIN) issued by the SA Revenue Services (in terms of the Preferential Procurement Regulations, 2001 published in Government Gazette No. 22549 dated 10 August 2001),</li> <li>d. Certified copy of VAT Registration Certificate (if VAT number is not included in tax clearance certificate),</li> <li>e. Certified copy of Letter of Good Standing issued by the Department of Labour in terms of Act 130 of 1993,</li> <li>f. Certified copy of Unemployment Insurance Fund Certificate of Compliance in terms of Act 4 of 2002,</li> <li>g. Certified copy of Certificate of Incorporation (if tenderer is a Company),</li> </ul>

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Clause	Addition or Variation to Standard Conditions of Tender
	<p>h. Certified copy of Founding Statement (if tenderer is a Closed Corporation),</p> <p>i. Certified copy of Partnership Agreement (if tenderer is a Partnership),</p> <p>j. Certified copy of Identity Document (if tenderer is a One-man concern),</p> <p>k. Joint Venture Agreement (if tenderer is a Joint Venture),</p> <p>l. Curriculum vitae of the person who prepares the Contractor's Health and Safety Plan, and</p> <p>m. Curriculum vitae of the Health and Safety Officer the successful tenderer intends appointing in accordance with the Occupational Health and Safety Act (Act 85 of 1993),</p> <p>n. Curriculum Vitae of all supervisory staff,</p> <p>o. Copy of NHBRC registration certificate,</p> <p>p. NCP 1; 4; 6; 7; 8 &amp; 9</p> <p>q. Audited financial statements for the last three years and including a Bank Rating Letter based on whether the tenderer will be able to sustain a negative cashflow of up to 5% of the contract value (as per the Offer and Acceptance) within the first three months of the project.</p> <p>r. An implementation plan, and</p> <p>s. Cashflow</p> <p>t. A soft copy of the complete tender document shall be loaded onto a flash dish and submitted with the hard copy.</p>
3.1.1	<p>Replace the contents of the clause with the following:</p> <p>Respond to a request for clarification received up to five (5) working days before the Tender closing time stated in the Tender Data and notify all Tenderers who collected procurement documents within two (2) working days of the same date.</p>
3.4	Tender prices will NOT be read out.
3.5	A two-envelope procedure will not be followed.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

Clause	Addition or Variation to Standard Conditions of Tender
3.8.1	<p>Add the following to the clause:</p> <p>Failure on the part of the Tenderer to submit a tender offer as stipulated in clause F2.13 prior to the closing time as stipulated in clause F2.15 shall be just cause for the Employer to consider the tender offer as being non-responsive</p> <p>Failure on the part of the Tenderer to submit any one of the returnable documents or certificates listed in clause 2.23 within the period stipulated shall be just cause for the Employer to consider the tender offer as being non-responsive.</p>
3.11.1	<p>The evaluation of all responsive tender offers will be carried out in accordance with the following method:</p> <p><b>Functionality, Price and Preference</b></p> <p>Evaluate all responsive tenders as follows:</p> <ul style="list-style-type: none"> <li>a) Score functionality, rejecting all tender offers that fail to achieve the minimum number of points for functionality. Evaluate tenders that have achieved the minimum qualification score for functionality in terms of the following items b, c, and d</li> <li>b) Score tender evaluation points for price</li> <li>c) Score points for B-BBEE contribution</li> <li>d) Add the points scored for price and B-BBEE to obtain the total number of points scored.</li> </ul> <p>No tender must be regarded as an acceptable tender if it fails to achieve the minimum qualifying score for functionality as indicated in the tender invitation and elaborated further in the Tender Data.</p> <p>Subject to paragraph 3.13 the contract must be awarded to the tender who scores the highest total number of points.</p> <p>The points scoring for price and B-BBEE contribution will be a function of the financial value in accordance with:</p>

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



Clause	Addition or Variation to Standard Conditions of Tender
	<p>a) Clause 3.11.3 where the financial value inclusive of VAT of one or more responsive tender offers equals or is less than R50 000 000; or</p> <p>b) Clause 3.11.4 where the financial value inclusive of VAT of all responsive tenders received have a value in excess of R50 000 000.</p>
3.11.2	<p><b>Functionality</b></p> <p>The tenderers shall first be evaluated on the following functionality requirements:</p> <p><b>1. Company Experience</b></p> <p><b>(Scoring a maximum of 30%)</b></p> <p>30% - Completion of at least 3 projects of similar scope (value of the works related to buildings) above CIDB 7GB in the last 5 years, supported by contactable references and completion certificates</p> <p>20% - Completion of at least 2 projects of similar scope (value of the works related to buildings) above CIDB 7GB in the last 5 years, supported by contactable references and completion certificates</p> <p>10% - Completion of at least 1 projects of similar scope (value of the works related to buildings) above CIDB 7GB in the last 5 years, supported by contactable references and completion certificates</p> <p><b>2. Project Staff Experience</b></p> <p><b>(Scoring a maximum of 40%)</b></p> <p>15% - Contracts Manager – minimum of 10 years’ experience as a Contracts Manager or a Site Agent (or a combination of the two) and a minimum qualification of a BTech (Both requirements need to be in a buildings related field), with supporting documentation</p> <ul style="list-style-type: none"> <li>• 15% - Minimum of 10 years’ experience</li> <li>• 10% - Minimum of 7 years’ experience</li> <li>• 5% - Minimum of 5 years’ experience</li> <li>• 0% - less than 5 years’ experience</li> </ul> <p>15% - Site Agent – minimum of 7 years’ experience as a Site Agent in a buildings related field, with supporting documentation</p> <ul style="list-style-type: none"> <li>• 15% - Minimum 7 years’ experience</li> <li>• 10% - Minimum 5 years’ experience</li> </ul>

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Clause	Addition or Variation to Standard Conditions of Tender
	<ul style="list-style-type: none"> <li>• 5% - Minimum 3 years' experience</li> <li>• 0% - less than 3 years' experience</li> </ul> <p>10% - Foreman – minimum 5 years' experience as a Foreman in a building related field, with supporting documentation</p> <ul style="list-style-type: none"> <li>• 10% - Minimum 5 years' experience</li> <li>• 5% - Minimum 3 years' experience</li> <li>• 0% - less than 3 years' experience</li> </ul> <p><b>3. Plant and Equipment</b>  <b>(Scoring a maximum of 10%)</b></p> <p>10% - Owning all equipment supported by proof  5% - Owning 50% to 99% of equipment supported by proof  3% - Owning &lt;50% of equipment supported by proof  0% - Owning no equipment</p> <p>All equipment shall be applicable to the scope of the work. Equipment listed which has no bearing on the project will be excluded from the percentage scoring.</p> <p><b>4. Companies Owned by Women, Youth and People with disabilities</b>  <b>(Scoring a maximum of 10%)</b></p> <ul style="list-style-type: none"> <li>• 10% - Companies that are 100% owned by Women, Youth and People with disabilities</li> <li>• 5% - Companies that are between 50% and 100% owned by Women, Youth and People with disabilities</li> </ul> <p><b>5. Locality</b>  <b>(Scoring a maximum of 10%)</b></p> <ul style="list-style-type: none"> <li>• 10% - Companies that are based in Northern Cape</li> </ul> <p>The points shall be totalled to obtain a score out of 100%, to obtain the final score for functionality.</p> <p>The minimum number of evaluation points to be eligible for functionality scoring shall be 70%.</p>

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Clause	Addition or Variation to Standard Conditions of Tender																				
3.11.3	<p>Add the following sub-clause:</p> <p><b>The 80/20 preference point system for acquisition of services, works or goods up to Rand value of R50 million will apply.</b></p> <p>a) The following formula must be used to calculate the points for price in respect of tenders (including price quotation) with a rand value equal to, or above R 30 000 and up to Rand value of R50 000 000 (all applicable taxes included):</p> $Ps = 80 \times \left[ 1 - \frac{Pt - P_{min}}{P_{min}} \right]$ <p>Where:</p> <p><i>Ps</i> = Points scored for comparative price of tender or offer under consideration;</p> <p><i>Pt</i> = Comparative price of tender or offer under consideration; and</p> <p><i>P<sub>min</sub></i> = Comparative price of lowest acceptable tender or offer.</p> <p>b) An employer of state may apply the formula in paragraph (a) for price quotations with a value less than R30 000, if and when appropriate</p> <p>c) Subject to subparagraph (d), points must be awarded to a tender for attaining the B-BBEE status level of contributor in accordance with the table below:</p> <table border="1"> <thead> <tr> <th>B-BBEE status level of contributor</th><th>Number of points</th></tr> </thead> <tbody> <tr><td>1</td><td>20</td></tr> <tr><td>2</td><td>18</td></tr> <tr><td>3</td><td>16</td></tr> <tr><td>4</td><td>12</td></tr> <tr><td>5</td><td>8</td></tr> <tr><td>6</td><td>6</td></tr> <tr><td>7</td><td>4</td></tr> <tr><td>8</td><td>2</td></tr> <tr><td>Non-compliant contributor</td><td>0</td></tr> </tbody> </table> <p>d) A maximum of 20 points may be allocated in accordance with subparagraph (c).</p>	B-BBEE status level of contributor	Number of points	1	20	2	18	3	16	4	12	5	8	6	6	7	4	8	2	Non-compliant contributor	0
B-BBEE status level of contributor	Number of points																				
1	20																				
2	18																				
3	16																				
4	12																				
5	8																				
6	6																				
7	4																				
8	2																				
Non-compliant contributor	0																				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Clause	Addition or Variation to Standard Conditions of Tender																				
3.11.3	<p>Add the following sub-clause:</p> <p><b>The 90/10 preference points system for acquisition of services, works or goods with a Rand value above R 50 million.</b></p> <p>a) The following formula must be used to calculate the points for price in respect of tenders (including price quotation) with a rand value equal to, or above R 30 000 and up to Rand value of R50 000 000 (all applicable taxes included):</p> $Ps = 90 \times \left[ 1 - \frac{Pt - P_{min}}{P_{min}} \right]$ <p>Where:</p> <p><math>Ps</math> = Points scored for comparative price of tender or offer under consideration;</p> <p><math>Pt</math> = Comparative price of tender or offer under consideration; and</p> <p><math>P_{min}</math> = Comparative price of lowest acceptable tender or offer.</p> <p>b) An employer of state may apply the formula in paragraph (a) for price quotations with a value less than R30 000, if and when appropriate</p> <p>c) Subject to subparagraph (d), points must be awarded to a tender for attaining the B-BBEE status level of contributor in accordance with the table below:</p> <table border="1"> <thead> <tr> <th>B-BBEE status level of contributor</th><th>Number of points</th></tr> </thead> <tbody> <tr><td>1</td><td>10</td></tr> <tr><td>2</td><td>9</td></tr> <tr><td>3</td><td>8</td></tr> <tr><td>4</td><td>5</td></tr> <tr><td>5</td><td>4</td></tr> <tr><td>6</td><td>3</td></tr> <tr><td>7</td><td>2</td></tr> <tr><td>8</td><td>1</td></tr> <tr><td>Non-compliant contributor</td><td>0</td></tr> </tbody> </table> <p>d) A maximum of 10 points may be allocated in accordance with subparagraph (c).</p>	B-BBEE status level of contributor	Number of points	1	10	2	9	3	8	4	5	5	4	6	3	7	2	8	1	Non-compliant contributor	0
B-BBEE status level of contributor	Number of points																				
1	10																				
2	9																				
3	8																				
4	5																				
5	4																				
6	3																				
7	2																				
8	1																				
Non-compliant contributor	0																				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Clause	Addition or Variation to Standard Conditions of Tender
3.16	<p>Add the following to the clause:</p> <p>Notice of non-acceptance of tender will not be sent to individual unsuccessful tenderers. Particulars of the accepted tender can be obtained from the Employer' Agent.</p>
3.17	The successful tenderer shall receive one copy of the signed contract.
3.18	<p>Add the following new clause:</p> <p>The successful tenderer must subcontract a minimum of 30% of the contract value to:</p> <ul style="list-style-type: none"> <li>i. an EME or QSE:</li> <li>ii. An EME or QSE which is at least 51% owned by black people;</li> <li>iii. An EME or QSE which is at least 51% owned by black people who are youth;</li> <li>iv. An EME or QSE which is at least 51% owned by black people who are women;</li> <li>v. An EME or QSE which is at least 51% owned by black people with disabilities;</li> <li>vi. An EME or QSE which is at least 51% owned by black people living in rural or underdeveloped areas or townships;</li> <li>vii. A cooperative which is at least 51% owned by black people;</li> <li>viii. An EME or QSE which is at least 51% owned by black people who are military veterans; or</li> <li>ix. More than one of the categories referred to in paragraphs (i) to (viii).</li> </ul> <p>A list of proposed subcontractors will be provided by the employer at the compulsory site clarification meeting, from which the main contractor will need to select subcontractors to fulfil the requirement of subcontracting 30% of the contract value. The responsibility to sub-contract with competent and capable subcontractors rests with the tenderer. The list provided will be/has been sourced from the Northern Cape Department: COGHSTA sub-consultant database and National Treasury Central Supply Database (CSD). Any tenderer who responds by saying they will subcontract on appointment without listing and submitting supporting documents will be disqualified.</p>

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

Clause	Addition or Variation to Standard Conditions of Tender
	Tenderers must submit proof of subcontracting arrangement between the main tenderer and the subcontractor. Proof of subcontracting arrangement may include a subcontracting arrangement between main tenderer and the subcontractor.

**END OF SECTION**

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**


**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**


**VOLUME 1  
PORTION 1: TENDER**

**Section T1.3  
Standard Conditions of Tender**


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Contractor




Witness 1




Witness 2



Employer



Witness 1



Witness 2



**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**STANDARD CONDITIONS OF TENDER**

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These standard conditions of tender are identical to those published in Annex C of the Department of Public Works Notice 423 of 2019. (Government Gazette No 42622, 8 August 2019)

## END OF SECTION

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**STANDARD CONDITIONS OF TENDER**

**1. GENERAL**

**1.1 Actions**

- 1.1.1 The employer and each tenderer submitting a tender offer shall comply with these conditions of tender. In their dealings with each other, they shall discharge their duties and obligations as set out in item 2 and 3, timeously and with integrity, and behave equitably, honestly and transparently, comply with all legal obligations and not engage in anticompetitive practices.
- 1.1.2 The employer and the tenderer and all their agents and employees involved in the tender process shall avoid conflicts of interest and where a conflict of interest is perceived or known, declare any such conflict of interest, indicating the nature of such conflict. Tenderers shall declare any potential conflict of interest in their tender submissions. Employees, agents and advisors of the employer shall declare any conflict of interest to whoever is responsible for overseeing the procurement process at the start of any deliberations relating to the procurement process or as soon as they become aware of such conflict, and abstain from any decisions where such conflict exists or recuse themselves from the procurement process, as appropriate.

Note: 1) *A conflict of interest may arise due to a conflict of roles which might provide an incentive for improper acts in some circumstances. A conflict of interest can create an appearance of impropriety that can undermine confidence in the ability of that person to act properly in his or her position even if no improper acts result.*

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- 2) *Conflicts of interest in respect of those engaged in the procurement process include direct, indirect or family interests in the tender or outcome of the procurement process and any personal bias, inclination, obligation, allegiance or loyalty which would in any way affect any decisions taken.*

- 1.1.3 The employer shall not seek and a tenderer shall not submit a tender without having a firm intention and the capacity to proceed with the contract

## 1.2 Tender Documents

The documents issued by the employer for the purpose of a tender offer are listed in the tender data.

## 1.3 Interpretation

- 1.3.1 The tender data and additional requirements contained in the tender schedules that are included in the returnable documents are deemed to be part of these conditions of tender.

- 1.3.2 These conditions of tender, the tender data and tender schedules which are only required for tender evaluation purposes, shall not form part of any contract arising from the invitation to tender.

- 1.3.3 For the purposes of these conditions of tender, the following definitions apply:

**a) conflict of interest** means any situation in which:

- i) someone in a position of trust has competing professional or personal interests which make it difficult to fulfill his or her duties impartially;
- ii) an individual or organisation is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or
- iii) incompatibility or contradictory interests exist between an employee and the organisation which employs that employee.

**b) comparative offer** means the price after the factors of a non-firm price and all unconditional discounts it can be utilised to have been taken into consideration;

**c) corrupt practice** means the offering, giving, receiving or soliciting of anything of value to influence the action of the employer or his staff or agents in the tender process;

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- d) **fraudulent practice** means the misrepresentation of the facts in order to influence the tender process or the award of a contract arising from a tender offer to the detriment of the employer, including collusive practices intended to establish prices at artificial levels;

## 1.4 Communication and employer's agent

Each communication between the employer and a tenderer shall be to or from the employer's agent only, and in a form that can be readily read, copied and recorded. Communications shall be in the English language. The employer shall not take any responsibility for non-receipt of communications from or by a tenderer. The name and contact details of the employer's agent are stated in the tender data.

## 1.5 The employer's right to accept or reject any tender offer

- 1.5.1 An organ of state may, prior to the award of the tender, cancel a tender if-
- (a) due to changed circumstances, there is no longer a need for the engineering and construction works specified in the invitation; or
  - (b) funds are no longer available to cover the total envisaged expenditure; or
  - (c) no acceptable tenders are received; or
  - (d) there is a material irregularity in the tender process.
- 1.5.2 The decision to cancel a tender must be published in the same manner in which the original tender invitation was advertised.
- 1.5.3 An employer may only with the prior approval of the relevant treasury cancel a tender invitation for the second time.

## 1.6 Procurement procedures

### 1.6.1 General

Unless otherwise stated in the tender data, a contract will, subject to 3.13, be concluded with the tenderer who in terms of 3.11 is the highest ranked or the tenderer scoring the highest number of tender evaluation points, as relevant, based on the tender submissions that are received at the closing time for tenders.

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

## **1.6.2 Competitive negotiation procedure**

**1.6.2.1** Where the tender data require that the competitive negotiation procedure is to be followed, tenderers shall submit tender offers in response to the proposed contract in the first round of submissions. Notwithstanding the requirements of 3.4, the employer shall announce only the names of the tenderers who make a submission. The requirements of 3.8 relating to the material deviations or qualifications which affect the competitive position of tenderers shall not apply.

**1.6.2.2** All responsive tenderers, or at least a minimum of not less than three responsive tenderers that are highest ranked in terms of the evaluation criteria stated in the tender data, shall be invited to enter into competitive negotiations, based on the principle of equal treatment, keeping confidential the proposed solutions and associated information.

Notwithstanding the provisions of 2.17, the employer may request that tenders be clarified, specified and fine-tuned in order to improve a tenderer's competitive position provided that such clarification, specification, fine-tuning or additional information does not alter any fundamental aspects of the offers or impose substantial new requirements which restrict or distort competition or have a discriminatory effect.

**1.6.2.3** At the conclusion of each round of negotiations, tenderers shall be invited by the employer to revise their tender offer, based on the same evaluation criteria, with or without adjusted weightings. Tenderers shall be advised when they are to submit their best and final offer.

**1.6.2.4** The contract shall be awarded in accordance with the provisions of 3.11 and 3.13 after tenderers have been requested to submit their best and final offer.

## **1.6.3 Proposal procedure using the two stage-system**

### **1.6.3.1 Option 1**

Tenderers shall in the first stage submit technical proposals and, if required, cost parameters around which a contract may be negotiated. The employer shall evaluate each responsive submission in terms of the method of evaluation stated in the tender data, and in the second stage negotiate a contract with the tenderer scoring the highest number of evaluation points and award the contract in terms of these conditions of tender.

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### 1.6.3.2 Option 2

1.6.3.2.1 Tenderers shall submit in the first stage only technical proposals. The employer shall invite all responsive tenderers to submit tender offers in the second stage, following the issuing of procurement documents.

1.6.3.2.2 The employer shall evaluate tenders received during the second stage in terms of the method of evaluation stated in the tender data, and award the contract in terms of these conditions of tender.

## **2. TENDERER'S OBLIGATIONS**

### **2.1 Eligibility**

**2.1.1** Submit a tender offer only if the tenderer satisfies the criteria stated in the tender data and the tenderer, or any of his principals, is not under any restriction to do business with employer.

**2.1.2** Notify the employer of any proposed material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used by the employer as the basis in a prior process to invite the tenderer to submit a tender offer and obtain the employer's written approval to do so prior to the closing time for tenders.

### **2.2 Cost of tendering**

**2.2.1** Accept that, unless otherwise stated in the tender data, the employer will not compensate the tenderer for any costs incurred in the preparation and submission of a tender offer, including the costs of any testing necessary to demonstrate that aspects of the offer complies with requirements.

**2.2.2** The cost of the tender documents charged by the employer shall be limited to the actual cost incurred by the employer for printing the documents. Employers must attempt to make available the tender documents on its website so as not to incur any costs pertaining to the printing of the tender documents.

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Contractor

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## **2.3 Check documents**

Check the tender documents on receipt for completeness and notify the employer of any discrepancy or omission.

## **2.4 Confidentiality and copyright of documents**

Treat as confidential all matters arising in connection with the tender. Use and copy the documents issued by the employer only for the purpose of preparing and submitting a tender offer in response to the invitation.

## **2.5 Reference documents**

Obtain, as necessary for submitting a tender offer, copies of the latest versions of standards, specifications, conditions of contract and other publications, which are not attached but which are incorporated into the tender documents by reference.

## **2.6 Acknowledge addenda**

Acknowledge receipt of addenda to the tender documents, which the employer may issue, and if necessary apply for an extension to the closing time stated in the tender data, in order to take the addenda into account.

## **2.7 Clarification meeting**

Attend, where required, a clarification meeting at which tenderers may familiarize themselves with aspects of the proposed work, services or supply and raise questions. Details of the meeting (s) are stated in the tender data.

## **2.8 Seek clarification**

Request clarification of the tender documents, if necessary, by notifying the employer at least five (5) working days before the closing time stated in the tender data.

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Contractor

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Employer

Witness 1

Witness 2

## **2.9 Insurance**

Be aware that the extent of insurance to be provided by the employer (if any) might not be for the full cover required in terms of the conditions of contract identified in the contract data. The tenderer is advised to seek qualified advice regarding insurance.

## **2.10 Pricing the tender offer**

- 2.10.1 Include in the rates, prices, and the tendered total of the prices (if any) all duties, taxes (except Value Added Tax (VAT), and other levies payable by the successful tenderer, such duties, taxes and levies being those applicable fourteen (14) days before the closing time stated in the tender data.
- 2.10.2 Show VAT payable by the employer separately as an addition to the tendered total of the prices.
- 2.10.3 Provide rates and prices that are fixed for the duration of the contract and not subject to adjustment except as provided for in the conditions of contract identified in the contract data.
- 2.10.4 State the rates and prices in Rand unless instructed otherwise in the tender data. The conditions of contract identified in the contract data may provide for part payment in other currencies.

## **2.11 Alterations to documents**

Do not make any alterations or additions to the tender documents, except to comply with instructions issued by the employer, or necessary to correct errors made by the tenderer. All signatories to the tender offer shall initial all such alterations.

## **2.12 Alternative tender offers**

- 2.12.1 Unless otherwise stated in the tender data, submit alternative tender offers only if a main tender offer, strictly in accordance with all the requirements of the tender documents, is also submitted as well as a schedule that compares the requirements of the tender documents with the alternative requirements that are proposed.
- 2.12.2 Accept that an alternative tender offer may be based only on the criteria stated in the tender data or criteria otherwise acceptable to the employer.

---

Contractor

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- 2.12.3 An alternative tender offer must only be considered if the main tender offer is the winning tender.

## **2.13 Submitting a tender offer**

- 2.13.1 Submit one tender offer only, either as a single tendering entity or as a member in a joint venture to provide the whole of the works identified in the contract data and described in the scope of works, unless stated otherwise in the tender data.
- 2.13.2 Return all returnable documents to the employer after completing them in their entirety, either electronically (if they were issued in electronic format) or by writing legibly in non-erasable ink.
- 2.13.3 Submit the parts of the tender offer communicated on paper as an original plus the number of copies stated in the tender data, with an English translation of any documentation in a language other than English, and the parts communicated electronically in the same format as they were issued by the employer.
- 2.13.4 Sign the original and all copies of the tender offer where required in terms of the tender data. The employer will hold all authorized signatories liable on behalf of the tenderer. Signatories for tenderers proposing to contract as joint ventures shall state which of the signatories is the lead partner whom the employer shall hold liable for the purpose of the tender offer.
- 2.13.5 Seal the original and each copy of the tender offer as separate packages marking the packages as "ORIGINAL" and "COPY". Each package shall state on the outside the employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.
- 2.13.6 Where a two-envelope system is required in terms of the tender data, place and seal the returnable documents listed in the tender data in an envelope marked "financial proposal" and place the remaining returnable documents in an envelope marked "technical proposal". Each envelope shall state on the outside the employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.
- 2.13.7 Seal the original tender offer and copy packages together in an outer package that states on the outside only the employer's address and identification details as stated in the tender data.
- 2.13.8 Accept that the employer will not assume any responsibility for the misplacement or premature opening of the tender offer if the outer package is not sealed and marked as stated.

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

- 2.13.9 Accept that tender offers submitted by facsimile or e-mail will be rejected by the employer, unless stated otherwise in the tender data.

## **2.14 Information and data to be completed in all respects**

Accept that tender offers, which do not provide all the data or information requested completely and in the form required, may be regarded by the employer as non-responsive.

## **2.15 Closing time**

- 2.15.1 Ensure that the employer receives the tender offer at the address specified in the tender data not later than the closing time stated in the tender data. Accept that proof of posting shall not be accepted as proof of delivery.
- 2.15.2 Accept that, if the employer extends the closing time stated in the tender data for any reason, the requirements of these conditions of tender apply equally to the extended deadline.

## **2.16 Tender offer validity**

- 2.16.1 Hold the tender offer(s) valid for acceptance by the employer at any time during the validity period stated in the tender data after the closing time stated in the tender data.
- 2.16.2 If requested by the employer, consider extending the validity period stated in the tender data for an agreed additional period with or without any conditions attached to such extension.
- 2.16.3 Accept that a tender submission that has been submitted to the employer may only be withdrawn or substituted by giving the employer's agent written notice before the closing time for tenders that a tender is to be withdrawn or substituted. If the validity period stated in 2.16 lapses before the employer evaluating tender, the contractor reserves the right to review the price based on the Consumer Price Index (CPI).
- 2.16.4 Where a tender submission is to be substituted, a tenderer must submit a substitute tender in accordance with the requirements of 2.13 with the packages clearly marked as "SUBSTITUTE"

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Contractor

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## **2.17 Clarification of tender offer after submission**

Provide clarification of a tender offer in response to a request to do so from the employer during the evaluation of tender offers. This may include providing a breakdown of rates or prices and correction of arithmetical errors by the adjustment of certain rates or item prices (or both). No change in the competitive position of tenderers or substance of the tender offer is sought, offered, or permitted.

**Note:** Sub-clause 2.17 does not preclude the negotiation of the final terms of the contract with a preferred tenderer following a competitive selection process, should the Employer elect to do so.

## **2.18 Provide other material**

- 2.18.1 Provide, on request by the employer, any other material that has a bearing on the tender offer, the tenderer's commercial position (including notarized joint venture agreements), preferencing arrangements, or samples of materials, considered necessary by the employer for the purpose of a full and fair risk assessment.

Should the tenderer not provide the material, or a satisfactory reason as to why it cannot be provided, by the time for submission stated in the employer's request, the employer may regard the tender offer as non-responsive.

- 2.18.2 Dispose of samples of materials provided for evaluation by the employer, where required.

## **2.19 Inspections, tests and analysis**

Provide access during working hours to premises for inspections, tests and analysis as provided for in the tender data.

## **2.20 Submit securities, bonds and policies**

If requested, submit for the employer's acceptance before formation of the contract, all securities, bonds, guarantees, policies and certificates of insurance required in terms of the conditions of contract identified in the contract data.

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Contractor

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## **2.21 Check final draft**

Check the final draft of the contract provided by the employer within the time available for the employer to issue the contract.

## **2.22 Return of other tender documents**

If so instructed by the employer, return all retained tender documents within twenty-eight (28) days after the expiry of the validity period stated in the tender data.

## **2.23 Certificates**

Include in the tender submission or provide the employer with any certificates as stated in the tender data.

# **3. THE EMPLOYER'S UNDERTAKINGS**

## **3.1 Respond to requests from the tenderer**

3.1.1 Unless otherwise stated in the tender Data, respond to a request for clarification received up to five (5) working days before the tender closing time stated in the Tender Data and notify all tenderers who collected procurement documents.

3.1.2 Consider any request to make a material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used to prequalify a tenderer to submit a tender offer in terms of a previous procurement process and deny any such request if as a consequence:

- a) an individual firm, or a joint venture as a whole, or any individual member of the joint venture fails to meet any of the collective or individual qualifying requirements;
- b) the new partners to a joint venture were not prequalified in the first instance, either as individual firms or as another joint venture; or
- c) in the opinion of the Employer, acceptance of the material change would compromise the outcome of the prequalification process.

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### **3.2 Issue Addenda**

If necessary, issue addenda that may amend or amplify the tender documents to each tenderer during the period from the date that tender documents are available until three (3) days before the tender closing time stated in the Tender Data. If, as a result a tenderer applies for an extension to the closing time stated in the Tender Data, the Employer may grant such extension and, shall then notify all tenderers who collected tender documents.

### **3.3 Return late tender offers**

Return tender offers received after the closing time stated in the Tender Data, unopened, (unless it is necessary to open a tender submission to obtain a forwarding address), to the tenderer concerned.

### **3.4 Opening of tender submissions**

- 3.4.1 Unless the two-envelope system is to be followed, open valid tender submissions in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data. Tender submissions for which acceptable reasons for withdrawal have been submitted will not be opened.
- 3.4.2 Announce at the meeting held immediately after the opening of tender submissions, at a venue indicated in the tender data, the name of each tenderer whose tender offer is opened and, where applicable, the total of his prices, number of points claimed for its BBEE status level and time for completion for the main tender offer only.
- 3.4.3 Make available the record outlined in 3.4.2 to all interested persons upon request

### **3.5 Two-envelope system**

- 3.5.1 Where stated in the tender data that a two-envelope system is to be followed, open only the technical proposal of valid tenders in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data and announce the name of each tenderer whose technical proposal is opened.
- 3.5.2 Evaluate functionality of the technical proposals offered by tenderers, then advise tenderers who remain in contention for the award of the contract of the time and place when the financial proposals will be opened. Open only the financial proposals of tenderers, who score

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in the functionality evaluation more than the minimum number of points for functionality stated in the tender data, and announce the score obtained for the technical proposals and the total price and any points claimed on BBBEE status level. Return unopened financial proposals to tenderers whose technical proposals failed to achieve the minimum number of points for functionality.

### **3.6 Non-disclosure**

Not disclose to tenderers, or to any other person not officially concerned with such processes, information relating to the evaluation and comparison of tender offers, the final evaluation price and recommendations for the award of a contract, until after the award of the contract to the successful tenderer.

### **3.7 Grounds for rejection and disqualification**

Determine whether there has been any effort by a tenderer to influence the processing of tender offers and instantly disqualify a tenderer (and his tender offer) if it is established that he engaged in corrupt or fraudulent practices.

### **3.8 Test for responsiveness**

3.8.1 Determine, after opening and before detailed evaluation, whether each tender offer properly received:

- a) complies with the requirements of these Conditions of Tender,
- b) has been properly and fully completed and signed, and
- c) is responsive to the other requirements of the tender documents.

3.8.2 A responsive tender is one that conforms to all the terms, conditions, and specifications of the tender documents without material deviation or qualification. A material deviation or qualification is one which, in the Employer's opinion, would:

- a) detrimentally affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work,
- b) significantly change the Employer's or the tenderer's risks and responsibilities under the contract, or

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2



- c) affect the competitive position of other tenderers presenting responsive tenders, if it were to be rectified.

Reject a non-responsive tender offer, and not allow it to be subsequently made responsive by correction or withdrawal of the non- conforming deviation or reservation.

### **3.9 Arithmetical errors, omissions and discrepancies**

3.9.1 Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is a discrepancy between the amounts in figures and the amount in words, the amount in words shall govern.

3.9.2 Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with 3.11 for:

- a) the gross misplacement of the decimal point in any unit rate;
- b) omissions made in completing the pricing schedule or bills of quantities; or
- c) arithmetic errors in:
  - i) line item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or
  - ii) the summation of the prices.

3.9.3 Notify the tenderer of all errors or omissions that are identified in the tender offer and either confirm the tender as tendered or accept the corrected total of prices.

3.9.4 Where the tenderer elects to confirm the tender offer as tendered, correct the errors as follows.

- a) If bills of quantities or pricing schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the line item total shall govern and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted shall govern, and the unit rate shall be corrected.
- b) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the

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prices shall govern and the tenderer will be asked to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices.

### 3.10 Clarification of a tender offer

Obtain clarification from a tenderer on any matter that could give rise to ambiguity in a contract arising from the tender offer.

### 3.11 Evaluation of tender offers


The Standard Conditions of Tender standardize the procurement processes, methods and procedures from the time that tenders are invited to the time that a contract is awarded. They are generic in nature and are made project specific through choices that are made in developing the Tender Data associated with a specific project. Conditions of tender are by definition the document that establishes a tenderer's obligations in submitting a tender and the employer's undertakings in soliciting and evaluating tender offers. Such conditions establish the rules from the time a tender is advertised to the time that a contract is awarded and require employers to conduct the process of offer and acceptance in terms of a set of standard procedures.


The CIDB Standard Conditions of Tender are based on a procurement system that satisfies the following system requirements:	
Requirement	Qualitative interpretation of goal
Fair	The process of offer and acceptance is conducted impartially without bias, providing simultaneous and timely access to participating parties to the same information.
Equitable	Terms and conditions for performing the work do not unfairly prejudice the interests of the parties.
Transparent	The only grounds for not awarding a contract to a tenderer who satisfies all requirements are restrictions from doing business with the employer, lack of capability or capacity, legal impediments and conflicts of interest.
Competitive	The system provides for appropriate levels of competition to ensure cost effective and best value outcomes.
Cost effective	The processes, procedures and methods are standardized with sufficient flexibility to attain best value outcomes in respect of quality, timing and price, and least resources to effectively manage and control procurement processes.


The activities associated with evaluating tender offers are as follows:


- Open and record tender offers received
- Determine whether or not tender offers are complete
- Determine whether or not tender offers are responsive
- Evaluate tender offers
- Determine if there are any grounds for disqualification
- Determine acceptability of preferred tenderer


  
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- g) Prepare a tender evaluation report
- h) Confirm the recommendation contained in the tender evaluation report

#### 3.11.1 General

The employer must appoint an evaluation panel of not less than three persons conversant with the proposed scope of works to evaluate each responsive tender offer using the tender evaluation methods and associated evaluation criteria and weightings that are specified in the tender data.

#### 3.12 Insurance provided by the employer

If requested by the proposed successful tenderer, submit for the tenderer's information the policies and / or certificates of insurance which the conditions of contract identified in the contract data, require the employer to provide.

#### 3.13 Acceptance of tender offer

Accept the tender offer, if in the opinion of the employer, it does not present any risk and only if the tenderer:

- a) is not under restrictions, or has principals who are under restrictions, preventing participating in the employer's procurement,
- b) can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise and the personnel, to perform the contract,
- c) has the legal capacity to enter into the contract,
- d) is not insolvent, in receivership, under Business Rescue as provided for in chapter 6 of the Companies Act, 2008, bankrupt or being wound up, has his/her affairs administered by a court or a judicial officer, has suspended his/her business activities, or is subject to legal proceedings in respect of any of the foregoing,
- e) complies with the legal requirements, if any, stated in the tender data, and
- f) is able, in the opinion of the employer, to perform the contract free of conflicts of interest.

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### **3.14 Prepare contract documents**

- 3.14.1 If necessary, revise documents that shall form part of the contract and that were issued by the employer as part of the tender documents to take account of:
- a) addenda issued during the tender period,
  - b) inclusion of some of the returnable documents, and
  - c) other revisions agreed between the employer and the successful tenderer.
- 3.14.2 Complete the schedule of deviations attached to the form of offer and acceptance, if any.

### **3.15 Complete adjudicator's contract**

Unless alternative arrangements have been agreed or otherwise provided for in the contract, arrange for both parties to complete formalities for appointing the selected adjudicator at the same time as the main contract is signed.

### **3.16 Registration of the award**

An employer must within twenty-one (21) days from the date on which a contractor's offer to perform a construction works contract is accepted in writing by the employer, register and publish the award on the CIDB Register of Projects.

### **3.17 Provide copies of the contracts**

Provide to the successful tenderer the number of copies stated in the Tender Data of the signed copy of the contract as soon as possible after completion and signing of the form of offer and acceptance.

### **3.18 Provide written reasons for actions taken**

Provide upon request written reasons to tenderers for any action that is taken in applying these conditions of tender, but withhold information which is not in the public interest to be divulged, which is considered to prejudice the legitimate commercial interests of tenderers or might prejudice fair competition between tenderers.

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**VOLUME 1  
PORTION 1: TENDER**

**Part T2  
Returnable Documents**

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**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**VOLUME 1  
PORTION 1: TENDER**

**Section T2.1  
List of returnable documents**

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**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**LIST OF RETURNABLE DOCUMENTS**

1. Tenderers are required to submit the following with their completed tenders:
  - (a) Copy of Certificate of Contractor Registration with the CIDB,
  - (b) BBEE status level certificate as issued by accredited measurement entity. (See form MBD6.1 for details),
  - (c) Original valid Tax Clearance Certificate, or a unique security personal identification number (PIN) issued by the SA Revenue Services (in terms of the Preferential Procurement Regulations, 2001 published in Government Gazette No. 22549 dated 10 August 2001),
  - (d) Certified copy of VAT Registration Certificate (if VAT number is not included in tax clearance certificate),
  - (e) Certified copy of Letter of Good Standing issued by the Department of Labour in terms of Act 130 of 1993,
  - (f) Certified copy of Unemployment Insurance Fund Certificate of Compliance in terms of Act 4 of 2002,
  - (g) Certified copy of Certificate of Incorporation (if tenderer is a Company),
  - (h) Certified copy of Founding Statement (if tenderer is a Closed Corporation),
  - (i) Certified copy of Partnership Agreement (if tenderer is a Partnership),
  - (j) Certified copy of Identity Document (if tenderer is a One-man concern),
  - (k) Joint Venture Agreement (if tenderer is a Joint Venture),

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- (l) Curriculum vitae of the person who prepares the Contractor's Health and Safety Plan, and
- (m) Curriculum vitae of the Health and Safety Officer the successful tenderer intends appointing in accordance with the Occupational Health and Safety Act (Act 85 of 1993),
- (n) Curriculum Vitae of all supervisory staff,
- (o) Copy of NHBRC registration certificate,
- (p) NCP 1; 4; 6; 7; 8 & 9
- (q) Audited financial statements for the last three years and including a Bank Rating Letter based on whether the tenderer will be able to sustain a negative cashflow of up to 5% of the contract value (as per the Offer and Acceptance) within the first three months of the project.
- (r) An implementation plan, and
- (s) Cashflow
- (t) A soft copy of the complete tender document shall be loaded onto a flash dish and submitted with the hard copy.

The returnable schedules included in Section T2.2 will be used to evaluate tenders received. These schedules will also form part of the Contract.

**END OF SECTION**

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2



**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

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**Remedial work to 491 RDP Houses**

**VOLUME 1  
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**Section T2.2  
Returnable schedules**

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**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**RETURNABLE SCHEDULES**


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END OF SECTION


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## ALTERATIONS BY TENDERER

Should the Tenderer desire to make any departures from or modifications to the General Conditions of Contract, Contract Data, Scope of Work, Pricing Data or the Drawings, or to qualify his tender in any way, he shall set out his proposals clearly hereunder or alternatively state them in a covering letter attached to his tender and referred to hereunder, failing which the tender will be deemed to be unqualified.

[illegible]

Signature of Tenderer : \_\_\_\_\_

Date : \_\_\_\_\_

\_\_\_\_\_

Contractor

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### WORKS PREVIOUSLY EXECUTED

The following is a statement of major works successfully executed by myself/ourselves in recent years:

Employer	Consulting Engineers (incl. contact person and contact details)	Nature of Works	Value of Works	Duration and Completion Date

Failure to detail the required information, shall signify that the tender is submitted by an inexperienced tenderer.

Signature of Tenderer : \_\_\_\_\_ Date : \_\_\_\_\_

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

### PRESENT COMMITMENTS

Employer	Consulting Engineers (incl. contact person and contact details)	Nature of Works	Value of Works	Duration and Completion Date

Signature of Tenderer : \_\_\_\_\_

Date : \_\_\_\_\_

Contractor

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Witness 2

Employer

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## SUPERVISORY AND SAFETY PERSONNEL

### PREVIOUS EXPERIENCE ON WORKS OF A SIMILAR NATURE

Name	% Time on Site	Position (Current)	Service (Years)	Name of Project And year executed	Value of Works	Position Occupied
Contracts Manager						
Contractor's Site Agent						
Contractor's Foremen (List a minimum of 1 to be utilised on the project)						
Construction Health and Safety Officer						

Tenderers shall indicate the percentage of working time these persons will be engaged on site. Tenderers are required to provide copies of curriculum vitas of all supervisory and safety personnel.

Signature of Tenderer : \_\_\_\_\_ Date : \_\_\_\_\_

Contractor

Witness 1

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## LABOUR UTILISATION

### Labour Categories - Definitions

NOTE: These definitions serve as a guideline to complete the following table and will in no respect alter the Scope of Work.

#### 1. General Foreman / Foreman

An employee who gives out work to and directly co-ordinates and supervises employees. His duties encompass any one or more of the following activities :

- a) Supervision;
- b) maintaining discipline;
- c) ensuring safety on the workplace;
- d) being responsible to the Contractor for efficiency and production for his portion of the works; and
- e) performing skilled work, whether in an instructional capacity or otherwise.

#### 2. Charge hand

An employee engaged in any one or more of the following activities :

- a) Being primarily employed in a supervisory capacity, but who may also be doing the work of an artisan;
- b) giving out work to other employees under his control and supervision;
- c) ensuring safety on the workplace;
- d) maintaining discipline; and

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- e) being directly responsible to a general foreman or foreman or the Contractor or the Contractor's representative for efficiency and production for his portion of the works.

### **3. Artisan**

An employee who has successfully completed all prescribed courses at a practical institutional training centre for a particular trade and who has successfully completed the on-site period of training as prescribed and who has successfully passed the prescribed trade tests.

### **4. Team Leader**

An employee engaged in any one or more of the following activities :

- a) Being employed in a supervisory capacity, but who may also be doing the work of a skilled person;
- b) giving out work to other employees under his control and supervision;
- c) maintaining discipline;
- d) being directly responsible to a Charge hand or a foreman or a general foreman or the employer's authorised representative for efficiency and production for his portion of the works.

### **5. Skilled Employee**

An employee engaged in an ancillary trade or an assistant artisan.

### **6. Semi-Skilled Employee**

An employee with any specified skills, an apprentice or a trainee-artisan.

### **7. Unskilled Employee**

An employee engaged on any task or operation not specified above.

### **8. Imported Employee**

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Contractor

Witness 1

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Employer

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Witness 2



Personnel permanently employed by Contractor.

**9. Local Employee**

Temporary workforce employed through Labour Desk.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## **MAN DAYS**

Categories	No. of Man Days	
	Imported	Local
1. Contracts Manager		
2. Site Agent		
3. Foreman/Supervisors (specify type)		
3.1 _____		
3.2 _____		
3.3 _____		
4. Safety Inspectors (specify type)		
4.1 _____		
4.2 _____		
5. Charge hands		
6. Artisans		
7. Operators/Drivers		
8. Clerks/Storeman		
9. Team Leader		

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Categories	No. of Man Days	
	Imported	Local
10. Skilled Labour		
11. Semi-skilled Labour		
12. Unskilled Labour		

\_\_\_\_\_  
Signature of Tenderer

\_\_\_\_\_  
Date

\_\_\_\_\_

Contractor

\_\_\_\_\_

Witness 1

\_\_\_\_\_

Witness 2

\_\_\_\_\_

Employer

\_\_\_\_\_

Witness 1

\_\_\_\_\_

Witness 2

## COMPLIANCE WITH OHSA (ACT 85 OF 1993)

Tenderers are required to satisfy the Employer and the Engineer as to their ability and available resources to comply with the above by answering the following questions and providing the relevant information required below.

1. Is the Contractor familiar with the OHSA (ACT 85 OF 1993) and its Regulations? **YES / NO**
2. Who will prepare the Contractor's Health and Safety Plan? (Provide a copy of the person/s curriculum vitae/s or company profile).  

---
3. Does the Contractor have a health and safety policy? (If yes, provide a copy). **YES / NO**  
How is this policy communicated to all employees?  

---
4. Does the Contractor keep records of safety aspects of each construction site? **YES / NO**  
If yes, what records are kept?  

---
5. Does the Contractor conduct monthly safety meetings? If yes, who is the chairperson of the meeting, and who attends these meetings? **YES / NO**  

---
6. Does the Contractor have a safety officer in his employment, responsible for the overall safety of his company? **YES / NO**  
If yes, please explain his duties and provide a copy of his CV.  

---

---
7. Does the Contractor have trained first aid employees? If yes, indicate who. **YES / NO**  

---
8. Does the Contractor have a safety induction training programme in place? **YES / NO**  
(If yes, provide a copy).

---

Signature of Tenderer

---

Date

---

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## PLANT AND EQUIPMENT

1. Major Plant and Equipment available for this Contract:

Quantity	Ownership (Yes/No)	Size, Description, Capacity, etc.

2. Major Plant and Equipment that will be acquired for this contract if my/our tender is accepted:

Quantity	Ownership (Yes/No)	Size, Description, Capacity, etc.

---

Signature of Tenderer

---

Date

---

--	--	--	--	--	--

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## PROPOSED SUB-CONTRACTORS

The tenderer shall list below any subcontractors he intends to employ to carry out part(s) of the Works.

The acceptance of this tender shall not be construed as being approval of all or any of the listed subcontractors. Should any or all of the subcontractors be not approved subsequent to the acceptance of the tender, it shall in no way invalidate this tender, and the tendered unit rates for the various items of work shall remain final and binding in the event of a subcontractor not listed below being approved by the Employer.

Company	Portion of Contract	Portion of Contract allocated to Women & Youth	Approx. Value

Signature of Tenderer \_\_\_\_\_

Date \_\_\_\_\_

---

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

## SITE INSPECTION CERTIFICATE

As required by Clause 2.7 of the Tender Data, I/we certify that I/we have visited the site of the Works and attended the site visit and clarification meeting on the date certified below.

I/we further certify that I am / we are satisfied with the description of the Work and the explanations given by the Engineer at the site visit and clarification meeting.

\_\_\_\_\_  
Signature of Tenderer

\_\_\_\_\_  
Date

### Site Visit

This will certify that \_\_\_\_\_

representing \_\_\_\_\_

attended a Site Inspection for this Contract on \_\_\_\_\_ 20\_\_\_\_\_

\_\_\_\_\_(signed)  
For the Engineer

---

--	--	--	--	--	--

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## AUTHORITY OF SIGNATORY

With reference to Clause 2.13.4 of the Tender Data, I/we herewith certify that this tender is submitted by : *(Mark applicable block)*

a company, and attach hereto a certified copy of the required resolution of the Board of Directors

☐

a partnership, and attach hereto a certified copy of the required resolution by all partners

☐

a close corporation, and attach hereto a certified copy of the required resolution of the Board of Officials

☐

a one-man business, and attach hereto certified proof that I am the sole owner of the business submitting this tender

☐

a joint venture, and attach hereto

☐

- an notarially certified copy of the original document under which the joint venture was constituted; and
- certified authorisation by the participating members of the undersigned to submit tenders and conclude contracts on behalf of the joint venture

Signature of Tenderer \_\_\_\_\_

Date \_\_\_\_\_

---

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



## RECORD OF ADDENDA TO TENDER DOCUMENTS

We confirm that the following communications received from the Employer before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer:		
	Date	Title or Details
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Attach additional pages if more space is required.

Signature of Tenderer \_\_\_\_\_

Date \_\_\_\_\_

---

--

Contractor

--

Witness 1

--

Witness 2

--

Employer

--

Witness 1

--

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**LIST OF RETURNABLE DOCUMENTS**

**NCP SCHEDULES AS REQUIRED BY COGHSTA**

<b>LIST OF NCP FORMS</b>	<b>Pages</b>
NCP 1 .....	2
NCP 2 .....	4
NCP 4 (7/12/11) .....	5
NCP 6.1 (7/12/11) .....	8
NCP 7.1 .....	15
NCP 8 (7/12/11) .....	17
NCP 9 (7/12/11) .....	19

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

NCP 1

## INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR COGHSTA

TENDER NO. 2334-50-02/03 CLOSING DATE: 10 September 2021 CLOSING TIME: 11:00am

DESCRIPTION: **BIDS ARE INVITED BY DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE FOR THE PROCUREMENT OF A CONTRACTOR TO PERFORM REMEDIAL WORK TO 491 RDP HOUSES.**

**The successful Bidder will be required to fill in and sign a written contract Form (NCP 7)**

BID DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT: **J.S. DU PLOOY BUILDING  
9 CECIL SUSSMAN ROAD  
KIMBERLEY  
8301**

**A COMPULSORY SITE MEETING WILL BE HELD ON 18 AUGUST 2021 AT 09:00 AT GPS COORDINATES: 28°40'31.10"S and 24°43'8.69"E OR THE CLOSEST STREET CROSSING BEING EAGLE AND PAPEGAAL STREET (KIMBERLEY).**

**Bidders should ensure that bids are delivered timeously to the correct address. If the bid is late, it will not be accepted for consideration.**

The bid box is generally open 24 (twenty-four) hours a day, 7 (seven) days a week.

ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS (NOT TO BE RE-TYPED)

THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017, THE GENERAL CONDITIONS OF CONTRACT (JBCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.

**THE FOLLOWING PARTICULARS MUST BE FURNISHED.  
(FAILURE TO DO SO MAY RESULT IN YOUR BID BEING DISQUALIFIED)**

NAME OF BIDDER: .....  
POSTAL ADDRESS: .....  
STREET ADDRESS: .....  
TELEPHONE NUMBER: .....  
CELLPHONE NUMBER: .....  
FACIMILE NUMBER: .....  
E-MAIL ADDRESS: .....



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

VAT REGISTRATION NUMBER: .....

**NCP 1**

HAS AN ORIGINAL AND VALID TAX CLEARANCE CERTIFICATE BEEN SUBMITTED?  
(NCP 2) YES NO

HAS A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE BEEN SUBMITTED?  
(NCP 6.1) YES NO

IF YES, WHO WAS THE CERTIFICATE ISSUED BY?

AN ACCOUNTING OFFICER AS CONTEMPLATED IN THE CLOSE CORPORATION ACT (CCA) ..... ☐

A VERIFICATION AGENCY ACCREDITED BY THE SOUTH AFRICAN ACCREDITATION SYSTEM

(SANAS); ..... ☐

OR

A REGISTERED AUDITOR ..... ☐

(Tick the applicable box)

**A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE)**

ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /  
SERVICES / WORKS OFFERED? YES NO

IF YES, ENCLOSE PROOF

.....

SIGNATURE OF BIDDER

.....

DATE

.....

CAPACITY UNDER WHICH THIS BID IS SIGNED

.....

TOTAL BID PRICE

.....

TOTAL NUMBER OF ITEMS OFFERED

**ANY ENQUIRIES REGARDING THE BIDDING PROCEDURE MAY BE DIRECTED TO:**

Contact Person: Tebogo Monoametsi of CoGHSTA,  
Tel: (053) 807-9713, e-mail: [TMonoametsi@ncpg.gov.za](mailto:TMonoametsi@ncpg.gov.za)

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**ANY ENQUIRIES REGARDING TECHNICAL INFORMATION MAY BE DIRECTED TO:**

Contact Person: Mr. Mpho Marindili of CoGHSTA,  
Tel: (053) 830-9515, e-mail: [mmarindili@ncpg.gov.za](mailto:mmarindili@ncpg.gov.za)

NCP 2

**TAX CLEARANCE REQUIREMENTS**

IT IS A CONDITION OF BIDDING THAT:

1. The taxes of the successful Bidder must be in order, or that satisfactory arrangements have been made with the Receiver of Revenue to meet his/her tax obligations.
2. The form "Application for Tax Clearance Certificate (in respect of Bidders)", must be completed in all respects and submitted to the Receiver of Revenue where the Bidder is registered for tax purposes. The Receiver of Revenue will then furnish the Bidder with a Tax Clearance Certificate that will be valid for a period of 6 (six) months from the date of issue. This Tax Clearance Certificate must be submitted in the original (or PIN), together with the bid and attached to Schedule 15. Failure to submit the original and valid Tax Clearance Certificate will invalidate the bid.
3. In bids where Consortia / Joint Ventures / Sub-Contractors are involved, each party must submit a separate Tax Clearance Certificate. Copies of the "Application for Tax Clearance Certificates" are available at any Receiver's Office.

---

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

**NCP 4 (7/12/11)**

**DECLARATION OF INTEREST**

1. Any legal person, including persons employed by the State<sup>1</sup>, or persons having a kinship with persons employed by the State, including a blood relationship, may make an offer or offers in terms of this invitation to bid (includes an advertised competitive bid, a limited bid, a proposal or written price quotation). In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons employed by the State, or to persons connected with or related to them, it is required that the Bidder or his/her authorised representative declare his/her position in relation to the evaluating/adjudicating authority where –

- the bidder is employed by the state; and/or
- the legal person on whose behalf the bidding document is signed, has a relationship with persons/ a person who are/is involved in the evaluation and/or adjudication of the bid(s), or where it is known that such a relationship exists between the person or persons for or on whose behalf the declarant acts and persons who are involved with the evaluation and/or adjudication of the bid.

2. **In order to give effect to the above the following questionnaire must be completed and submitted with the bid.**

2.1 Full name of the Bidder or his representative: .....

2.2 Identity Number: .....

2.3 Position occupied in the Company (Director; Trustee, Shareholder<sup>2</sup>, Member):  
.....

2.4 Registration Number of Company, Enterprise, Close Corporation, Partnership agreement or Trust:  
.....

2.5 Tax Reference Number: .....

2.6 Vat Registration Number: .....

2.6.1 The names of all Directors / Trustees / Shareholders / Members, their individual identity numbers, tax reference numbers and, if applicable, Employee / PERSAL numbers must be indicated in paragraph 3 below.

- <sup>1</sup> "State" means –
- (a) any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No. 1 of 1999);
  - (b) any municipality or municipal entity;
  - (c) provincial legislature;
  - (d) National assembly or the National Council for Provinces; or
  - (e) Parliament.

<sup>2</sup> "Shareholder" means a person who owns shares in the Company and is actively involved in the management of the enterprise or business and exercises control over the enterprise.

---

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

**NCP 4 (7/12/11)**

- 2.7 Are you or any person connected with the Bidder presently employed by the State? **YES NO**
- 2.7.1 If so, furnish the following particulars:  
Name of person /director / Trustee / Shareholder? Member: .....  
Name of State institution at which you or the person  
connected to the Bidder is employed: .....  
  
Position occupied in the State institution: .....  
Any other particulars:  
.....  
.....
- 2.7.2 If you are presently employed by the State, did you obtain the appropriate authority to  
undertake remunerative work outside employment in the Public Sector? **YES NO**
- 2.7.2.1 If YES, did you attach proof of such authority to the bid document? **YES NO**
- Note: Failure to submit proof of such authority, where applicable, may result in the  
disqualification of the bid.**
- 2.7.2.2 If NO, furnish reasons for non-submission of such proof:  
.....  
.....
- 2.8 Did you or your spouse, or any other of the Company's Directors / Trustees /  
Shareholders / Members or their spouses conduct business with the State in the  
previous 12 (twelve) months? **YES NO**
- 2.8.1 If so, furnish particulars:  
.....  
.....
- 2.9 Do you, or any person connected with the Bidder, have any relationship (family, friend, other) with  
a person employed by the State and who may be involved with the evaluation and/or **YES NO**  
adjudication of this bid?
- 2.9.1 If so, furnish particulars:  
.....  
.....
- 2.10 Are you, or any person connected with the Bidder, aware of any relationship (family, friend, other)  
between any other Bidder and any person employed by the State and who may be  
involved with the evaluation and/or adjudication of this bid? **YES NO**

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

2.10.1 If so, furnish particulars: **NCP4(7/12/11)**

.....  
.....

2.11 Do you or any of the Directors / Trustees / Shareholders / Members of the Company have any interest in any other related companies whether or not they are bidding for this contract? **YES NO**

2.11.1 If so, furnish particulars:

.....  
.....

3. Full details of Directors / Trustees / Members / Shareholders:

FULL NAME	IDENTITY NUMBER	PERSONAL INCOME TAX REFERENCE NUMBER	STAFF EMPLOYEE NUMBER / PERSONAL NUMBER

4. DECLARATION:

I, THE UNDERSIGNED ..... (Name)  
CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 2 AND 3 ABOVE IS CORRECT. I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....  
**SIGNATURE**

.....  
**DATE**

.....  
**POSITION**

.....  
**NAME OF TENDERER**

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



**NCP 6.1 (7/12/11)**

**PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017**

This preference form must form part of all bids invited. It contains general information and serves as a claim form for preference points for Broad-Based Black Economic Empowerment (B-BBEE) Status Level of Contribution.

**NB. BEFORE COMPLETING THIS FORM, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF B-BBEE, AS PRESCRIBED IN THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017**

**1. GENERAL CONDITIONS**

1.1 The following preference point systems are applicable to all Bids:

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

1.2 The value of this bid estimated to **exceed/not exceed R50 000 000**, (all applicable taxes included), and therefore the ..... system shall be applicable.

1.3 Preference points for this bid shall be awarded for:

- (i) Price; and
- (ii) B-BBEE Status Level of Contribution.

1.3.1 The maximum points for this bid are allocated as follows:

**POINTS**

1.3.1.1 **PRICE**

.....

1.3.1.2 **B-BBEE STATUS LEVEL OF CONTRIBUTION**

.....

**Total points for Price and B-BBEE must not exceed**

**100**

1.4 **Failure** on the part of a Bidder to fill in and/or to sign this form **and submit a valid original or a valid certified copy of a B-BBEE Verification Certificate** from a Verification Agency accredited by the South African Accreditation System (SANAS) or a Registered Auditor approved by the Independent Regulatory Board of Auditors (IRBA) or an Accounting Officer as contemplated in the Close Corporation Act (CCA) together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution **are not claimed**.

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

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## **2. DEFINITIONS**

- 2.1 **“all applicable taxes”** includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies;
- 2.2 **“B-BBEE”** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
- 2.3 **“B-BBEE status level of contributor”** means the B-BBEE status received by a measured entity based on its overall performance using the relevant scorecard contained in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;
- 2.4 **“Bid”** means a written offer in a prescribed or stipulated form in response to an invitation by an organ of State for the provision of services, works or goods, through price quotations, advertised competitive bid processes or proposals;
- 2.5 **“Broad-Based Black Economic Empowerment Act”** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- 2.6 **“Comparative price”** means the price after the factors of a non-firm price and all unconditional discounts that can be utilised have been taken into consideration.
- 2.7 **“Consortium or Joint Venture”** means an association of persons for the purpose of combining their expertise, property, capital, efforts, skills and knowledge in an activity for the execution of a contract.
- 2.8 **“Contract”** means the agreement that results from the acceptance of a bid by an organ of State.
- 2.9 **“EME”** means any enterprise with annual total revenue of R5 million or less;
- 2.10 **“Firm price”** means the price that is only subject to adjustments in accordance with the actual increase or decrease resulting from the change, imposition or abolition of customs or excise duty and any other duty, levy or tax which, in terms of the law or regulation, is binding on the Contractor and demonstrably has an influence on the price of any supplies, or the rendering costs of any service, for the execution of the contract;
- 2.11 **“Functionality”** means the measurement according to predetermined norms, as set out in the bid documents, of a service or commodity that is designed to be practical and useful, working or operating, taking into account, among other factors, the quality, reliability, viability and durability of a service and the technical capacity and ability of a Bidder;
- 2.12 **“Non-firm prices”** means all prices other than “firm” prices;
- 2.13 **“Person”** includes a juristic person;
- 2.14 **“Rand value”** means the total estimated value of a contract in South African currency, calculated at the time of the bid invitations and includes all applicable taxes and excise duties;

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## NCP 6.1 (7/12/11)

- 2.15 **“Sub-contract”** means the primary Contractor’s assigning, leasing, making out work to, or employing another person to support such primary Contractor in the execution of part of a project in terms of the contract;
- 2.16 **“Total revenue”** bears the same meaning assigned to this expression in the Codes of Good Practice on Black Economic Empowerment, issued in terms of Section 9 (1) of the Broad- Based Black Economic Empowerment Act and promulgated in the *Government Gazette* on 9 February 2007;
- 2.17 **“Trust”** means the arrangement through which the property of one person is made over or bequeathed to a trustee to administer such property for the benefit of another person; and
- 2.18 **“Trustee”** means any person, including the founder of the trust, to whom property is bequeathed in order for such property to be administered for the benefit of another person.

### 3. ADJUDICATION USING A POINT SYSTEM

- 3.1 The Bidder obtaining the highest number of total points will be awarded the contract.
- 3.2 Preference points shall be calculated after prices have been brought to a comparative basis taking into account all factors of non-firm prices and all unconditional discounts.
- 3.3 Points scored must be rounded off to the nearest 2 (two) decimal places.
- 3.4 In the event that two or more bids have scored equal points, the successful bid must be the one scoring the highest number of preference points for B-BBEE.
- 3.5 However, when functionality is part of the evaluation process and two or more bids have scored equal points including equal preferential points for B-BBEE, the successful bid must be the one scoring the highest score for functionality.
- 3.6 Should two or more bids be equal in all respects; the award shall be decided by the drawing of lots.

### 4. POINTS AWARDED FOR PRICE

#### 4.1 THE 80/20 OR 90/10 PREFERENCE SYSTEMS

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

##### 80/20

$$P_s = 80 \left( 1 - \frac{(P_t - P_{min})}{P_{min}} \right)$$

##### 90/10

$$P_s = 90 \left( 1 - \frac{(P_t - P_{min})}{P_{min}} \right)$$

Where

Ps = Points scored for comparative price of bid under consideration  
Pt = Comparative price of bid under consideration  
Pmin = Comparative price of lowest acceptable bid

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**NCP 6.1 (7/12/11)**

**5. POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTION**

- 5.1 In terms of Regulation 5(2) and 6(2) of the Preferential Procurement Regulations, preference points must be awarded to a Bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

<b>B-BBEE Status Level of Contributor</b>	<b>Number of Points (80/20 system)</b>	<b>Number of points (90/10 system)</b>
1	20	10
2	18	9
3	16	8
4	12	5
5	8	4
6	6	3
7	4	2
8	2	1
Non-compliant contributor	0	0

- 5.2 Bidders who qualify as EMEs in terms of the B-BBEE Act must submit a certificate issued by an Accounting Officer as contemplated in the CCA or a Verification Agency accredited by SANAS or a Registered Auditor. Registered auditors do not need to meet the prerequisite for IRBA's approval for the purpose of conducting verification and issuing EMEs with B-BBEE Status Level Certificates.
- 5.3 Bidders other than EMEs must submit their original and valid B-BBEE status level verification certificate or a certified copy thereof, substantiating their B-BBEE rating issued by a Registered Auditor approved by IRBA or a Verification Agency accredited by SANAS.
- 5.4 A Trust, Consortium or Joint Venture, will qualify for points for their B-BBEE status level as a legal entity, provided that the entity submits their B-BBEE status level certificate.
- 5.5 A Trust, Consortium or Joint Venture will qualify for points for their B-BBEE status level as an unincorporated entity, provided that the entity submits their consolidated B-BBEE scorecard as if they were a group structure and that such a consolidated B-BBEE scorecard is prepared for every separate bid.
- 5.6 Tertiary institutions and public entities will be required to submit their B-BBEE status level certificates in terms of the specialized scorecard contained in the B-BBEE Codes of Good Practice.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

**NCP 6.1 (7/12/11)**

5.7 A person will not be awarded points for B-BBEE status level if it is indicated in the bid documents that such a Bidder intends sub-contracting more than 30 (thirty) % of the value of the contract to any other enterprise that does not qualify for at least the points that such a Bidder qualifies for, unless the intended Sub-Contractor is an EME that has the capacity and ability to execute the sub-contract.

5.8 A person awarded a contract may not sub-contract more than 30 (thirty) % of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the person concerned, unless the contract is sub-contracted to an EME that has the capability and ability to execute the sub-contract.

**6. BID DECLARATION:**

6.1 Bidders who claim points in respect of B-BBEE Status Level of Contributions must complete the following:

**7. B-BBEE STATUS LEVEL OF CONTRIBUTION CLAIMED IN TERMS OF PARAGRAPHS 1.3.1.2 AND 5.1**

7.1 B-BBEE Status Level of Contribution: ..... = ..... (maximum of 10 or 20 points)

(Points claimed in respect of paragraph 7.1 must be in accordance with the table reflected in paragraph 5.1 and must be substantiated by means of a B-BBEE certificate issued by a Verification Agency accredited by SANAS or a Registered Auditor approved by IRBA or an Accounting Officer as contemplated in the CCA).

**8. SUB-CONTRACTING**

8.1 Will any portion of the contract be sub-contracted? (Delete which is not applicable) **YES NO**

8.1.1 If yes, indicate:

- (i) what percentage of the contract will be sub-contracted ..... %
- (ii) the name of the Sub-Contractor .....
- (iii) the B-BBEE status level of the Sub-Contractor .....
- (iv) whether the Sub-Contractor is an EME **YES NO**

**9. DECLARATION WITH REGARD TO COMPANY / FIRM:**

9.1 Name of firm: .....

9.2 VAT registration number: .....

9.3 Company registration number: .....

---

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**NCP 6.1 (7/12/11)**

**9.4 TYPE OF COMPANY / FIRM**

- ☐ Partnership/Joint Venture/Consortium
- ☐ One-person business/sole propriety
- ☐ Close Corporation
- ☐ Company
- ☐ (Pty) Limited

*(Tick applicable box)*

**9.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES**

.....  
.....

**9.6 COMPANY CLASSIFICATION**

- ☐ Manufacturer
- ☐ Supplier
- ☐ Professional service provider
- ☐ Other service providers, e.g. transporter, etc.

*(Tick applicable box)*

**9.7** Total number of years the firm has been in business? .....years

**9.8** I/We, the undersigned, who is/are duly authorised to do so on behalf of the company/firm, certify that points claimed, based on the B-BBEE Status Level of Contribution, indicated in paragraph 7 of the foregoing certificate, qualifies the company/firm for the preference(s) shown and I/we acknowledge that:

- (i) The information furnished is true and correct.
- (ii) The preference points claimed is in accordance with the General Conditions as indicated in paragraph 1 of this form.
- (iii) In the event of a contract being awarded as a result of points claimed as shown in paragraph 7, the Contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct.
- (iv) If the B-BBEE Status Level of Contribution has been claimed or obtained on a fraudulent basis or any of the conditions of the contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have –

(a) disqualify the person from the bidding process;

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

(b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;

**NCP 6.1 (7/12/11)**

(c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;

(d) restrict the Bidder or Contractor, its Shareholders and Directors, or only the Shareholders and Directors who acted on a fraudulent basis, from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and

(e) forward the matter for criminal prosecution.

**WITNESSES:**

1. ....

.....  
**SIGNATURE(S) OF BIDDER (S)**

2. ....

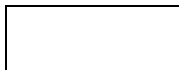
DATE: .....

ADDRESS: .....

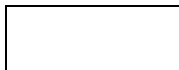
.....

.....

.....



Contractor



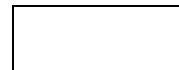
Witness 1



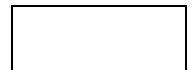
Witness 2



Employer



Witness 1



Witness 2

## NCP 7.1

### CONTRACT FORM – PURCHASE OF GOODS / WORKS

**THIS FORM MUST BE COMPLETED IN DUPLICATE BY BOTH THE SUCCESSFUL BIDDER (PART 1) AND THE PURCHASER (PART 2). BOTH FORMS MUST BE SIGNED IN THE ORIGINAL SO THAT THE SUCCESSFUL BIDDER AND THE PURCHASER WOULD BE IN POSSESSION OF ORIGINALLY SIGNED CONTRACTS FOR THEIR RESPECTIVE RECORDS**

#### PART 1 (TO BE COMPLETED BY THE BIDDER)

1. I hereby undertake to supply all or any of the goods and/or works described in the attached bidding documents to (name of institution) ..... in accordance with the requirements and specifications stipulated in bid number ..... at the price/s quoted. My offer/s remain binding upon me and open for acceptance by the purchaser during the validity period indicated and calculated from the closing time of bid.
2. The following documents shall be deemed to form and be read and construed as part of this agreement:
  - (i) bidding documents, viz
    - Invitation to bid;
    - Tax Clearance Certificate
    - Pricing Schedule(s);
    - Technical Specification(s);
    - Preference claims for Broad Based Black
    - Economic Empowerment Status Level of Contribution in terms of the Preferential Procurement Regulations 2011;
    - Declaration of interest;
    - Declaration of Bidder's past SCM practices;
    - Certificate of Independent Bid Determination;
    - Special Conditions of Contract;
  - (ii) General Conditions of Contract; and
  - (iii) Other (specify)
3. I confirm that I have satisfied myself as to the correctness and validity of my bid; that the tendered Re-measurable quoted cover all the goods and/or works specified in the bidding documents; that the tendered Re-measurable cover all my obligations and I accept that any mistakes regarding the tendered Re-measurable and calculations will be at my own risk.
4. I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this agreement as the principal liable for the due fulfilment of this contract.
5. I declare that I have no participation in any collusive practices with any Bidder or any other person regarding this or any other bid.
6. I confirm that I am duly authorised to sign this contract.

NAME (PRINT) .....  
CAPACITY .....  
SIGNATURE .....  
NAME OF FIRM .....  
DATE .....

#### WITNESSES

1. ....  
2. ....  
DATE: .....

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



**CONTRACT FORM – PURCHASE OF GOODS / WORKS**

**PART 2 (TO BE COMPLETED BY THE PURCHASER)**

1. I, ..... in my capacity as .....  
accept your bid under Reference Number ..... dated .....  
for the supply of goods / works indicated hereunder and/or further specified in the annexure(s).
2. An official order indicating delivery instructions is forthcoming.
3. I undertake to make payment for the goods/works delivered in accordance with the terms and conditions of the contract, within 30 (thirty) days after receipt of an invoice accompanied by the delivery note.

ITEM NO.	PRICE (ALL APPLICABLE TAXES INCLUDED), EXCL 15% VAT	BRAND	DELIVERY PERIOD	B-BBEE STATUS LEVEL OF CONTRIBUTION	MINIMUM THRESHOLD FOR LOCAL PRODUCTION AND CONTENT (if applicable)

4. I confirm that I am duly authorised to sign this contract.

SIGNED AT ..... ON .....

NAME (PRINT) .....

SIGNATURE .....

OFFICIAL STAMP

WITNESSES

1. ....

2. ....

DATE: .....

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## NCP 8 (7/12/11)

### DECLARATION OF TENDERER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

1. This Standard Bidding Document must form part of all bids invited.
2. It serves as a declaration to be used institutions in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.
3. The bid of any Bidder may be rejected if that Bidder, or any of its Directors have:
  - (a) abused the institution's supply chain management;
  - (b) committed fraud or any other improper conduct in relation to such system; or
  - (c) failed to perform on any previous contract.
4. In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

Item	Question	Yes	No
4.1	Is the Bidder or any of its Directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector?  <b>(Companies or persons who are listed on this database were informed in writing of this restriction by the National Treasury after the <i>audi alteram partem</i> rule was applied).</b>  <b>The Database of Restricted Suppliers now resides on the National Treasury's website (www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.</b>	Yes  <input type="checkbox"/>	No  <input type="checkbox"/>
4.1.1	If so, furnish particulars:		
4.2	Is the Bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)?  <b>The Register for Tender Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.</b>	Yes  <input type="checkbox"/>	No  <input type="checkbox"/>
4.2.1	If so, furnish particulars:		

<div style="border: 1px solid black; height: 30px; width: 100px;"></div>	<div style="border: 1px solid black; height: 30px; width: 100px;"></div>	<div style="border: 1px solid black; height: 30px; width: 100px;"></div>	<div style="border: 1px solid black; height: 30px; width: 100px;"></div>	<div style="border: 1px solid black; height: 30px; width: 100px;"></div>	<div style="border: 1px solid black; height: 30px; width: 100px;"></div>
Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

4.3	Was the Bidder or any of its Directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.3.1	If so, furnish particulars:		
4.4	Was any contract between the Bidder and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.4.1	If so, furnish particulars:		

### CERTIFICATION

I, THE UNDERSIGNED (FULL NAME) .....

CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS TRUE AND CORRECT.







I ACCEPT THAT, IN ADDITION TO CANCELLATION OF A CONTRACT, ACTION MAY BE TAKEN AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....  
SIGNATURE

.....  
DATE

.....  
POSITION

.....  
NAME OF BIDDER

					
Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

## NCP 9 (7/12/11)

### CERTIFICATE OF INDEPENDENT BID DETERMINATION

1. This Standard Bidding Document (NCP) must form part of all bids<sup>1</sup> invited.
2. Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).<sup>2</sup> Collusive bidding is a *per se* prohibition meaning that it cannot be justified under any grounds.
3. Treasury Regulation 16A9 prescribes that accounting officers and accounting authorities must take all reasonable steps to prevent abuse of the supply chain management system, and authorizes Accounting Officers and Accounting Authorities to:
  - (a) Disregard the bid of any Bidder if that Bidder, or any of its directors have abused the institution's supply chain management system and/or committed fraud or any other improper conduct in relation to such system.
  - (b) Cancel a contract awarded to a supplier of goods and services if the supplier committed any corrupt or fraudulent act during the bidding process or the execution of that contract.
4. This NCP serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
5. In order to give effect to the above, the attached Certificate of Bid Determination (NCP 9) must be completed and submitted with the bid:

<sup>1</sup> Includes price quotations, advertised competitive tenders, limited tenders and proposals.

<sup>2</sup> Bid rigging (or collusive tendering) occurs when businesses, that would otherwise be expected to compete, secretly conspire to raise prices or lower the quality of goods and / or Services for purchasers who wish to acquire goods and / or services through a bidding process. Bid rigging is, therefore, an agreement between competitors not to compete.

---

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

NCP 9 (7/12/11)

### CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

.....  
(Bid Number and Description)

in response to the invitation for the Bid made by:

.....  
(Name of institution)

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

I certify, on behalf of: ..... that:  
(Name of Bidder)

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

<sup>3</sup> Joint Venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital,

.....  
Contractor

.....  
Witness 1

.....  
Witness 2

.....  
Employer

.....  
Witness 1

.....  
Witness 2

efforts, skill and knowledge in an activity for the execution of a contract.

**NCP 9 (7/12/11)**

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

.....  
SIGNATURE

.....  
DATE

.....  
POSITION

.....  
NAME OF BIDDER

**END OF SECTION**

---

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

LERATO PARK INTEGRATED HOUSING DEVELOPMENT

**CONTRACT 2334-50-02/03**

Remedial work to 491 RDP Houses

**VOLUME 1  
PORTION 2: CONTRACT**

**Part C1  
Agreements and Contract Data**

---

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**AGREEMENTS AND CONTRACT DATA**

**CONTENTS LIST**

<b>Section</b>	<b>Description</b>	<b>Page No</b>
<b>C1.1</b>	<b>FORM OF TENDER.....</b>	<b>C1.1-1</b>
	Addendum No.1 .....	<b>C1.1-4</b>
<b>C1.2</b>	<b>CONTRACT DATA.....</b>	<b>C1.2-1</b>
	Annexure A: Guarantee for Construction .....	<b>C1.2-25</b>
	Annexure B: Waiver of Contractor's Lien .....	<b>C1.2-28</b>
	Annexure C: Written agreement in terms of the section 37(2) of the OHSACT .....	<b>C1.2-37</b>

**END OF SECTION**

---

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**VOLUME 1  
PORTION 2: CONTRACT**

**Section C1.1  
Form of Tender**

---

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## E FORM OF TENDER

### E 1.0 Tenderer's details

Name			
Legal entity of above		Contact person	
Business registration number		Telephone number	
VAT/GST number		Mobile number	
Country		E-mail	
Postal address			
		Postal code	
Physical address			
		Postal code	

### E 2.0 Acceptance of tender conditions

By submission of this tender to the employer the tenderer offers and agrees to execute and complete the works and to remedy any defects in conformity with the specification for the tender amount stated

The tender shall remain in full legal force for forty-five (45) calendar days from the closing date of the tender. The tenderer accepts liability for loss or damages that may be suffered by the employer should the tender validity period not be honoured '

The lowest or any tender will not necessarily be accepted by the employer nor will reasons be given for such a decision

### E 3.0 Tender amount compilation

		Amount
Tenderer's work excluding <b>tax</b>		
Tax		%
Total tender amount including <b>tax</b>		
Total tender amount including <b>tax</b> , in words		

Signature	Tenderer who by signature hereto warrants authority	Place			
Name		Capacity		Date	

Signature	Witness	Place			
Name			Date		

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Contractor

Witness 1

Witness 2

Employer

Witness 1

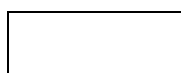
Witness 2

**E 4.0 Tender qualifications**

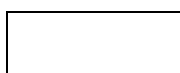


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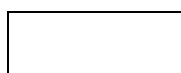
An original purchased copy will be signed on the acceptance of a tender



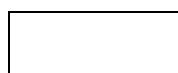
Contractor



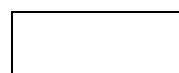
Witness 1



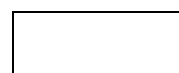
Witness 2



Employer



Witness 1



Witness 2

**ADDENDUM NO.1**

**CONTRACT DATA: FORM OF TENDER**

**SECTION NO. E 2.0: Acceptance of tender conditions**

Replace the following wording:

“...forty five (45) calendar days...”

with

“...ninety (90) calendar days...”

Add the following after the last paragraph:

“This tender takes into account the documents listed hereunder by the principal agent or agent for the purpose of preparing and submitting this tender

1. Volume 1 - Part T1 Tendering procedures
2. Volume 1 - Part T2 Returnable documents
3. Volume 1 - Part C1 Agreements and contract data
4. Volume 1 - Part C2 Pricing data
5. Volume 1 - Part C3 Scope of work
6. Volume 1 - Part C4 Site Information
7. Volume 2 - Drawings”

END OF SECTION

---

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

LERATO PARK INTEGRATED HOUSING DEVELOPMENT

**CONTRACT 2334-50-02/03**

Remedial work to 491 RDP Houses

**VOLUME 1  
PORTION 2: CONTRACT**

**Section C1.2  
Contract Data**

---

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**AGREEMENTS AND CONTRACT DATA**

**CONDITIONS OF CONTRACT**

The JBCC® Principal Building Agreement - Edition 6.2 (May 2018) is applicable to this contract.

The Principal Building Agreement is not bound into this document, but is available at the Contractor's expense from the JBCC constituents. Contact the JBCC at [info@jbcc.co.za](mailto:info@jbcc.co.za) for information.

The following additional documents form part of the suite of contract agreements:

- The JBCC® Principal Building Agreement - Contract Data that incorporates specific employer and contractor requirements;
- The JBCC® General Preliminaries that generally covers all aspects of preliminaries for most types of projects; and
- A comprehensive set of certificate forms and support documents for use in the administration of the agreement

**END OF SECTION**

---

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2



## PRINCIPAL BUILDING AGREEMENT: CONTRACT DATA

**Project:** Lerato Park Integrated Housing Development, Remedial work to 491 RDP Houses

**Employer:** The Northern Cape Department of Co-operative Governance, Human Settlements and Traditional Affairs ("COGHSTA")

**Contractor:**

**Contract Date:**

**File Code:** 2334-50-02/03

**CONTRACT DATA**  
**Principal Building Agreement**  
**Edition 6.2 - May 2018**

**JBCC®**

The Joint Building Contracts Committee® NPC (JBCC®) is representative of building owners and developers, professional consultants and general and specialist contractors who contribute their knowledge and experience to the compilation of the JBCC® documents. The JBCC® documents portray the consensus view of the constituent members and are published in the interests of standardisation and good practice with an equitable distribution of contractual risk

**Application of JBCC® agreements**

The definitions contained in the JBCC® Principal Building Agreement apply to this document. A word or phrase in bold type in the text has the same meaning assigned to it in the definitions of such agreement. Where a word or phrase is not in bold type it has the meaning consistent with the context of its use

This contract data contains unique requirements applicable to the project and variables referred to in the JBCC® Principal Building Agreement and the JBCC® General Preliminaries. The information provided in this document by the principal agent is complete and accurate at the time of calling for tenders. Where additional information becomes available, all tenderers will be informed in writing. Reference to clause numbers in the JBCC® Principal Building Agreement are shown in [square brackets] in this contract data eg [3.2.1]. Spaces requiring information must be filled in, or marked as 'not applicable' but not left blank

This contract data, when completed and submitted by the contractor, becomes the form of tender. Where the contractor is appointed, the contract documents comprise the signed JBCC® Principal Building Agreement, this completed contract data, the priced document, drawings and other listed documents

**Warning!**

The JBCC® Principal Building Agreement Edition 6.2 has been coordinated with the JBCC® Nominated/Selected Subcontract Agreement Edition 6.2, the JBCC® General Preliminaries and the JBCC® certificate forms and support documents. Forms from previous editions are not compatible with the JBCC® Principal Building Agreement Edition 6.2

Persons entering into or preparing contracts using the JBCC® suite of contract agreements and support documents are warned of the dangers inherent in modifying any part of it

Experience has shown that changes drafted by others, including members of the building professions, often have unintended results that may be prejudicial to either, or both, parties

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



## A PROJECT INFORMATION

### A 1.0 Works [1.1]

Project name	Lerato Park Integrated Housing Development, Remedial work to 491 RDP Houses
Reference number	2334-50-02/03
Works description	Lerato Park Integrated Housing Development: Remedial work to 491 RDP Houses (refer to Section C3.1)

### A 2.0 Site [1.1]

Erf / stand number	As per locality plan and layout plan, and volume 2 (refer to Section C3.1)
Township / Suburb	Kimberley, Lerato Park
Site address	Lerato Park Integrated Housing Development coordinates: 28°40'24.34"S 24°42'54.48"E
Local authority	Sol Plaatje Local Municipality

### A 3.0 Employer [1.1]

Name	The Northern Cape Department of Co-operative Governance, Human Settlements and Traditional Affairs (COGHSTA)		
Legal entity of above		Contact person	Tebogo Monoametsi
Business registration number		Telephone number	+27(0)53 830 9400
VAT/GST number		Mobile number	
Country	South Africa	E-mail	
Postal address	JS du Plooy building, 9 Cecil Sussman Road, Kimberley		
		Postal code	8301
Physical address	JS du Plooy building, 9 Cecil Sussman Road, Kimberley		
		Postal code	8301

### A 4.0 Principal agent [1.1]

Name	Bigen Africa Services (Pty) Ltd ("Bigen")		
Legal entity of above		Contact person	Marthinus Pretorius
Practice number		Telephone number	+27(0)53 831 2935
		Mobile number	
Country	South Africa	E-mail	<a href="mailto:Marthinus.Pretorius@bigengroup.com">Marthinus.Pretorius@bigengroup.com</a>
Postal address	PO Box 110092, Kimberley,		
		Postal code	8306
Physical address	4 Jacobus Smit Ave, Labram, Kimberley,		
		Postal code	8301

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**A 5.0 Agent** [1.1; 6.2]

A 5.0 Agent [1.1; 6.2]	Discipline		Structural Engineer	
Name	Bigen Africa Services (Pty) Ltd (“Bigen”)			
Legal entity of above		Contact person	Francois de Kock	
Practice number		Telephone number	+27(0)53 831 2935	
		Mobile number		
Country	South Africa	E-mail	<a href="mailto:Francois.deKock@bigengroup.com">Francois.deKock@bigengroup.com</a>	
Postal address	PO Box 110092, Kimberley,			
		Postal code	8306	
Physical address	4 Jacobus Smit Ave, Labram, Kimberley,			
	Postal code		8301	

**A 6.0 Agent** [1.1; 6.2]

A 6.0 Agent [1.1; 6.2]	Discipline		Quantity Surveyor	
	Name			
	Bigen Africa Services (Pty) Ltd (“Bigen”)			
	Legal entity of above		Contact person	Stuart Graham
	Practice number		Telephone number	+27(0)53 831 2935
			Mobile number	
	Country		E-mail	<a href="mailto:Stuart.Graham@bigengroup.com">Stuart.Graham@bigengroup.com</a>
	Postal address		PO Box 110092, Kimberley,	
			Postal code	8306
	Physical address		4 Jacobus Smit Ave, Labram, Kimberley,	
		Postal code	8301	

**A 7.0 Agent** [1.1; 6.2]

A 7.0 Agent [1.1; 6.2]

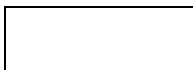
	Discipline	Electrical Engineer	
Name	Bigen Africa Services (Pty) Ltd (“Bigen”)		
Legal entity of above		Contact person	Mark Lowe
Practice number		Telephone number	+27(0)53 831 2935
		Mobile number	
Country	South Africa	E-mail	<a href="mailto:Mark.Lowe@bigengroup.com">Mark.Lowe@bigengroup.com</a>
Postal address	PO Box 110092, Kimberley,		
		Postal code	8306
Physical address	4 Jacobus Smit Ave, Labram, Kimberley,		
		Postal code	8301

**A 8.0 Agent** [1.1; 6.2]

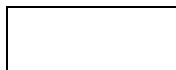
A 8.0 Agent [1.1; 6.2]

Discipline		Architect (	
Name	N.M Projects		
Legal entity of above		Contact person	Johan Malan
Practice number		Telephone number	+27 13 656 0288
		Mobile number	082 821 1914
Country		E-mail	<a href="mailto:admin@naliandmalan.co.za">admin@naliandmalan.co.za</a>
Postal address	Postnet Suite 52, Private Bag x7297, eMalahleni		
		Postal code	
Physical address	Smokey Mountain Office Park, Suite 310. 3rd Floor, N4 Business Park Building 22		
	Ben Fleur Ext 11, eMalahleni	Postal code	

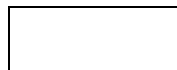
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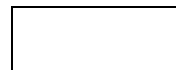
Contractor



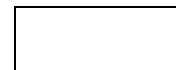
Witness 1



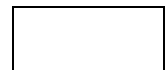
Witness 2



Employer



Witness 1



Witness 2

**A 9.0 Agent** [1.1; 6.2]

Discipline			
Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
		Mobile number	
Country		E-mail	
Postal address			
		Postal code	
Physical address			
		Postal code	

**A 10.0 Agent** [1.1; 6.2]

Discipline			
Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
		Mobile number	
Country		E-mail	
Postal address			
		Postal code	
Physical address			
		Postal code	

**A 11.0 Agent** [1.1; 6.2]

Discipline			
Name			
Legal entity of above		Contact person	
Practice number		Telephone number	
		Mobile number	
Country		E-mail	
Postal address			
		Postal code	
Physical address			
		Postal code	

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Contractor

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Witness 1

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Witness 2

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Employer

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Witness 1

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Witness 2

## B CONTRACT INFORMATION

### B 1.0 Definitions [1.1]

Bills of quantities: System/Method of measurement	Standard System of Measuring Building Work, (6th Edition – 2 <sup>nd</sup> revision), as revised in 2013
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### B 2.0 Law, regulations and notices [2.0]

Law applicable to the works, state country [2.1]	South Africa
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### B 3.0 Offer and acceptance [3.0]

Currency applicable to this agreement [3.2]	Rand
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### B 4.0 Documents [5.0]

The original signed <b>agreement</b> is to be held by the <b>principal agent</b> [5.2], if not, indicate by whom	Employer
Number of copies of <b>construction information</b> issued to the <b>contractor</b> at no cost [5.6]	1

Documents comprising the <b>agreement</b>	Page numbers
The <b>JBCC</b> ® Principal Building Agreement, Edition 6.2 May 2018	1 to 30
The <b>JBCC</b> ® Principal Building Agreement- Contract Data, Edition 6.2 May 2018	1 to 20
The <b>JBCC</b> ® General Preliminaries for use with the <b>JBCC</b> ® Principal Building Agreement, Edition 6.2 May 2018	1 to 7
Volume 1 - Part T1 Tendering procedures	
Volume 1 - Part T2 Returnable documents	
Volume 1 - Part C1 Agreements and contract data	
Volume 1 - Part C2 Pricing Data	
Volume 1 - Part C3 Scope of work	
Volume 1 - Part C4 Site Information	

Contract drawings — description	Number	Revision	Date
Refer to Volume 2 – All drawings incorporated into the tender document			

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**B 5.0 Employer's agents [6.0]**

Authority is delegated to the following <b>agents</b> to issue <b>contract instructions</b> and perform duties for specific aspects of the <b>works</b> [6.2]
None

<b>Principal agent's and agents' interest or involvement in the works other than a professional interest [6.3]</b>
Bigen Africa Services (Pty) Ltd ("Bigen") acting as Development Agent on behalf of the Northern Cape Department of Co-operative Governance, Human Settlements and Traditional Affairs

**B 6.0 Insurances [10.0]**

Insurances by <b>Employer: No</b>			Amount including tax	Deductible amount including tax
Contract works insurance:				
	New works [10.1.1] ( <b>contract sum</b> or amount)			
or	<b>Works with practical completion</b> in sections [10.2] ( <b>contract sum</b> or amount)			
or	<b>Works with alterations and additions</b> [10.3] (reinstatement value of existing structures with or including new <b>works</b> )			
	<b>Direct contractors</b> [10.1.1; 10.2] where applicable, to be included in the contract works insurance			
	<b>Free issue</b> [10.1.1; 10.2] where applicable, to be included in the contract works insurance			
	Escalation, professional fees and reinstatement costs if not included above			
Total of the above contract works insurance amount				
Supplementary insurance [10.1.2; 10.2]				
Public liability insurance [10.1.3; 10.2]				
Removal of lateral support insurance [10.1.4; 10.2]				
Other insurances [10.1.5]				
Yes/no?	Yes	If yes, description 1		
SASRIA, if not already covered in [10.1.2; 10.2]" above				
Yes/no?		If yes, description 2		

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Contractor

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Witness 1

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Witness 2

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Employer

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Witness 1

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Witness 2

and/or

<b>Insurances by contractor: Yes</b>		Amount including tax	Deductible amount including tax
Contract works insurance:			
	New works [10.1.1] (contract sum or amount)		
or	Works with practical completion in sections [10.2] (contract sum or amount)	Contract sum + 30%	
or	Works with alterations and additions [10.3] (reinstatement value of existing structures with or		
	Direct contractors [10.1.1; 10.2] where applicable, to be included in the contract works insurance		
	Free issue [10.1.1; 10.2] where applicable, to be included in the contract works insurance		
	Escalation, professional fees and reinstatement costs if not included above		
Total of the above contract works insurance amount		Contract sum + 30%	
Supplementary insurance [10.1.2]		Contract sum + 30%	
Public liability insurance [10.1.3]		R5 million per event	
Removal of lateral support insurance [10.1.4]		Not applicable	
Other insurances [10.1.5]:			
Yes/no?	Yes	If yes, description 1	Contract sum + 30%
SASRIA, if not already included in [10.1.2; 10.2]" above			
Yes/no?		If yes, description 2	

**B 7.0 Obligations of the employer [12.1]**

Existing premises will be in use and occupied [12.1.2]		Yes/no?	No
If yes, description			
Restriction of working hours [12.1.2]		Yes/no?	Yes
If yes, description	7:00am to 17:00pm		
Natural features and known services to be preserved by the contractor [12.1.3]		Yes/no?	No
If yes, description			
Restrictions to the site or areas that the contractor may not occupy [12.1.4]		Yes/no?	Yes
If yes, description	The contractor is limited to the boundaries of each individual stand. No works may be performed in the road servitude. The access roads shall be clear at all times to allow the inhabitants within the neighbouring area to have free access.		
Supply of free issue [12.1 10]		Yes/no?	No
If yes, description			

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Contractor

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Witness 1

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Witness 2

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Employer

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Witness 1

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Witness 2

## B 8.0 Nominated subcontractors [14.0]

Specialisation 1	N/A
Specialisation 2	
Specialisation 3	
Specialisation 4	
Specialisation 5	

## B 9.0 Direct contractors [16.0]

Extent of work [12.1.11]	N/A
Extent of work [12.1.11]	
Extent of work [12.1.11]	
Extent of work [12.1.11]	
Extent of work [12.1.11]	

## B 10.0 Description of sections [20.1]

Section 1 to 135	135 All Duplex Houses
Section 136 to 491	359 All Semi-Detached and Freestanding Houses
Section	
Section	
Section	
Section	
Section	
Section	
Section	
Section	Remainder of the works

## B 11.0 Possession of site [12.1.5], practical completion [19.0;20.0] and penalties [24.0]

Practical completion for the works as a whole	Intended date of possession of the site [12.1.5]	Period for inspection by the principal agent [19.3]	Date for practical completion [12.2.7; 24.1]	Penalty [24.1]
	Date	working days	Date	Penalty amount per calendar day

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

or where **sections** are applicable

Practical completion of a section of the works	Intended date of possession of a section [ 12.1.5] Refer B15.0 Applicable to [12.1.5; 12.2.22]	Period for inspection by the principal agent [19.3]	The date for <b>practical completion</b> shall be the period as indicated below from the date of possession of the <b>site</b> by the <b>contractor</b> [12.2.7; 24.1]	Penalty [24.1]  Penalties shall be cumulative
	Date	working days	Working days	Penalty amount per calendar day
Section 1 to 135		3 working days per an individual section	219	R 3500
Section 136 to 491		3 working days per an individual section	455	R 7700
Section				
Section				
Section				
Section				
Section				
Remainder of the works				

Criteria to achieve **practical completion** not covered in the definition of **practical completion**

Sectional Practical Completion on the individual houses shall only be achieved once the prescribed scope of work for each individual house has been completed to a quality-approved standard (Quality forms affixed to this contract need to be completed for each of the houses). This includes the moving the inhabitant from the temporary accommodation (Decanting units) back to the newly renovated house and the reconnection of the municipal/prepaid water and electrical meters.

In order for the last Section to achieve Practical Completion, all decanting units and services shall be removed, and the erf rehabilitated to its original state prior to construction.

## B 12.0 Payment [25.0]

Date of month for issue of regular <b>payment certificates</b> [25.2]	Refer to B15		
Cost fluctuations [25.3.4; 26.9.5]	Yes/no?	Yes	
If yes, method to calculate	Refer to B15		

## B 13.0 Dispute resolution [30.0]

Adjudication [30.6.1; 30.10] Name of nominating body	The Association of Arbitrators (Southern Africa)
Applicable rules for adjudication [30.6.2]	JBCC Adjudication Rules 2018
Arbitration [30.7.4; 30.10] Name of nominating body	The Association of Arbitrators (Southern Africa)
Applicable rules for arbitration [30.7.5]	Rules for The Conduct of Arbitrations: 2018 Edition (1 January 2018)

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



**B 14.0 JBCC° General Preliminaries — selections**

Provisional bills of quantities [P2.2]	Yes/no?	Yes	
Availability of construction information [P2.3]	Yes/no?	Yes	
Previous work - dimensional accuracy - details of previous contract(s) [P3.1]	Due to the time constraint available for each individual house, amend the time available to provide notice to 2 working days from when the house was made available to the Contractor.		
Previous work - <b>defects</b> - details of previous contract(s) [P3.2]	Due to the nature of the project (Remedial works to existing buildings), the Contractor shall only notify the Principal Agent should additional repair work be required which has not already been identified and included as part of the original scope of work for that specific house in question.		
Inspection of adjoining properties - details [P3.3]	<p>The Contractor shall give all residents or other parties owning a building or top structure within an appropriate radius (not less than 50m) from any point of construction or blasting, a minimum of 72 hours written notice of his intent to execute any construction or blasting work. The Contractor shall note all aspects relevant to the condition of the affected buildings and/or top structures prior to construction or blasting, and shall acquire the signature of the owners/occupants agreeing to such conditions.</p> <p>Subsequent to construction or blasting, both the Contractor and the owners/occupants shall confirm the condition of the buildings and/or top structures. In the event of damage to existing buildings and/or top structures as a result of construction or blasting, remedial work shall be done to the satisfaction of the owners/occupants at the Contractor's expense.</p> <p>Compliance with this clause shall not relieve the Contractor of any of his responsibilities in terms of the Contract.</p>		
Handover of <b>site</b> in stages - specific requirements [P4.1]	The Contractor shall only be provided access to the individual houses once the inhabitants of the house have been totally moved to a vacant temporary decanting house. This includes the moving of all their possessions, not limited to, indoor and outdoor possessions. Due to the limited number of decanting units available, the Contractor will not be allowed to work on more houses than the number of decanting units available. The works shall be coordinated so that the requirements of the target completion periods are adhered to.		

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Enclosure of the <b>works</b> - specific requirements [P4.2]	<p>The contractor shall install a temporary 2.1m high fence (covered with shade netting) to separate the areas under construction and the public (on every section). This to safeguard the public. After a section is handed over to the inhabitants of the home/homes the temporary enclosure shall be moved to new sections. The enclosure of the section shall be confined to the limits of the stand and may not encroach within the road reserve. The Contractor shall ensure that the temporary enclosure is maintained at all times and in the event of damage, theft, deterioration or the like, the Contractor shall have the enclosure (at their own expense) replaced/repaired.</p> <p>On completion of all of the works, the temporary fencing shall be spoiled off site.</p>
Geotechnical and other investigations - specific requirements [P4.3]	<p>Refer to PART C4 Site Information, C4.2 Geotechnical Report for a copy of the Geotechnical Report for the proposed project area.</p>
Existing premises occupied - details [P4.5]	<p>The Contractor's attention is drawn to the fact that most portions of the Works (Top Structures) will be constructed in an urban area close to existing structures that are occupied. The Contractor shall exercise all necessary precautions and take all necessary steps to ensure the safety and convenience of the public residing in the area. In addition, the Contractor shall provide access for traffic over and through the works, and for residents to their places of abode, all as described in the Specifications. Allowance must be made by the Contractor in his programming for any possible delays resulting from the aforesaid operational environment.</p> <p>The Contractor shall give residents a minimum of 72 hours written notice of his intent to start working on the respective allotments and/or close access to any of the residents. The Contractor shall acquire written confirmation from all owners that they are aware of any intended closures of access. No traffic access to a residential stand/allotment shall be closed for longer than 48 hours unless otherwise agreed to in writing with the owners concerned.</p> <p>Meticulous care is required to ensure:</p> <ul style="list-style-type: none"> <li>• Convenient access to all houses in the surrounding area during all stages of construction;</li> <li>• Ensuring the safety of the public during all stages of construction;</li> <li>• Extended liaison with concerned parties, including the Project Steering Committee, Local Authority, Water Supply Authority, Water Services Provider, Traffic Department, Residents and management of businesses is imperative. Where problems are identified which impact on the cost, progress/ time and quality of the project, these must be brought to the attention of the Principle Agent in writing for a decision.</li> </ul>

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Services - known - specific requirements [P4.6]		It is not proposed or anticipated that any known existing services are to be terminated, developed or interfered with under the scope of this project. Nevertheless, notwithstanding this intention, the sites may be traversed by various existing services including water pipelines, sewer pipelines, some Eskom electrical and Telkom cables, the exact position of which are generally unknown. The Contractor will be required to so schedule and program his work that when works are disrupted due to the influence of unexpected services encountered, construction can continue in other portions of the site in order to allow the situation to be remedied by the re-siting of the proposed top structure or rerouting of the existing services as the last resort.		
Water [P8.1]	By <b>contractor</b>	Yes/no?	Yes	
	By <b>employer</b>	Yes/no?	No	
	By <b>employer</b> — metered	Yes/no?	No	
Electricity [P8.2]	By <b>contractor</b>	Yes/no?	Yes	
	By <b>employer</b>	Yes/no?	No	
	By <b>employer</b> — metered	Yes/no?	No	
Ablution and welfare facilities [P8.3]	By <b>contractor</b>	Yes/no?	Yes	
	By <b>employer</b>	Yes/no?	No	
Communication facilities - specific requirements [P8.4]		<p>The contractor shall make provision for uncapped, unshaped and unthrottled internet access and for payment of telecommunication costs.</p> <p>Financial provisions for the <b>Agent's</b> communication requirements has been included in the Provisional Sums.</p>		

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Protection of the <b>works</b> - specific requirements [P11.1]	<p><b>Security on constructions site</b></p> <p>From when possession of the site is given/handed over [12.2.22] to the contractor up until the issue of the Practical Completion Certificate [19.0] on the final/last section (Last house), the contractor shall at his own expense provide suitable security (24 hours a day) to safeguard the works (The works include the decanting houses).</p> <p><b>Security at Agent's site camp</b></p> <p>The Contractor shall provide security (at their expense) for the Employer's Agents site camp, which is located at the following co-ordinates 28°40'31.34"S and 24°43'8.51"E. Security shall include for guards 24 hours a day. The contractor shall provide security from when possession of the site is given/handed over [12.2.22] to the contractor up until the issue of the Practical Completion Certificate [19.0 &amp; 20.0] on the final/last section (Last house) and including the completion of "list for completion" as prescribed in [19.3.4] for the final/last section (Last house).</p> <p>For both categories above, the following is applicable: In the event of the security being of an insufficient standard, the Principal Agent may instruct the Contractor to enhance the security. The enhancement of the security shall be for the Contractor's expense.</p>
Protection / isolation of existing <b>works</b> and <b>works</b> occupied in <b>sections</b> - specific requirements [P11.2]	
Disturbance - specific requirements [P11.5]	The contractor shall ensure that noise levels are kept to a minimum. In the event of complaints from the surrounding residential areas, the contractor shall remedy such at their own expense until the issue has been remedied.
Environmental disturbance - specific requirements [P11.6]	Refer to Environmental Management Plan, attached to the contract document.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## B 15.0 Changes made to JBCC® documentation

Reference may be made to other documents forming part of this agreement

### Addendum 1:

Form of Tender (Addendum attached after Form of Tender)

### Addendum to the JBCC® Principal Building Agreement (Edition 6.2)

#### **Clause 1: Definitions**

- Add the following wording to "**NOTICE**":

"A notice shall be formally submitted in the form as defined in clause 2.4. The notice shall make reference to the relevant JBCC Principal Building Agreement clause to which the notice is applicable and details of the notice shall be provided to substantiate the notice."

- Add the following wording to "**PRINCIPAL AGENT**":

"The **Principal Agent** means any Principal, Associate Principal or registered person in a built environment profession appointed generally or specifically by the management of the firm Bigen Africa Services (Pty) Ltd to fulfil the functions of the Principal Agent in terms of the Conditions of Contract."

- Replace the wording under "**CONSTRUCTION PERIOD**" with the following:

"The period commencing on the date of possession of the site by the contractor and ending on the date of practical completion"

#### **Clause 2: Law, Regulations and Notice**

- Add the following as a New Clause to the Contract: Clause 2.5

##### "Written Agreement In Terms Of Section 37 (2) Of The Occupational Health And Safety Act

The Contractor shall comply with the Occupational Health and Safety Specification prepared by the **Employer** in terms of the Construction Regulations, 2014 promulgated in terms of Section 43 of the Occupational Health and Safety Act (Act No. 85 of 1993).

Without limiting the Contractor's obligations in terms of the Contract, the **Contractor** shall before commencement of the Works or any part thereof, be in the possession of an approved Health and Safety Plan.

The **Contractor** shall submit an approved Health and Safety Plan to the Engineer within the time period stated in 12.2.22.

##### Contractor's Liability as mandatory

Notwithstanding any actions which the Employer may take, the Contractor accepts sole liability for due compliance with the relevant duties, obligations, prohibitions, arrangements and procedures imposed by the Occupational Health and Safety Act, 1993 (Act 85 of 1993), and all its regulations, including the Construction Regulations, 2014, for which he is liable as mandatory.

##### Contractor to notify Employer

The Employer retains an interest in all inquiries conducted under this Contract in terms of Section 31 and/or 32 of the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and its Regulations following any incident involving the Contractor and/or Sub-Contractor and/or their employees. The Contractor shall notify the Employer in writing of all investigations, complaints or criminal charges which may arise pursuant to work performed under this Contract in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and Regulations.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Contractor's Designer

The Contractor and his designer shall accept full responsibility and liability to comply with the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and the Construction Regulations, 2014 for the design of the Temporary Works and those part of the Permanent Works which the Contractor is responsible to design in terms of the Contract.

The Contractor shall sign the Section 37 (2) Agreement in terms of the OHSACT attached hereto as **Part C1.2.2 Annexure C**. Included in Section C3.5 (Management, **Annexure C: Health and Safety Plan**), detailed pricing shall to be filled in on the Health and Safety Plan document and the total sum carried forward to this item."

- Add the following as a New Clause to the Contract: Clause 2.6

"The contractor shall comply with all environmental aspects as prescribed in the Environmental Management Plan. Included in Section C3.5 (**Management Annexure D: Environmental Management Plan**), detailed pricing shall to be filled in on the Environmental Management Plan document and the total sum carried forward to this item."

- Add the following as a New Clause to the Contract: Clause 2.7

"The Contractor is to comply with all NHBRC regulations."

**Clause 7: Design**

- Add the following as a New Clause to the Contract: Clause 7.4

"Where the contractor elects to design alternative methods of construction, he shall, notwithstanding approval by the **Principal Agent**, be liable for any error or deficiency in any drawing or document supplied by him for that part of the Works, and for any loss or damage arising out of such error or deficiency.

The **Contractor** shall provide the following to the **Principal Agent** for retention by the **Employer** or his assignee in respect of all works designed by the **Contractor**:

7.4.1 A Certificate of Stability of the Works signed by a registered Professional Engineer confirming that all such works have been designed in accordance with the appropriate codes of practice.

7.4.2 Proof of registration and of adequate and current professional indemnity insurance cover held by the designer(s).

7.4.3 Design calculations should the **Principal Agent** request a copy thereof.

7.4.4 Engineering drawings and workshop details (both signed by the relevant professional engineer), in order to allow the **Principal Agent** to compare the design with the specified requirements and to record any comments he may have with respect thereto.

7.4.5 "As-Built" drawings in DXF electronic format after completion of the Works."

**Clause 10: Insurances**

- Replace clause 10.2 with the following:

"Where practical completion in sections is required [20.0], or where the works is for alterations and additions, the **Contractor** shall effect and keep in force contract works insurance [10.1.1], supplementary insurance [10.1.2], public liability insurance [10.1.3] and where applicable, removal of lateral support insurance [10.1.4] and other insurances [10.1.5] in the joint names of the parties until the date of final completion"

- Replace clause 10.10 with the following:

"The **Contractor** shall effect and maintain Plant and Equipment insurance, Motor Vehicle Liability insurance and the insurance required in terms of the provisions of the Compensation for Occupational Injuries and Diseases (COID) Act No. 130 of 1993 (as amended)."

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**Clause 11: Securities**

- Amend 11.1 to read as follows:

"The **Contractor** shall not have the right to choose the security. The option which is presented in the contract data shall govern.

The **guarantee for construction** shall be provided to the **Employer** within twenty-one (21) calendar days of acceptance of the contractor's Form of Offer."

11.1.1 and 11.1.2 shall remain as is.

- Add the following to the end of 11.2.2:

"The guaranteed amount shall be equal in value to the maximum cash advance payment for materials and goods as per 25.4."

- Amend 11.10 to read as follows:

"There shall be no lien or right of retention held by any **Contractor** in respect of the works executed on site."

- Add the following as Clause 14.9:

"The guarantee for construction shall be provided by a Bank or Insurance Company approved by the **Employer**. Guarantees for construction submitted must be issued by either an insurance company duly registered in terms of the Short-Term Insurance Act, 1998 (Act 35 of 1998) or by a bank duly registered in terms of the Banks Act, 1990 (Act 94 of 1990) on the pro-forma referred to above. No alterations or amendments of the wording of the pro-forma will be accepted (Included under C1.2 CONTRACT DATA Annexure A: Guarantee for Construction)"

**Clause 12: Obligations of the Parties**

- Amend 12.1.5 to read as follows:

"Give possession of the site to the **Contractor** within ten (10) working days of the contractor complying with the terms of 12.2.22"

- Amend 12.2.2 to read as follows:

"Not applicable"

- Add the following as 12.2.22:

"Within thirty (30) working days of the date of the agreement, submit to the **principal agent** the following:

1. Health and Safety Plan (Refer to Clause 2)
2. Initial programme (Refer to Clause 12.2.6)
3. A detailed cashflow forecast (Refer to Clause 12.2.12)
4. Insurance (Refer to Clause 10 )
5. Building permit (with the assistance of the **Employer**) in accordance to Occupational Health and Safety Act (Refer to Clause 2)."

**Clause 19: Practical Completion**

- 19.5: Delete the words

"...subject to the contractor's lien or right of continuing possession of the works where this has not been waived"

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**Clause 23: Revision of the Date for Practical Completion**

- Add the following to Clause 23.1.1:

“Extension of time due to adverse rainfall conditions

Extension of time for Practical Completion of the Contract in the event of abnormal rainfall shall only be allowed in accordance with the following formula. No additional extension of Time for Practical Completion caused by adverse effect of weather conditions will be allowed, irrespective of the cause thereof or the effect it may have on the execution of the Works:

$$V = (N_w - N_n) + (R_w - R_n)/20$$

Where:

V	=	Extension of time in calendar days for the calendar month under consideration
N <sub>w</sub>	=	Actual number of days during the calendar month under consideration on which a rainfall of 10mm and more is recorded
R <sub>w</sub>	=	Actual total rainfall in mm recorded during the calendar month under consideration
N <sub>n</sub>	=	Average number of days, derived from rainfall records, on which a rainfall of 10mm and more was recorded during the relevant calendar month as per the data tabulated hereinafter
R <sub>n</sub>	=	Average total rainfall in mm for the relevant calendar month, derived from rainfall records, as tabulated hereinafter

Where the extension of time due to abnormal rainfall has to be calculated for portion of a calendar month, pro rata values shall be used. Should V be negative for any particular month, and should its absolute value exceed the corresponding value of N<sub>n</sub>, then V shall be taken as being equal to minus N<sub>n</sub>. The total extension of time to be granted shall be the algebraic sum of all the monthly extensions, provided that if this total is negative then the time for completion shall not be reduced due to subnormal rainfall.

Rainfall records for the period of construction shall be taken on Site. The **Contractor** shall provide and install all the necessary equipment for accurately measuring the rainfall. The **Contractor** shall also provide, erect and maintain a security fence plus gate, padlock and keys at each measuring station, all at his own cost. The **Principal Agent** or his Representative shall take and record the daily rainfall readings. The **Contractor** shall be permitted to attend these readings, in the company of the **Principal Agent** or their Representative. Access to the measuring gauge(s) shall at all times be under the **Principal Agent**'s control.

The rainfall records applicable to this Contract are those recorded at Weather Station KIMBERLY 0290468 4. The following values of N<sub>n</sub> and R<sub>n</sub> shall apply:”

Month	R <sub>n</sub> (mm)	N <sub>n</sub> (days)
January	57	9.8
February	76	9.8
March	65	10.2
April	49	7.6
May	16	3.3
June	7	2.5
July	7	1.5
August	7	1.8
September	12	3.1
October	30	6.1
November	42	7.7
December	46	7.9
Total	414	71

- Add the following new clause 23.9

“Revision to the date for Practical Completion shall only be considered when work on the critical path of the agreed programme for the Works is delayed.”

- Add the following new clause 23.10

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



"The removal and replacement of materials and/or workmanship which do not conform to specification or drawings shall not constitute grounds for an extension of the construction period nor for an adjustment to the contract value (clause 23.3)"

**Clause 25: Payment**

- Delete the wording of clause 25.2 and replace with  
"Refer to clause 25.10"
  
- Delete the following wording in Clause 25.3.2  
"A fair estimate..." and replace with "Eighty percent (80%)..."
  
- Replace Clause 25.3.4 with the following:  
  
"Price adjustment for inflation in accordance with the JBCC Contract Price Adjustment Provisions CPAP Indices Application Manual as calculated and published by Stats SA and distributed through JBCC (May 2005 Edition).  
  
The monthly indices shall be obtained from Statistics South Africa in the Statistical Release, P0151.1, Construction Materials Price Indices, table 1. The applicable work group is "180 Lump sum domestic building".  
  
Base month will be one month prior to closing of the tender."
  
- Add the following to Clause 25.4.4:  
  
"covered by an advance payment guarantee or such other security as may be accepted by the employer"
  
- Amend 25.7.5 to read as follows:  
  
"Not applicable"
  
- Replace Clause 25.10 with the following:  
  
Payment to the Contractor  
  
Notwithstanding anything else contained in this contract, payment of monthly certificates will be done as follows:  
  
"25.10.1 The Contractor will prepare and submit payment certificates by the 20th of the month to the **Principal Agent**.  
25.10.2 The **Principal Agent/Agents** will check and issue the certificate to the Employer by the 25th of the month.  
25.10.3 The **Employer** shall pay to the contractor the amount certified in an interim payment certificate within thirty (30) calendar days of the date for issue of the payment certificate.  
25.10.4 Preliminaries shall be paid as method indicated in the D3 below (D3 - contract data).  
  
Compensatory interest will not be paid by the Employer."
  
- Add the following to the end of clause 25.12.1:  
  
"(Defined as 5% retention retained)"
  
- 25.14: Change the notice period  
  
from "five (5) working days" to "ten (10) working days" in order to line up with the notice period in 28.1.
  
- Amend 25.14.2 to read as follows:  
  
"Not applicable"

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

- Add the following new clause 25.18:

"The **Employer** shall pay the contractor the amount certified in the final payment certificate within thirty (30) calendar days of the date of issue of the final payment certificate."

**Clause 27: Recovery of Expense and/or Loss**

- Amend 27.1.5 to read as follows:

"Not applicable"

**Clause 29.0 Termination**

Add the following after 29.1.3:

"or where ...

29.1.4: The contractor's estate has been sequestrated, liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa

29.1.5: The contractor has engaged in corrupt or fraudulent practices in competing for or in executing the contract"

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## C TENDER CLOSING

Tender closing date	Refer to T1.2 (Tender Data)	Time	Refer to T1.2 (Tender Data)
Tender submission address	Refer to T1.2 (Tender Data)		
Tender may be submitted by e-mail	yes/no?	Refer to T1.2 (Tender Data)	E-mail
Refer to T1.2 (Tender Data)			

## D TENDERER'S SELECTIONS

All information provided in this section requires consultation with the parties to the agreement. The Principal Agent however has the right to preselect certain alternatives available to the contractor and the items selected by the principal agent shall be deemed applicable.

### D 1.0 Securities [1 1.0]

Guarantee for construction: Select Option A or B

**B**

Option A	Guarantee for construction (variable) by contractor [11.1.1]
----------	--

Option B	Guarantee for construction (fixed) by contractor [11.1.2]
----------	---

Guarantee for payment by employer [11.5.1; 11.10]	Amount	Not applicable
---	--------	----------------

Advance payment, subject to a guarantee for advance payment [11.2.2; 11.3]	Amount	Applicable to the maximum value of material on site.
--	--------	--

### D 2.0 Contractor's annual holiday periods during the construction period

Year 1 contractor's annual holiday period	start date	16 Dec 2020	end date	3 Jan 2021
Year 2 contractor's annual holiday period	start date	16 Dec 2020	end date	4 Jan 2022
Year 3 contractor's annual holiday period	start date		end date	

### D 3.0 Payment of preliminaries [25.0]

Select Option A or B **A** Where the contractor does not select an option, Option A shall apply

Where the total amount of **preliminaries** is not identified (in a lump sum contract) it shall be taken as 7.5% (seven and a half per cent) of the **contract sum**, excluding contingency sums and any provision for contract price adjustment (cost fluctuation)

Option A	Assessed by the <b>principal agent</b> , an amount prorated to the value of the <b>works</b> executed in the same ratio as the amount of the <b>preliminaries</b> to the contract sum which contract sum shall exclude the amount of <b>preliminaries</b> . Contingency sum(s) and any provision for contract price adjustment (cost fluctuations) shall be excluded for the calculation of the aforesaid ratio
----------	--

Option B	An amount agreed by the <b>principal agent</b> and the <b>contractor</b> in terms of the <b>bills of quantities</b> or the <b>priced document</b> to identify an initial establishment charge, a time based charge and a final disestablishment charge. Payment of the time-based charge shall be adjusted from time to time as may be necessary to take into account the progress of the <b>works</b>
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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**D 4.0 Adjustment of preliminaries [26.9.4]**

Select Option A or B ☐ **A** Where the **contractor** does not select an option, Option A shall apply

The amount of **preliminaries** shall be adjusted to take account of the effect of changes in time and/or value on **preliminaries**. Such adjustment shall be based on the particulars provided by the **contractor** for this purpose in terms of Options A or B, shall preclude any further adjustment of the amount of **preliminaries** and shall apply notwithstanding the actual employment of resources by the **contractor** in the execution of the **works**

For the adjustment of **preliminaries** both the **contract sum** and the **contract value** shall exclude the amount of **preliminaries**, contingency sum(s) and any provision for contract price adjustment (cost fluctuations)

Where the total amount of **preliminaries** is not identified (in a lump sum contract) it shall be taken as 7.5% (seven and a half per cent) of the **contract sum**, excluding contingency sums, and any provision for contract price adjustment (cost fluctuation)

Option A	<p>The <b>preliminaries</b> shall be adjusted in accordance with an allocation of <b>preliminaries</b> amounts to be provided by the <b>contractor</b> within fifteen (15) <b>working days</b> of the date of acceptance of the tender as follows:</p> <ul style="list-style-type: none"> <li>- An amount which shall not be varied;</li> <li>- An amount varied in proportion to the <b>contract value</b> as compared to the <b>contract sum</b>;</li> <li>- An amount varied in proportion to the number of <b>calendar days</b> extension to the date of <b>practical completion</b> to which the <b>contractor</b> is entitled with an adjustment of the <b>contract value</b> as compared to the number of <b>calendar days</b> in the initial <b>construction period</b></li> </ul> <p>Where the above-mentioned information is not provided the following allocation of <b>preliminaries</b> amounts shall apply:</p> <ul style="list-style-type: none"> <li>- Ten per cent (10%) shall not be varied</li> <li>- Fifteen per cent (15%) shall be varied in proportion to the <b>contract value</b> as compared to the <b>contract sum</b></li> <li>- Seventy-five per cent (75%) shall be varied in proportion to the number of <b>calendar days</b> extension to the date of <b>practical completion</b> to which the <b>contractor</b> is entitled with an adjustment of the <b>contract value</b> as compared to the number of <b>calendar days</b> in the initial <b>construction period</b></li> </ul> <p>Where completion in <b>sections</b> is required the <b>contractor</b> shall provide an apportionment of <b>preliminaries</b> per <b>section</b>. Should the <b>contractor</b> fail to provide the apportionment of <b>preliminaries</b> per <b>section</b> the categorised amounts shall be prorated to the cost of each <b>section</b> <u>within the contract sum as determined by the principal agent</u></p>
Option B	<p>The <b>preliminaries</b> shall be adjusted in accordance with a detailed breakdown of <b>preliminaries</b> amounts for the <b>works</b> or of a <b>section</b> to be provided by the <b>contractor</b> within fifteen (15) <b>working days</b> of possession of the <b>site</b>. Such breakdown shall inter alia include administrative and supervisory staff charges and charges for the use of <b>construction equipment</b>, all in terms of the <b>programme</b></p> <p>The adjustment of <b>preliminaries</b> shall be based on the number of <b>calendar days</b> extension to the date of <b>practical completion</b> to which the <b>contractor</b> is entitled with an adjustment of the <b>contract value</b> as compared to the number of <b>calendar days</b> in the initial <b>construction period</b> taking into account the resources planned for the period of construction during which the delay occurred (not for the period added to the initial or extended date for <b>practical completion</b>)</p> <p>Where the <b>contractor</b> does not provide the detailed breakdown of <b>preliminaries</b> within the period stated, Option A shall apply</p>

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**ADDENDUM NO.2**

**CONTRACT DATA**

**This document shall be updated with data that doesn't fit within the online digital copy.**

END OF SECTION

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**


**Remedial work to 491 RDP Houses**

**VOLUME 1  
PORTION 2: CONTRACT**


**Section C1.2  
Contract Data**

**Annexure A: Performance Guarantee**


---




Contractor




Witness 1




Witness 2



Employer



Witness 1



Witness 2

## Guarantee for Construction

For use with the JBCC® Principal Building Agreement

edition / date

### GUARANTOR DETAILS

Guarantor:			
Physical address:			
Guarantor's signatory 1:		Capacity	
Guarantor's signatory 2:		Capacity	
Employer:	The Northern Cape Department of Co-operative Governance, Human Settlements and Traditional Affairs ("COGHSTA")		
Contractor:			
Principal Agent:	Bigen Africa Services (Pty) Ltd		
Works:	Refer to PRINCIPAL BUILDING AGREEMENT Contract Data, clause A 1.0 Works		
Site:	Refer to PRINCIPAL BUILDING AGREEMENT Contract Data, clause A 2.0 Site		
Name of Signatory:			
Contract Sum:	Accepted amount inclusive of tax	Currency	Rand
...amount in words:			
Guaranteed Sum:	The maximum aggregate amount	Currency	Rand
...amount in words:			
Guarantee for Construction:	(Insert variable or fixed)	FIXED	Expiry date
			On the issue of the practical completion certificate

### AGREEMENT DETAILS

Sections:	Total number / not applicable	491	Last section	491
Principal Agent issues:	'JBCC® format Interim Payment Certificates, the Final Payment Certificate, the Certificate of Practical Completion and the Certificate of Final Completion			

### 1.0 GUARANTEE for CONSTRUCTION (Variable)

- 1.1 Where a Guarantee for Construction (Variable) in terms of the Agreement has been selected this clause 1.0 and 3.0 to 13.0 shall apply. The Guarantor's liability shall be limited to the diminishing amounts of the Guaranteed Sum as follows:-

#### GUARANTOR'S LIABILITY

#### PERIOD OF LIABILITY

- 1.1.1 Maximum Guaranteed Sum (not exceeding 10.0% of the contract sum) in the amount of:

N/A

Amount in words:

From and including the date of issue of this Guarantee for Construction and up to and including the date of issue of the interim payment certificate certifying in excess of 50% of the contract sum

- 1.1.2 Reducing to the Guaranteed Sum (not exceeding 6.0% of the contract sum) in the amount of:

N/A

From and including the day after the date of the aforesaid interim payment certificate and up to and including the date of issue of the

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

only Certificate of Practical Completion or last Certificate of Practical Completion where there are sections

Amount in words:

- 1.1.3 Reducing to the Guaranteed Sum (not exceeding 4.0% of the contract sum) in the amount of:

N/A

From and including the day after the date of the applicable Certificate of Practical Completion and up to and including the date of issue of the only Certificate of Final Completion or the last Certificate of Final Completion where there are sections

Amount in words:

- 1.1.4 Reducing to the Guaranteed Sum (not exceeding 2.0% of the contract sum) in the amount of:

N/A

From and including the day after the date of the applicable Certificate of Final Completion and up to and including the date of issue of the Final Payment Certificate where payment is due to the Contractor, whereafter this Guarantee for Construction shall expire. Where the Final Payment Certificate reflects payment due to the Employer this Guarantee for Construction shall expire upon payment of the full amount certified

Amount in words:

- 1.2 The Guarantor's liability limits set out in 1.1.1 to 1.1.4 shall apply in respect of any claim received by the Guarantor during the Security

## 2.0 GUARANTEE for CONSTRUCTION (Fixed)

- 2.1 Where a Guarantee for Construction (Fixed) in terms of the Agreement has been selected this clause 2.0 and 3.0 to 13.0 shall apply. The Guarantor's liability shall be limited to the amount of the Guaranteed Sum as follows:-

### GUARANTOR'S LIABILITY

Maximum Guaranteed Sum (not exceeding 5.0% of the contract sum) in the amount of:

### PERIOD OF LIABILITY

From and including the date of issue of this Guarantee for Construction and up to and including the date of the only Certificate of Practical Completion or the last Certificate of Practical Completion where there are sections, whereafter this Guarantee for Construction shall expire

Amount in words:

- 3.0 The Guarantor acknowledges that:-

- 3.1 Any reference in this Guarantee for Construction to the Agreement is made for the purpose of convenience and shall not be construed as any intention to create an accessory obligation or any intention to create a suretyship
- 3.2 Its obligation under this Guarantee for Construction is restricted to the payment of money
- 3.3 Reference to a Recovery Statement or an Interim or Final Payment Certificate, or a Certificate(s) of Practical or Final Completion shall mean such certificate issued by the Principal Agent
- 4.0 Subject to the Guarantor's maximum liability referred to in clauses 1.0 or 2.0, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:-

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



- 4.1 A copy of a first written demand notice issued by the Employer to the Contractor stating that payment of a sum certified by the Principal Agent in an Interim or Final Payment Certificate has not been made in terms of the Agreement and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2
- 4.2 A written demand notice issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) calendar days has elapsed since the issue of the first written demand notice in terms of 4.1 and that the sum certified has not been paid to date. The Employer herewith calls up this Guarantee for Construction and demands payment of the sum certified from the Guarantor
- 4.3 A copy of the applicable payment certificate which entitles the Employer to receive payment in terms of the Agreement of the sum certified in 4.0
- 5.0 Subject to the Guarantor's maximum liability referred to in 1.0 or 2.0 , the Guarantor undertakes to pay the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand notice from the Employer to the Guarantor at the Guarantor's physical address calling up this Guarantee for Construction stating that:-
- 5.1 The Agreement has been terminated due to the Contractor's default and that the Guarantee for Construction is called up in terms of 5.0. The demand notice shall enclose a copy of the notice of termination; or
- 5.2 A provisional sequestration or liquidation court order has been granted against the Contractor and that the Guarantee for Construction is called up in terms of 5.0. The demand notice shall enclose a copy of the court order
- 6.0 The aggregate amount of payment to be made by the Guarantor in terms of 4.0 and 5.0 shall not exceed the Guarantor's maximum liability in terms of 1.0 or 2.0
- 7.0 Where the Guarantor is a registered insurer and has made payment in terms of 5.0, the Employer shall within one hundred and eighty (180) calendar days of receipt of payment submit an expense account to the Guarantor showing how all monies received in terms of the Guarantee for Construction have been expended, or will be expended, and shall refund to the Guarantor any surplus amount. All monies refunded to the Guarantor in terms of this Guarantee for Construction shall bear interest at the prime overdraft rate of the Employer's bank compounded monthly and calculated from the date of payment by the Guarantor to the Employer until the date of refund
- 8.0 Payment by the Guarantor in terms of 4.0 or 5.0 shall be made within seven (7) calendar days upon receipt of the first written demand notice to the Guarantor
- 9.0 The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer deems fit and the Guarantor shall not have the right to claim his release from this Guarantee for Construction on account of any conduct alleged to be prejudicial to the Guarantor
- 10.0 The Guarantor chooses the physical address stated above for all transactions in relation to this security
- 11.0 This Guarantee for Construction is neither negotiable nor transferable and shall expire in terms of either 1.1.4 or 2.1, or on payment in full of the Guaranteed Sum or on the Guarantee expiry date, whichever is the earlier, where after no claims will be considered by the Guarantor. The original Guarantee for Construction form shall be returned to the Guarantor after it has expired
- 12.0 This Guarantee for Construction, with the required demand notices in terms of 4.0 or 5.0, shall be regarded as a liquid document for the purpose of obtaining a court order
- 13.0 Where this Guarantee for Construction is issued in the Republic of South Africa the Guarantor hereby consents to the jurisdiction of a court in the area where the project is located

Signed at

Date

Guarantor's Signatory 1

\_\_\_\_\_

Guarantor's Signatory 2

\_\_\_\_\_

Witness

\_\_\_\_\_

Witness

\_\_\_\_\_

Guarantor's seal or stamp

JBCC® Guarantee for Construction PBA 6.2 © Aug 2019

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**VOLUME 1  
PORTION 2: CONTRACT**

**Section C1.2  
Contract Data**

**Annexure B: Waiver of Contractor's Lien**

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



®

# Waiver of the Contractor's Lien

for use with the...

Principal Building Agreement  
Minor Works Agreement

Edition 6.2 used

N/A

Contractor

Employer

Works

Site

## AGREEMENT

The **contractor** waives in favour of the **employer** any lien or right of retention that is or may be held in respect of the **works** to be executed on the **site**

This done and signed at

Date

Name of Signatory

Capacity

For and on behalf of the **contractor** who by signature  
hereto warrants such authorisation

Signature of Witness

Contractor

Street Address

Postal Address

E-mail

Fax

Code

Code

Mobile

Telephone

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**VOLUME 1  
PORTION 2: CONTRACT**

**Section C1.2  
Contract Data**

**Annexure C: Written agreement in terms of the section  
37(2) Agreement in terms of the OHSACT**

---

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**WRITTEN AGREEMENT IN TERMS OF SECTION 37 (2) OF THE OCCUPATIONAL HEALTH  
AND SAFETY ACT  
(Act Number 85 of 1993)**

---

This Agreement is made on this \_\_\_\_ day of \_\_\_\_\_ 20\_\_ (Effective Date)  
between:

**Department of Cooperative Governance, Human Settlement & Traditional Affairs** a company incorporated under the laws of the Republic of South Africa with company registration number .....N/A..... whose registered address is at JS du Plooy building, 9 Cecil Sussman Road, Kimberley herein represented by **Representative as Acting Capacity** duly authorised thereto (**Employer**).

**AND**

**MANDATARY** a company incorporated under the laws of the Republic of South Africa with company registration number ..... whose registered address is at \_\_\_\_\_ herein represented by **Representative as Acting Capacity** duly authorised thereto (**Mandatar**).

**Workmen's Compensation Number:** \_\_\_\_\_

(hereinafter collectively referred to as **Parties** and individually as **Party**)

For purposes of **Lerato Park Integrated Housing Development for Remedial work to 491 RDP Houses** (Work Package Number: 2334-50-02/03) (**Project**) at **Kimberley**.

**PREAMBLE**

**WHEREAS** the Employer appointed the Mandatary as the principal contractor on the project by way of a contract dated \_\_\_\_\_ (**Contract**).

**AND WHEREAS** the purpose of the Agreement is to regulate the legal responsibilities and liabilities arising from the work for which the Mandatary was engaged by the Employer (through the Contract) and all related activities (**Contract Work**) specifically regarding occupational safety, health and environmental management.

**AND WHEREAS** this Agreement does not purport to regulate all the contractual relations between the Parties, and does not replace any existing agreement(s) between the Parties relating to any other aspect that does not relate to Occupational Safety, Health and Environmental (**SHE**) risks, responsibilities and liabilities.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**WRITTEN AGREEMENT IN TERMS OF SECTION 37 (2) OF THE OCCUPATIONAL HEALTH  
AND SAFETY ACT  
(Act Number 85 of 1993)**

---

**AND WHEREAS** it is the intention of the Parties that, subject to the express provisions of this Agreement, the Mandatary shall be the main risk carrier for SHE regarding the Contract Work.

**AND WHEREAS** this Agreement shall be deemed to be for the full extent of site presence and these rules will remain in force until such time as the Employer revokes the document in full or in part.

**AND WHEREAS** this declaration is binding on the Mandatary (**being the principal contractor**), as well as the fact, that in terms of this document any sub-contractor who may be utilised by the Mandatary from a liability perspective remains with the Mandatary. The onus is on the Mandatary to advise any sub-contractor that this document is an agreement under Section 37(2) of the Occupational Health and Safety Act No 85 of 1993 and similarly binds such sub-contractors.

**AND WHEREAS** the Mandatary specifically acknowledges that any reference to the Mandatary and its employees also refer to the Mandatary's sub-contractors and the sub-contractors' employees.

**NOW THEREFORE THE PARTIES AGREE AS FOLLOWS:**

**1. LEGAL COMPLIANCE**

- 1.1. The Mandatary undertakes to comply with all legal requirements for SHE during the execution of the Contract Work, including both legislative and Common Law provisions.
- 1.2. The legal requirements mentioned above include, without limitation, the provisions of the following Acts and regulations as amended from time to time and shall always refer to the latest act, regulation or codes of practice:
  - 1.2.1. Occupational Health and Safety Act, 85 of 1993 and its regulations (**OHSA**);
  - 1.2.2. The Compensation for Occupational Injuries and Diseases Act, 130 of 1993;
  - 1.2.3. The latest National Building Regulations and Building Standards Act, its regulations and related Codes of Practice as amended from time to time;
  - 1.2.4. The National Environmental Management Act, 107 of 1998 ;
  - 1.2.5. The Environment Conservation Act, 73 of 1989;
  - 1.2.6. The National Water Act, 36 of 1998;
  - 1.2.7. All relevant labour legislation;
  - 1.2.8. Any other applicable National Acts of Parliament, Provincial legislation and local bylaws and regulations, as well as Common Law provisions.

**2. MANDATORY AN EMPLOYER**

The Mandatary shall be deemed to be an employer in its own right whilst performing the Contract Work on behalf of the Employer. In terms of Section 16(1) of the OHSA, and

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**WRITTEN AGREEMENT IN TERMS OF SECTION 37 (2) OF THE OCCUPATIONAL HEALTH  
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the Mandatary shall accordingly ensure that it and/or its nominated chief executive officer comply with the requirements of the OHSA.

**3. REPORTING**

The Mandatary and/or its designated person appointed in terms of Section 16(2) of the OHSA, shall report to the Employer's representative and/or a representative designated by the Employer prior to commencing Contract Work at the site or premises (**Site**).

**4. ACCESS TO THE OHSA**

The Mandatary shall ensure that it has an updated copy of the OHSA and the relevant legislation on site at all times, and that this is accessible to its appointed responsible persons and employees.

**5. WARRANTY OF COMPLIANCE**

Without derogating from any legal requirement or any other aspect of the Agreement, the Mandatary undertakes to ensure that it and its employees will at all times comply with the following conditions:

- 5.1. In terms of this Agreement the Mandatary warrants that it agrees to the arrangements and procedures, as prescribed by the Employer, and as provided for in terms of Section 37(2) of the OHSA, for the purposes of compliance with the OHSA;
- 5.2. The Mandatary acknowledges that this Agreement constitutes an agreement in terms of Section 37(2) of the OHSA, whereby all responsibility for SHE matters relating to the Contract Work, the Mandatary and its employees are to perform on the Site in terms of the engagement shall be the obligation of the Mandatary;
- 5.3. The Mandatary further warrants that it and/or its employees undertake to maintain such compliance with the OHSA. Without derogating from the generality of the above, or from the provisions of the Agreement, the Mandatary shall ensure that the clauses as hereunder described are at all times adhered to by itself, its employees, sub-contractors and the sub-contractor's employees;
- 5.4. The Mandatary hereby warrants and undertakes to ensure that the health and safety of any person on the Site will not be endangered by the conduct and/or activities of itself and its employees in execution of the Contract Work whilst they are on the Site; and
- 5.5. All work performed on Site must be performed under the close supervision of people who are trained to understand all the SHE hazards associated with any Contract Work that the Mandatary performs on Site.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



**WRITTEN AGREEMENT IN TERMS OF SECTION 37 (2) OF THE OCCUPATIONAL HEALTH  
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**6. APPOINTMENTS AND TRAINING**

- 6.1. The Mandatary shall appoint competent persons as per Section 16(2) of the OHSA. Any such appointed person shall be trained on any SHE matter, and the OHSA provisions pertinent to the Contract.
- 6.2. Copies of any appointments or delegation of authority made by the Mandatary in terms of Section 16(2) of the OHSA shall immediately be provided to the Employer.
- 6.3. The Mandatary shall further ensure that all its employees are trained on the health and safety aspects relating to Contract Work and that they understand the hazards associated with such work being carried out on the Site that forms part of the Contract Work.
- 6.4. Without derogating from the foregoing, the Mandatary shall, in particular, ensure that all its users or operators of any materials, machinery or equipment are properly trained in the use of such materials, machinery or equipment.
- 6.5. Notwithstanding the provisions of the above, the Mandatary shall ensure that its appointed responsible persons and employees are at all times familiar with the provisions of the OHSA, and that they comply with the provisions.
- 6.6. The Mandatary may be required to nominate its employee(s) to successfully undergo the Employer's SHE training course, providing the Contract Work requires such.

**7. SUPERVISION, DISCIPLINE AND REPORTING**

- 7.1. The Mandatary shall ensure that all Contract Work performed is done under strict supervision, and that no unsafe or unhealthy work practices are permitted. Discipline regarding health and safety matters shall be strictly enforced against any of its employees regarding non-compliance by such employee with any SHE matters.
- 7.2. The Mandatary shall further ensure that its employees report to it all unsafe or unhealthy work situations immediately after they become aware of the same, and that it in turn immediately reports these to the Employer and/or its representative.
- 7.3. The Mandatary shall report to the Employer's representative daily to ensure that any work that he might perform will not compromise the safety of the Employer's process or any persons on site.

**8. CO-OPERATION**

- 8.1. The Mandatary and/or its responsible persons and employees shall provide full Cooperation and information if and when the Employer or its representative inquiries into SHE issues concerning the Mandatary. It is hereby recorded that the Employer and its representative shall at all times be entitled to make such inquiry.
- 8.2. Without derogating from the generality of the above, the Mandatary and its responsible persons shall make available to the Employer and its representative, on request, any

Contractor

Witness 1

Witness 2

Employer

Witness 1

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**WRITTEN AGREEMENT IN TERMS OF SECTION 37 (2) OF THE OCCUPATIONAL HEALTH  
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and all checklists and inspection registers required to be kept by it in respect of any of its materials, machinery or equipment.

**9. WORK PROCEDURES**

- 9.1. The Mandatary shall utilise its own procedures, guidelines and other documentation as required for the purposes of ensuring a healthy and safe Working environment.
- 9.2. The Mandatary shall then ensure that its responsible persons and employees are familiar with, and utilise the documents.
- 9.3. The Mandatary shall implement and enforce safe work practices as required by the OHSA, and he shall ensure that its responsible persons and employees are made conversant with the contents of these practices and that they adhere to such procedures.
- 9.4. The Mandatary shall ensure that its employees will obtaining a permit(s) before performing Contract Work requiring a permit(s) and that its employees will be trained and found competent prior to performing Contract Work.

**10. HEALTH AND SAFETY MEETINGS**

- 10.1. If required in terms of the OHSA, the Mandatary shall establish its own health and safety committee(s), and ensure that its employees, being the committee members, hold health and safety meetings as often as may be required, and at least once every (3) three months.
- 10.2. The Employer may elect to permit the Mandatary's health and safety representatives to attend The Employer's health and safety committee meetings.

**11. INDEMNITIES**

- 11.1. The Mandatary indemnifies and holds the Employer, the Employer's representative, and/or the Employer's Agent/Engineer and any of the Employer, the Employer's representative and/or the Employer's Agent/Engineer's subsidiary companies as well as their associates, directors and employees from and against any and all losses, damages, penalties, costs, expense, attorneys' fees, loss of limb, loss of life, injuries, costs and expenses which may occur due to injury, death, permanent or temporary incapacity or loss of property, all actions, proceedings, claims, and liability of any nature whatsoever arising out of the Mandatary's failure to perform its responsibilities in accordance with the terms of this Agreement and the Mandatary's actions or failure to act when action is required, and more specifically for the following:
  - 11.1.1. A non-compliance by the Mandatary with any provision of the legislation as referred to in Clause 1 above, common law, Act of Parliament, regulation and bylaw of any local authority arising out of or due to the execution of the Contract Work or occupation of the site by the Mandatary.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**WRITTEN AGREEMENT IN TERMS OF SECTION 37 (2) OF THE OCCUPATIONAL HEALTH  
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- 11.1.2. Claims from other parties, whether against the Employer, the Employer's representative and/or the Employer's Agent/Engineer or the Mandatary, consequent upon death, bodily injury or illness of any person or damage to any property arising out of or due to the execution of the Contract Work or occupation of the site by the Mandatary.
- 11.1.3. Physical loss or damage to any plant, equipment or other property belonging to the Mandatary or its subordinates or agents.
- 11.1.4. Notwithstanding anything else contained in this Agreement, any indemnity provided by the Contractor to the Employer shall extend to the Principal Agent and the Agents and any of their subsidiary companies as well as its associates, directors and employees. The Mandatary herewith indemnifies and holds harmless the Employer and the Principal Agent from any loss or damages, including but not limited to monetary loss, costs and expenses incurred by the loss or damage, all actions, proceedings, liability, claims, damages, loss of limb, loss of life, injuries, costs and expenses which may occur due to any actions or omissions by the Mandatary its sub-contractors, service providers, employees or representative or caused in any way whatsoever by the Mandatary its sub-contractors, service providers, employees or representatives.

**12. INSURANCE AND REGRESS**

- 12.1. The Mandatary shall ensure that it has a valid registration with the Compensation Commissioner, as required in terms of the Compensation for Occupational Injuries and Diseases Act 130 of 1993, and that all payments owing to the Commissioner are discharged. The Mandatary shall further ensure that the cover shall remain in force during the duration of the Contract Work
- 12.2. In order to verify the cover mentioned above the Employer shall be entitled to request at any time of the Mandatary to furnish the Employer with written proof of registration and good standing with the Compensation Fund, which proof shall be delivered within 14 (fourteen) days of such request.
- 12.3. Notwithstanding Clause 12.2, the Mandatary shall deliver to the Employer a certificate of good standing with the Compensation Fund, or similar proof acceptable by the Employer, annually should the contract duration warrant this.
- 12.4. The Mandatary warrants that it is in possession of the following insurance cover which shall remain in force during the duration of the Contract Work:
- 12.4.1. Public liability insurance cover;
- 12.4.2. Insurance covering its liabilities to any of its and/or its sub-contractors' employees;
- 12.4.3. Insurance covering any liabilities in respect of Environmental pollution, damage or other loss relating to inadequate Environmental management;
- 12.4.4. Any other insurance cover that will adequately make provision for any possible losses and/or claims arising from the indemnities provided for in this Agreement.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**WRITTEN AGREEMENT IN TERMS OF SECTION 37 (2) OF THE OCCUPATIONAL HEALTH  
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- 12.5. In order to verify the cover mentioned in Clause 12.4 the Employer shall be entitled to request of the Mandatary to furnish the Employer with written proof of such cover, which proof shall be delivered within 14 (fourteen) days of such request.
- 12.6. Notwithstanding Clause 12.5, the Mandatary shall deliver to the Employer written proof of its public liability insurance, annually should the contract duration warrant this.
- 12.7. Should any finding / order / penalty or similar conclusion be made by a court of law, arbitrator, national, provincial or local authority against the Employer, the Employer's representative and/or the Employer's Agent/Engineer due to something for which the Mandatary is liable in terms of this Agreement, then the Mandatary shall, within 30 (thirty) days after being so requested by the Employer, make good any and all loss suffered by the Employer, the Employer's representative and/or the Employer's Agent/Engineer as a result of such finding, order or penalty.

**13. MEDICAL EXAMINATIONS**

The Mandatary shall ensure that all its employees undergo routine medical examinations, and that they are medically fit for the purposes of Contract Work they are to perform and provide the proof of such to the Employer or its representative on request.

**14. INCIDENT REPORTING AND INVESTIGATION**

All incidents referred to in the OHSA shall be reported by the Mandatary to the Department of Labour and to the Employer immediately upon becoming aware of such incident. The Employer shall further be provided with copies of any written documentation relating to any incident. The Employer retains an interest in the notification of any incident as described, above, as well as in any formal investigation and/or inquiry conducted in terms of Section 32 of the OHSA into such incident.

**15. SUB-CONTRACTORS**

The Mandatary shall notify the Employer of any sub-contractor he may wish to perform work on the Site in terms of the Contract Work. It is hereby recorded that all the terms and provisions contained in this Agreement shall be equally binding upon the sub-contractor prior to the sub-contractor commencing with Sub-Contracted Work. Without derogating from the generality of this clause the Mandatary shall:

- 15.1. ensure that training as discussed above, is provided, prior to the sub-contractor commencing work on the Site.
- 15.2. ensure that work performed by the sub-contractor is done under strict supervision and discipline, as described above.
- 15.3. inform the Employer of any SHE hazard and/or issue which the sub-contractor may have brought to its attention.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**WRITTEN AGREEMENT IN TERMS OF SECTION 37 (2) OF THE OCCUPATIONAL HEALTH  
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- 15.4. inform the Employer of any difficulty encountered with regard to compliance by the sub-contractor to any SHE instruction, procedure and/or legal provision applicable to work the sub-contractor performs in terms of the Contract Work.

**16. SECURITY AND ACCESS**

The Mandatary shall ensure that all employees, materials, machinery or equipment are safeguarded at all times to prevent any injury or losses in terms of crime related activities.

**17. FIRE PRECAUTIONS AND FACILITIES**

The Mandatary shall ensure that an adequate supply of fire protection and first aid facilities is provided for Contract Work to be performed. The Mandatary shall further ensure that all its employees are familiar with fire precautions at the Site, which include fire hazards that may be caused by third parties and emergency exits and that such precautions are adhered to.

**18. HYGIENE AND CLEANLINESS**

The Mandatary shall ensure that the area where Contract Work is performed is at all times maintained to reasonably practicable levels of hygiene and that they maintain the surrounding area of Contract Work site to a reasonably practicable level of cleanliness. In this regard, no loose materials shall be left lying unnecessarily, and Contract Work site shall be cleared of waste material regularly and on completion of Contract Work.

**19. NO NUISANCE**

The Mandatary shall ensure that neither it nor its employees undertake any activity which may cause environmental impairment, nor constitute any form of nuisance to the surroundings. The Mandatary shall ensure that no hindrance, hazard, annoyance or inconvenience is inflicted on any parties. Where such situations are unavoidable, the Mandatary shall give prior notice to the Employer.

**20. INTOXICATION NOT ALLOWED**

No intoxicating substance of any form shall be allowed on site. Any person reasonably suspected of being intoxicated shall not be allowed on the site. Save that any person required to take medication shall notify the relevant Construction supervisor and Assistant Construction Supervisor thereof, as well as the potential side effects of the medication.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**WRITTEN AGREEMENT IN TERMS OF SECTION 37 (2) OF THE OCCUPATIONAL HEALTH  
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(Act Number 85 of 1993)**

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**21. PERSONAL PROTECTIVE EQUIPMENT**

The Mandatary shall ensure that its responsible persons and employees are provided with adequate personal protective equipment (**PPE**) for Contract Work they may perform, and in accordance with the requirements of General Safety Regulation 2(1) of the OHSA. The Mandatary shall further ensure that its responsible persons and employees wear the PPE issued to them at all material times.

**22. PLANT, MACHINERY AND EQUIPMENT**

22.1. The Mandatary shall ensure that all the plant, machinery, equipment and/or vehicles it may wish to utilise while performing work in terms of the Contract Work are at all times of sound order and fit for the purpose for which it is intended, and that it complies with the requirements of Section 10 of the OHSA as well as any other legislation and requirements from the Employer.

22.2. In accordance with the provisions of Section 10(4) of the OHSA, the Mandatary hereby assumes the liability, for taking the necessary steps to ensure that any article or substance that it erects or installs at the Site, or manufactures, sells or supplies for the Employer, complies with all the prescribed requirements and will be safe and without risks to people's health.

**23. NO USAGE OF THE EMPLOYER'S EQUIPMENT**

The Mandatary hereby acknowledges that its employees shall not be permitted to use any materials, machinery or equipment of the Employer unless the prior written consent of the Employer has been obtained, in which case, the Mandatary shall ensure that only those persons authorised to make use of the same, have access thereto.

**24. TRANSPORT**

The Mandatary shall ensure that all vehicles used for the performing work in terms of the Contract Work are in a roadworthy condition, are licensed and insured. All drivers shall have relevant valid driving licences and no vehicle shall carry passengers at the back of LDV's or other vehicles unless it is specifically designed to do so. All drivers shall adhere to the speed limits and road signs at all times.

**25. DURATION OF AGREEMENT**

This agreement shall remain in force for the duration of Contract Work to be performed by the Mandatary and/or whilst any of the Mandatary's workmen are present on the Site applicable in terms of the Contract Work.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**WRITTEN AGREEMENT IN TERMS OF SECTION 37 (2) OF THE OCCUPATIONAL HEALTH  
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(Act Number 85 of 1993)**

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**For: the Employer**

Signed at \_\_\_\_\_ on this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_

**WITNESSES**

1. \_\_\_\_\_

2. \_\_\_\_\_

_____ <b>Name of Signatory</b>	_____ <b>Signature</b>
-----------------------------------	---------------------------

**For: the Mandatary**

Signed at \_\_\_\_\_ on this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_

**WITNESSES**

1. \_\_\_\_\_

2. \_\_\_\_\_

_____ <b>Name of Signatory</b>	_____ <b>Signature</b>
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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

LERATO PARK INTEGRATED HOUSING DEVELOPMENT

**CONTRACT 2334-50-02/03**

Remedial work to 491 RDP Houses

**VOLUME 1  
PORTION 2: CONTRACT**

**Part C2  
Pricing Data**

---

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**PRICING DATA**

**CONTENTS LIST**

<b>Section</b>	<b>Description</b>	<b>Page No</b>
<b>PART C2.1</b>	<b>PRICING INSTRUCITONS</b>	
1.	General.....	C2.1-1
2.	Pay Items.....	C2.1-2
3.	Quantities .....	C2.1-2
4.	Rates .....	C2.1-4
<b>PART C2.2</b>	<b>BILL OF QUANTITIES</b>	

**END OF SECTION**

---

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

LERATO PARK INTEGRATED HOUSING DEVELOPMENT

**CONTRACT 2334-50-02/03**

Remedial work to 491 RDP Houses

**VOLUME 1  
PORTION 2: CONTRACT**

**Section C2.1  
Pricing Instructions**

---

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**PRICING INSTRUCTIONS**

**1. GENERAL**

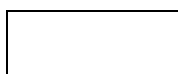
These pricing instructions provide the Tenderer with guidelines and requirements with regard to the completion of the bill of quantities. These pricing instructions also describe the criteria and assumptions which will be assumed in the Contract to have been taken into account by the Tenderer when developing his prices.

The bill of quantities shall be read with all the documents which form part of this Contract.

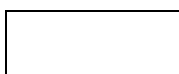
The following words have the meaning hereby assigned to them:

Unit : The unit of measurement for each item of work in terms of the Scope of Work.  
Quantity : The number of units for each item.  
Rate : The payment per unit of work at which the tenderer tenders to do the work.  
Amount : The product of the quantity and the rate tendered for an item.  
Lump sum : An amount tendered for an item, the extend of which is described in the  
(L.Sum) Pricing Instructions, Bill of Quantities or the Scope of Work but the quantity of work of which is not measured in any units.

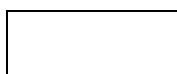
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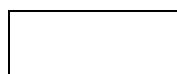
Contractor



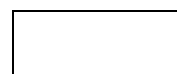
Witness 1



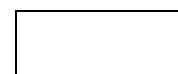
Witness 2



Employer



Witness 1



Witness 2

## 2. PAY ITEMS

Descriptions in the Bill of Quantities are abbreviated and comply generally with those in the Standard Specifications. The measurement and payment clause of each Standard Specification, read together with the relevant clauses of the Scope of Work, set out what ancillary or associated activities are included in the rates for the operations specified. Should any requirements of the measurement and payment clause of the applicable Standard Specification, or the Scope of Work, conflict with the terms of the Bill of Quantities, the requirements of the Standard Specification or Scope of Work, as applicable, shall prevail.

The units of measurement described in the Bill of Quantities are metric units. Abbreviations used in the Bill of Quantities are as follows:

mm	=	millimetre	h	=	hour
m	=	metre	kg	=	kilogram
km	=	kilometre	t	=	ton (1000kg)
m <sup>2</sup>	=	square metre	No.	=	number
m <sup>2</sup> .pass	=	square metre pass	sum	=	lump sum
ha	=	hectare	MN	=	meganewton
m <sup>3</sup>	=	cubic metre	MN.m	=	meganewton-metre
m <sup>3</sup> .km	=	cubic metre-kilometre	PC sum	=	Prime Cost Sum
l	=	litre	Prov sum	=	Provisional sum
kl	=	kilolitre	%	=	per cent
MPa	=	megapascal	kW	=	kilowatt
kPa	=	kilopascal	wt	=	wall thickness
			dia	=	diameter

## 3. QUANTITIES

- 3.1 Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for waste.
- 3.2 The quantities set out in the Bill of Quantities are the estimated quantities of the Works, and do not necessarily represent the actual amount of work to be done. The quantities certified for payment, and not the quantities given in the Bill of Quantities, shall be used for determining payments to the Contractor. The Contract Price for the completed contract shall be computed from the actual quantities of work done, valued at the relevant unit rates and prices.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## Method of measurement

- **PRELIMINARIES FOR USE WITH THE 2018 JBCC PBA EDITION 6.2**  
**(Applicable to schedule no. 1 in the bills of quantities/schedules)**

The preliminaries shall be the Preliminaries (May 2018) prepared and published by the Joint Building Contracts Committee for use with the JBCC Principal Building Agreement (6.2 Edition - May 2018).

All domestic subcontractors (If any) shall include their Preliminary and General costs within their rates. Preliminary and General shall not be paid separately to any subcontractor.

- **BUILDING WORK**  
**(Applicable to Schedule No. 2 in the bills of quantities/schedules)**

The provisional bills of quantities have been prepared generally in accordance with the 6th edition (Second Revision) of the "Standard System of Measuring Builder's Work" (as revised in 2013) published by the Association of South African Quantity Surveyors in consultation with the Building Industries Federation South Africa.

- **WET SERVICES**  
**(Applicable to Schedule No. 3 in the bills of quantities/schedules)**

The provisional bills of quantities have been prepared generally in accordance with the 6th edition (Second Revision) of the "Standard System of Measuring Builder's Work" (as revised in 2013) published by the Association of South African Quantity Surveyors in consultation with the Building Industries Federation South Africa.

- **ELECTRICAL**  
**(Applicable to Schedule No. 4 in the bills of quantities/schedules)**

Refer to Particular specification (Part C3.4)

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

#### 4. RATES

4.1 The prices and rates to be inserted in the Bill of Quantities are to be full inclusive prices for the work described under the several items. Such prices and rates shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based, as well as overhead charges and profit. Reasonable prices shall be inserted as these will be used as a basis for assessment of payment for additional work that may have to be carried out.

4.2 A price or rate is to be entered against each item in the Bill of Quantities, whether the quantities are stated or not. An item against which no price is entered or where a word or phrase such as "included" or "provided elsewhere" will be accepted as a rate of nil (R0,00) having been entered against such items and covered by the other prices or rates in the schedule.

Any work executed to which such a pay item applies, shall be measured under the appropriate items in the Bill of Quantities and valued at a rate of nil (R0,00). The rate of nil shall be valid irrespective of any change in the quantities during the execution of the Contract.

4.3 The Tenderer shall fill in a rate against all items where the words "rate only" appears in the amount column. The intention is that, although no work is foreseen under such item and no quantities are consequently given in the quantity column, the tendered rate shall apply should work under this item be actually required.

4.4 Except where rates only are required, the Tenderer shall insert all amounts to be included in his total tendered price in the "Amount" column and show the corresponding total tendered price.

4.5 The Tenderer shall not group together a number of items and tender one rate for such group of items.

4.6 All rates and sums of money quoted in the Bill of Quantities shall be in rands and whole cents. Fractions of a cent shall be discarded.

4.7 All prices and rates entered in the Bill of Quantities must be **excluding Value Added Tax (VAT)**. VAT will be added last on the summary page of the Bill of Quantities.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

- 4.8 Should excessively high unit prices be tendered, such prices may be of sufficient importance to warrant rejection of a tender by the Employer.
- 4.9 Where the Contractor is required to furnish detailed drawings and designs or other information in terms of the Contract Documents, all costs thereof shall be deemed to have been provided for and included in the unit rates and sum amounts tendered for the items scheduled in the Bill of Quantities, and separate additional payments will not be made.

**END OF SECTION**

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

LERATO PARK INTEGRATED HOUSING DEVELOPMENT

**CONTRACT 2334-50-02/03**

Remedial work to 491 RDP Houses

**VOLUME 1  
PORTION 2: CONTRACT**

**Section C2.2  
Schedule of Quantities**

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**


**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**


**VOLUME 1  
PORTION 2: CONTRACT**

**Section C2.2  
Schedule No. 1  
Preliminary & General**


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Contractor




Witness 1




Witness 2



Employer



Witness 1



Witness 2

Contract: 2334-50-02/03 (Remedial work to 491 RDP Houses)

Part C2: Pricing Data

Section C2.2: Bill of Quantities

Preliminaries

SCHEDULE 1					
Item	Description	Unit	Qty	Rate (R)	Amount (R)
	<p><b><u>BILL NO. 1</u></b></p> <p><b><u>PRELIMINARIES</u></b></p> <p><b>PROVISION SHALL BE MADE FOR REPAIRWORK TO 491 UNITS</b></p> <p><b>PRINCIPAL BUILDING AGREEMENT</b></p> <p>The agreement shall be the Principal Building Agreement prepared and published by the Joint Building Contracts Committee: Edition 6.2, May 2018.</p> <p>The JBCC Principal Building Agreement contract data form an integral part of this agreement</p> <p><b>PRELIMINARIES</b></p> <p>The preliminaries shall be The JBCC® General Preliminaries (Edition 6.2 - May 2018) prepared and published by the Joint Building Contracts Committee for use with the JBCC Principal Building Agreement (6.2 Edition - May 2018).</p> <p><b>PREAMBLES FOR TRADES</b></p> <p>The General Preambles for Trades 2017 published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claim arising from brevity of description of items fully described in the said Model Preambles will be entertained</p> <p>Supplementary preambles are incorporated in these bills of quantities and Section C3.4 to satisfy the requirements of this project. Such supplementary preambles shall take precedence over the provisions of the said Model Preambles</p> <p>The contractor's prices for all items throughout these bills of quantities must take account of and include for all of the obligations, requirements and specifications given in the said Model Preambles and in any supplementary preambles</p> <p><b>FULL INTENT AND MEANING OF CLAUSES</b></p> <p>Tenderers shall be deemed to have referred to the aforementioned documents for the full intent and meaning of each clause. These clauses are hereinafter referred to by the heading and clause number only.</p>				
	Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C2.2-1

Brought Forward					
	<p>Where standard clauses or alternatives are not applicable to this contract, such modifications, corrections or supplements as are necessary, are given under each relevant clause heading or within the relevant schedule.</p> <p>Where an item is not relevant to this specific contract, such item is marked "NA" signifying "Not applicable".</p> <p><b>PRICING OF CLAUSES</b></p> <p>Tenderers shall allow opposite each clause for any cost involved with complying with such clause. Any clauses left unpriced shall be deemed to be covered by rates and prices elsewhere incorporated throughout these bills of quantities.</p> <p><b>PAYMENT CATEGORIES</b></p> <p>Should 'Alternative A', as set out in the Principal Building Agreement contract data, be used for the adjustment of preliminaries, then each item priced is to be allocated to one or more categories by the insertion of the letter "F", "V" or "T", as the case may be, against the price in the rate column. These letters shall indicate the relevant categories as follows :</p> <p><b>F</b> -A fixed amount, ie. which shall not be varied</p> <p><b>V</b> -An amount which shall be varied in proportion to the contract value</p> <p><b>T</b> -An amount which shall be varied in proportion to the construction period.</p> <p><b>NOTE:</b> The Contractor must submit with his tender a detailed breakdown of his Preliminaries Matrix.</p> <p><b><u>SECTION A : JBCC PRINCIPAL BUILDING AGREEMENT</u></b></p> <p><b><u>NOTE:</u></b> <b><u>Refer to section C1.2 - JBCC Contract Data, B15 Changes made to the standard JBCC document</u></b></p> <p><b>INTERPRETATION</b></p>				
1.1	Clause 1.0 - Definitions and interpretation.  F:..... V:..... T:.....	Item			
1.2	Clause 2.0 - Law, Regulations and Notices  F:..... V:..... T:.....	Item			
Carried Forward					

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C2.2-2

Brought Forward					
1.3	Clause 2.5.1 - Compliance with regulations. F:..... V:..... T:.....	Item			
1.4	Clause 2.5.2 - Compliance with Health & Safety Specification and Regulations F:..... V:..... T:.....	Item			
1.5	Clause 2.5.3 - Compliance with Environmental Management Plan and Regulations F:..... V:..... T:.....	Item			
1.6	Clause 2.5.4 - National Home Builders Registration Council (NHBRC) F:..... V:..... T:.....	Item			
1.7	Clause 3.0 - Offer and acceptance F:..... V:..... T:.....	Item			
1.8	Clause 4.0 - Cession and assignment F:..... V:..... T:.....	Item			
1.9	Clause 5.0 - Documents F:..... V:..... T:.....	Item			
1.10	Clause 6.0 - Employer's agents F:..... V:..... T:.....	Item			
1.11	Clause 7.0 - Design responsibility F:..... V:..... T:.....	Item			
<b>INSURANCES AND SECURITIES</b>					
1.12	Clause 8.0 - Works risk. F:..... V:..... T:.....	Item			
1.13	Clause 9.0 - Indemnities. F:..... V:..... T:.....	Item			
1.14	Clause 10.0 - Insurances F:..... V:..... T:.....	Item			
1.15	Clause 11.0 - Securities F:..... V:..... T:.....	Item			
Carried Forward					

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C2.2-3



Brought Forward					
	<b>PAYMENT</b>				
1.29	Clause 25.0 - Payment F:..... V:..... T:.....	Item			
1.30	Clause 26.0 - Adjustment of the contract value and final account F:..... V:..... T:.....	Item			
1.31	Clause 27.0 - Recovery of expense and/or loss F:..... V:..... T:.....	Item			
	<b>SUSPENSION AND-TERMINATION</b>				
1.32	Clause 28.0 - Suspension by the contractor F:..... V:..... T:.....	Item			
1.33	Clause 29.0 - Termination F:..... V:..... T:.....	Item			
	<b>DISPUTE RESOLUTION</b>				
1.34	Clause 30.0 - Dispute resolution F:..... V:..... T:.....	Item			
	<b><u>SECTION B : JBCC PRELIMINARIES</u></b>				
	<b><u>NOTE:</u></b> <b><u>Refer to Part C3.4.2 and section C1.2 - JBCC Contract Data, B14 (JBCC® General Preliminaries — selections) for information and changes made to the standard JBCC® General Preliminaries – May 2018</u></b>				
	<b>1.0 DEFINITIONS AND INTERPRETATION</b>				
1.35	Clause 1.1 - Definitions F:..... V:..... T:.....	Item			
1.36	Clause 1.2 - Interpretation F:..... V:..... T:.....	Item			
	<b>2.0 DOCUMENTS</b>				
1.37	Clause 2.1 - Checking of documents. F:..... V:..... T:.....	Item			
Carried Forward					

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward					
1.38	Clause 2.2 - Provisional bills of quantities. F:..... V:..... T:.....	Item			
1.39	Clause 2.3 - Availability of construction information F:..... V:..... T:.....	Item			
1.40	Clause 2.4 - Ordering of materials and goods F:..... V:..... T:.....	Item			
<b>3.0 PREVIOUS WORK AND ADJOINING PROPERTIES</b>					
1.41	Clause 3.1 - Previous work - dimensional accuracy F:..... V:..... T:.....	Item			
1.42	Clause 3.2 - Previous work - defects F:..... V:..... T:.....	Item			
1.43	Clause 3.3 - Inspection of adjoining properties F:..... V:..... T:.....	Item			
<b>4.0 THE SITE</b>					
1.44	Clause 4.1 - Handover of site in stages F:..... V:..... T:.....	Item			
1.45	Clause 4.2 - Enclosure of the works F:..... V:..... T:.....	Item			
1.46	Clause 4.3 - Geotechnical and other investigations F:..... V:..... T:.....	Item			
1.47	Clause 4.4 - Encroachments F:..... V:..... T:.....	Item			
1.48	Clause 4.5 - Existing premises occupied F:..... V:..... T:.....	Item			
1.49	Clause 4.6 - Services – known F:..... V:..... T:.....	Item			
Carried Forward					

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward					
	<b>5.0 MANAGEMENT OF CONTRACT</b>				
1.50	Clause 5.1 - Management of the works F:..... V:..... T:.....	Item			
1.51	Clause 5.2 - Progress meetings F:..... V:..... T:.....	Item			
1.52	Clause 5.3 - Technical meetings F:..... V:..... T:.....	Item			
	<b>6.0 SAMPLES, SHOP DRAWINGS, ETC</b>				
1.53	Clause 6.1 - Samples of materials F:..... V:..... T:.....	Item			
1.54	Clause 6.2 - Workmanship samples F:..... V:..... T:.....	Item			
1.55	Clause 6.3 - Shop drawings F:..... V:..... T:.....	Item			
1.56	Clause 6.4 - Compliance with manufacturer's instructions F:..... V:..... T:.....	Item			
	<b>7.0 DEPOSITS AND FEES</b>				
1.57	Clause 7.1 - Deposits and fees F:..... V:..... T:.....	Item			
	<b>8.0 TEMPORARY SERVICES</b>				
1.58	Clause 8.1 - Water F:..... V:..... T:.....	Item			
1.59	Clause 8.2 - Electricity F:..... V:..... T:.....	Item			
1.60	Clause 8.3 - Ablution and welfare facilities F:..... V:..... T:.....	Item			
1.61	Clause 8.4 - Communication facilities F:..... V:..... T:.....	Item			
Carried Forward					

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



Brought Forward					
	<b>9.0 PRIME COST AMOUNTS</b>				
1.62	Clause 9.1 - Responsibility for prime cost amounts F:..... V:..... T:.....	Item			
	<b>10.0 ATTENDANCE ON SUBCONTRACTORS</b>				
1.63	Clause 10.1 - General attendance F:..... V:..... T:.....	Item			
1.64	Clause 10.2 - Special attendance F:..... V:..... T:.....	Item			
	<b>11.0 GENERAL</b>				
1.65	Clause 11.1 - Protection of the Works. F:..... V:..... T:.....	Item			
1.66	Clause 11.2 - Protection/isolation of existing works and works occupied in sections F:..... V:..... T:.....	Item			
1.67	Clause 11.3 - Security of the works. F:..... V:..... T:.....	Item			
1.68	Clause 11.4 - Notice before covering work. F:..... V:..... T:.....	Item			
1.69	Clause 11.5 - Disturbance. F:..... V:..... T:.....	Item			
1.70	Clause 11.6 - Environmental disturbance. F:..... V:..... T:.....	Item			
1.71	Clause 11.7 - Works cleaning and clearing. F:..... V:..... T:.....	Item			
1.72	Clause 11.8 - Vermin. F:..... V:..... T:.....	Item			
1.73	Clause 11.9 - Overhand work. F:..... V:..... T:.....	Item			
	Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward					
1.74	Clause 11.10 - Tenant installations by direct contractors F:..... V:..... T:.....	Item			
1.75	Clause 11.11 - Advertising F:..... V:..... T:.....	Item			
<b><u>SECTION C: SPECIFIC PRELIMINARIES ITEMS TO BE PRICED SEPERATELY</u></b>					
<b>Refer to Section C3 in the contract document</b>					
1.76	C3.1.1 Employers Objectives Fixed.....Value.....Time.....	sum			
1.77	C3.1.2 Overview of the Works Fixed.....Value.....Time.....	sum			
1.78	C3.1.3 Scope of the Works Fixed.....Value.....Time.....	sum			
1.79	C3.1.4 Location of the Works Fixed.....Value.....Time.....	sum			
1.80	C3.1.5 Handover of completed houses Fixed.....Value.....Time.....	sum			
1.81	C3.1.6 Decanting facility Fixed.....Value.....Time.....	sum			
1.82	C3.2.1 Employer's Design Fixed.....Value.....Time.....	sum			
1.83	C3.2.2 Drawings Fixed.....Value.....Time.....	sum			
1.84	C3.3.1 Procurement Principles Fixed.....Value.....Time.....	sum			
1.85	C3.3.2 Contractors Personnel Fixed.....Value.....Time.....	sum			
Carried Forward					

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward					
1.86	C3.3.3 Temporary Workforce	sum			
	Fixed.....Value.....Time.....				
1.87	C3.3.4 Labour Intensive Construction	sum			
	Fixed.....Value.....Time.....				
1.88	C3.3.5 Subcontracting	sum			
	Fixed.....Value.....Time.....				
1.89	C3.4.1 Standard Specifications	sum			
	Fixed.....Value.....Time.....				
1.90	C3.4.2 Variation & Additions to Standard Specifications	sum			
	Fixed.....Value.....Time.....				
1.91	C3.4.3 Particular Specification	sum			
	Fixed.....Value.....Time.....				
1.92	C3.5.1.1 Concurrent Construction Contracts	sum			
	Fixed.....Value.....Time.....				
1.93	C3.5.1.2 Contractor's Project Management Plan	sum			
	Fixed.....Value.....Time.....				
1.94	C3.5.1.3 Construction Programme	sum			
	Fixed.....Value.....Time.....				
1.95	C3.5.1.4 Quality Assurance	sum			
	Fixed.....Value.....Time.....				
1.96	C3.5.1.5 Site Administration	sum			
	Fixed.....Value.....Time.....				
1.97	C3.5.1.6 Site Instructions	sum			
	Fixed.....Value.....Time.....				
1.98	C3.5.1.7 Site Meetings	sum			
	Fixed.....Value.....Time.....				
1.99	C3.5.1.8 Payment Certificates	sum			
	Fixed.....Value.....Time.....				
Carried Forward					

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



**SCHEDULE 1**

Item	Description	Unit	Qty	Rate (R)	Amount (R)
	<p><b><u>BILL NO. 2</u></b></p> <p><b><u>PROVISIONAL SUMS</u></b></p> <p><b>SUPPLEMENTARY PREAMBLES</b></p> <p><b>General</b></p> <p>Work for which budgetary allowances are provided will be measured and valued in accordance with Clause 26 of the Principal Building Agreement and deducted in whole or in part if not required without any compensation for loss or profit on the said allowances</p> <p>Prime cost amounts and provisional sums are net. Prime cost amounts include for delivery to site of all articles concerned</p> <p>Provisional sums are for material and equipment supplied and installed complete by firms of specialists</p> <p><b>Profit</b></p> <p>Where stated, the contractor may allow for profit if required</p> <p><b>General attendance on nominated/selected subcontractors</b></p> <p>The item "Attendance" which follows each provisional sum for nominated/selected subcontractors' work, shall be deemed to cover all the contractor's costs incurred in providing free of charge to the nominated/selected subcontractors, the following:</p> <ol style="list-style-type: none"> <li>1.Access to the site and places where the subcontract work is to be carried out, including the reasonable use of any temporary personnel hoists erected by the contractor</li> <li>2.The provision of water and lighting and of single-phase electric power to a position within 50 metres of the place where the subcontract or subcontractors work is to be carried out other than water, fuel and power for commissioning of any installation</li> <li>3.The provision of an area for the subcontractor to establish temporary office accommodation and workshops and for the storage of plant and materials and goods</li> <li>4.The use of erected scaffolding belonging to the contractor, in common with others having the like right, while it remains erected on the site</li> </ol>				
	Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward				
	5.The use of ablution facilities and the like, where provided			
	6.The use of the site telecommunication facilities, where provided, subject to payment by the subcontractor for usage thereof			
	7.Making good all trades and cleaning down and removal of rubbish on completion			
	<b><u>BUDGETARY ALLOWANCES</u></b>			
	<u>For work to be executed by the Contractor and valued in terms of the "Adjustment to the Contract Value" clause in the Principal Building Agreement</u>			
	<u>Community requirements</u>			
2.1	CLO/LDO remuneration (Refer to Section <b>C3.4.3.1.6</b> of the contract document)	Prov sum		340 000.00
2.2	Attendance, overheads, charges and profit on above	%		
2.3	Accredited training courses for selected local and other labourers (Refer to Section <b>C3.4.3.1.7</b> of the contract document)	Prov sum		130 000.00
2.4	Attendance, overheads, charges and profit on above	%		
2.5	Wages and salaries of local and other labourers employed during training (Refer to Section <b>C3.4.3.1.8</b> of the contract document)	Prov sum		31 500.00
2.6	Attendance, overheads, charges and profit on above	%		
	<u>Principal Agent requirements</u>			
2.7	Acceptance control testing (Refer to Section <b>C3.4.3.1.4</b> of the contract document)	Prov sum		100 000.00
2.8	Attendance, overheads, charges and profit on above	%		
2.9	Communication facilities and equipment (Refer to Section <b>C3.4.3.1.10</b> of the contract document)	Prov sum		75 000.00
2.10	Attendance, overheads, charges and profit on above	%		
2.11	Upkeep of the existing Principal Agent/Engineer site camp (Refer to Section <b>C3.4.3.1.11</b> of the contract document)	Prov sum		50 000.00
2.12	Attendance, overheads, charges and profit on above	%		
	<u>Remedial work to Landscaping</u>			
2.13	Remedial work to Landscaping, including grass and trees (Refer to Section <b>C3.4.3.1.9</b> of the contract document)	Prov sum		50 000.00
2.14	Attendance, overheads, charges and profit on above	%		
Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



Contract: 2334-50-02/02 (Remedial work to 491 RDP Houses)  
Part C2: Pricing Data  
Section C2.2: Bill of Quantities  
Dayworks

**SCHEDULE 1**

Item	Description	Unit	Qty	Rate (R)	Amount (R)
	<b><u>BILL NO. 3</u></b>				
	<b><u>DAYWORKS (PROVISIONAL)</u></b>				
	<u>Note:</u> Dayworks executed on instruction of the Principal Agent only. Items not used shall be deducted from the contract. (Refer to <b>C3.4.3.1.2</b> - VARIATIONS AND ADDITIONS TO STANDARD AND PARTICULAR SPECIFICATIONS)				
	<b><u>LABOUR</u></b>				
3.1	(a) Skilled	hr	100		
3.2	(b) Semi-skilled	hr	200		
3.3	(c) Un-skilled	hr	300		
	<b><u>PLANT HIRE (WORK RATES ON SITE)</u></b>				
	<b><u>TRUCKS</u></b>				
	<u>Flatbed trucks (specify capacity)</u>				
3.4	(a) Capacity_____m <sup>3</sup> (small)	hr	40		
3.5	(b) Capacity_____m <sup>3</sup> (medium)	hr	40		
	<b><u>LDV'S</u></b>				
	<u>LDV (specify size)</u>				
3.6	(a) LDV_____ton	km	200		
	<b><u>TLB'S</u></b>				
	<u>Tractor loader backhoe (TLB)(specify model)</u>				
3.7	(a) Model_____	hr	40		
	<b><u>ROLLERS</u></b>				
	<u>Walk behind vibrating rollers (specify model)</u>				
3.8	(a) Model_____(BW 61) (small)	hr	40		
3.9	(b) Model_____(BW 76) (medium)	hr	40		
3.10	(c) Model_____(BW 90) (large)	hr	40		
	<b><u>COMPACTORS</u></b>				
	<u>Plate compactors (specify model)</u>				
3.11	(a) Model_____	hr	40		
	<u>Wackers (specify model)</u>				
3.12	(a) Model_____	hr	40		
Carried Forward					

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



Brought Forward				
<b>CONCRETE MIXERS</b>				
<u>Concrete mixers (specify mixing volume)</u>				
3.15	(a) Volume_____liter (small, towable)	hr	40	
3.16	(b) Volume_____liter (medium)	hr	40	
<b>COMPRESSORS</b>				
<u>Portable diesel compressors (specify capacity)</u>				
3.17	(a) Capacity_____cfm (small)	hr	40	
3.18	(b) Capacity_____cfm (medium)	hr	40	
<b>TRANSPORT (COST TO AND FROM SITE)</b>				
<u>Note:</u> Distance shall be measured one way only (tender rates shall include for transport in both directions to and from site)				
<u>Low bed</u>				
3.19	(a) Low-bed (suitable for the largest piece of equipment above)	km	100	
<u>Flatbed truck</u>				
3.20	(a) Small	km	100	
3.21	(b) Medium	km	100	
<u>Security</u> Additional security per a section with sufficient man power to secure a minimum of 45 houses. (Refer to <b>C3.4.3.1.1</b> - PARTICULAR SPECIFICATIONS)  The Employer may in certain circumstances be unable to take possession of prescribed sections. The price shall cover a dayworks cost to provide security for individual prescribed sections.				
3.22	The rate per one calendar day shall cover a 24 hours shift	days	70	
<b>BILL NO. 3 DAYWORKS (PROVISIONAL)</b>				
<b>Carried forward to Summary of Bill of Quantities</b>				<b>R</b>

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Contract: 2334-50-02/02 (Remedial work to 491 RDP Houses)

Part C2: Pricing Data

Section C2.2: Bill of Quantities

Dayworks

SCHEDULE 1					
Item	Description	Unit	Qty	Rate (R)	Amount (R)
	<p><b><u>BILL NO. 4</u></b></p> <p><b><u>DECANTING - OPTION 1</u></b></p> <p><u>Note:</u> All detail for decanting shall be in accordance with the following drawings complete: 2334.50.02.SUA.14.U005 2334.50.02.SUA.14.U006 A total of 30 decanting houses to be constructed</p> <p><u>PREAMBLES FOR PAINTING</u></p> <p>All items to be painted shall be "Plascon" or similar approved, and installation shall be in accordance to the manufacturers recommendation</p> <p>Painting is applicable when the words "paint", painting or "painted" has been included in the description for a specific item. The cost of painting shall be included with that specific item</p> <p><u>MOVING OF HOUSE INHABITANTS TO AND FROM THE DECANTING HOUSES</u></p> <p>The contractor shall be compensated for the moving of house inhabitants to and from the decanting house under Bill 1 Preliminaries - item 1.81 - C3.1.6 Decanting facility</p> <p><u>EARTHWORKS</u></p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Nature of ground</u></p> <p>A soils investigation has been carried out on site by the Principal Agent and the report is available at the Principal Agents offices. Descriptions of excavations shall be deemed to include all ground conditions classified as "earth" "soft rock" and "hard rock." Soft and hard rock excavations will not be measured separately.</p> <p><u>Platform for raft foundation</u></p> <p>Preparation of platforms for raft foundations shall include for the following:</p> <p>a. Clearing and grubbing of the site and removal of all rubbish, debris, vegetation, and trees not exceeding 200mm girth (removal of larger trees will be measured separately)</p> <p>b. Stripping of topsoil and stockpiling on site and later spreading and levelling around house after completion of all building work.</p>				
	Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

		Brought Forward			
	<p>c. Cut to spoil (to location identified by contractor) and importing G7 material from commercial sources.</p> <p>All preparation of in-situ ground formation to 95% mod AASHTO density and compacting all fill material to 95% mod AASHTO density</p> <p>d. Approved field density test on each house platform.</p> <p>e. Keeping all excavation free of water.</p> <p>f. Stormwater management to ensure no houses are flooded.</p> <p><u>BULK EXCAVATION, FILLING, ETC</u></p> <p><u>Platform</u></p> <p>4.1 Platform for one house complete</p> <p><u>CONCRETE, FORMWORK AND REINFORCEMENT</u></p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Raft foundation</u></p> <p>Raft foundations shall include for the following (Dimensions as per drawing)</p> <p>a. Excavation for raft foundations, including carting away of surplus material</p> <p>b. Supply and fixing of all polyethylene sheeting below floors</p> <p>c. Supply, fixing and removal of all formwork to rafts</p> <p>d. Supply and fixing of all reinforcing/mesh to rafts</p> <p>e. Supply and placing of all concrete to rafts</p> <p>f. Power floated surface finish to top of rafts, including approved curing of concrete.</p> <p>g. Set of three concrete test cubes per raft foundation and testing thereof.</p> <p>h. All costs regarding Engineering fees, registration, etc (fees only applicable if Contractor tenders alternative raft design)</p> <p>i. Termite proofing ground below raft and issue certificate.</p> <p>j. Apron slabs to be included</p> <p>k. Shaping groundworks up to 1.5m away from the building</p> <p><u>REINFORCED CONCRETE</u></p> <p><u>RAFT FOUNDATION</u></p> <p><u>Raft foundation</u></p> <p>4.2 Raft foundation for 1 house</p> <p><u>SUPERSTRUCTURE</u></p> <p><u>Structure complete to include the following</u></p> <p>Timber or steel structure covered with galvanised IBR sheeting externally, painted nutec board dry walls internally (Colour to be approved by Principal Agent) and 100mm thick insulation</p> <p>4.3</p>	no	30		
		no	30		
		no	30		
		Carried Forward			

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

		Brought Forward		
	<u>ROOF COVERINGS ETC</u>  <u>SHEETING</u>  <u>Note:</u>  Price for sheeting shall include polyethylene sheeting and SA Pine purlins complete (Galvanised IBR sheeting)			
4.4	Roof covering with pitch 17.5 degrees	no	30	
	<u>CARPENTRY AND JOINERY</u>  <u>SUPPLEMENTARY PREAMBLES</u>  <u>ROOFS ETC</u>  <u>Approved roof truss construction</u>  The roof trusses to houses have not been designed. The Contractor shall have the roof trusses, etc designed by an approved Engineer appointed by the Contractor and submit this design with drawings to the Engineer for approval. The cost of all design fees, etc must be included in the cost of the roofs.  <u>Plate nailed timber roof truss or steel truss construction</u>  Roof construction to house complete with wall plates, trusses, bracing, platform, painting with creosote, etc			
4.5		no	30	
	<u>FIXED CEILINGS</u>  <u>Supply and erect fixed Gypsum ceilings</u>  6,4mm Gypsum fixed ceiling including 38 x 38mm SAP brandering or galvanised steel brandering (Depending on the design) at 450mm centres in one direction (Unit complete)			
4.6		no	30	
4.7	100mm Thick fibre wool insulation on top of ceiling boards (Unit complete)	no	30	
	<u>DOORS ETC</u>  <u>Wrought hardwood doors</u>  <u>Meranti framed, ledged and braced door hung to steel frames</u>  Painted 44mm Door 813 x 2032mm high			
4.8		no	60	
	<u>Wrought softwood doors</u>  <u>Hollow core flush doors with 3,2mm standard hardboard covering on both sides hung to steel frames</u>  Painted 44mm Door 813 x 2032mm high			
4.9		no	90	
		Carried Forward		

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

[illegible]

Brought Forward				
<u>PLUMBING AND DRAINAGE</u>  <u>SUPPLEMENTARY PREAMBLES</u>  <u>Note:</u>  Refer to drawings for specification of plumbing fittings, etc  Plumbing measured in elements (plumbing points) and shall be priced accordingly. Prices must include for supply and installation of all fittings, taps, water supply and sewer discharge piping from the fittings to the underground civil pipework complete (incl. airvents, gulleys, ect). Supply and discharge piping from the perimeter of the building up to the municipal services will be measured separately, and must be priced accordingly.  The external supply and discharge piping must include all items such as, excavation, bedding, backfilling, pipe fittings, manholes, etc complete  <u>Plumbing points for 1 house</u>				
4.17	WC	no	30	
4.18	Hwb	no	30	
4.19	Sink (Including wall bracket)	no	30	
4.20	Shower, including waterproofing to walls and floors	no	30	
<u>External supply and discharge piping, etc</u>  <u>Note:</u>  Water piping shall have a minimum cover of 600mm Sewer piping shall have a minimum cover of 600mm				
4.21	20mm Dia HDPE water supply in ground (incl. trenching) and connecting to municipal lines with saddles	m	420	
4.22	20mm Dia stop cock	no	30	
4.23	"Kwikot" 400kpa Multi Pressure Control Valve or similar approved	no	30	
4.24	Water meter as approved by the municipality - Supply & install and remove on completion of the project	no	30	
4.25	For purposes of water, sewer and electrical consumption at the decanting units, the contractor shall perform the following: Deregistration of home owners details from their existing RPD house to the decanting unit and then back to the renovated house on completion of the renovation of the RDP house. This captured at the relevant municipal service provider	no	491	
4.26	110mm Dia uPVC sewer pipe in ground (incl. trenching all depths) (Including rodding eye at head of drain, inspection eyes at each junctions. Incl. marker blocks for each and saddles/45 degree T's at connection to the municipal lines	m	420	
Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

		Brought Forward		
	<u>DUCTS FOR ELECTRICAL CABLES</u>  uPVC pipes cast into raft foundation or surface fixed to brick walls including bends, end caps, etc			
4.27	25mm Dia (3m lengths)	no	30	
	<u>ELECTRICAL INSTALLATION</u>  Refer to the electrical BOQ			
	<u>GLAZING</u>  <u>GLAZING TO STEEL WITH PUTTY</u>  4mm float glass			
4.28	Cliscoe Window type NC1 (W1) (Clear)	no	30	
4.29	Cliscoe Window type NE1 (W2) (obscured)	no	30	
4.30	Cliscoe Window type NC4F (W3) (Clear)	no	30	
	<u>FENCING</u>  Fencing supplied and installed complete, including all posts, stays, standards, droppers, excavation, backfilling, concrete bases, etc. Dwg 2334.50.02.SUA.14.U005			
4.31	1. 1.8m high to exterior of decanting demarcated area	m	405	
4.32	2. 1.2m Within the decanting and around house stands	m	980	
	Gates supplied and installed complete, including all posts, stays, hinges, locking devices, excavation, backfilling, concrete bases, etc			
4.33	1. Single gate size 1.2m high	no	30	
4.34	2. Double gate size 1.8m high	no	2	
	<u>REPAIRWORK / MAINTENANCE / UPKEEP OF DECANTING UNITS</u>  The contractor shall make provision for the repair work / maintenance / upkeep of the decanting units, fencing and services to and from the decanting units during the period of the contract. The value will be paid proportionally in accordance to the duration of the contract. The value shall include, but limited to, all labour, materials, equipment, plant, transport, fuels, profits, management, head office costs, etc.			
4.35		sum		
		Carried Forward		

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

		Brought Forward			
4.36	<b><u>DISESTABLISHMENT OF DECANTING AREA AND REHABILITATION OF AREA</u></b>  On completion of the project, disestablish and rehabilitate the demarcated decanting area complete. This shall include, but not limited to handing over all temporary decanting structures to the client and removal of all: earthworks and concrete works; services; fencing and gates; parking areas; etc. Rehabilitate the site to its original condition and to the approval of the Environmental Consultant	sum			
	<b>BILL NO. 4</b> <b>DECANTING - OPTION 1</b>				
	Carried forward to Summary of Bill of Quantities				R

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



Contract: 2334-50-02/02 (Remedial work to 491 RDP Houses)

Part C2: Pricing Data

Section C2.2: Bill of Quantities

Dayworks

SCHEDULE 1					
Item	Description	Unit	Qty	Rate (R)	Amount (R)
	<b><u>BILL NO. 4</u></b>  <b><u>DECANTING - OPTION 2</u></b>  <b><u>Note:</u></b> As an alternative option 2, the tenderer shall provide pricing for an alternative building methodology, which shall be of a similar or better: size/dimension, layout, thermal characteristic, functionality, etc which shall serve as a decanting facility as indicated in the following drawings: 2334.50.02.SUA.14.U005 2334.50.02.SUA.14.U006 A total of 30 decanting houses to be constructed and shall conform to all SANS and national building regulations  <u>MOVING OF HOUSE INHABITANTS TO AND FROM THE DECANTING HOUSES</u>  The contractor shall be compensated for the moving of house inhabitants to and from the decanting house under Bill 1 Preliminaries - item 1.81 - C3.1.6 Decanting facility  <u>EARTHWORKS</u>  <u>Ground platform taking the geotechnical report into consideration</u>  4.1 Platform for one house complete  <u>RAFT FOUNDATION / CONCRETE FLOORS / APRON</u>  4.2 Raft foundation/concrete surfacebed for one house complete (taking the geotechnical report into consideration)  <u>SUPERSTRUCTURE</u>  4.3 Structure for one house complete up to wall plate level (including door and window frames)  <u>ROOF COVERINGS ETC</u>  4.4 Roof covering for one house complete  <u>ROOF STRUCTURE</u>  <u>Plate nailed timber roof truss or steel truss construction or other similar approved</u>  4.5 Roof structure for one house complete (including beam filling)				
	Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C2.2-24

		Brought Forward			
	<u>CEILINGS / INSULATION / DOORS / IRONMONGERY / PAINTING GLAZING / AND ALL OTHER FINISHES</u>				
4.6	For one house complete	no	30		
	<u>PLUMBING AND DRAINAGE</u>  Internal plumbing points including all waste and water reticulation for WC, HWB, Sink, Shower (including waterproofing to walls and floors)				
4.7	For one house complete	no	30		
	<u>External supply and discharge piping, etc</u>  <u>Note:</u>  Water piping shall have a minimum cover of 600mm Sewer piping shall have a minimum cover of 600mm				
4.8	20mm Dia HDPE water supply in ground (incl. trenching) and connecting to municipal lines with saddles	m	420		
4.9	20mm Dia stop cock	no	30		
4.10	"Kwikot" 400kpa Multi Pressure Control Valve or similar approved	no	30		
4.11	Water meter as approved by the municipality - Supply & install and remove on completion of the project	no	30		
4.12	For purposes of water, sewer and electrical consumption at the decanting units, the contractor shall perform the following: Deregistration of home owners details from their existing RPD house to the decanting unit and then back to the renovated house on completion of the renovation of the RDP house. This captured at the relevant municipal service provider	no	491		
4.13	110mm Dia uPVC sewer pipe in ground (incl. trenching all depths) (Including rodding eye at head of drain, inspection eyes at each junctions. Incl. marker blocks for each and saddles/45 degree T's at connection to the municipal lines	m	420		
	<u>INTERNAL ELECTRICAL INSTALLATION</u>  Including plug points, light switches and fittings in all rooms, DB board and CoC on completion				
4.14	For one house complete	no	30		
		Carried Forward			

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward				
<b><u>FENCING</u></b>  Fencing supplied and installed complete, including all posts, stays, standards, droppers, excavation, backfilling, concrete bases, etc. Dwg 2334.50.02.SUA.14.U005				
4.15	1. 1.8m high to exterior of decanting demarcated area	m	405	
4.16	2. 1.2m Within the decanting and around house stands	m	980	
Gates supplied and installed complete, including all posts, stays, hinges, locking devices, excavation, backfilling, concrete bases, etc				
4.17	1. Single gate size 1.2m high	no	30	
4.18	2. Double gate size 1.8m high	no	2	
<b><u>REPAIRWORK / MAINTENANCE / UPKEEP OF DECANTING UNITS</u></b>  The contractor shall make provision for the repair work / maintenance / upkeep of the decanting units, fencing and services to and from the decanting units during the period of the contract. The value will be paid proportionally in accordance to the duration of the contract. The value shall include, but limited to, all labour, materials, equipment, plant, transport, fuels, profits, management, head office costs, etc.				
4.19		sum		
<b><u>DISESTABLISHMENT OF DECANTING AREA AND REHABILITATION OF AREA</u></b>  On completion of the project, disestablish and rehabilitate the demarcated decanting area complete. This shall include, but not limited to handing over all temporary decanting structures to the client and removal of all: earthworks and concrete works; services; fencing and gates; parking areas; etc. Rehabilitate the site to its original condition and to the approval of the Environmental Consultant				
4.20		sum		
<b>BILL NO. 4</b> <b>DECANTING - OPTION 2</b>				
Carried forward to Summary of Bill of Quantities				R

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Contract: 2334-50-02/02 (Remedial work to 491 RDP Houses)

Part C2: Pricing Data

Section C2.2: Bill of Quantities

Dayworks

**SCHEDULE 1**

Item	Description	Unit	Qty	Rate (R)	Amount (R)
	<p><b><u>BILL NO. 4</u></b></p> <p><b><u>DECANTING - OPTION 3</u></b></p> <p><b><u>Note:</u></b> As an alternative option 3, the tenderer shall provide pricing for rental units for the duration of the contract, which shall be of a similar or better: size/dimension, layout, thermal characteristic, functionality, etc which shall serve as a decanting facility as indicated in the following drawings: 2334.50.02.SUA.14.U005 2334.50.02.SUA.14.U006 A total of 30 decanting houses to be constructed and shall conform to all SANS and national building regulations</p> <p><b><u>MOVING OF HOUSE INHABITANTS TO AND FROM THE DECANTING HOUSES</u></b></p> <p>The contractor shall be compensated for the moving of house inhabitants to and from the decanting house under Bill 1 Preliminaries - item 1.81 - C3.1.6 Decanting facility</p> <p><b><u>HOUSE COMPLETE</u></b></p> <p><b><u>House complete including all internal services</u></b></p>				
4.1	For one house complete	no	30		
	<p><b><u>PLUMBING AND DRAINAGE</u></b></p> <p><b><u>External supply and discharge piping, etc</u></b></p> <p><b><u>Note:</u></b> Water piping shall have a minimum cover of 600mm Sewer piping shall have a minimum cover of 600mm</p>				
4.2	20mm Dia HDPE water supply in ground (incl. trenching) and connecting to municipal lines with saddles	m	420		
4.3	20mm Dia stop cock	no	30		
4.4	"Kwikot" 400kpa Multi Pressure Control Valve or similar approved	no	30		
4.5	Water meter as approved by the municipality - Supply & install and remove on completion of the project	no	30		
Carried Forward					

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward				
4.6	For purposes of water, sewer and electrical consumption at the decanting units, the contractor shall perform the following: Deregistration of home owners details from their existing RPD house to the decanting unit and then back to the renovated house on completion of the renovation of the RDP house. This captured at the relevant municipal service provider	no	491	
4.7	110mm Dia uPVC sewer pipe in ground (incl. trenching all depths) (Including rodding eye at head of drain, inspection eyes at each junctions. Incl. marker blocks for each and saddles/45 degree T's at connection to the municipal lines	m	420	
<b><u>FENCING</u></b>				
Fencing supplied and installed complete, including all posts, stays, standards, droppers, excavation, backfilling, concrete bases, etc. Dwg 2334.50.02.SUA.14.U005				
4.8	1. 1.8m high to exterior of decanting demarcated area	m	405	
4.9	2. 1.2m Within the decanting and around house stands	m	980	
Gates supplied and installed complete, including all posts, stays, hinges, locking devices, excavation, backfilling, concrete bases, etc				
4.10	1. Single gate size 1.2m high	no	30	
4.11	2. Double gate size 1.8m high	no	2	
<b><u>REPAIRWORK / MAINTENANCE / UPKEEP OF DECANTING UNITS</u></b>				
4.12	The contractor shall make provision for the repair work / maintenance / upkeep of the decanting units, fencing and services to and from the decanting units during the period of the contract. The value will be paid proportionally in accordance to the duration of the contract. The value shall include, but limited to, all labour, materials, equipment, plant, transport, fuels, profits, management, head office costs, etc.	sum		
<b><u>DISESTABLISHMENT OF DECANTING AREA AND REHABILITATION OF AREA</u></b>				
4.13	On completion of the project, disestablish and rehabilitate the demarcated decanting area complete. This shall include, but not limited to removal of the rental units and the removal of all: earthworks and concrete works; services; fencing and gates; parking areas; etc. Rehabilitate the site to its original condition and to the approval of the Environmental Consultant	sum		
<b>BILL NO. 4 DECANTING - OPTION 3</b>				
Carried forward to Summary of Bill of Quantities				R

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Contract: 2334-50-02/03 (Remedial work to 491 RDP Houses)

Part C2: Pricing Data

Section C2.3: Summary of Bills (Preliminary & General)

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**DEPARTMENT OF COOPERATIVE GOVERNANCE,  
HUMAN SETTLEMENT & TRADITIONAL AFFAIRS**

LERATO PARK INTEGRATED HOUSING DEVELOPMENT  
Remedial work to 491 RDP Houses

**CONTRACT 2334-50-02/02**

**Summary of Bill of Quantities**

**DECANTING OPTION 1   DECANTING OPTION 2   DECANTING OPTION 3**

Bill No.	Description	Amount ( R )	Amount ( R )	Amount ( R )
	<b>SCHEDULE 1 - PRELIMINARY &amp; GENERAL</b>			
1	Preliminary and General			
2	Provisional Sums and Prime Cost Items			
3	Dayworks			
4	Decanting			
<b>Total Amount of SCHEDULE 1 Carried Forward to Summary of Schedules</b>				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C2.2-29

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

LERATO PARK INTEGRATED HOUSING DEVELOPMENT


**CONTRACT 2334-50-02/03**

Remedial work to 491 RDP Houses


**VOLUME 1  
PORTION 2: CONTRACT**

**Section C2.2  
Schedule No. 2  
Buildings**


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Contractor




Witness 1




Witness 2



Employer



Witness 1



Witness 2

**SCHEDULE 2 - BUILDING WORK**

ITEM	Description	Unit	Qty	Rate (R)	Amount (R)
	<p><b><u>BILL NO. 1</u></b></p> <p><b><u>ALTERATIONS (DEMOLITION &amp; REPLACEMENT)</u></b></p> <p><b>SUPPLEMENTARY PREAMBLES</b></p> <p><b>View site</b></p> <p>Before submitting his tender the contractor shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials contained in the buildings or portions of the buildings to be demolished. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained</p> <p><b>Explosives</b></p> <p>No explosives whatsoever may be used for demolition purposes unless otherwise stated</p> <p><b>General</b></p> <p>The contractor shall carry out the whole of the works with as little mess and noise as possible and with a minimum of disturbance to adjoining premises and their tenants. He shall provide proper protection and provide, erect and remove when directed, any temporary tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the principal agent</p> <p>Water supply pipes and other piping that may be encountered and found necessary to disconnect or cut, shall be effectually stopped off or grubbed up and removed, and any new connections that may be necessary shall be made with proper fittings, to the satisfaction of the principal agent</p> <p>Doors, fanlights, fittings, frames, linings, etc. which are to be re-used shall be thoroughly overhauled before re fixing including taking off, easing and rehanging, cramping up, re-wedging as required and making good cramps, dowels, etc., and easing, oiling, adjusting and repairing ironmongery as necessary, replacing any glass damaged in removal or subsequently and stopping up all nail and screw holes with tinted plastic wood to match timber, unless otherwise described. Re-painting or re-varnishing is given separately</p> <p>Prices for taking out of doors, windows, etc. shall include for removal of all beads, architraves, ironmongery, etc.</p>				
	Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



Brought Forward				
	<p>Prices for taking out and removing doors and frames shall include for removing door stops, cabin hooks, etc. and making good floor and wall finishes to match existing</p> <p>With regard to building up of openings in existing walls, cement screeds and paving, granolith, tops of walls, etc., shall be levelled and prepared for raising of brickwork</p> <p>Making good of finishes shall include making good of the brick and concrete surfaces onto which the new finishes are applied, where necessary</p> <p>The contractor will be required to take all dimensions affecting the existing buildings on the site and he will be held solely responsible for the accuracy of all such dimensions where used in the manufacture of new items (doors, windows, fittings, etc.)</p> <p><b>Removal</b></p> <p>"Removal" shall include for the removal off site and dumped at a location identified by the contractor and approved by the principal agent, unless defined differently in the description</p> <p><u>The following drawings shall be applicable to this bill:</u></p> <ul style="list-style-type: none"> <li>- 2334.50.02.SUA.A001 to A004</li> <li>- 2334.50.02.SUA.U001 to 2</li> <li>- 2334.50.02.SUA.U003 to 4</li> </ul> <p><b><u>DEMOLITION OF BUILDINGS</u></b></p> <p><b><u>Earthworks</u></b></p> <p><b>EXCAVATIONS, ETC.</b></p> <p><b>Excavation in earth for platform (including clearing of stand)</b></p> <p>Not exceeding 1m deep</p>			
	1.1 - Freestanding units	m <sup>3</sup>	41	
	1.2 - Semidetached units	m <sup>3</sup>	66	
	<b>Extra over all excavations for carting away</b>			
	Surplus material from excavations and/or stock piles on site			
	1.3 - Freestanding units	m <sup>3</sup>	41	
	1.4 - Semidetached units	m <sup>3</sup>	66	
Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

[illegible]

Brought Forward				
<b><u>Carpentry and joinery</u></b>				
<b>Carefully remove internal doors and internal door ironmongery and store at location identified by the contractor, for reinstallation after reconstruction of building</b>				
1.17	- Freestanding units	no	3	
1.18	- Semidetached units	no	6	
<b>Remove doors and door ironmongery (813x2032mm high timber door)</b>				
1.19	- Freestanding units	no	2	
1.20	- Semidetached units	no	4	
<b>Carefully remove kitchen sink, including all plumbing fittings and store at location identified by the contractor, for reinstallation after reconstruction of building</b>				
1.21	- Freestanding units	no	1	
1.22	- Semidetached units	no	2	
<b><u>Ceilings, Partitions and Access</u></b>				
<b>Remove PVC ceiling panels (including battens), cornices and trap doors</b>				
1.23	- Freestanding units (36m <sup>2</sup> floor area per house)	no	1	
1.24	- Semidetached units (31m <sup>2</sup> floor area per house)	no	2	
<b><u>Ironmongery</u></b>				
<b>Carefully remove curtain tracks and store at location identified by the contractor, for reinstallation after reconstruction of building</b>				
1.25	- Freestanding units	no	5	
1.26	- Semidetached units	no	10	
<b><u>Metal Work</u></b>				
<b>Carefully remove door frames and store at location identified by the contractor, for reinstallation after reconstruction of building</b>				
1.27	- Freestanding units	no	5	
1.28	- Semidetached units	no	10	
<b>Carefully remove steel window frames and store at location identified by the contractor, for reinstallation after reconstruction of building, including removal of damaged glazing</b>				
1.29	- Freestanding units	no	5	
Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

				Brought Forward	
1.30	- Semidetached units	no	10		
<b>Plastering</b>					
<b>Remove 30mm thick screed</b>					
1.31	- Freestanding units	m <sup>2</sup>	37		
1.32	- Semidetached units	m <sup>2</sup>	64		
<b>Remove once coat plaster (Internal &amp; External)</b>					
1.33	- Freestanding units	m <sup>2</sup>	190		
1.34	- Semidetached units	m <sup>2</sup>	366		
<b>Tiling</b>					
<b>Remove floor tiles, vinyl, wall tiles and weather strips</b>					
1.35	- Freestanding units	m <sup>2</sup>	37		
1.36	- Semidetached units	m <sup>2</sup>	64		
<b>Plumbing</b>					
<b>Remove all water and sewer reticulation (Internally &amp; Externally)</b>					
1.37	- Freestanding units (Cost per house complete)	no	1		
1.38	- Semidetached units (Cost per house complete)	no	2		
<b>Carefully remove toilets, basins, sinks, all plumbing taps and fittings, ironmongery, etc and store at location identified by the contractor, for reinstallation after reconstruction of building. A single plumbing point measured will include all taps, fitting, ironmongery, etc.</b>					
1.39	- Freestanding units (Cost per plumbing point)	no	4		
1.40	- Semidetached units (Cost per plumbing point)	no	8		
<b>Electrical Work</b>					
<b>Carefully remove all light fittings, switches, plugs, DB boards, stoves and store at location identified by the contractor, for reinstallation after reconstruction of building</b>					
1.41	- Freestanding units (Cost per house complete)	No	1		
1.42	- Semidetached units (Cost per house complete)	No	2		
<b>Remove all electrical reticulation including ducting</b>					
1.43	- Freestanding units (Cost per house complete)	no	1		
1.44	- Semidetached units (Cost per house complete)	no	2		
				Carried Forward	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward				
<b>External Works</b>				
<b>Carefully remove paving (Discard haunching) and store at location identified by the contractor, for reinstallation after reconstruction of building</b>				
1.45	- Freestanding units (Cost per unit complete)	m <sup>2</sup>	8	
1.46	- Semidetached units (Cost per unit complete)	m <sup>2</sup>	16	
<b>Carefully remove diamond mesh fencing (including posts and gates) and store at location identified by the contractor, for reinstallation after reconstruction of building</b>				
1.47	- Freestanding units (Cost per unit complete)	m	8	
1.48	- Semidetached units (Cost per unit complete)	m	12	
Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward				
<b>NEW BUILDINGS</b>				
<b>Notes for preamble</b>				
The headings highlighted in grey below shall be in line with the Supplementary Preamble defined in the bills to follow.				
<b>Earthworks</b>				
<b>Excavation in earth not exceeding 1m deep</b>				
Raft foundations in trenches				
1.49	- Freestanding units	m <sup>3</sup>	7	
1.50	- Semidetached units	m <sup>3</sup>	12	
<b>Extra over all excavations for carting away</b>				
Surplus material from excavations and/or stock piles on site				
1.51	- Freestanding units	m <sup>3</sup>	2	
1.52	- Semidetached units	m <sup>3</sup>	4	
<b>Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density for sloping of ground level away from houses</b>				
1.53	- Freestanding units	m <sup>3</sup>	2	
1.54	- Semidetached units	m <sup>3</sup>	4	
<b>Keeping excavations free of water</b>				
Keeping excavations free of water other than subterranean water				
1.55	- Freestanding units	Item	1	
1.56	- Semidetached units (x2 Buildings)	Item	1	
<b>G7 type earth filling supplied by the contractor, compacted to 95% Mod AASHTO density (From commercial sources)</b>				
to form platforms				
1.57	- Freestanding units	m <sup>3</sup>	41	
1.58	- Semidetached units	m <sup>3</sup>	66	
Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward				
<b>Compaction of surfaces</b>  Compaction of ground surface under floors, etc. including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density				
1.59	- Freestanding units	m <sup>2</sup>	82	
1.60	- Semidetached units	m <sup>2</sup>	132	
<b>Prescribed density tests on filling</b>  Modified AASHTO Density test				
1.61	- Freestanding units	No	2	
1.62	- Semidetached units	No	4	
<b>SOIL POISONING</b>  <b>Weedkiller (active ingredients metalaclor 102,8 g/l, terbitilasien 248,6 g/l and atrasien 248,6 g/l) mixed in the proportion of 100 ml weedkiller to 100 l water and applied at a rate of 10 l/m<sup>2</sup></b>  Under paving, etc.				
1.63	- Freestanding units	m <sup>2</sup>	82	
1.64	- Semidetached units	m <sup>2</sup>	132	
<b>Soil insecticide in accordance with SANS 5859</b>  Under floors, etc. including forming and poisoning shallow furrows against foundation walls, etc., filling in furrows and ramming				
1.65	- Freestanding units	m <sup>2</sup>	82	
1.66	- Semidetached units	m <sup>2</sup>	132	
<b>Reinforced concrete</b>  <b>25MPa / 19mm Concrete</b>  Reinforced concrete rafts on waterproofing				
1.67	- Freestanding units	m <sup>3</sup>	16	
1.68	- Semidetached units	m <sup>3</sup>	26	
<b>TEST CUBES</b>  Making and testing set of three 150 x 150 x 150mm concrete strength test cubes				
1.69		Sets	5	
Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward				
<b>CONCRETE SUNDRIES</b>				
<b>Finishing top surfaces of concrete smooth with a power float</b>				
Surface beds, etc				
1.70	- Freestanding units	m <sup>2</sup>	82	
1.71	- Semidetached units	m <sup>2</sup>	132	
<b>SMOOTH FORMWORK (DEGREE OF ACCURACY</b>				
<b>Rough formwork to sides</b>				
Sides of reinforced concrete rafts and aprons				
1.72	- Freestanding units	m <sup>2</sup>	12	
1.73	- Semidetached units	m <sup>2</sup>	20	
<b>REINFORCEMENT</b>				
<b>Mild steel reinforcement to structural concrete work</b>				
1.74	All diameter bars	kg	110	
<b>High tensile steel reinforcement to structural concrete work</b>				
1.75	All diameter bars	kg	2100	
<b>Mesh reinforcement</b>				
Ref 245 Mesh steel fabric reinforcement laid in surface beds, etc lapped minimum 200mm along edges and ends				
1.76	- Freestanding units	m <sup>2</sup>	82	
1.77	- Semidetached units	m <sup>2</sup>	132	
<b>Masonry</b>				
<b>SUPERSTRUCTURE</b>				
<b>Brickwork of 140mm wide concrete "maxi bricks" (7MPa nominal compressive strength) or similar approved in class II mortar walls, etc.</b>				
140mm Internal brick walls				
1.78	- Freestanding units	m <sup>2</sup>	32	
1.79	- Semidetached units	m <sup>2</sup>	60	
140mm external brick walls				
1.80	- Freestanding units	m <sup>2</sup>	70	
1.81	- Semidetached units	m <sup>2</sup>	130	
Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



				Brought Forward	
	140mm brick walls for baths				
1.82	- Freestanding units	m <sup>2</sup>	2		
1.83	- Semidetached units	m <sup>2</sup>	3		
	140mm half brick walls for beam filling				
1.84	- Freestanding units	m	8		
1.85	- Semidetached units	m	14		
	<b>Joint forming material in movement joints</b>				
	10mm Bitumen impregnated fibre board or similar approved built in vertically between brick walls				
1.86	- Freestanding units	m <sup>2</sup>	0		
1.87	- Semidetached units	m <sup>2</sup>	31		
	10mm Bitumen impregnated fibre board or similar approved built in vertically in wall expansion joints				
1.88	- Freestanding units	m <sup>2</sup>	4		
1.89	- Semidetached units	m <sup>2</sup>	8		
	<b>2,8mm Galvanised brick reinforcement</b>				
	110mm Wide brick reinforcement built in horizontally				
1.90	- Freestanding units	m	653		
1.91	- Semidetached units	m	1210		
	<b>Prestressed fabricated concrete lintels including necessary temporary supports</b>				
	140 x 90mm Lintels in lengths not exceeding 3m				
1.92	- Freestanding units	m	17		
1.93	- Semidetached units	m	34		
	<b>Galvanised wire ties, etc.</b>				
	4mm Diameter roof tie 2m girth bent double, with one end built into brickwork and other end fixed to roof trusses (5x brick course deep)				
1.94	- Freestanding units	no	24		
1.95	- Semidetached units	no	44		
	<b>Galvanised hoop iron cramps, ties, etc.</b>				
	40 x 1,6mm wall tie strips built in horizontally and crimped in brick walls for vertical joints				
				Carried Forward	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

				Brought Forward	
1.96	- Freestanding units	no	54		
1.97	- Semidetached units	no	96		
<b>Waterproofing</b>					
<b>DAMPPROOFING OF WALLS AND FLOORS</b>					
<b>One layer Gundle® API A.T Brickgrip DPC 375µm damp proof course (or similar approved) in solid walls conforming to SANS 952-1:2011 laid with minimum 150mm overlaps.</b>					
In walls					
1.98	- Freestanding units	m²	6		
1.99	- Semidetached units	m²	10		
<b>One layer Gundle® API A.T USB Green 250µm damp proof membrane (or similar approved) under concrete raft surface conforming to SANS 952-1:2011 laid with minimum 150mm overlaps and sealed with Gunplas pressure sensitive tape.</b>					
Under rafts					
1.100	- Freestanding units	m²	55		
1.101	- Semidetached units	m²	72		
Under Aprons and walkways					
1.102	- Freestanding units	m²	50		
1.103	- Semidetached units	m²	66		
<b>SEALING STRIPS, JOINT SEALANTS, ETC</b>					
<b>Polyurethane sealant or similar approved, including backing cord, bond breaker, primer, etc</b>					
10mm wide x 10mm thick expansion joints in external walls, including raking out expansion joint filler as necessary					
1.104	- Freestanding units	m	11		
1.105	- Semidetached units	m	22		
Ditto, but for internal walls					
1.106	- Freestanding units	m	37		
1.107	- Semidetached units	m	64		
				Carried Forward	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward				
<b><u>Roof Covering &amp; Roof Structure</u></b>				
<b>Reinstall roof structure complete, including light weight steel structure, roof tiles, etc.</b> <b>Rate to include for replacement of material if damaged.</b> <b>Refer to Architect's specification for finishing details if any items are to be replaced. The rate shall include for an engineer's roofing certificate, once installation is complete.</b> <b>Material to be obtained from the contractor's place of storage.</b>				
1.108	- Freestanding units (42m <sup>2</sup> floor area per house)	no	1	
1.109	- Semidetached units (36m <sup>2</sup> floor area per house)	no	2	
<b><u>FACIA, BARGE &amp; DUCT ETC.</u></b>				
<b>Medium density fibre-cement fascia and barge boards:</b>  225 x 12mm thick "Everite" (or similar approved) medium density plain ungrooved Nutec fascia boards (Code: 41-202), fixed to lightweight steel batten and support battens between rafters twice screwed with 12 x 40mm countersunk non corrosive screws at 900mm centres to support battens with PVC H-profile fascia joiner between boards and at board ends. Fixing holes in fascia to be predrilled with backing support to prevent rear splitting of board.				
1.110	- Freestanding houses	m	17	
1.111	- Semi-detached houses	m	32	
200 x 80mm "Everite" (Code: 721-731) (or similar approved) moulded Nutec moulded barge boards, fixed to lightweight steel batten twice screwed with 12 x 40mm countersunk non corrosive screws with PVC H-profile barge board joiners between boards and at roof apex. Fixing holes in fascia to be predrilled with backing support to prevent rear splitting of board.				
1.112	- Freestanding houses	m	15	
1.113	- Semi-detached houses	m	26	
<b><u>Carpentry and joinery</u></b>				
<b>Supply and install external doors and external door ironmongery complete. Refer to Structural &amp; Finishes specification for finishing details if any items are to be replaced.</b>				
1.114	- Freestanding units	no	2	
1.115	- Semidetached units	no	4	
<b>Re install internal doors and internal door ironmongery complete. Refer to Structural &amp; Finishes specifications for finishing details if any items are to be replaced.</b>				
1.116	- Freestanding units	no	3	
1.117	- Semidetached units	no	6	
Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward				
	<p><b>Reinstall kitchen sink complete. Rate to include for replacement of material if damaged. Refer to Structural &amp; Finishes specification and drawings for finishing details if any items are to be replaced. Material to be obtained from the contractor's place of storage</b></p>			
1.118	- Freestanding units	no	1	
1.119	- Semidetached units	no	2	
<b>Ceilings, Partitions and Access</b>				
<b>NAILED-UP CEILINGS</b>				
6.4mm thick Gypsum "Rhino" board or similar approved fixed to lightweight steel branderling and in one direction with H-section metal corner strips.				
Horizontal ceilings, including all opening for light fittings and fixed to lightweight steel branderling, installed at maximum 400mm centres. <b>(Including branderling)</b>				
1.120	- Freestanding units	m²	37	
1.121	- Semidetached units	m²	65	
<b>CORNICE</b>				
<b>Meranti timber cornice with rounding fixed to wall with "DAS 2" in Acrylic adhesive (or similar approved cornice adhesive). Seal between cornice &amp; ceiling and cornice &amp; wall with cornice adhesive.</b>				
40x16mm meranti timber cornice with rounding <b>(Internal)</b> see drg 2334.50.02.SUA.U001 to U004				
1.122	- Freestanding units	m	45	
1.123	- Semidetached units	m	90	
<b>INSULATION, ETC.</b>				
<b>"Brits Insulation Systems Isotherm" or similar approved polyester thermal insulation (Density: 10 kg/m³)</b>				
135mm thick insulation in blanket form closely fitted and laid on top of branderling between roof timbers, etc.				
1.124	- Freestanding units	m²	37	
1.125	- Semidetached units	m²	65	
Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward				
<b>Metal Work</b>				
<b>STEEL WINDOWS, DOORS, ETC.</b>				
Reinstall steel window frames. Rate to include for replacement of material if damaged. Refer to Structural & Finishes specifications for finishing details if any items are to be replaced. Material to be obtained from the contractor's place of storage.				
1.126	- Freestanding units	no	5	
1.127	- Semidetached units	no	10	
Reinstall steel door frames. Rate to include for replacement of material if damaged. Refer to Structural & Finishes specifications for finishing details if any items are to be replaced. Material to be obtained from the contractor's place of storage.				
1.128	- Freestanding units	no	5	
1.129	- Semidetached units	no	10	
<b>Plastering</b>				
<b>INTERNAL PLASTER</b>				
<b>Cement plaster steel trowelled, on brickwork</b>				
On walls (Ensure a homogeneous plaster finish between old and new by applying an approved skimming agent, if necessary)				
1.130	- Freestanding units	m <sup>2</sup>	120	
1.131	- Semidetached units	m <sup>2</sup>	240	
On narrow widths				
1.132	- Freestanding units	m <sup>2</sup>	3	
1.133	- Semidetached units	m <sup>2</sup>	5	
<b>EXTERNAL PLASTER</b>				
<b>Cement plaster bagwashed, on brickwork</b>				
On walls				
1.134	- Freestanding units	m <sup>2</sup>	73	
1.135	- Semidetached units	m <sup>2</sup>	130	
On narrow widths (Reveals)				
1.136	- Freestanding units	m <sup>2</sup>	3	
1.137	- Semidetached units	m <sup>2</sup>	5	
Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward				
	Plasterbands: Hack off all plaster reveals and up to 150mm wide around windows and doors (Exterior face), and re-plaster 15mm thick within reveal and provide a 150mm wide x 30mm thick plaster band			
1.138	- Freestanding units	m <sup>2</sup>	8	
1.139	- Semidetached units	m <sup>2</sup>	16	
<b>Plumbing</b>				
<b>Above Ground Domestic Water Supply.</b>				
<b>UMG156 Pipe UNITWIST MONOGOLD. (Bracketry Included In Rate)</b>				
15mm Pipe surface mounted in external wall and painted				
1.140	- Freestanding units	m	15	
1.141	- Semidetached units	m	30	
15mm Pipe chased into walls				
1.142	- Freestanding units	m	3	
1.143	- Semidetached units	m	6	
<b>UNITWIST Compression Fittings.</b>				
Tee equal 15mm x 15mm x 15mm				
1.144	- Freestanding units	No	3	
1.145	- Semidetached units	No	6	
Elbow C x C 15mm				
1.146	- Freestanding units	No	2	
1.147	- Semidetached units	No	4	
Elbow C x C 15mmx22mm				
1.148	- Freestanding units	No	1	
1.149	- Semidetached units	No	2	
Elbow wall plate C x F 15mm x 1/2" BSPT				
1.150	- Freestanding units	No	1	
1.151	- Semidetached units	No	2	
Through wall fitting to tap				
1.152	- Freestanding units	No	2	
1.153	- Semidetached units	No	4	
Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward				
	<b>Fitments</b>			
	Cobra Hose Bibtap RbandPI.H/Union P/209/15			
1.154	- Freestanding units	No	1	
1.155	- Semidetached units	No	2	
	Stopcock rough brass FXF BS1010 15mm or similar approved			
1.156	- Freestanding units	No	1	
1.157	- Semidetached units	No	2	
	ANGLE VALVE 15x15mm PVC CP or similar approved			
1.158	- Freestanding units	No	1	
1.159	- Semidetached units	No	2	
	Libra Value 17MAB01-H Drop-In Bath - White (1700 x 700mm)			
1.160	- Freestanding units	No	1	
1.161	- Semidetached units	No	2	
	<b>Reinstall toilets, sinks, basins, baths, showers, all plumbing taps and fittings. Material to be obtained from the contractor's place of storage. A single plumbing point measured will include all taps, fitting, ironmongery, etc.</b>			
1.162	- Freestanding units (All plumbing points)	no	1	
1.163	- Semidetached units (All plumbing points)	no	2	
	<b>WASTE RETICULATION</b>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Note:</u>			
	Refer to drawings for specification of plumbing fittings, etc			
	Plumbing measured in elements (plumbing points) and shall be priced accordingly. Prices must include for supply and installation of all discharge piping from the plumbing points to the perimeter of the building complete.			
	Supply and discharge piping from the perimeter of the building up to the connection point on the site, will be measured separately, and must be priced accordingly.			
	The external supply and discharge piping must include all items such as, excavation, bedding, backfilling, pipe fittings, manholes, etc complete			
	<u>Plumbing points for 1 house</u>			
	WC			
Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

				Brought Forward	
1.164	- Freestanding units	No	1		
1.165	- Semidetached units	No	2		
Hwb					
1.166	- Freestanding units	No	1		
1.167	- Semidetached units	No	2		
Sink (Including wall bracket)					
1.168	- Freestanding units	No	1		
1.169	- Semidetached units	No	2		
Shower					
1.170	- Freestanding units	No	0		
1.171	- Semidetached units	No	2		
Bath					
1.172	- Freestanding units	No	1		
1.173	- Semidetached units	No	0		
<u>External discharge piping, etc</u>					
<u>Note:</u>					
Sewer piping shall have a minimum cover of 600mm					
110mm Dia uPVC sewer pipe in ground (all depths)					
(Including rodding eye at head of drain and inspection eye at each junction. Incl. marker blocks for each)					
1.174	- Freestanding units	m	10		
1.175	- Semidetached units	m	20		
<u>Glazing</u>					
<b>GLAZING TO STEEL WITH PUTTY</b>					
Removal of broken glass panel and dispose at location identified by contractor. Replace with obscure glass 3mm thick, to be installed in steel window frame with approved glazing putty, all in strict accordance to manufacturer's specifications.					
"Powafix" (or similar approved) glazing putty for steel windows to be applied in strict accordance to manufacturers specifications.					
Glazing to NC4F steel window frames					
1.176	- Freestanding units	No	3		
1.177	- Semidetached units	No	6		
				Carried Forward	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



Brought Forward				
	Obscured glazing to NC1 steel window frames			
1.178	- Freestanding units	No	1	
1.179	- Semidetached units	No	2	
	Glazing to NC2 steel window frames			
1.180	- Freestanding units	No	1	
1.181	- Semidetached units	No	0	
	Glazing to NE1 steel window frames			
1.182	- Freestanding units	No	0	
1.183	- Semidetached units	No	2	
<b>Painting</b>				
<b>EXTERNAL PAINT</b>				
<b>ON METAL SURFACES</b>				
	<b>Paintwork to Previously Painted Surfaces</b> <i>(Currently includes final coat)</i>			
	Remove surface contaminants using "Metalcare Aquasolv Degreaser (GR 1)" with bristle brush or Brillo pads. Remove rust and millscale by abrasive blasting to ISO 8501 - 01:1988 - Sa2½ or by hand/mechanical wire brushing to St3 of the same standard. Prime with one coat "Plascoprime 170 Primer (UC170)" and finish with <u>one</u> coats "Professional Brilliant White Gloss Enamel (PSB 1000)" with a guarantee of 3 years			
	Window Frames (Both Sides)			
1.184	- Freestanding units	m²	15	
1.185	- Semidetached units	m²	25	
	Door frames (Both sides)			
1.186	- Freestanding units	m²	5	
1.187	- Semidetached units	m²	10	
<b>ON EXTERNAL FLOATED PLASTER SURFACES</b>				
	<b>New Surfaces &amp; Old Surfaces</b>			
	Prime with one coat Plascon Plaster Primer (UC56) and finish with two coats Micatex (BBO 300), with 10 years guarantee			
	Walls			
1.188	- Freestanding units	m²	73	
1.189	- Semidetached units	m²	130	
	Window sills			
Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

				Brought Forward	
1.190	- Freestanding units	m <sup>2</sup>	4		
1.191	- Semidetached units	m <sup>2</sup>	6		
	Window reveals				
1.192	- Freestanding units	m <sup>2</sup>	4		
1.193	- Semidetached units	m <sup>2</sup>	6		
	Window plaster bands				
1.194	- Freestanding units	m <sup>2</sup>	4		
1.195	- Semidetached units	m <sup>2</sup>	8		
<b>ON WOOD SURFACES</b>					
<b>New Surfaces</b> <b>(Currently - raw surface)</b>  Surface to be assessed and the appropriate surface preparation clauses selected for remedial procedure. Prime with one coat "Woodcare Ultra Varnish (X33/X44)" and two coats "Woodcare Ultra Varnish (X33/X44)", with a guarantee of 4 years  External timber doors (Both sides)					
1.196	- Freestanding units	m <sup>2</sup>	8		
1.197	- Semidetached units	m <sup>2</sup>	15		
<b>ON FIBRE-CEMENT BOARD SURFACES</b>					
<b>New Surfaces</b>  Surface to be assessed and the appropriate surface preparation clauses selected for remedial procedure. Prime one coat Bonding Liquid (CVI14) and two coats Nuroof Cool Acrylic Roof Paint (TRP) with a guarantee of 12 years  Facia & Barge Boards					
1.198	- Freestanding units	m <sup>2</sup>	16		
1.199	- Semidetached units	m <sup>2</sup>	33		
				Carried Forward	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward				
<b>INTERNAL</b>				
<b>ON METAL SURFACES</b>				
<b>Paintwork to Previously Painted Surfaces</b> <i>(Currently includes final coat)</i>  Remove surface contaminants using "Metalcare Aquasolv Degreaser (GR 1)" with bristle brush or Brillo pads. Remove rust and millscale by abrasive blasting to ISO 8501 - 01:1988 - Sa2½ or by hand/mechanical wire brushing to St3 of the same standard. Prime with one coat "Plascoprime 170 Primer (UC170)" and finish with one coats "Professional Brilliant White Gloss Enamel (PSB 1000)" with a guarantee of 3 year  Door frames (Internal)				
1.200	- Freestanding units	m²	7	
1.201	- Semidetached units	m²	14	
<b>ON WOOD SURFACES</b>				
<b>Paintwork to Previously Painted Surfaces</b> <i>(Currently includes final coat)</i>  Surface to be assessed and the appropriate surface preparation clauses selected for remedial procedure. Prime with one coat Wood Primer (UC2) and finish with one coats Velvagio Water Based (VLW), with a guarantee of 12 years  Internal timber doors				
1.202	- Freestanding units	m²	11	
1.203	- Semidetached units	m²	22	
<b>ON INTERNAL FLOATED PLASTER SURFACES</b>				
<b>New Surfaces</b>  Prime with one coat "Professional Plaster Primer (PP700)" and finish with two coats "Professional Superior Low Sheen (PEM 1000)", with a guarantee of 7 years  Walls				
1.204	- Freestanding units	m²	130	
1.205	- Semidetached units	m²	245	
<b>CEILINGS</b>				
<b>New Surfaces &amp; Old Surfaces</b> <i>(Currently - raw surface)</i>  Two coats "Professional Superior Low Sheen (PEM 1000)", with a guarantee of 7 years				
Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

[illegible]

SCHEDULE 2 - BUILDING WORK					
ITEM	Description	Unit	Qty	Rate (R)	Amount (R)
	<p><b><u>BILL NO. 2</u></b>  <b><u>ALTERATIONS (INTERNAL &amp; EXTERNAL)</u></b></p> <p><b>SUPPLEMENTARY PREAMBLES</b></p> <p><b>View site</b></p> <p>Before submitting his tender the contractor shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials contained in the buildings or portions of the buildings to be demolished. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained</p> <p><b>Explosives</b></p> <p>No explosives whatsoever may be used for demolition purposes unless otherwise stated</p> <p><b>General</b></p> <p>The contractor shall carry out the whole of the works with as little mess and noise as possible and with a minimum of disturbance to adjoining premises and their tenants. He shall provide proper protection and provide, erect and remove when directed, any temporary tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the principal agent</p> <p>Water supply pipes and other piping that may be encountered and found necessary to disconnect or cut, shall be effectually stopped off or grubbed up and removed, and any new connections that may be necessary shall be made with proper fittings, to the satisfaction of the principal agent</p> <p>Doors, fanlights, fittings, frames, linings, etc. which are to be re-used shall be thoroughly overhauled before re fixing including taking off, easing and rehanging, cramping up, re-wedging as required and making good cramps, dowels, etc., and easing, oiling, adjusting and repairing ironmongery as necessary, replacing any glass damaged in removal or subsequently and stopping up all nail and screw holes with tinted plastic wood to match timber, unless otherwise described. Re-painting or re-varnishing is given separately</p> <p>Prices for taking out of doors, windows, etc. shall include for removal of all beads, architraves, ironmongery, etc.</p> <p>Prices for taking out and removing doors and frames shall include for removing door stops, cabin hooks, etc. and making good floor and wall finishes to match existing</p>				
	Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward				
	<p>With regard to building up of openings in existing walls, cement screeds and pavings, granolith, tops of walls, etc., shall be levelled and prepared for raising of brickwork</p> <p>Making good of finishes shall include making good of the brick and concrete surfaces onto which the new finishes are applied, where necessary</p> <p>The contractor will be required to take all dimensions affecting the existing buildings on the site and he will be held solely responsible for the accuracy of all such dimensions where used in the manufacture of new items (doors, windows, fittings, etc.)</p> <p><b>Removal</b></p> <p>"Removal" shall include for the removal off site and dumped at a location identified by the contractor and approved by the principal agent, unless defined differently in the description</p>			
	<b>EXTERNAL</b>			
	<b><u>REMOVAL OF EXISTING WORK</u></b>			
	<b><u>Concrete, Masonry and roof coverings</u></b>			
	<p><b>Hacking up/off and removing granolith, screeds, plaster, etc. from concrete or brickwork and preparing surfaces for new screed, plaster, tile finishes, etc.</b></p> <p>Remove bag wash from walls, including reveals and sides of rafts</p>			
2.1	- Freestanding units	m2	4565	
2.2	- Semidetached units	m2	1925	
2.3	- Duplex units	m2	3365	
	Remove bag wash/"Africoat one coat PVC" from external walls/slabs adjacent to suspended slabs, 250mm wide			
2.4	- Duplex units	m2	705	
	<b>Breaking down and removing brickwork, etc. (including internal plaster &amp; external bagging)</b>			
	Remove 140mm thick cement brick wall at cracks and at required openings, keeping brick force intact. See drg 2334.50.50.SUA.14.U011 &U013			
2.5	- Freestanding units	m2	530	
2.6	- Semidetached units	m2	215	
2.7	- Duplex units	m2	4075	
Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward				
	Remove 140mm thick cement brick wall above windows & doors to insert lintel keeping brick force intact Refer to drg 2334.50.50.SUA.14.U011 & U013			
2.8	- Freestanding units	m2	135	
2.9	- Semidetached units	m2	55	
	Remove 140mm thick cement brick wall for suspended slab pockets 600mm long x 140mm wide x 170mm high including all plaster and bagwash. Refer to dwg. 2334.50.02.SUA.14.U022			
2.10	- Duplex units	no	675	
	Remove loose and cracked beam filling/"Africoat one coat PVC" (150mm wide)			
2.11	- Freestanding units	m	6390	
2.12	- Semidetached units	m	2770	
2.13	- Duplex units	m	705	
	<b>Remove concrete, concrete elements, paving etc.</b>			
	Remove 600mmx100mm thick concrete apron			
2.14	- Freestanding units	m³	72	
2.15	- Semidetached units	m³	25	
2.16	- Duplex units	m³	72	
	Carefully remove concrete gullies and store at location identified by the contractor, for reinstallation after re-pairing of sewer connection (Breakage measured elsewhere)			
2.17	- Freestanding units	no	239	
2.18	- Semidetached units	no	114	
2.19	- Duplex units	no	135	
	Carefully remove cement paving blocks and store on erf for owners use			
2.20	- Freestanding units	m²	245	
2.21	- Semidetached units	m²	117	
2.22	- Duplex units	m²	138	
Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward				
	<b>Taking down and removing roofs, panelling, ceilings, partitions, etc.</b>  Carefully remove roof tiles and store at location identified by the contractor, for reinstallation after re-placing of the roof underlay. All roof tiles damaged shall be discard at location identified by the contractor			
2.23	- Freestanding units	m2	12300	
2.24	- Semidetached units	m2	5500	
	Remove roof underlay and discard at location identified by the contractor			
2.25	- Freestanding units	m2	2460	
2.26	- Semidetached units	m2	1100	
	Remove ridge caps and discard at location identified by the contractor			
2.27	- Freestanding units	m	1890	
2.28	- Semidetached units	m	835	
<b>Carpentry, Ironmongery &amp; Metal Work</b>				
	Remove doors and door ironmongery (new door & ironmongery measured elsewhere)			
2.29	- Freestanding units	no	478	
2.30	- Semidetached units	no	228	
2.31	- Duplex units	no	405	
	Remove damaged 813 x 2031mm high steel door frame in 140mm brick wall and break out additional brickwork to allow for correct dimensions of the new door frame, including replacing door frame, plaster repairwork and painting to remedial work areas.			
2.32	- Freestanding units	no	72	
2.33	- Semidetached units	no	35	
2.34	- Duplex units	no	405	
<b>Plumbing</b>				
	<b>Remove plumbing, plumbing fittings etc.</b>			
	Remove external plastic bip-tap			
2.35	- Freestanding units	no	239	
2.36	- Semidetached units	no	114	
2.37	- Duplex units	no	135	
Carried Forward				

 Contractor

 Witness 1

 Witness 2

 Employer

 Witness 1

 Witness 2



				Brought Forward	
	Remove wall mounted poly-cop water supply piping, fixing brackets, fittings (bends, tee's, etc.), etc. To be disposed of at location identified by the contractor				
2.38	- Freestanding units (house complete)	no	239		
2.39	- Semidetached units (house complete)	no	114		
2.40	- Duplex units (house complete)	no	135		
<b>INTERNAL</b>					
<b>REMOVAL OF EXISTING WORK</b>					
<b>Concrete, masonry and finishes</b>					
<b>Hacking up/off and removing ceramic tiles including removing mortar bed or adhesive from concrete or brickwork and preparing surfaces for new screed, plaster, tile finish, etc.</b>					
Tiles to floors, walls, stairs, etc (Including patches)					
2.41	- Freestanding units	m²	1380		
2.42	- Semidetached units	m²	640		
2.43	- Duplex units	m²	825		
<b>Hacking up/off and removing granolith, screeds, plaster, etc. from concrete or brickwork and preparing surfaces for new screed, plaster, tile finishes, etc.</b>					
25mm Screed from floors					
2.44	- Freestanding units	m²	75		
2.45	- Semidetached units	m²	35		
2.46	- Duplex units	m²	41		
Internal plaster to walls, columns, ceilings & beams (Including patches)					
2.47	- Freestanding units	m²	735		
2.48	- Semidetached units	m²	350		
2.49	- Duplex units	m²	240		
Internal plaster where internal walls intersect external wall (100mm wide). New recess to be formed (measured elsewhere) as per Drg 2334.50.02.SUA.14.U010 to U013					
2.50	- Freestanding units	m	2585		
2.51	- Semidetached units	m	1140		
2.52	- Duplex units	m	355		
				Carried Forward	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

				Brought Forward	
	Ditto, item above, but strip plaster on walls between the top of walls and the underside of suspended slabs (100mm wide).				
2.53	- Duplex units	m	745		
	<b>Cutting of plaster and brickwork</b>				
	Cutting of plaster 3mm wide x 20mm deep between where internal and external walls intersect				
2.52	- Freestanding units	m	2585		
2.55	- Semidetached units	m	1140		
2.56	- Duplex units	m	355		
	Cutting of plaster 3mm wide x 15mm deep between the top of walls and the underside of suspended slabs as per dwg. 2334.50.02.SUA.14.U022				
2.57	- Duplex units	m	2970		
	Cutting 10 x 10mm notch to sides of concrete rafts to form a drip groove between the exterior walls and raft foundation				
2.54	- Freestanding units	m	3195		
2.59	- Semidetached units	m	1090		
2.60	- Duplex units	m	1085		
	<b>Breaking down and removing brickwork, etc. (including internal plaster bothsides) Demolish 140mm thick cement brick wall at cracks keeping brick force intact</b>				
	Refer to drg 2334.50.50.SUA.14.U011 movement joint detail 3				
2.61	- Freestanding units	m <sup>2</sup>	132		
2.62	- Semidetached units	m <sup>2</sup>	63		
	Remove 140mm thick cement brick wall above windows & doors to insert lintel keeping brick force intact Refer to drg 2334.50.50.SUA.14.U011 & U013				
2.63	- Freestanding units	m <sup>2</sup>	23		
2.64	- Semidetached units	m <sup>2</sup>	11		
	<b>Remove PVC ceilings complete with cornice and trap door (new ceilings measured elsewhere)</b>				
2.65	Freestanding units 36m <sup>2</sup>	no	239		
2.66	Semi-detached units 32m <sup>2</sup>	no	114		
2.67	Duplex units 20m <sup>2</sup>	no	135		
				Carried Forward	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

			Brought Forward	
	<b>Remove concrete, concrete elements, etc.</b>  Carefully remove suspended reinforced concrete staircase and landing  2.68 - Duplex units	m³	240	
	<b>Plumbing</b>			
	<b>Remove damaged baths, cement bedding, etc.</b>  Dismantle baths, and dispose at location identified by the contractor, including all brickwork  2.69 - Freestanding units	no	239	
	Remove building rubble, cement sand mixture or other material used as bedding material for baths  2.70 - Freestanding units	no	239	
	<b>Remove plumbing fittings</b>  Carefully dismantle wash-hand basin tap, shower rose with extender arm, shower taps, bath taps, toilet feeder pipe with shut off valve, kitchen taps and all flexible hoses with shut-off valves to the different taps to be temporarily stored at a location identified by the contractor (reinstallation to be measured elsewhere).  2.71 - Freestanding units (house complete)	no	239	
	2.72 - Semidetached units (house complete)	no	114	
	2.73 - Duplex units (house complete)	no	135	
	<b>Carpentry, Ironmongery &amp; Metal Work</b>			
	<b>Remove doors, door ironmongery, door frames etc.</b>  Remove damaged 813 x 2031mm high steel door frame in one brick wall and break out additional brickwork to allow for correct dimensions of the new door frame, including replacing door frame, plaster repairwork and painting to remedial work areas.  2.74 - Freestanding units	no	24	
	2.75 - Semidetached units	no	12	
	2.76 - Duplex units	no	14	
	Remove door (new door measured elsewhere)  2.77 - Freestanding units	no	60	
	2.78 - Semidetached units	no	30	
	2.79 - Duplex units	no	35	
			Carried Forward	

Brought Forward				
<b>Remove kitchen cupboards and reinstall</b>				
Carefully remove kitchen cupboards, temporary store at location established by the contractor				
2.80	- Duplex units	no	135	
Replace any damaged/missing components of the kitchen cupboard and reinstall kitchen cupboards at new location in the unit				
2.81	- Duplex units	no	135	
<b><u>Making good of finishes, etc.</u></b>				
<b>Clean house complete</b>				
Clean house complete on the completion of the works, including cleaning all surfaces, walls, floors, ceilings, windows, etc.				
2.82	- Freestanding units	no	239	
2.83	- Semidetached units	no	114	
2.84	- Duplex units	no	135	
<b>Refixing/Tightening of screws, bolts, etc to all existing electrical fittings, ironmongery fittings, cupboards, curtain rails, doors (Including supplying missing screws, plugs, bolts, etc)</b>				
2.85	- Freestanding units (house complete)	no	239	
2.86	- Semi-detached units (house complete)	no	114	
2.87	- Duplex units (house complete)	no	135	
<b><u>ILLEGAL STRUCTURES</u></b>				
<b><u>REMOVAL OF EXISTING WORK</u></b>				
Carefully dismantle illegal structures connected to the building. All materials to be issued back to the owner/tenant. Details of the illegal structure shall be individually identified on site				
2.88	- Freestanding units	no	80	
2.89	- Semi-detached units	no	30	
2.90	- Duplex units	no	30	
<b>BILL NO. 2</b>				
<b>ALTERATIONS (INTERNAL &amp; EXTERNAL)</b>				
Carried forward to Summary of Bill of Quantities				R

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Contract: 2334-50-02/03 (Remedial work to 491 RDP Houses)  
Part C2: Pricing Data  
Section C2.2: Bill of Quantities  
Earthworks

**SCHEDULE 2 - BUILDING WORK**

Item	Description	Unit	Qty	Rate (R)	Amount (R)
	<p><b><u>BILL NO. 3</u></b></p> <p><b><u>EARTHWORKS (PROVISIONAL)</u></b></p> <p><b>SUPPLEMENTARY PREAMBLES</b></p> <p><b>Nature of ground</b></p> <p>The nature of the ground is assumed to be loose sandy clay material, therefore "earth", but possibly interspersed with "soft rock" or "hard rock"</p> <p><b>Subterranean water</b></p> <p>No subterranean water is expected</p> <p><b>Excavation for working space in rock</b></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> <p><b>Carting away of excavated material</b></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 stock piles situated on the building site</p> <p><b>Filling</b></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 necessary multiple handling of material</p> <p><b>Testing</b></p> <p>Prices for filling are to include for all necessary density tests in accordance with SABS 1200D</p>				
	Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward				
<b>SITE CLEARANCE, ETC.</b>				
<b>Site clearance</b>				
Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc. and trees not exceeding 200mm girth for extending apron				
3.1	- Freestanding units	m2	985	
3.2	- Semi-detached units	m2	315	
3.3	- Duplex units	m2	2080	
<b>EXCAVATION, FILLING, ETC.</b>				
<b>Excavation in earth not exceeding 1m deep</b>				
Excavate for ground platforms and aprons and stockpile				
3.4	- Freestanding units	m <sup>3</sup>	495	
3.5	- Semidetached units	m <sup>3</sup>	160	
3.6	- Duplex units	m <sup>3</sup>	2230	
Ditto, but for beams in concrete raft foundations				
3.7	- Duplex units	m <sup>3</sup>	240	
<b>Keeping excavations free of water</b>				
Keeping excavations free of water other than subterranean water				
3.8	- Freestanding units (all 239 units)	Item	1	
3.9	- Semidetached units (all 114 units)	Item	1	
3.10	- Duplex units (All 135 units)	Item	1	
<b>Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density</b>				
to sloping of ground level away from houses				
3.11	- Freestanding units	m <sup>3</sup>	1410	
3.12	- Semidetached units	m <sup>3</sup>	675	
3.13	- Duplex units	m <sup>3</sup>	800	
Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

				Brought Forward	
	<b>G7 type earth filling supplied by the contractor, compacted to 95% Mod AASHTO density (From commercial sources)</b>  to form platforms. Material to be moist at all times.				
3.26	- Duplex houses	m <sup>3</sup>	3665		
	<b>Compaction of surfaces</b>  Compaction of ground surface under floors, etc. including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density for aprons  Under aprons				
3.15	- Freestanding units	m <sup>2</sup>	4915		
3.16	- Semidetached units	m <sup>2</sup>	1555		
3.17	- Duplex units	m <sup>2</sup>	3680		
	Under raft foundations				
3.18	- Duplex units	m <sup>2</sup>	1350		
	<b>Prescribed density tests on filling</b>  Modified AASHTO Density test				
3.19	- Duplex units	No	270		
	<b>SOIL POISONING</b>  <b>Weedkiller (active ingredients metalaclor 102,8 g/l, terbitilasien 248,6 g/l and atrasien 248,6 g/l) mixed in the proportion of 100 ml weedkiller to 100 l water and applied at a rate of 10 l/m<sup>2</sup></b>  Under paving, etc.				
3.20	- Freestanding units	m <sup>2</sup>	4915		
3.21	- Semidetached units	m <sup>2</sup>	1555		
3.22	- Duplex units	m <sup>2</sup>	3680		
	<b>Soil insecticide in accordance with SANS 5859</b>  Under floors, etc. including forming and poisoning shallow furrows against foundation walls, etc., filling in furrows and ramming				
3.23	- Duplex uits	m <sup>2</sup>	1350		
				Carried Forward	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward				
<b>TOP SOIL</b>  Import 150mm thick top soil from commercial sources, including shaping to falls				
3.24	- Freestanding units	m <sup>3</sup>	880	
3.25	- Semidetached units	m <sup>3</sup>	275	
3.26	- Duplex units	m <sup>3</sup>	425	
<b>SHAPEING OF SOIL</b>  Shape natural ground level in such a manner that storm water runs away from house. (5m <sup>3</sup> to be cut to fill)				
3.27	- Freestanding units	No	5	
3.28	- Semidetached units	No	3	
3.29	- Duplex units	No	3	
<b>BILL NO. 3</b> <b>EARTHWORKS (PROVISIONAL)</b>				
Carried forward to Summary of Bill of Quantities				R

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



Contract: 2334-50-02/03 (Remedial work to 491 RDP Houses)

Part C2: Pricing Data

Section C2.2: Bill of Quantities

Concrete, Formwork and Reinforcement Concrete

**SCHEDULE 2 - BUILDING WORK**

Item	Description	Unit	Qty	Rate (R)	Amount (R)
	<p><b><u>BILL NO. 4</u></b></p> <p><b><u>CONCRETE, FORMWORK AND REINFORCEMENT CONCRETE</u></b> <b><u>(PROVISIONAL)</u></b></p> <p><b>SUPPLEMENTARY PREAMBLES</b></p> <p>Cost of tests</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 principal agent. The testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the principal agent. (Test cubes are measured separately)</p> <p>Formwork</p> <p>Descriptions 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>Formwork to soffits of solid slabs, etc. shall be deemed to be to 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>				
	Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward				
<b>UNREINFORCED CONCRETE CAST AGAINST FORMWORK</b>				
<b>25MPa / 19mm Concrete</b>				
85mm thick apron on water proofing including around gullies				
4.1	- Freestanding units	m <sup>3</sup>	72	
4.2	- Semidetached units	m <sup>3</sup>	25	
4.3	- Duplex units	m <sup>3</sup>	160	
<b>30MPa / 19mm Concrete</b>				
Reinforced concrete rafts on waterproofing				
4.4	- Duplex units	m <sup>3</sup>	395	
Reinforced concrete suspended slabs and beams				
4.5	- Duplex units	m <sup>3</sup>	162	
Reinforced concrete stairs and landing				
4.6	- Duplex units	m <sup>3</sup>	190	
<b>TEST CUBES</b>				
Making and testing set of three 150 x 150 x 150mm concrete strength test cubes 5 per set.				
4.7	- Freestanding units	Sets	12	
4.8	- Semidetached units	Sets	5	
4.9	- Duplex units	Sets	146	
<b>CONCRETE SUNDRIES</b>				
<b>Finishing top surfaces of concrete smooth with a wood float to</b>				
Aprons				
4.10	- Freestanding units	m <sup>2</sup>	850	
4.11	- Semidetached units	m <sup>2</sup>	300	
4.12	- Duplex units	m <sup>2</sup>	1280	
<b>Finishing top surfaces of concrete smooth with a steel float</b>				
Surface beds, suspended slabs, stairs, landings, etc				
4.13	- Duplex units	m <sup>2</sup>	2975	
Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward					
	<b>Reeded finish to stairs</b>				
	50mm wide reeded finish to stairs				
4.14	- Duplex units	m	1700		
	<b>ROUGH FORMWORK (DEGREE OF ACCURACY II)</b>				
	<b>Rough formwork - Vertical</b>				
	85mm thick apron on water proofing including around gullies				
4.15	- Freestanding units	m <sup>2</sup>	280		
4.16	- Semidetached units	m <sup>2</sup>	95		
4.17	- Duplex units	m <sup>2</sup>	460		
	Sides of reinforced concrete rafts				
4.18	- Duplex units	m <sup>2</sup>	540		
	Back for second stair				
4.19	- Duplex units	m <sup>2</sup>	50		
	<b>Smooth formwork - Vertical</b>				
	Stair risers				
4.20	- Duplex units	m <sup>2</sup>	370		
	Sides of raking stairs				
4.21	- Duplex units	m <sup>2</sup>	315		
	Sides of pockets (net concrete surface measured)				
4.22	- Duplex units	m <sup>2</sup>	70		
	Sides of beams, propped up 2.3m high				
4.23	- Duplex units	m <sup>2</sup>	420		
	<b>Smooth formwork - Horizontal</b>				
	To the underside of slabs, propped up 2.5m high				
4.24	- Duplex units	m <sup>2</sup>	600		
	To the underside of beams, propped up 2.25m high				
4.25	- Duplex units	m <sup>2</sup>	235		
	<b>Smooth formwork - Sloping</b>				
	To the underside of stairs, propped up between 2.4m high to 0.4m high				
4.26	- Duplex units	m <sup>2</sup>	540		
Carried Forward					

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward				
<b>Propping existing structure</b>  Propping existing suspended slab during demolition (props at 1m centers) and during the installation of new beams and suspended slabs. Not exceeding 2.5m high as per drg. 2334.50.02.SUA.14.U021				
4.27	- Duplex units (Unit complete)	no	135	
<b>REINFORCEMENT</b>  <b>Mild steel reinforcement to structural concrete work</b>  All diameter bars				
4.28	- Duplex units	kg	3235	
<b>High tensile steel reinforcement to structural concrete work</b>  All diameter bars				
4.29	- Duplex units	kg	61425	
Y12 bars epoxy grouted into concrete raft (staircase landing) with HILTI HIT HY200 with embedment depth of 50mm (total 300mm)				
4.30	- Duplex units	No	540	
Y12 bars epoxy grouted into existing concrete raft (sides) with HILTI HIT HY200 with embedment depth of 150mm (total 300mm)				
4.31	- Duplex units	No	1080	
<b>Mesh reinforcement</b>  Ref 193 Mesh steel fabric reinforcement laid in surface beds, etc lapped minimum 200mm along edges and ends (wastage and overlaps shall be incorporated in the rate and will not be paid separately)				
4.32	- Duplex units	m <sup>2</sup>	1750	
<b>MOVEMENT JOINTS, ETC</b>  <b>Expansion joints with 10mm thick polystyrene between vertical concrete and brick surfaces</b>  Not exceeding 150mm high to edges of concrete apron/surfacebed and brick wall				
	- Freestanding units	m	1395	
4.34	- Semidetached units	m	465	
4.35	- Duplex units	m	2820	
Not exceeding 400mm high to edges of concrete stairs and walls				
4.36	- Duplex units	m	1090	
Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward					
	<b>Expansion joints with 10mm thick polystyrene between vertical concrete surfaces</b>				
4.37	- Duplex units	m <sup>2</sup>	145		
	<b>Damp proof membrane (DPM)</b>				
4.38	Two layers of 150mm wide DPM between concrete beam and stair/slab	m	665		
	<b>Saw-cut sides of old reinforced concrete slabs</b>				
	170mm thick hollow core precast prestress concrete slab				
4.39	- Duplex units	m	525		
	<b>REPAIR/PREPARATION OF CONCRETE</b>				
	Scabble existing concrete surface to expose aggregate and make ready for new concrete				
4.40	- Freestanding units	m <sup>2</sup>	120		
4.41	- Semidetached units	m <sup>2</sup>	40		
4.42	- Duplex units	m <sup>2</sup>	690		
	<b>BILL NO. 4 CONCRETE, FORMWORK AND REINFORCEMENT CONCRETE (PROVISIONAL)</b>				
Carried forward to Summary of Bill of Quantities				R	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## Masonry

[illegible]

11

Witness 2

13 August 2021

Brought Forward				
<b>Galvanised hoop iron cramps, ties, etc.</b>  400mm long (Bent once) x 30 x 1,6mm hoop iron strap, to be fixed to existing brick work and built into new brick work where no brick force is present				
5.9	- Freestanding units	no	1435	
5.10	- Semidetached units	no	460	
5.11	- Duplex units	no	3510	
<b>2,8mm Galvanised brick reinforcement</b>  110mm Wide brick reinforcement built in horizontally				
5.12	- Freestanding units	m	7890	
5.13	- Semidetached units	m	3580	
5.14	- Duplex units	m	22000	
<b>Galvanised wire ties, etc.</b>  Roof ties to be 1 x strand, 8 gauge galvanised steel wire taken up on either side of wall over plate and twist together to take up all slack and free ends down to prevent any untwisting. Note: minimum depth of ties (anchors) to be built in 600mm into walls (6 course of 100mm)				
5.15		no	675	
<b>Paving</b>  "Inca Concrete Products" (or similar approved) Bond Classic Chamfer Grey coloured paving blocks, size 200 x 100 x 50mm thick, laid in herringbone pattern (including any cutting), including laying paving on 25mm compacted riversand sand bed with fine jointing sand swept and vibrated into joints, all laid on subgrade conforming to SANS 1200 D Degree of Accuracy I. All in strict accordance to manufacturers specifications.  Walkways/Aprons				
5.16	- Freestanding units	m <sup>2</sup>	4890	
5.17	- Semidetached units	m <sup>2</sup>	1560	
5.18	- Duplex units	m <sup>2</sup>	3005	
Paving edge restraints/haunching as prescribed in the finishes specification/drawings				
5.19	- Freestanding units	m	8710	
5.20	- Semidetached units	m	2725	
5.21	- Duplex units	m	5195	
Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward				
<b>Joint forming material in movement joints</b>  10mm thick polystyrene or similar approved built in vertically in wall expansion joints				
5.22	- Freestanding units	m <sup>2</sup>	100	
5.23	- Semidetached units	m <sup>2</sup>	40	
5.24	- Duplex units	m <sup>2</sup>	205	
<b>Prestressed fabricated concrete lintels including necessary temporary supports</b>  140 x 90mm Lintels in lengths not exceeding 3m				
5.25	- Freestanding units	m	1470	
5.26	- Semidetached units	m	580	
5.27	- Duplex units	m	165	
<b>Turning piece</b>  90mm Wide turning piece to support roof trusses while brick work below is removed and rebuilt				
5.28	- Freestanding units	m	1420	
5.29	- Semidetached units	m	615	
5.30	- Duplex units	m	285	
<b>Cutting of brickwork and plaster</b>  Saw cutting through 140mm thick wall for movement joint				
5.31	- Freestanding units	m	2880	
5.32	- Semidetached units	m	1225	
Saw cutting through 140mm thick walls for alterations				
5.33	- Duplex units	m	3285	
Saw cutting 30x3mm thick joint in walls				
5.34	- Freestanding units	m	4600	
5.35	- Semidetached units	m	2100	
5.36	- Duplex units	m	355	
Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2





Contract: 2334-50-02/03 (Remedial work to 491 RDP Houses)  
Part C2: Pricing Data  
Section C2.2: Bill of Quantities  
Waterproofing

SCHEDULE 2 - BUILDING WORK					
Item	Description	Unit	Qty	Rate (R)	Amount (R)
	<b><u>BILL NO. 6</u></b>				
	<b><u>WATERPROOFING (PROVISIONAL)</u></b>				
	<b>One layer Gundle® API A.T USB Green 250µm damp proof membrane (or similar approved) under concrete aprons conforming to SANS 952-1:2011 laid with minimum 150mm overlaps and sealed with Gunplas pressure sensitive tape.</b>				
	Under new concrete aprons				
6.1	- Freestanding units	m²	1190		
6.2	- Semidetached units	m²	400		
6.3	- Duplex units	m²	1820		
	Under new paved aprons				
6.4	- Freestanding units	m²	5580		
6.5	- Semidetached units	m²	1775		
6.6	- Duplex units	m²	3385		
	Under new raft foundations				
6.7	- Duplex units	m²	4860		
	<b>One layer 375 micron embossed polyethylene dampproof course (SANS 952-1985 type B)</b>				
	Under walls				
6.8	- Duplex units	m²	295		
	In walls below sills				
6.9	- Duplex units	m²	32		
	<b>SEALING STRIPS, JOINT SEALANTS, ETC</b>				
	<b>Polyurethane sealant or similar approved, including backing cord, bond breaker, primer, etc</b>				
	10mm wide x 10mm thick expansion joints in external & internal walls (or any larger sizes from cutting through 140mm wide walls), including raking out expansion joint filler as necessary				
6.10	- Freestanding units	m	5755		
6.11	- Semidetached units	m	2445		
	Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward					
	3mm wide x 10mm thick expansion joints in external & internal walls, including raking out expansion joint filler as necessary				
6.12	- Freestanding units	m	2010		
6.13	- Semidetached units	m	960		
	<b>Sealant to side of baths</b>				
	Silicon sealant to sides of baths, basins and sink (Mould resistant) - White				
6.14	- Freestanding units	m	2065		
6.15	- Semidetached units	m	330		
6.16	- Duplex units	m	520		
	<b>SHOWER WALL SURFACES</b>				
	Prime with a coat of neat Tal floor primer, Apply a coat of Tal Sureproof up the pipe and immediately bed the Tal Sureproof membrane into the wet Tal Sureproof. Apply a heavy coat of Tal Sureproof over the membrane to completely saturate the membrane before the first coat dries. For the waste that is flush with the floor, take the application down into the shower recess and around the waste. To be applied following manufactures specifications. Or similar product approved				
6.17	- Semidetached units	m <sup>2</sup>	765		
6.18	- Duplex units	m <sup>2</sup>	870		
	<b>BILL NO. 6</b> <b>WATERPROOFING (PROVISIONAL)</b>				
	<b>Carried forward to Summary of Bill of Quantities</b>			R	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Contract: 2334-50-02/03 (Remedial work to 491 RDP Houses)

Part C2: Pricing Data

Section C2.2: Bill of Quantities

Roof Coverings, Claddings etc.

**SCHEDULE 2 - BUILDING WORK**

Item	Description	Unit	Qty	Rate (R)	Amount (R)
	<b><u>BILL NO. 7</u></b> <b><u>ROOF COVERINGS (PROVISIONAL)</u></b> <b><u>TILES</u></b> <b><u>Preamble:</u></b> <p>Collect cement roof tiles from contractor's place of storage. Fix with non-corrosive screws and fix with suitable non-corrosive clips as required to lightweight steel battens at 300mm centres and including an underlay of multi-layered waterproof membrane in accordance with SANS 952 - 1985 or an Agreement certificate with a minimum thickness of 250 microns. Overlaps to be 150mm and an underlay strip under eaves shall be 600mm wide. Any broken or missing cement roof tiles shall be replaced at the contractor's expense. The contractor shall make sufficient provision for any broken and missing tiles. New ridges shall be installed on all roofs, all in accordance with the manufacturers minimum installation requirements. All new roof tiles and ridge tiles are to be SABS approved. The colour of the new cement roof tiles and ridges shall match existing</p> <p>The fixing requirements for tiles are:</p> <ul style="list-style-type: none"> <li>- first two courses at eaves and ridges</li> <li>- first two rows at rake and valleys</li> <li>- every second tile on the interior</li> </ul> <p>Roof covering with pitches not exceeding 25 degrees (refer to preamble above)</p>				
7.1	- Freestanding units	m2	12300		
7.2	- Semidetached units	m2	5500		
	Roof underlay (refer to preamble above)				
7.3	- Freestanding units	m2	2465		
7.4	- Semidetached units	m2	1100		
	Roof ridge (refer to preamble above) complete as per detail included on dwg. 2334.50.02.SUA.14.U001 & 2334.50.02.SUA.14.U003				
7.5	- Freestanding units	m	1890		
7.6	- Semidetached units	m	835		
Carried Forward					

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C2.2-74

Brought Forward					
<b>NEW TILED ROOFS</b>  Double Roman cement roof tiles nailed with non-corrosive nails and/or fixed with suitable non-corrosive clips as required to and including 38 x 38 mm sawn softwood battens at 320mm centres over and including an underlay of 250 micron polyethelene sheeting in accordance with SANS 952 Type E fixed to rafters under battens with minimum laps of 150mm  Roof covering with a 23 degree pitch					
7.7	1. Above staircase	no	135		
7.8	2. Above entrance	no	135		
<b>FLASHING</b>  <b>0,6mm Galvanised sheet steel as per dwg. 233-01-11/02A (sheet 2 of 2)</b>					
7.9	1. Side wall flashings 305mm girth	m	435		
7.10	2. Head wall flashings 305mm girth	m	540		
7.11	3. Stepped cover flashings (150mm avg. girth)	m	435		
7.12	4. Cover flashings 120mm girth	m	540		
<b>BILL NO. 7</b> <b>ROOF COVERINGS (PROVISIONAL)</b>					
Carried forward to Summary of Bill of Quantities					R

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Contract: 2334-50-02/03 (Remedial work to 491 RDP Houses)  
Part C2: Pricing Data  
Section C2.2: Bill of Quantities  
Carpentry and Joinery

**SCHEDULE 2 - BUILDING WORK**

Item	Description	Unit	Qty	Rate (R)	Amount (R)
	<b><u>BILL NO. 8</u></b>  <b><u>CARPENTRY AND JOINERY (PROVISIONAL)</u></b>  <b>SUPPLEMENTARY PREAMBLES</b>  <b>Fixing</b>  Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins, or to be shot-pinned, to brickwork or concrete  Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 500mm centres, and where described as "bolted", the bolts have been given elsewhere  <b>Joinery</b>  Descriptions of frames shall be deemed to include frames, transoms, rails, etc.  Descriptions of hardwood joinery shall be deemed to include sinking and pelleting heads and nuts of bolts  <b>Decorative thermosetting plastic laminate covering</b>  Laminate covering shall be glued under pressure and edge strips of same shall be butt jointed at junctions with adjacent similar finish  <b><u>DOORS, ETC</u></b>  <b>Meranti FL&amp;B Flush door, according to SANS: 545 standards, hung to steel frames</b>  813 x 2032mm high  8.1 - Freestanding units  8.2 - Semidetached units  8.3 - Duplex units  <b>Hollow core flush doors with 3,2mm plain hardboard covering on both sides with exposed edges, hung to steel frames</b>  40mm Door 813 x 2032mm high  8.4 - Freestanding units				
		No	478		
		No	228		
		No	405		
		No	60		
		Carried Forward			

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward				
8.5	- Semidetached units	No	30	
8.6	- Duplex units	No	35	
<b>PLATE NAILED TIMBER ROOF TRUSS CONSTRUCTION, ETC.</b>  <b>SUPPLEMENTARY PREAMBLES</b>  Rafters are at maximum 760mm centres  Roof coverings are tiles on battens  Ceilings are 6.4mm thick Gypsum "Rhino" board or similar approved on 38 x 38mm branderling  References given in descriptions refer to the respective types of trusses detailed on the architect's/engineer's drawings numbered 2334-01-11/02A sheet 1 and 2  All timber to be Grade 5  Roof to be SANS10400 compliant  Roof construction to roof including trusses, rafters, bracing, support beam, joist hangers with expansion bolts, and 38 x 38mm battens at 320 centres for roof covering (wall plates elsewhere)				
8.7	Above staircase	no	135	
8.8	Above entrance	no	135	
8.9	52 x 38mm Wall plates	m	345	
<b>BILL NO. 8</b> <b>CARPENTRY AND JOINERY (PROVISIONAL)</b>				
Carried forward to Summary of Bill of Quantities				R

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## Ceilings, Partitioning and Access Flooring

[illegible]

Carried Forward

7

Witness 2

13 August 2021



Brought Forward				
	Supply & install new "Heunis" Steel ceiling access panel (code: CTDRDL533533) or similar approved comprising of Matt White epoxy coated aluminium T-frame with 533 x 533mm White epoxy coated steel top hinged pan, fitted flush to flush plaster lightweight steel branded ceiling, screw fixed through stalk of T-profile frame into prepared ceiling structure. Hinged to open 180 degrees onto ceiling, all in accordance with the manufacturer's recommendations.			
9.4	- Freestanding units	no	239	
9.5	- Semidetached units	no	114	
9.6	- Duplex units	no	135	
<b>CORNICE</b>				
<b>Timber cornice</b>				
Timber cornice, supply and install complete as per dwg. 2334.50.02.SUA.14.U001 & 2334.50.02.SUA.14.U003				
9.7	- Freestanding units	m	11850	
9.8	- Semidetached units	m	5360	
9.9	- Duplex units	m	6125	
<b>INSULATION, ETC.</b>				
<b>"Aero insulation" or similar approved polyester thermal insulation as per SANS 10400 XA (Density: 10 kg/m³)</b>				
135mm thick insulation in blanket form closely fitted and laid on top of bracing between roof timbers, etc.				
9.10	- Freestanding units	m2	8940	
9.11	- Semidetached units	m2	3720	
9.12	- Duplex units	m2	3935	
<b>BILL NO. 9 CEILINGS, PARTITIONS AND ACCESS FLOORING (PROVISIONAL)</b>				
Carried forward to Summary of Bill of Quantities				R

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Contract: 2334-50-02/03 (Remedial work to 491 RDP Houses)  
Part C2: Pricing Data  
Section C2.2: Bill of Quantities  
Ironmongery

**SCHEDULE 2 - BUILDING WORK**

Item	Description	Unit	Qty	Rate (R)	Amount (R)
	<b><u>BILL NO. 10</u></b>  <b><u>IRONMONGERY (PROVISIONAL)</u></b>  <b>SUPPLEMENTARY PREAMBLES</b>  <b>Proprietary items</b>  Where applicable the manufacturers' names or product catalogue titles are given in sub-headings preceding the items  Prices are to be based on the specific products/articles specified. If tenderers wish to offer alternative products/articles for certain items, these items are to be clearly marked and the alternative specification given with Supporting brochures, etc. clarifying the features of the products/articles offered  On request returnable samples are to be provided to the principal agent for consideration  <b>Additional Specification</b>  Refer to the Architects specification for addition information. Pricing shall include for details defined in the descriptions below and including that which has been defined in the Architects Specification.  <b>LOCKS</b>  "Esco" or similar approved Contractor 3-lever lockset, chrome finish, installed strictly accordance to manufacturers specifications				
10.1	- Freestanding units	No	478		
10.2	- Semidetached units	No	228		
10.3	- Duplex units	No	405		
	Ditto item above, but for 2-level lock				
10.4	- Freestanding units	No	84		
10.5	- Semidetached units	No	42		
10.6	- Duplex units	No	49		
Carried Forward					

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward				
	"Sanlic" (code: STRICLAM) or similar approved metal striker plate to be fixed with screw and nut in strict accordance to manufactures specifications.			
10.7	- Freestanding units	No	478	
10.8	- Semidetached units	No	228	
10.9	- Duplex units	No	405	
	<b>HANDLES</b>			
	"Esco" or similar approved Contractor chrome finish door handle, installed strictly accordance to manufacturers specifications (For a single handle)			
10.10	- Freestanding units	No	956	
10.11	- Semidetached units	No	456	
10.12	- Duplex units	No	810	
	<b>WINDOW FITTINGS</b>			
	Replace clisco window sliders and discard old sliders at a location identified by the contractor			
10.13	- Freestanding units	No	132	
10.14	- Semidetached units	No	63	
10.15	- Duplex units	No	95	
	Perma 12x5mm window weather strip around all windows			
10.16	- Freestanding units	m	6730	
10.17	- Semidetached units	m	3150	
10.18	- Duplex units	m	5730	
Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

[illegible]

Contract: 2334-50-02/03 (Remedial work to 491 RDP Houses)

Part C2: Pricing Data

Section C2.2: Bill of Quantities

Metalwork

**SCHEDULE 2 - BUILDING WORK**

Item	Description	Unit	Qty	Rate (R)	Amount (R)
	<b><u>BILL NO. 11</u></b>  <b><u>METALWORK (PROVISIONAL)</u></b>  <b>SUPPLEMENTARY PREAMBLES</b>  <b>Descriptions of bolts, anchors, etc.</b>  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  Items described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described  Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres  <b>PRESSED STEEL DOOR FRAMES</b>  <b>All door frames to be built into existing walls where previous doors have been removed. This includes for breaking out required brickwork for working space (minimum width of the lug length) and rebuild brickwork and replaster walls to tie into existing</b>  1.2mm thick CLISCO Factory coated grey/red oxide primer pressed steel non-screeded door frame (double rebated), to suit door size 813 x 2032mm high, for 140mm wall. Frame to be supplied with 4 metal strap lugs to be built into wall in strict accordance to manufacturer's specifications and including two 100mm brass butt hinges per door leaf. Swing direction to be determined on site by building contractor, prior to ordering. (for <b>external</b> door)				
11.1	- Freestanding units	No	72		
11.2	- Semidetached units	No	35		
11.3	- Duplex units	No	405		
Carried Forward					

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward				
	1.2mm thick CLISCO Factory coated grey/red oxide primer pressed steel non-screeded door frame (double rebated), to suit door size 813 x 2032mm high, for 140mm wall. Frame to be supplied with 4 metal strap lugs to be built into wall in strict accordance to manufacturer's specifications and including two 100mm brass butt hinges per door leaf. Swing direction to be determined on site by building contractor, prior to ordering. (for <b>internal</b> door)			
11.4	- Freestanding units	No	24	
11.5	- Semidetached units	No	12	
11.6	- Duplex units	No	14	
	<b>BALUSTRADE</b>			
	Supply and install steel balustrade complete, including fixing to concrete surfacebed as per dwg. 2334-01-11/02A Sheet 2 of 2			
11.7	- Duplex units	No	135	
	<b>BILL NO. 11</b> <b>METALWORK (PROVISIONAL)</b>			
Carried forward to Summary of Bill of Quantities				R

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Contract: 2334-50-02/03 (Remedial work to 491 RDP Houses)

Part C2: Pricing Data

Section C2.2: Bill of Quantities

Plastering

**SCHEDULE 2 - BUILDING WORK**

Item	Description	Unit	Qty	Rate (R)	Amount (R)
	<b><u>BILL NO. 12</u></b>				
	<b><u>PLASTERING (PROVISIONAL)</u></b>				
	<b>SCREEDS</b>				
	<b>Screeds wood floated, on concrete</b> <b>Prepare a rough substrate by hammer chipping or any other suitable method to create suitable bonding surface.</b> <b>Apply a wet slurry bonding mix (2:5) with acrylic bonding agent to concrete substrate 15 minutes prior to application of screed. Screed mix to be 1 part cement and 4 parts clean course sand with sufficient water until a plastic consistence is achieved.</b>				
	Minimum of 25mm Thick on floors				
12.1	- Freestanding units	m <sup>2</sup>	75		
12.2	- Semidetached units	m <sup>2</sup>	35		
12.3	- Duplex units	m <sup>2</sup>	41		
	<b>INTERNAL PLASTER</b>				
	<b>Cement plaster steel trowelled, on brickwork</b>				
	Plaster patch on walls, including on narrow widths (Ensure a homogeneous plaster finish between old and new by applying an approved skimming agent, if necessary)				
12.4	- Freestanding units	m <sup>2</sup>	1205		
12.5	- Semidetached units	m <sup>2</sup>	525		
12.6	- Duplex units	m <sup>2</sup>	10550		
	Redo plaster finish between walls & slab soffit (40mm wide), including allowing a "V-Joint" recess in the plasterwork as on 2334.50.02.SUA.14.U022				
12.7	- Duplex units	m	745		
	Redo plaster finish between internal & external wall (100mm wide), including allowing a "V-Joint" recess in the plasterwork as on Drg 2334.50.02.SUA.14.U010 to U013				
12.8	- Freestanding units	m	2585		
12.9	- Semidetached units	m	1140		
12.10	- Duplex units	m	355		
	Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C2.2-85

Brought Forward				
12.11	Plaster to sides of baths - Freestanding units	m <sup>2</sup>	220	
<b>Making good cracks</b>				
200mm wide chicken mesh (2mm expanded galvanised metal mesh) placed over exposed area (removal of plaster measured elsewhere). Plaster over mesh ensuring that mesh is not visible. (length of crack measured)				
12.12	- Freestanding units	m	815	
12.13	- Semidetached units	m	390	
12.14	- Duplex units	m	270	
Repairwork to cracks, includes removing brickwork mortar 60mm deep (removal of plaster measured elsewhere); install two Y5.6 800mm long every 3rd course; patch and grout with "Rockset" or similar approved (length of crack measured)				
12.15	- Freestanding units	m	410	
12.16	- Semidetached units	m	195	
12.17	- Duplex units	m	55	
<b>EXTERNAL PLASTER</b>				
<b>Bagging of 1:4 cement and sand mixture</b>				
On walls and reveals (including in patches)				
12.18	- Freestanding units	m <sup>2</sup>	5190	
12.19	- Semidetached units	m <sup>2</sup>	2135	
12.20	- Duplex units	m <sup>2</sup>	7755	
On walls in narrow widths including two "V" joints, 250mm				
12.21	- Duplex units	m <sup>2</sup>	705	
<b>Cement plaster steel trowelled, on brickwork</b>				
Plasterbands: Hack off all plaster reveals and up to 150mm wide around windows & doors (Exterior face), and re-plaster 15mm thick within reveal and provide a 150x15mm thick plaster band				
12.22	- Freestanding units	m <sup>2</sup>	1430	
12.23	- Semidetached units	m <sup>2</sup>	730	
12.24	- Duplex units	m <sup>2</sup>	1265	
Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



				Brought Forward	
<b>Making good cracks</b> <i>Drg 2334.50.02.SUA.14.U010 to U015</i>  200mm wide chicken mesh (2mm expanded galvanised metal mesh) placed over exposed area (removal of plaster measured elsewhere). Plaster over mesh ensuring that mesh is not visible. (length of crack measured)					
12.25	- Freestanding units	m	1020		
12.26	- Semidetached units	m	490		
12.27	- Duplex units	m	500		
Repairwork to cracks, includes removing brickwork mortar 60mm deep (removal of plaster measured elsewhere); replace with 1:4 mortar mix; install two Y5.6 1300mm long every 3rd course; patch and grout with "Rockset" or similar approved to level of surrounding plaster (length of crack measured)					
12.28	- Freestanding units	m	610		
12.29	- Semidetached units	m	295		
12.30	- Duplex units	m	300		
<b>PLASTER PATCHING</b>					
<u>Plaster patching to</u>					
Repaired plumbing connections (all pipe sizes, for 140mm thick wall) (Ensure a homogeneous plaster finish between old and new by applying an approved skimming agent, if necessary)					
12.31	- Freestanding units	no	2390		
12.32	- Semidetached units	no	1140		
12.33	- Duplex units	no	1350		
Water reticulation 15mm diam chased into brickwork					
12.34	- Freestanding units	m	580		
12.35	- Semidetached units	m	280		
12.36	- Duplex units	m	340		
<b>BILL NO. 12</b> <b>PLASTERING (PROVISIONAL)</b>					
<b>Carried forward to Summary of Bill of Quantities</b>				R	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Contract: 2334-50-02/03 (Remedial work to 491 RDP Houses)

Part C2: Pricing Data

Section C2.2: Bill of Quantities

Tiling

**SCHEDULE 2 - BUILDING WORK**

Item	Description	Unit	Qty	Rate (R)	Amount (R)
	<b><u>BILL NO. 13</u></b>  <b><u>TILING (PROVISIONAL)</u></b>  <b>SUPPLEMENTARY PREAMBLES</b>  <b>Fixing</b>  Unless described as "fixed with adhesive to plaster (plaster elsewhere)" descriptions of tiling on brick or concrete walls, columns, etc. shall be deemed to include 1:4 cement plaster backing and descriptions of tiling on concrete floors, etc. shall be deemed to include 1:3 plaster bedding  Tiling described as "fixed with adhesive on power floated concrete" shall be deemed to include for approved tiling key-coat  Ceramic, porcelain, marble and granite tiles are to be fixed and grouted with suitable adhesives and grouts from the "Tal Professional" range of products as recommended by the manufacturer of the tiles  <b>WALL TILING</b>  <b>PC SUM</b>  Allow a PC sum of R150 per m <sup>2</sup> for the supply, deliver and install of floor tiles, size 200 x 300mm, fixed to steel floated Class II mortar plaster backing (plaster measured elsewhere) with "TAL" (or similar approved) tile adhesive) mixed with bonding liquid in lieu of water, with 3mm joints continuous in both directions grouted with White "TAL" (or similar approved) tile grout with minimum 5mm expansion joints at perimeter, all structural expansion and construction joints and maximum 3m centres internally in both directions in both directions.  On walls in isolated panels, splashbacks, etc. The rate shall include for tiling to sills and in patches				
13.1	- Freestanding units	m <sup>2</sup>	1245		
13.2	- Semidetached units	m <sup>2</sup>	575		
13.3	- Duplex units	m <sup>2</sup>	750		
	Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C2.2-88

Brought Forward					
<b>FLOOR TILING</b>  <b>PC Sum</b>  Allow a PC sum of R150 per m <sup>2</sup> for the supply, deliver and install of floor tiles, size 430x430mm, fixed to internal floor screed with "TAL" (or similar approved) tile adhesive with 5mm joints continuous in both directions and grouted with "TAL" (or similar approved) Dove grey grout, including minimum 5mm expansion joints at perimeter, all structural expansion and construction joints and maximum 3m centres internally in both directions.  On floors, including in patches					
13.4	-	Freestanding units	m <sup>2</sup>	140	
13.5	-	Semidetached units	m <sup>2</sup>	70	
13.6	-	Duplex units	m <sup>2</sup>	80	
<b>BILL NO. 13</b> <b>TILING (PROVISIONAL)</b>					
Carried forward to Summary of Bill of Quantities					R

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Contract: 2334-50-02/03 (Remedial work to 491 RDP Houses)

Part C2: Pricing Data

Section C2.2: Bill of Quantities

Glazing

**SCHEDULE 2 - BUILDING WORK**

Item	Description	Unit	Qty	Rate (R)	Amount (R)
	<b><u>BILL NO. 14</u></b> <b><u>GLAZING (PROVISIONAL)</u></b> <b>SUPPLEMENTARY PREAMBLES</b> <b>Float glass</b> The term "float glass" is used for monolithic annealed glass <b>Laminated glass</b> Laminated glass to have polyvinyl butyral (PVB) interlayer(s) <b>GLAZING TO STEEL WITH PUTTY</b> <b>Removal of broken glass panel and dispose at location identified by contractor. Replace with obscure glass 3mm thick, to be installed in steel window frame with approved glazing putty, all in strict accordance to manufacturer's specifications.</b> <b>"Powafix" (or similar approved) glazing putty for steel windows to be applied in strict accordance to manufacturers specifications.</b> Glazing to NC4F steel window frames				
14.1	- Freestanding units	no	5		
14.2	- Semidetached units	no	3		
14.3	- Duplex units	no	3		
	Obscured glazing to NC1 steel window frames				
14.4	- Freestanding units	no	5		
14.5	- Semidetached units	no	3		
14.6	- Duplex units	no	3		
	Glazing to NC2 steel window frames				
14.7	- Freestanding units	no	5		
14.8	- Semidetached units	no	3		
14.9	- Duplex units	no	3		
	Glazing to NE1 steel window frames				
14.10	- Freestanding units	no	5		
Carried Forward					

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

				Brought Forward	
14.11	- Semidetached units	no	3		
14.12	- Duplex units	no	3		
<b>BILL NO. 14</b> <b>GLAZING (PROVISIONAL)</b>					
Carried forward to Summary of Bill of Quantities				R	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Contract: 2334-50-02/03 (Remedial work to 491 RDP Houses)  
Part C2: Pricing Data  
Section C2.2: Bill of Quantities  
Painting

**SCHEDULE 2 - BUILDING WORK**

Item	Description	Unit	Qty	Rate (R)	Amount (R)
	<p><b><u>BILL NO. 15</u></b></p> <p><b><u>PAINTING (PROVISIONAL)</u></b></p> <p><b>PREPARATORY WORK TO EXISTING WORK</b></p> <p><b>Previously painted plastered surfaces</b></p> <p>Surfaces shall be thoroughly washed down and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and cracks shall be opened, filled with a suitable filler and finished smooth  <u>Any patching/repairwork to hairline cracks smaller than 1mm shall be deemed to be included in the rate</u></p> <p><b>Previously painted metal surfaces</b></p> <p>Surfaces shall be thoroughly rubbed and cleaned down. Blistered or peeling paint shall be completely removed down to bare metal</p> <p><b>Previously painted wood surfaces</b></p> <p>Surfaces shall be thoroughly cleaned down. Blistered or peeling paint shall be completely removed and cracks and crevices shall be primed, filled with suitable filler and finished smooth</p> <p><b>COLOURS</b></p> <p>Unless otherwise described all paintwork shall be deemed to have a colour value in excess of 7 on the Munsell system in accordance with SANS 1091</p> <p><b>PAINT SPECIFICATIONS</b></p> <p>All paint to be Plascon or similar quality approved with guarantee parameters as defined in the specification. All painting to be in line with the manufacturers recommendations.</p>				
	Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

				Brought Forward	
<b>EXTERNAL PAINT</b>					
<b>ON METAL SURFACES</b>					
<b>Paintwork to Previously Painted Surfaces</b> <i>(Currently includes final coat)</i>  Remove surface contaminants using "Metalcare Aquasolv Degreaser (GR 1)" with bristle brush or Brillo pads. Remove rust and millscale by abrasive blasting to ISO 8501 - 01:1988 - Sa2½ or by hand/mechanical wire brushing to St3 of the same standard. Prime with one coat "Plascoprime 170 Primer (UC170)" and finish with <u>one</u> coats "Professional Brilliant White Gloss Enamel (PSB 1000)" with a guarantee of 3 years  Window Frames (Both Sides and including frame)					
15.1	- Freestanding units	m²	2765		
15.2	- Semidetached units	m²	1180		
15.3	- Duplex units	m²	2080		
Door frames					
15.4	- Freestanding units	m²	750		
15.5	- Semidetached units	m²	360		
15.6	- Duplex units	m²	425		
<b>ON EXTERNAL FLOATED PLASTER SURFACES</b>					
<b>New Surfaces &amp; Old Surfaces</b>  Prime with one coat Plascon Plaster Primer (UC56) and finish with two coats Micatex (BBO 300), with 10 years guarantee  Door & Window plaster bands					
15.7	- Freestanding units	m²	1360		
15.8	- Semidetached units	m²	620		
15.9	- Duplex units	m²	1120		
Paint house numbers (Including for 5 digits) per item					
15.10	- Freestanding units	no	239		
15.11	- Semidetached units	no	114		
15.15	- Duplex units	no	135		
				Carried Forward	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward					
<p><b>Old Surfaces</b></p> <p>"Africote one coat PVA" installed as per the manufactureres recommendation, including to the minimum thickness, surface preperation of previously painted "Africote" (power hosing/grinding/flake removal/key forming, etc) or similar approved product which conforms to SANS 10400-1990 Multi-colours to be confirmed by the Principal Agent</p> <p>Walls (one coat primer and one final coat)</p>					
15.13	- Freestanding units	m <sup>2</sup>	17470		
15.14	- Semidetached units	m <sup>2</sup>	6850		
15.15	- Duplex units	m <sup>2</sup>	10830		
<p><b>New Surfaces</b></p> <p>"Africote one coat PVA" installed as per the manufactureres recommendation, including to the minimum thickness, surface preperation of previously painted "Africote" (power hosing/grinding/flake removal/key forming, etc) or similar approved product which conforms to SANS 10400-1990 Multi-colours to be confirmed by the Principal Agent</p> <p>Walls (one final coat only)</p>					
15.16	- Duplex units	m <sup>2</sup>	4410		
<b>ON WOOD SURFACES</b>					
<p><b>New Surfaces</b> <i>(Currently - raw surface)</i></p> <p>Surface to be assessed and the appropriate surface preparation clauses selected for remedial procedure. Prime with one coat "Woodcare Ultra Varnish (X33/X44)" and two coats "Woodcare Ultra Varnish (X33/X44)", with a guarantee of 4 years</p> <p>External timber doors</p>					
15.17	- Freestanding units	m <sup>2</sup>	1690		
15.18	- Semidetached units	m <sup>2</sup>	810		
15.19	- Duplex units	m <sup>2</sup>	960		
Two coats of Creasol					
Roof Timer					
15.20	- Duplex units	m <sup>2</sup>	2315		
Carried Forward					

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



Brought Forward			
<b>INTERNAL</b>			
<b>ON METAL SURFACES</b>			
<b>Paintwork to Previously Painted Surfaces</b> <i>(Currently includes final coat)</i>  Remove surface contaminants using "Metalcare Aquasolv Degreaser (GR 1)" with bristle brush or Brillo pads. Remove rust and millscale by abrasive blasting to ISO 8501 - 01:1988 - Sa2½ or by hand/mechanical wire brushing to St3 of the same standard. Prime with one coat "Plascoprime 170 Primer (UC170)" and finish with one coats "Professional Brilliant White Gloss Enamel (PSB 1000)" with a guarantee of 3 year  Door frames (Internal)			
15.21	- Freestanding units	m²	1120
15.22	- Semidetached units	m²	535
15.23	- Duplex units	m²	635
<b>ON WOOD SURFACES</b>			
<b>Paintwork to Previously Painted Surfaces</b> <i>(Currently includes final coat)</i>  Surface to be assessed and the appropriate surface preparation clauses selected for remedial procedure. Prime with one coat Wood Primer (UC2) and finish with one coats Velvagro Water Based (VLW), with a guarantee of 12 years  Internal timber doors			
15.24	- Freestanding units	m²	2540
15.25	- Semidetached units	m²	1210
15.26	- Duplex units	m²	1435
<b>ON INTERNAL FLOATED PLASTER SURFACES</b>			
<b>New Surfaces</b>  One coat of primer suitable for multi surfaces (acrylic, enamel etc.) and finish with two coats "Professional Superior Low Sheen (PEM 1000)", with a guarantee of 7 years  Walls			
15.27	- Freestanding units	m²	27750
15.28	- Semidetached units	m²	11400
15.29	- Duplex units	m²	26300
Carried Forward			

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward				
<b>CEILINGS</b>				
<b>New Surfaces &amp; Old Surfaces</b> <i>(Currently - raw surface)</i>  Two coats "Professional Superior Low Sheen (PEM 1000)", with a guarantee of 7 years  Ceiling				
15.30	- Freestanding units	m <sup>2</sup>	8530	
15.31	- Semidetached units	m <sup>2</sup>	3540	
15.32	- Duplex units	m <sup>2</sup>	3920	
<b>New Surfaces &amp; Old Surfaces</b> <i>(Currently - raw surface)</i>  Timber primer, and two coats "Professional Superior Low Sheen (PEM 1000)", with a guarantee of 7 years  Cornice				
15.33	- Freestanding units	m <sup>2</sup>	1710	
15.34	- Semidetached units	m <sup>2</sup>	775	
15.35	- Duplex units	m <sup>2</sup>	940	
<b>BILL NO. 15</b> <b>PAINTING (PROVISIONAL)</b>				
Carried forward to Summary of Bill of Quantities				R

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE,  
HUMAN SETTLEMENT & TRADITIONAL AFFAIRS**

LERATO PARK INTEGRATED HOUSING DEVELOPMENT  
Remedial work to 491 RDP Houses

**CONTRACT 2334-50-02/03**

**Summary of Bill of Quantities**

Bill No.	Description	Amount ( R )
	<b>SCHEDULE 2 - BUILDING WORK</b>	
1	Alterations (Demolition & Replacement)	
2	Alterations (Internal & External)	
3	Earthworks	
4	Concrete, Formwork and Reinforcement Concrete	
5	Masonry	
6	Waterproofing	
7	Roof Coverings, Claddings etc.	
8	Carpentry and Joinery	
9	Ceilings, Partitions and Access Flooring	
10	Ironmongery	
11	Metalwork	
12	Plastering	
13	Tiling	
14	Glazing	
15	Painting	
<b>Total Amount of SCHEDULE 2 Carried Forward to Summary of Schedules</b>		

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**


**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**


**VOLUME 1  
PORTION 2: CONTRACT**

**Section C2.2  
Schedule No. 3  
Wet Services**


---




Contractor




Witness 1




Witness 2



Employer



Witness 1



Witness 2

Contract: 2334-50-02/03 (Remedial work to 491 RDP Houses)  
Part C2: Pricing Data  
Section C2.2: Bill of Quantities  
Wet services

**SCHEDULE 3 - WET SERVICES**

Item	Description	Unit	Qty	Rate (R)	Amount (R)
	<b><u>BILL NO. 1</u></b>				
	<b><u>WET SERVICES</u></b>				
	<b><i>NOTE: Rates to include for supply and install complete</i></b>				
	<b>Ground Works - Sewer.</b>				
	<b>UG Pvc Class 34 Pipe and Fittings.</b>				
	<b>UG Pvc Fittings.</b>				
	Expose 90° bend under gully and re-connect and seal bend (removal of gully measured elsewhere) 110mm Gully trap including Pvc hopper head and grating New Concrete encasement of Gully trap 15Mpa				
1.1	- Freestanding units	no	240		
1.2	- Semidetached units	no	116		
1.3	- Duplex units	no	135		
	<b>Below Ground - Soil and Waste Stack System.</b>				
	<b>SV Pvc Pipe.</b>				
	<b><i>Trenching and Backfilling Included</i></b>				
	110mm SV Pvc Pipe surface mounted on external wall to gully				
1.4	- Freestanding units	m	4080		
1.5	- Semidetached units	m	1740		
1.6	- Duplex units	m	1350		
	<b>SV Pvc fittings</b>				
	110mm 90° bend				
1.7	- Freestanding units	no	482		
1.8	- Semidetached units	no	232		
1.9	- Duplex units	no	270		
	110mm 45° bend				
1.10	- Freestanding units	no	1446		
1.11	- Semidetached units	no	696		
1.12	- Duplex units	no	810		
	Carried Forward				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

				Brought Forward	
	110mm Rodding Eye (RE)				
1.13	- Freestanding units	no	480		
1.14	- Semidetached units	no	232		
1.15	- Duplex units	no	405		
	<b>Above Ground - Soil and Waste Stack System.</b>				
	<b>SV Pvc Pipe.</b>				
	<b>(Bracketry Included In Rate)</b>				
	50mm SV Pvc Pipe surface mounted on external wall to gully				
1.16	- Freestanding units	m	1440		
1.17	- Semidetached units	m	696		
1.18	- Duplex units	m	1755		
	<b>SV Pvc fittings</b>				
	50mm 90° bend <i>(including inspection eyes)</i>				
1.19	- Freestanding units	no	1920		
1.20	- Semidetached units	no	696		
1.21	- Duplex units	no	1350		
	50mm equal T connection <i>(including inspection eyes)</i>				
1.22	- Freestanding units	no	240		
1.23	- Semidetached units	no	116		
1.24	- Duplex units	no	135		
	<b>Above Ground Domestic Water Supply.</b>				
	<b>Supply and install the following SANS 62-1 Medium Class Galvanized Steel piping fixed vertically / horizontally or chased in wall on any structure i.e. concrete/brickwork etc. Rate shall include all adaptors, couplers, brackets, reducers necessary in jointing of pipe.:</b>				
	<b>This piping is to be installed above ground.</b>				
	<b>(Bracketry Included In Rate)</b>				
	15mm Pipe surface mounted in external wall and painted				
1.25	- Freestanding units	m	3600		
1.26	- Semidetached units	m	1740		
1.27	- Duplex units	m	2700		
					Carried Forward

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

				Brought Forward	
	15mm Pipe chased into walls				
1.28	- Freestanding units	m	240		
1.29	- Semidetached units	m	232		
1.30	- Duplex units	m	135		
	<b>Extra over on SANS 62-1 Medium Class Galvanized Steel piping, supply, install, test commission and handover the following pipe fittings complete with adaptors, flanges, bushes, unions, fixing brackets etc. in the running length. This fittings are to be installed above ground.</b>				
	Tee equal 15mm x 15mm x 15mm				
1.31	- Freestanding units	no	720		
1.32	- Semidetached units	no	348		
1.33	- Duplex units	no	405		
	Elbow C x C 15mm				
1.34	- Freestanding units	no	2400		
1.35	- Semidetached units	no	1392		
1.36	- Duplex units	no	1890		
	Elbow C x C 15mmx22mm				
1.37	- Freestanding units	no	240		
1.38	- Semidetached units	no	116		
1.39	- Duplex units	no	135		
	Elbow wall plate C x F 15mm x 1/2" BSPT				
1.40	- Freestanding units	no	1035		
1.41	- Semidetached units	no	495		
1.42	- Duplex units	no	585		
	<b>Fitments</b>				
	Water Meters				
1.43	- Freestanding units	no	240		
1.44	- Semidetached units	no	116		
1.45	- Duplex units	no	135		
				Carried Forward	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

				Brought Forward	
	Cobra Hose Bibtap RbandPl.H/Union P/209/15				
1.46	- Freestanding units	no	240		
1.47	- Semidetached units	no	116		
1.48	- Duplex units	no	135		
	Stopcock rough brass FXF BS1010 15mm or similar approved				
1.49	- Semidetached units	no	120		
1.50	- Duplex units	no	58		
	ANGLE VALVE 15x15mm PVC CP or similar approved				
1.51	- Freestanding units	no	240		
1.52	- Semidetached units	no	116		
1.53	- Duplex units	no	135		
	Libra Value 17MAB01-H Drop-In Bath - White (1700 x 700mm) including all traps, waste water pipework and bedding to the underside of the baths (building rubble will not be accepted)				
1.54	- Freestanding units	no	240		
	Shower Arm Angle Short Cp Sarmct				
1.55	- Semidetached units	no	116		
1.56	- Duplex units	no	135		
	Triumph 1 Function Shower Rose Chrome Plated Knuckle Joint				
1.57	- Semidetached units	no	116		
1.58	- Duplex units	no	135		
	600mm long x15mm Braided connector flexible hose for WC				
1.59	- Freestanding units	no	240		
1.60	- Semidetached units	no	116		
1.61	- Duplex units	no	135		
	<b>Inspect and service all plumbing fittings previously removed (measured elsewhere), complete with new washers, skimming of washer seat, toilet mechanism fittings etc. including installation when complete</b>				
	Chrome plated biptaps (basin, bath & sink)				
1.62	- Freestanding units	no	480		
1.63	- Semidetached units	no	232		
1.64	- Duplex units	no	270		
				Carried Forward	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



				Brought Forward	
	Brass stop valve (Shower)				
1.65	- Semidetached units	no	58		
1.66	- Duplex units	no	68		
	Toilet mechanism				
1.67	- Freestanding units	no	240		
1.68	- Semidetached units	no	116		
1.69	- Duplex units	no	135		
	<b>Replace unserviceable plumbing fittings (Material only)</b>				
	Chrome plated biptaps (basin)				
1.70	- Freestanding units	no	18		
1.71	- Semidetached units	no	9		
1.72	- Duplex units	no	12		
	Chrome plated biptaps extended (bath & sink)				
1.73	- Freestanding units	no	36		
1.74	- Semidetached units	no	18		
1.75	- Duplex units	no	21		
	Stopcock rough brass FXF BS1010 15mm or similar approved				
1.76	- Freestanding units	no	14		
1.77	- Semidetached units	no	7		
1.78	- Duplex units	no	8		
	Toilet mechanism				
1.79	- Freestanding units	no	12		
1.80	- Semidetached units	no	6		
1.81	- Duplex units	no	7		
	<b>BILL NO. 1 WET SERVICES</b>				
<b>Carried forward to Summary of Bill of Quantities</b>				<b>R</b>	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE,  
HUMAN SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT  
REMEDIAL WORK TO 491 RDP HOUSES: WET SERVICES**

**CONTRACT 2334-50-02/03**

**Summary of Bill of Quantities**

Bill No.	Description	Amount ( R )
1	<b>SCHEDULE 3 - WET SERVICES</b>	
	Wet Services	
<b>Total Amount of SCHEDULE 3 Carried Forward to Summary of Schedules</b>		

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**VOLUME 1  
PORTION 2: CONTRACT**

**Section C2.2  
Schedule No. 4  
Electrical**

---

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Item	Payment Reference	Description	Unit	Qty	Rate (R)	Amount (R)
B		<b>BUILDING ELECTRICAL INSTALLATION</b>				
		<b>NEW, OR REPLACEMENT WORKS</b>				
1		<b>DISTRIBUTION BOARDS (SINGLE PHASE)</b>				
1.1		8 Way "Samite" type flush mount DB'S complete with all circuit breakers, wiring,labelling and all accessories required to ensure functionality (1x40A DP MCB, 1x63A E/L No O/L, 1x20A MCB, 1x10A MCB)				
		i) Supply	no	70		
		ii) Install	no	70		
2		<b>LOW VOLTAGE APPLIANCES</b>				
		Supply and Install the following appliances complete with all cover plates, fixing screws and connections				
2.1		230V 16A 1 way 1 lever light switch				
		i) Supply	no	108		
		ii) Install	no	108		
2.2		230V 16A 1 way 2 lever light switch				
		i) Supply	no	28		
		ii) Install	no	28		
2.3		230V 16A 2 way 1 lever light switch				
		i) Supply	no	135		
		ii) Install	no	135		
2.4		230V 16A 3pin slimline switched socket outlet with 3-pin switched 6A euro combo switched socket outlet				
		i) Supply	no	216		
		ii) Install	no	216		
2.5		230V 16A Isolator for 2plate hotplate (50x100mm)				
		i) Supply	no	135		R-----
		ii) Install	no	135		R-----
2.6		TV point (coax) 50mm x 100mm				
		i) Supply	no	Rate Only		R-----
		ii) Install	no	Rate Only		R-----
3		<b>LUMINAIRES</b>				
3.1		Diecast AL bulkhead IP54 with eyelid and E27 lampholder c/w 10W ES LED lamp ±700 lumen Similar or equal to ACDC NB1014L E27 White				
		i) Supply	no	135		
		ii) Install	no	135		
3.2		Ceiling or Wall bulkhead 1x E27 lampholder c/w 1x10W ES LED lamp ±700 lumen 2700K Similar or equal to Radiant JM60/Monte 300mm				
		i) Supply	no	945		
		ii) Install	no	945		
3.3		Surface mounted 1200mm 2x18W LED luminaire -acrylic diffuser 3400lm, 6000K, Similar or equal to ACDC LU-509-2x18W				
		i) Supply	no	135		
		ii) Install	no	135		
					Carried Forward	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Item	Payment Reference	Description	Unit	Qty	Rate (R)	Amount (R)
					Brought Forward	R -
<b>EXISTING INSTALLATION - MODIFICATIONS, REPAIRS AND REFIT</b>						
4		<b>DISTRIBUTION BOARD EQUIPMENT</b>				
4.1		40A DP MCB 3kA (Main Breaker)				
		i) Supply	no	35		
		ii) Install	no	35		
4.2		63A 30mA DP Earth Leakage Unit (No O/L)				
		i) Supply	no	70		
		ii) Install	no	70		
4.3		20A SP MCB (Plugs)				
		i) Supply	no	35		
		ii) Install	no	35		
4.4		10A SP MCB (Lights)				
		i) Supply	no	35		
		ii) Install	no	35		
4.5		Blank plates				
		i) Supply	no	270		
		ii) Install	no	270		
4.6		Circuit Breaker labelling				
		i) Supply	no	135		
		ii) Install	no	135		
5		<b>LOW VOLTAGE WIRING</b>				
		Install New or Replace damaged PVC insulated wiring and BCEW in existing/new conduit installations, including terminations & removal of existing conductors, where installed				
5.1		1.5mm <sup>2</sup> PVC insulated Cu wire				
		i) Supply	m	11800		
		ii) Install	m	11800		
5.2		2.5mm <sup>2</sup> PVC insulated Cu wire				
		i) Supply	m	1188		
		ii) Install	m	1188		
5.3		1.5mm <sup>2</sup> BCEW				
		i) Supply	m	6500		
		ii) Install	m	6500		
5.4		2,5mm <sup>2</sup> Surfex cable (Twin flat + earth)				
		i) Supply	m	Rate Only		R-----
		ii) Install	m	Rate Only		R-----
					Carried Forward	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Item	Payment Reference	Description	Unit	Qty	Rate (R)	Amount (R)
					Brought Forward	
5.5		1,5mm <sup>2</sup> Surfex cable (Twin flat + earth)				
		i) Supply	m	Rate Only		R-----
		ii) Install	m	Rate Only		R-----
5.6		20mm PVC Conduit, chased into brickwork for modification works Including all couplings, boxes, elbows and drawwires, etc.				
		i) Supply	m	5800		
		ii) Install	m	5800		
5.7		25mm PVC Conduit, chased into brickwork for modification works Including all couplings, boxes, elbows and drawwires, etc.				
		i) Supply	m	2100		
		ii) Install	m	2100		
6		<b>INVESTIGATION AND MAKE GOOD</b>				
		Investigation of all previously installed electrical installations and making good including replacement of covers, screws, fastening of all connections and installation of all missing or broken items required to ensure correct operation and compliance to SANS10142-1 (New appliances priced elsewhere)				
6.1		230V 16A light switches				
		i) Investigate, Supply and Install	no	728		
6.2		230V 16A switched socket outlets - single or double				
		i) Investigate, Supply and Install	no	486		
6.3		8way Samite DB (MCB's costed elsewhere)				
		i) Investigate, Supply and Install	no	123		
6.4		Ceiling mounted luminaires - all points				
		i) Investigate, Supply and Install	no	Rate Only		R-----
7		<b>SUNDRY ELECTRICAL WORK</b>				
		a) Earthing & Bonding of all equipment to SANS10142-1	no	135		
		b) Test and Issue Certificate of Compliance for all dwelling units	no	135		
		c) Removal of all redundant materials off site to COGHSTA Stores	sum	1		
		d) Identify illegal etc and remove / disconnect	no	80		
		<b>Total : Schedule No. 4: Bill No.1</b>				
		<b>DUPLEX Unit Building Electrical Installation including MODIFICATIONS</b>				
Carried forward to Summary of Bill of Quantities						

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



Item	Payment Reference	Description	Unit	Qty	Rate (R)	Amount (R)
<u>B</u>		<b>BUILDING ELECTRICAL INSTALLATION</b>				
		<b>NEW OR REPLACEMENT WORKS</b>				
1		<b>DISTRIBUTION BOARDS (SINGLE PHASE)</b>				
1.1		8 Way "Samite" type flush mount DB'S complete with all circuit breakers, wiring, labelling and all accessories required to ensure functionality (1x40A DP MCB, 1x63A E/L No O/L, 1x20A MCB, 1x10A MCB)				
		i) Supply	no	12		
		ii) Install	no	12		
2		<b>LOW VOLTAGE APPLIANCES</b>				
		Supply and Install the following appliances complete with all cover plates, fixing screws and connections				
2.1		230V 16A 1 way 1 lever light switch				
		i) Supply	no	94		
		ii) Install	no	94		
2.2		230V 16A 1 way 2 lever light switch				
		i) Supply	no	24		
		ii) Install	no	24		
2.3		230V 16A 2 way 1 lever light switch				
		i) Supply	no	0		
		ii) Install	no	0		
2.4		230V 16A 3pin slimline switched socket outlet with 3-pin switched 6A euro combo switched socket outlet				
		i) Supply	no	188		
		ii) Install	no	188		
2.5		230V 16A Isolator for 2plate hotplate (50x100mm)				
		i) Supply	no	Rate Only		R-----
		ii) Install	no	Rate Only		R-----
2.6		TV point (coax) 50mm x 100mm				
		i) Supply	no	Rate Only		R-----
		ii) Install	no	Rate Only		R-----
3		<b>LUMINAIRES</b>				
3.1		Diecast AL bulkhead IP54 with eyelid and E27 lampholder c/w 10W ES LED lamp ±700 lumen Similar or equal to ACDC NB1014L E27 White				
		i) Supply	no	116		
		ii) Install	no	116		
3.2		Ceiling bulkhead 1x E27 lampholder c/w 1x10W ES LED lamp ±700 lumen 2700K Similar or equal to Radiant JM60/Monte 300mm				
		i) Supply	no	580		
		ii) Install	no	580		
3.3		Surface mounted 1200mm 2x18W LED luminaire -acrylic diffuser 3400lm, 6000K, Similar or equal to ACDC LU-509-2x18W				
		i) Supply	no	116		
		ii) Install	no	116		
					Carried Forward	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



Item	Payment Reference	Description	Unit	Qty	Rate (R)	Amount (R)
					Brought Forward	
<b>EXISTING INSTALLATION - REPAIRS AND REFIT</b>						
4		<b>DISTRIBUTION BOARD EQUIPMENT</b>				
4.1		40A DP MCB 3kA (Main Breaker)				
		i) Supply	no	35		
		ii) Install	no	35		
4.2		63A 30mA DP Earth Leakage Unit (No O/L)				
		i) Supply	no	70		
		ii) Install	no	70		
4.3		20A SP MCB (Plugs)				
		i) Supply	no	35		
		ii) Install	no	35		
4.4		10A SP MCB (Lights)				
		i) Supply	no	35		
		ii) Install	no	35		
4.5		Blank plates				
		i) Supply	no	35		
		ii) Install	no	35		
4.6		Circuit Breaker labelling				
		i) Supply	no	35		
		ii) Install	no	35		
5		<b>LOW VOLTAGE WIRING</b>				
		Replace damaged or vandalised PVC insulated wiring and BCEW in existing conduit installations, including terminations & removal of existing conductors, where installed				
5.1		1.5mm <sup>2</sup> PVC insulated Cu wire				
		i) Supply	m	1392		
		ii) Install	m	1392		
5.2		2.5mm <sup>2</sup> PVC insulated Cu wire				
		i) Supply	m	928		
		ii) Install	m	928		
5.3		1.5mm <sup>2</sup> BCEW				
		i) Supply	m	1160		
		ii) Install	m	1160		
5.4		2,5mm <sup>2</sup> Surfex cable (Twin flat + earth)				
		i) Supply	m	Rate Only		R-----
		ii) Install	m	Rate Only		R-----
5.5		1,5mm <sup>2</sup> Surfex cable (Twin flat + earth)				
		i) Supply	m	Rate Only		R-----
		ii) Install	m	Rate Only		R-----
5.6		20mm PVC Conduit, chased into brickwork for modification works Including all couplings, boxes, elbows and drawwires, etc.				
		i) Supply	m	400		
		ii) Install	m	400		
					Carried Forward	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



*Schedule No. 4: Bill No.2 - Lerato Park RDP Houses: Electrical Installations-Semi Detached Units*

13 August 2021



Item	Payment Reference	Description	Unit	Qty	Rate (R)	Amount (R)
B		<b>BUILDING ELECTRICAL INSTALLATION</b>				
		<b>NEW OR REPLACEMENT WORKS</b>				
1		<b>DISTRIBUTION BOARDS (SINGLE PHASE)</b>				
1.1		8 Way "Samite" type flush mount DB'S complete with all circuit breakers, wiring, labelling and all accessories required to ensure functionality (1x40A DP MCB, 1x63A E/L No O/L, 1x20A MCB, 1x10A MCB)				
		i) Supply	no	25		
		ii) Install	no	25		
2		<b>LOW VOLTAGE APPLIANCES</b>				
		Supply and Install the following appliances complete with all cover plates, fixing screws and connections				
2.1		230V 16A 1 way 1 lever light switch				
		i) Supply	no	192		
		ii) Install	no	192		
2.2		230V 16A 1 way 2 lever light switch				
		i) Supply	no	48		
		ii) Install	no	48		
2.3		230V 16A 2 way 1 lever light switch				
		i) Supply	no	0		
		ii) Install	no	0		
2.4		230V 16A 3pin slimline switched socket outlet with 3-pin switched 6A euro combo switched socket outlet				
		i) Supply	no	384		
		ii) Install	no	384		
2.5		230V 16A Isolator for 2plate hotplate (50x100mm)				
		i) Supply	no	Rate Only		R-----
		ii) Install	no	Rate Only		R-----
2.6		TV point (coax) 50mm x 100mm				
		i) Supply	no	Rate Only		R-----
		ii) Install	no	Rate Only		R-----
3		<b>LUMINAIRES</b>				
3.1		Diecast AL bulkhead IP54 with eyelid and E27 lampholder c/w 10W ES LED lamp ±700 lumen Similar or equal to ACDC NB1014L E27 White				
		i) Supply	no	240		
		ii) Install	no	240		
3.2		Ceiling bulkhead 1x E27 lampholder c/w 1x10W ES LED lamp ±700 lumen 2700K Similar or equal to Radiant JM60/Monte 300mm				
		i) Supply	no	960		
		ii) Install	no	960		
					Carried Forward	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



Item	Payment Reference	Description	Unit	Qty	Rate (R)	Amount (R)
					Brought Forward	
3.3		Surface mounted 1200mm 2x18W LED luminaire -acrylic diffuser 3400lm, 6000K, Similar or equal to ACDC LU-509-2x18W				
		i) Supply	no	240		
		ii) Install	no	240		
<b>EXISTING INSTALLATION - REPAIRS AND REFIT</b>						
4		<b>DISTRIBUTION BOARD EQUIPMENT</b>				
4.1		40A DP MCB 3kA (Main Breaker)				
		i) Supply	no	60		
		ii) Install	no	60		
4.2		63A 30mA DP Earth Leakage Unit (No O/L)				
		i) Supply	no	90		
		ii) Install	no	90		
4.3		20A SP MCB (Plugs)				
		i) Supply	no	60		
		ii) Install	no	60		
4.4		10A SP MCB (Lights)				
		i) Supply	no	60		
		ii) Install	no	60		
4.5		Blank plates				
		i) Supply	no	60		
		ii) Install	no	60		
4.6		Circuit Breaker labelling				
		i) Supply	no	60		
		ii) Install	no	60		
5		<b>LOW VOLTAGE WIRING</b>				
		Replace damaged or vandalised PVC insulated wiring and BCEW in existing conduit installations, including terminations & removal of existing conductors, where installed				
5.1		1.5mm <sup>2</sup> PVC insulated Cu wire				
		i) Supply	m	2880		
		ii) Install	m	2880		
5.2		2.5mm <sup>2</sup> PVC insulated Cu wire				
		i) Supply	m	1920		
		ii) Install	m	1920		
5.3		1.5mm <sup>2</sup> BCEW				
		i) Supply	m	2400		
		ii) Install	m	2400		
					Carried Forward	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



Item	Payment Reference	Description	Unit	Qty	Rate (R)	Amount (R)
					Brought Forward	
5.4		2,5mm <sup>2</sup> Surfex cable (Twin flat + earth)				
		i) Supply	m	Rate Only		R-----
		ii) Install	m	Rate Only		R-----
5.5		1,5mm <sup>2</sup> Surfex cable (Twin flat + earth)				
		i) Supply	m	Rate Only		R-----
		ii) Install	m	Rate Only		R-----
5.6		20mm PVC Conduit, chased into brickwork for modification works Including all couplings, boxes, elbows and drawwires, etc.				
		i) Supply	m	800		
		ii) Install	m	800		
6		<b>INVESTIGATION AND MAKE GOOD</b>				
		Investigation of all previously installed electrical installations and making good including replacement of covers, screws, fastening of all connections and installation of all missing or broken items required to ensure correct operation and compliance to SANS10142-1 (New appliances priced elsewhere)				
6.1		230V 16A light switches				
		i) Investigate, Supply and Install	no	1080		
6.2		230V 16A switched socket outlets - single or double				
		i) Investigate, Supply and Install	no	864		
6.3		8way Samite DB (MCB's costed elsewhere)				
		i) Investigate, Supply and Install	no	203		
6.4		Ceiling mounted luminaires - all points				
		i) Investigate, Supply and Install	no	Rate Only		R-----
7		<b>SUNDRY ELECTRICAL WORK</b>				
		a) Earthing & Bonding of all equipment to SANS10142-1	no	240		
		b) Test and Issue Certificate of Compliance for all dwelling units	no	240		
		c) Removal of all redundant materials off site to COGHSTA Stores	sum	1		
		d) Identify illegal etc and remove / disconnect	no	140		
<b>Schedule No. 4: Bill No.3</b>						
<b>FREE STANDING Unit Building Electrical Installation</b>						
Carried forward to Summary of Bill of Quantities						

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



Item	Payment Reference	Description	Unit	Qty	Rate (R)	Amount (R)
<u>B</u>		<b>SITE ELECTRICAL INSTALLATION FOR DECANTING UNITS</b>				
		<b>NEW AND TEMPORARY WORKS</b>				
1		<b>LOW VOLTAGE DISTRIBUTION KIOSKS</b>				
		Supply/ Install; connecting up & Commissioning of the Outdoor weather proof metering kiosks complete , excluding cable terminations. Allow for earth continuity tests at first and last units. Earth & Neutral bars in kiosks to be bonded using 70mm <sup>2</sup> Insulated earth conductor.				
1.1		a) Floor standing Weather Proof Metering kiosk (Main meter kiosk)				
		i) Supply	no	1		
		ii) Install	no	1		
1.2		b) Floor standing Weather Proof 3CR12 Metering kiosk ( 12 way)				
		i) Supply	no	1		
		ii) Install	no	1		
1.3		b) Floor standing Weather Proof 3CR12 Metering kiosk ( 9 way)				
		i) Supply	no	2		
		ii) Install	no	2		
2		<b>LOW VOLTAGE CIRCUIT BREAKERS</b>				
		To comply with Solplaatje municipality specifications Circuit breakers for feeder cables from miniature substations and primary substations, including MCCB extension struts, welding Cu cable tails and face-plate to suite MCCB's (see SLD)				
2.1		a) 225A 3-phase 25kA (3x70mm <sup>2</sup> tail)				
		i) Supply	no	1		
		ii) Install	no	1		
3		<b>LOW VOLTAGE CABLES AND BCEW</b>				
		PVC-insulated, cable with single-layer steel-wire armouring and PVC outer sheath. (PVC/SWA/PVC 600 / 1000V Grade cables)				
3.1		a) 70mm <sup>2</sup> 4-core Copper cable				
		i) Supply	m	80		
		ii) Install	m	80		
3.2		b) 50mm <sup>2</sup> 4-core Copper cable				
		i) Supply	m	180		
		ii) Install	m	180		
3.3		c) 35mm <sup>2</sup> 4-core Copper cable				
		i) Supply	m	80		
		ii) Install	m	80		
3.4		c) 10mm <sup>2</sup> 2-core copper cable (service connections)				
		i) Supply	m	1380		
		ii) Install	m	1380		
3.5		d) 6mm <sup>2</sup> 3-core copper cable (area lighting)				
		i) Supply	m	270		
		ii) Install	m	270		
3.6		e) 35mm <sup>2</sup> BCEW				
		i) Supply	m	370		
		ii) Install	m	370		
Carried Forward						

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Brought Forward					
4		<b>LOW VOLTAGE CABLE TERMINATIONS AND JOINTS</b> LV Terminations as per specification for cables complete			
4.1		a) 70mm <sup>2</sup> 4-core Copper cable			
		i) Supply	m	2	
		ii) Install	m	2	
4.2		b) 50mm <sup>2</sup> 4-core Copper cable			
		i) Supply	m	4	
		ii) Install	m	4	
4.3		c) 35mm <sup>2</sup> 4-core Copper cable			
		i) Supply	m	2	
		ii) Install	m	2	
4.4		c) 10mm <sup>2</sup> 2-core copper cable (service connections)			
		i) Supply	no	60	
		ii) Install	no	60	
4.5		d) 6mm <sup>2</sup> 3-core copper cable (area lighting)			
		i) Supply	no	12	
		ii) Install	no	12	
4.6		e) 35mm <sup>2</sup> BCEW			
		i) Supply	no	8	
		ii) Install	no	8	
5		<b>EXCAVATIONS &amp; SLEEVES</b> Excavated in materials as specified below for trenches, backfill with sifted material and compact Excavations to be 0.6m x 0.4m x running meter <b>NB: Due to proximity of existing services all excavations BY HAND only</b>			
5.1		a) Pickable soil			
		i) Supply	m <sup>3</sup>	249	
5.2		b) Soft rock			
5.3		i) Supply	m <sup>3</sup>	70	
5.4		c) Hard rock			
		i) Supply	m <sup>3</sup>	34	
5.5		d) Provide imported soil for backfilling, where rocks are excavated			
		i) Supply	m <sup>3</sup>	36	
5.6		e) 110mmØ Nextube sleeves for roadway and pathway crossing			
		i) Supply	m	200	
		ii) Install	m	200	
6		<b>AREA LIGHTING MATERIAL, EQUIPMENT AND INSTALLATION</b> <u>AREA LIGHTING LUMINAIRES</u> Supply and Installation of pole mounted flood light luminaires complete. with brackets to mount on wooden pole at 5.5m mounting height			
6.1		a) 40W LED Floodlight 3600lumen 120° IP65 Similar or equal to ACDC GY290TG-40W/WW			
		i) Supply	no	5	
		ii) Install	no	5	
Carried Forward					

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

					Brought Forward	R	-
6.2		b) 6,5m length treated wooden gum poles 100/125mm top planted at 1m depth i) Supply ii) Install	no no	4 4			
7		<b>READY BOARD WITH BULKHEAD (C/W 8,5W ES LED LAMP)</b> 1 x QA 17C 63A, 2 x 20A mcb, 1 x Bulkhead, 3 x 16A Sockets, 1 x 6A Euro Socket Compatible with all the prepayment meters Knockouts for additional CB's , 15 access points for conduit or 2+E Surfix Switches (light and socket outlets) have a glow-in-dark fluorescent insert Warning labels      Bulkhead light      Earth Leakage protection Sealing facility      Mounting lugs      6A Euro Switched socket i) Supply ii) Install	no no	30 30			
7		<b>SUNDRY ELECTRICAL WORK</b>					
7.1		a) Earthing of all equipment as per Code of Practice	Sum	1			
7.2		b) Commissioning of Installation	Sum	1			
7.3		c) Label all distribution boards	ea	5			
7.4		d) Test and Issue Certificate of Compliance for all Distribution Board & Kiosk areas	no	33			
7.5		e) As Built Drawings	no	3			
7.6		f) Municipal Application/Connection	no	30			
<b>ITEMS TO BE PROCURED EX SOL PLAATJE MUNICIPALITY</b>							
8		<b>DOMESTIC ELECTRICITY METERING</b>					
8.1		a) 1ph domestic split pre-payment energy meter (PLC type) To be purchased from Sol Plaatje Municipality to SPM specifications i) supply (at estimated cost from SPM) ii) Contractor's mark-up / profit..... iii) Install	no no no	30 30 30			
<b>Total : Schedule No. 4: Bill No.4</b> <b>DECANTING UNITS - Electrical Reticulation</b>							
Carried forward to Summary of Bill of Quantities							

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE,  
HUMAN SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT  
REMEDIAL WORK TO 491 RDP HOUSES: ELECTRICAL INSTALLATION WORKS**

**CONTRACT 2334-50-02/03**

**Summary of Bill of Quantities**

Bill No.	Description	Amount ( R )
	<b>SCHEDULE 4 - ELECTRICAL</b>	
1	Electrical Installations-Duplex Units	
2	Electrical Installations-Semi Detached Units	
3	Electrical Installations-Free Standing Units	
4	Decanting Units Electrical Installation	
	.	
<b>Total Amount of SCHEDULE 4 Carried Forward to Summary of Schedules</b>		

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

LERATO PARK INTEGRATED HOUSING DEVELOPMENT

**CONTRACT 2334-50-02/03**

Remedial work to 491 RDP Houses

**VOLUME 1  
PORTION 2: CONTRACT**

**Section C2.3  
Summary of Schedules**

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE,  
HUMAN SETTLEMENT & TRADITIONAL AFFAIRS**

LERATO PARK INTEGRATED HOUSING DEVELOPMENT  
Remedial work to 491 RDP Houses

**CONTRACT 2334-50-02/03**

**Summary of Schedules**

Schedule No.	Description	DECANTING OPTION 1	DECANTING OPTION 2	DECANTING OPTION 3
		Amount ( R )	Amount ( R )	Amount ( R )
1	PRELIMINARY & GENERAL			
2	BUILDING WORK			
3	WET SERVICES			
4	ELECTRICAL			
<b>Sub-Total</b>				
Provisional sum: Allowance for Contract Price Adjustment (10% of Sub-Total)				
<b>Sub-Total all Portions</b>				
Provisional sum: Allowance for Contingencies (10% of Sub-Total)				
<b>Total</b>				
<b>VAT 15%</b>				
<b>Total incl. VAT (Total Amount of Tender Carried Forward to Form of Tender)</b>				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C2.2-117

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**VOLUME 1  
PORTION 2: CONTRACT**

**Part C3  
Scope of Work**

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

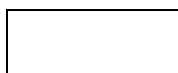
**Remedial work to 492 RDP Houses**

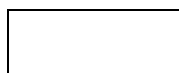
**SCOPE OF WORKS**

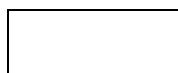
**CONTENTS LIST**

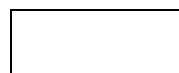
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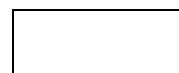
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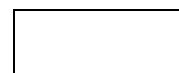
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

<b>Section C3.4</b>	<b>Construction .....</b>	<b>C3.4-1</b>
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**END OF SECTION**

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
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**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**VOLUME 1  
PORTION 2: CONTRACT**

**Section C3.1  
Description of the Works**

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Contractor

Witness 1

Witness 2

Employer

Witness 1

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**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**C3.1 DESCRIPTION OF THE WORKS**

**C3.1.1 Employers Objectives**

In 2013, 491 RDP houses were constructed in the Lerato Park Integrated Housing Development (Kimberley North). Due to the severity of the surrounding ground conditions and the poor workmanship/materials, the houses have deteriorated. It is the employer's objective to remedy any defects which were identified in the site assessment to ensure a better living environment for the home inhabitant's.

**C3.1.2 Overview of the Works**

This contract is for the repair of 240 freestanding, 116 semi detached and 135 duplex houses (all currently occupied) previously constructed within the Lerato Park Integrated Housing development.

A condition based assessment was conducted to determine the extent of the defects, the findings of which have assisted in the compilation of this scope of work and bills of quantities.

This contract will be primarily based on the previous design drawings and specifications, with amendments and technology enhancements as may be required.

Inhabitants of all the duplex units (135 units), x1 freestanding house (to be demolished and rebuilt) and x2 semidetached units (to be demolished and rebuilt) will be relocated to a temporary decanting housing (30 in number) facility while remedial work is performed on the units. Based on the severity of the remainder of the freestanding units and the semidetached units, the inhabitants will have the choice of moving into the decanting units. The default would be to work around the current inhabitants/furniture/etc. and avoid

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Contractor

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Witness 2

having to move the inhabitants into the decanting units. The decanting of the inhabitants will be implemented in accordance to the contractors planned and approved (by the principal agent) programme.

Several houses have been flooded due to storm water not being adequately channelled away from the houses. The natural ground will be shaped in such a manner that will defer storm water away from the house and prevent ponding.

A limited budget is available for this financial year and the number of houses repaired in this financial year may change based on the successful bidders pricing. Thus assuming that it would be possible to repair more than 135 houses in the first financial.

### **C3.1.3 Scope of the Works**

#### Remedial work on Houses

Repairing of 491 RDP houses to a final standard as per the drawings included in Volume 2 and specifications under part C3.4. This includes but not limited to, remedial work to previously constructed works: masonry, waterproofing, carpentry and joinery, ceilings, ironmongery, metal works, plastering, tiling, plumbing and drainage, internal and external electrical works, glazing, paintwork, external works (landscaping, paving), ect. (Refer to Structural and Architect drawings for additional information)

The 491 RDP houses comprise of three topologies:

- Freestanding houses
  - o Number of houses = 240 (x1 to be demolished and rebuilt)
  - o 40.6m<sup>2</sup>
  - o 2 bedrooms
  - o 1 bathroom with
    - Toilet
    - Bath
    - Basin
  - o 1 Kitchenette
    - Stainless steel washing basin
- Semidetached houses
  - o Number of houses = 116 (x2 to be demolished and rebuilt)
  - o 40.6m<sup>2</sup>
  - o 2 bedrooms
  - o 1 bathroom with

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



- Toilet
  - Bath
  - Basin
- 1 Kitchenette
  - Stainless steel washing basin
- Duplex houses
  - Number of houses = 135
  - 44m<sup>2</sup>
  - 2 bedrooms
  - 1 bathroom with
    - Toilet
    - Shower
    - Basin
  - 1 Kitchenette
    - Stainless steel washing basin

#### Remedial work on Structural works

- Repair structural cracks
- Insert new movement joints with relevant cover strips and joint sealants
- Carefully dismantle illegal structures connected to the building. All materials to be issued back to the owner/tenant. Details of the illegal structure shall be individually identified on site
- Alterations to the Duplex units, which include:
  - Removing existing cast in-situ slab and staircase and install in new location.
  - Remove and rebuild footings, walls (with finishes) and floors to accommodate the new staircases.
  - Install new roof structure and roof tiles over new extended staircase

#### Remedial work on Architectural works

- Remove and re-fix roof and ridge tiles correctly
- Replace roof underlay
- Replace pvc ceiling with gypsum ceiling and cornices and install insulation
- Replace damaged doors and door frames
- New plaster band around external windows and doors
- Rebuild brickwork above doors and windows that are affected by structural cracks so that lintels can be installed above doors.
- Repair substandard floor screed and tiled splashbacks
- Repaint interior and exterior of houses (All surfaces)

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

- Re-fixing/Tightening of screws, bolts, etc to all existing electrical fittings, ironmongery fittings, cupboards, curtain rails, doors (Including supplying missing screws, plugs, bolts, etc)
- Repair work to the surrounding aprons with a combination of in-situ concrete and paving
- Waterproofing and tiling shower walls
- Replace faulty door and window furniture
- Replace glazing to windows

#### Remedial work on Wet Services

- Replace outside water taps and install new stand pipe
- Replace inferior quality fiberglass baths
- Repair and replace cold/fresh water and waste water reticulation (pipework)
- Repair and replace external gullies
- Replace or repair faulty plumbing fittings

#### Remedial work on Civil Works

- Shaping of soil away from houses
- Platforms for three demolished houses

#### Remedial work on Electrical Works

- Refer to the C3.4.3.1 for details on the electrical scope of work
- Testing and commissioning as well as the issue of a Certificate of Compliance (CoC) for each house

#### Demolition and Construction of New Houses

3 of the 491 units will be demolished and reconstructed due to excessive cracking (Included in the structural engineer's drawings). The house topologies include the following:

- Freestanding houses – 1 House
- Semidetached houses – 2 Houses

This includes but not limited to, demolishing existing building, earthworks, concrete, formwork, reinforcing, masonry, waterproofing, roof covering, carpentry and joinery, ceilings, ironmongery, metal works, plastering, tiling, plumbing and drainage, internal and external electrical works, glazing, paintwork, external works (landscaping, paving), ect.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

This contract provides for the supply, delivery to site, installation, testing, and handing over in good working order of the complete house as specified or implied herein and/or in the accompanying specifications and on the drawings.

The Tenderer shall allow in his Tender price for all material, labour, supervision, transport, tests and all other items necessary to complete the contract in its entirety and to the satisfaction of the Principal Agent and Employer's Agents.

In the event where the supply and/or installation of any item, material or equipment does not form part of this contract, it will be specifically indicated as such in this specification and/or on the accompanying drawings.

Other information

The Construction period will be 219 working days for the repair work to 135 duplex houses and 30 decanting houses during the first financial year and 236 working days for the remainder of the houses during the following financial year.

Refer to Section C3.3 with regards to the local labour requirement.

There is an agreed budget for the financial year and the number of houses being completed in this period may vary dependent on the successful tenderer contract sum.

The planning and coordination of how the sections will be implemented shall be the responsibility of the Contractor. The Contractor shall include within their planning the critical houses/sections (identified by the Engineer) which need immediate attention. Only on completion of the critical houses/sections will the Contractor be allowed to commence with the remainder of the houses.

The contractor shall install a temporary 1.8m high fence (covered with shade netting) to separate the areas under construction and the public. This will only be applicable to the 135 duplex units, x1 freestanding unit (to be demolished and rebuilt), x2 semidetached unit (to be demolished and rebuilt) and any other house where the inhabitant move out and into the decanting units. This to safeguard the public. After a section is handed over (on every unit) to the inhabitants of the homes, the fencing shall be moved to the new unit. On completion of all of the works, the temporary fencing shall be spoiled off site.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

#### **C3.1.4 Location of the Works**

The proposed development site is located to the North of Kimberly, in the Northern Cape Province, within the Francis Baard District Municipal area and within the borders of the Sol Plaatjie Local Municipality. It is situated between the townships of Galeshewe and Roodepan (see locality plan).

##### Coordinates

Phase 01 - 28°40'24.80"S 24°42'55.50"E

#### **C3.1.5 Handover of completed houses**

Prior to the commencement of the remedial work on the individual houses, inhabitants of roughly 30 (thirty) houses shall be decanted to the temporary accommodation, as defined in the Layout Plan and in accordance to the contractor's planned implementation strategy.

The handover of completed individual houses, back to the inhabitants of the houses, shall be done when the construction/repair work is complete (sectional practical completion achieved) and safe access to the house is available. Where possible houses should be grouped in sections/clusters for handover so that quality checks can be done in groups.

The Contractor shall remain responsible for the houses, from when the specific section has been made available up until such time as they are handed back to the inhabitants of the houses.

#### **C3.1.6 Decanting facility**

30 Decanting houses will be constructed, prior to repair work to RPD houses, for the decanting facility for the repair work to the first 135 houses. This applicable up until the end of the financial year.

All 30 decanting houses will be located on the same erf and fenced off (as per the layout plan). The houses consist of 2 bedrooms, a bathroom and a kitchenette. The structure is constructed of zink clad timber structure, with insulated "Nutec" boarding on the interior.

This includes but not limited to, construction of new huts, earthworks, concrete, formwork, reinforcing, masonry, waterproofing, roof covering, carpentry and joinery, ceilings, ironmongery, metal works, plastering, tiling, plumbing and drainage, internal and external

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

electrical works, water and sewer reticulation, glazing, paintwork, external works (landscaping, paving), ect.

- Decanting houses
  - o Number of houses = 40
  - o 32.5m<sup>2</sup>
  - o 2 bedrooms
  - o 1 bathroom with
    - Toilet
    - Bath
    - Basin
  - o 1 Kitchenette
    - Stainless steel washing basin

The contractor will facilitate the following:

- Provide a 72 hour notice prior to moving of the inhabitants to and from the decanting units.
- Moving of inhabitants in and out of decant houses (Including all interior and exterior possessions)
- Assist with water, sewer and electrical connection and including the registering the inhabitants at the municipality for the purposes of the usage of such service. This applicable to transferring of the account from the RDP house (needing repair work) to the decanting unit and then back to the RDP house on completion of the work.
- Formulating checklists for moving in and out of decanted houses
- Repair of any damages to decanting houses
- Keeping terrain clean and in a neat condition

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

LERATO PARK INTEGRATED HOUSING DEVELOPMENT

**CONTRACT 2334-50-02/03**

Remedial work to 491 RDP Houses

**VOLUME 1  
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**Section C3.2  
Engineering**

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

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**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**C3.2 ENGINEERING**

**C3.2.1 Employer's Design**

The permanent works included in this contract has been designed by the Engineer. The detail of the works is indicated on the drawings and in the specifications. The Tenderer may submit alternative offers for designs prepared by him subject to the conditions specified in the Contract Data.

**C3.2.2 Drawings**

Drawings are bound in Volume 2 – Book of Drawing. A drawing list is included in Volume 2.

The Contractor shall be entitled to receive free of charge, one full size and one A3 copies of each such drawings and to receive, at the cost of reproduction, such additional copies as he shall reasonably require.

One copy of all drawings shall be kept on the Site and be available for perusal by the Principal agent or any person authorised by him.

The Contractor shall, in accordance with the Principal agent's instructions, maintain a register on the Site of all drawings and revisions thereof in the chronological order in which they are delivered to him.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

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**VOLUME 1  
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**Section C3.3  
Procurement**

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



## DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN SETTLEMENT & TRADITIONAL AFFAIRS

### LERATO PARK INTEGRATED HOUSING DEVELOPMENT

#### CONTRACT 2334-50-02/03

#### Remedial work to 491 RDP Houses

### C3.3 PROCUREMENT

#### C3.3.1 Procurement Principles

The Employer decided to adopt the Standard of Uniformity in Construction Procurement published by the Construction Industry Development Board (CIDB) and including Procurement Policy of COGHSTA for his procurement process.

The Standard for Uniformity in Construction Procurement establishes minimum requirements that:

- promote cost efficiencies through the adoption of a uniform structure for procurement documents, standard component documents and generic solicitation procedures;
- provide transparent, fair and equitable procurement methods and procedures in critical areas in the solicitation process;
- ensure that the forms of contract that are used are fair and equitable for all the parties to a contract; and
- enable risk, responsibilities and obligations to be clearly identified.

#### Procurement Policy of COGHSTA

The Procurement Policy of COGHSTA ensures further that standards of behaviour, ethics and accountability which it require of its officials and professional service providers are met, and also makes a strong statement of the Department's commitment to a procurement system which enables the emergence of sustainable small, medium and micro businesses which will add to the common wealth of our Province and the achievement of enhanced economic and social well-being of all its citizens.

This policy based on the following five principles to ensure a sustainable procurement system:

- Preference will be given to construction companies who are owned by women, youth and persons with disability.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

- Value for Money;
- Open and Effective Competition;
- Ethics and Fair Dealing;
- Accountability and Reporting;
- Equity.

This policy is in line with the Preferential Procurement Policy Regulations, 2017.

In the event of any ambiguity/discrepancy between the above mentioned policies, the CIDB policy will take precedence?

### **C3.3.2 Contractors Personnel**

The Contractor shall limit the utilisation of his permanently employed personnel to that of key personnel only on the Works, as defined below, and shall execute and complete the Works utilising a temporary workforce employed directly by the Contractor and/or by his sub-contractors, using the assistance of the Labour Desk(s), from the various communities that are established in proximity to the Works or which will be consumers from the Scheme.

Without derogating from the Contractor's obligations to complete the Works within the specified time for completion in terms of the General Conditions of Contract, the numbers in each category of the Contractor's key personnel, as stated by the Contractor in the Returnable Schedules, will be strictly controlled during the contract period and any increase in numbers will be subject to the prior approval of the Employer.

Key personnel means all contracts managers, site agents, site clerks, materials and survey technicians, quantity surveyors, trainers, supervisors, foremen, skilled plant operators, brick layers, welders, shutter hands and the like, and all other personnel in the permanent employ of the Contractor or his sub-contractors who possess special skills, and/or who play key roles within the Contractor's or his subcontractor's operations.

The Principal Agent may at his discretion, upon receipt of a written and fully motivated application from the Contractor, and where he deems the circumstances so warrant, authorise in writing that the Contractor may utilise in the execution of the Works, workers not being his key personnel but who are in his permanent employ. Without limiting the generality of application of this sub-clause, circumstances which may be considered by the Principal Agent to warrant authorization of the use of the Contractor's permanent employees other than key personnel, include:

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- a) The unavailability from local sources of sufficient numbers of temporary workers and/or sub-contractors to execute the Works, provided always that the Contractor has satisfied the Principal Agent that he has exercised his best endeavours and taken all reasonable actions to recruit sufficient temporary workers and sub-contractors from local sources.
- b) The unavailability within the temporary worker pool and/or from subcontractor sources available to the Contractor in terms of the Contract, of sufficient skills necessary to execute the Works or specific portions thereof, in situations where the completion period allowed in the Contract is insufficient to facilitate the creation of the necessary skills through the provision of suitable training as contemplated in the Contract;
- c) Any other circumstances which the Principal Agent may deem as constituting a warrant.

### **C3.3.3 Temporary Workforce**

The Contractor shall employ labour from the local communities through the Labour Desk(s). Accordingly, the workforce that is employed on Site shall consist of local residents, except for approved key staff in the permanent employ of the Contractor, to the maximum extent that is compatible with the requirements of Clause C3.3.2.

The Labour Desk(s) shall assist in identifying available local labour and, where available, semi-skilled labour as well as local sub-contractors. The Labour Desks shall also assist and advise regarding conditions of employment, minimum wages, disputes and disciplinary procedures. The function of the Labour Desk(s) shall however in no way diminish the responsibilities of the Contractor in terms of the Conditions of Contract.

Although the Contractor shall adhere to the statutory minimum wage rates, he is however at liberty to negotiate additional incentive payments based on performance.

A contract of employment or subcontract should be signed between the Contractor and each of his employees or sub-contractors, as the case may be. Likewise contracts of employment must be entered into between each such sub-contractor, and each of the specific subcontractor's employees. Employment and subcontract agreements shall make clear reference to at least the following conditions:

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- The minimum agreed wage rate per hour in respect of labourers;
- The agreed pay rate per unit of production where applicable;
- UIF and WCA payments;
- Minimum working hours per day;
- Start and end times of a daily shift;
- Lunch break times;
- Company Policy regarding :
  - Rain time
  - Sickness and absenteeism
  - Disciplinary matters
  - Grievances
- Method and frequency of payment;
- Work clothes and safety equipment to be issued.

EPWP reporting must be submitted with every claim or monthly, whichever comes first. Should such backup not be provided, payment will be withheld.

#### **C3.3.4 Labour Intensive Construction**

Labour Intensive Construction shall mean the economically efficient employment of as great a portion of labour as is technically feasible to produce a standard of construction as demanded by the Specifications with completion by the Final Completion Date, thus the effective substitution of labour for equipment.

Appropriate portions of the Works included in the Contract shall be executed using labour intensive construction methods. These portions of the Works shall be constructed utilising only locally employed labour and/or the labour of local sub-contractors, supplemented to the extent necessary and unavoidable by the Contractors key personnel as provided for in clause C3.3.2, unless otherwise instructed by the Principal Agent.

#### **C3.3.5 Subcontracting**

- C3.3.5.1 The contractor must subcontract a minimum of 30% of the contract value to an
- i. EME or QSE:
  - ii. An EME or QSE which is at least 51% owned by black people;
  - iii. An EME or QSE which is at least 51% owned by black people who are youth;
  - iv. An EME or QSE which is at least 51% owned by black people who are women;
  - v. An EME or QSE which is at least 51% owned by black people with disabilities;

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Contractor

Witness 1

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Employer

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- vi. An EME or QSE which is at least 51% owned by black people living in rural or underdeveloped areas or townships;
- vii. A cooperative which is at least 51% owned by black people;
- viii. An EME or QSE which is at least 51% owned by black people who are military veterans; or
- ix. More than one of the categories referred to in paragraphs (i) to (viii). Preference must also be given to women, youth and persons with disability.

A list of local subcontractors will be provided by the employer (defined as: Employer subcontractor list), which will be used to identify subcontractors by the main contractor for the 30% budget allocation for subcontractors.

The extent to which the Contractor meets these targets will be monitored by the Principal agent for the duration of the Contract. The Contractor will be required to report on the attainment of local content targets as part of the monthly progress report prepared by the Contractor and submitted to the Principal agent. The report format will be provided to the Contractor. The Contractor shall submit documentary proof of expenditure on local content within the targeted categories, which proof will be examined by the Principal agent and certified, referred for further information or rejected based on the merits thereof.

C3.3.5.2 Tenderers should enter their firm undertakings for local content into section T2.2.8 of the tender documents. The successful tenderer will be required to meet its firm undertakings for local content. Failure to meet these targets will entitle the Employer to claim local content damages in accordance with the Conditions of Contract.

For every percentage of the 30% to be subcontracted that the Contractor defaults, the Contractor would have to pay penalties to the value of 0.1% of the total contract value excluding VAT.

C3.3.5.3 The Contractor shall be responsible for all work carried out by sub-contractors on his behalf. The Principal agent will not liaise directly with any such sub-contractor, nor will he become involved in any problems and/or disputes related to payments, programming, workmanship, etc, unless provided for in the Conditions of Contract. Such problems and/or disputes shall remain the sole concern of the Contractor and his sub-contractors.

C3.3.5.4 The Principal agent may at his discretion, upon receipt of a written and fully motivated application from the Contractor, and where he deems the circumstances so warrant, and

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provided always that the Contractor has complied fully and in all respects with the provisions of the Contract pertaining to subletting to local sub-contractors or has utilised his best endeavours to comply therewith, authorise in writing that the Contractor may employ local residents in terms of clause C3.3.1.1 with the sole intent of executing on-the-job training of such local residents to suitable levels of skill that will enable the Contractor to sub-let appropriate portions of the Works as specified in clause C3.3.1.1 to such local residents.

Without limiting the generality of application of this sub clause, circumstances which may be considered by the Principal agent to warrant such authorization include:

- a) non-receipt of valid or acceptable tenders/quotations from local sub-contractors;
- b) serious default or failure of appointed local sub-contractors;

The Principal agent shall not grant such authority in cases where it may reasonably be concluded on the available evidence that the invitation of further tenders/quotations in accordance with the terms of the Contract is likely to result in the successful completion of the portions of the Works concerned by local sub-contractors.

The Principal agent shall monitor progress achieved with subcontractor training, and successful completion of this training shall be subject to his approval or instruction. The Contractor shall tender rates for the training of sub-contractors and labour.

C3.3.5.5 The Contractor shall approach the Labour Desk that is established for purposes of the Contract for assistance and advice regarding conditions of employment, minimum wages, disputes and disciplinary procedures in respect of local sub-contractors.

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**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**


**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**


**VOLUME 1  
PORTION 2: CONTRACT**

**Section C3.4  
Construction**


---




Contractor




Witness 1




Witness 2



Employer



Witness 1



Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

LERATO PARK INTEGRATED HOUSING DEVELOPMENT

**CONTRACT 2334-50-02/03**

Remedial work to 491 RDP Houses

**VOLUME 1  
PORTION 2: CONTRACT**

**Section C3.4.1  
Standard Specifications**

---

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**C3.4.1 STANDARD SPECIFICATIONS**

**C3.4.1.1 THE JBCC® GENERAL PRELIMINARIES (EDITION 6.2 - MAY 2018)**  
***(Applicable to schedule no. 1 in the bills of quantities/schedules)***

The JBCC® General Preliminaries (Edition 6.2 - May 2018) prepared and published by the Joint Building Contracts Committee for use with the JBCC Principal Building Agreement (6.2 Edition - May 2018). This document shall be applicable to schedule no. 1 in the bill of quantities.

All subcontractors (If any) shall include their Preliminary and General costs within their rates. Preliminary and general shall not be paid separately to any subcontractor.

**C3.4.1.2 BUILDING WORK**  
***(Applicable to Schedule No. 2 in the bills of quantities/schedules)***

The Model Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be applicable to schedule no. 2 in the bill of quantities.

**C3.4.1.3 WET SERVICES**  
***(Applicable to Schedule No. 3 in the bills of quantities/schedules)***

The Model Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be applicable to schedule no. 3 in the bill of quantities.

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

#### **C3.4.1.4 ELECTRICAL WORKS**

***(Applicable to Schedule No. 4 in the bills of quantities/schedules)***

The project specification must be read together with the particular specifications, bill of quantities, and applicable drawings.

All work shall be carried out strictly in accordance with:

- The Occupational Health and Safety Act and Regulations (Act no. 85 of 1993 as amended).
- The SANS code of Practice for Wiring of Premises, SANS 10142-1 & 2: 2017 as amended.
- The project -, particular – and/or standard electrical specifications.
- Any municipal by-laws and regulations.
- The local authority requirements. (Sol Plaatje Municipality)
- All applicable SANS, BS & IEC equipment specifications.

The various documents listed in section C3.4.1 shall be treated as mutually explanatory. However, should any requirement of section C3.4.3 conflict with any requirement of the Standardised Specifications or with any requirement of the Particular Specifications, then the requirement of section C3.4.3 shall prevail.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

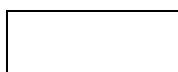
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**Remedial work to 491 RDP Houses**

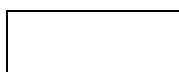
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PORTION 2: CONTRACT**

**Section C3.4.2  
Variations and Additions to Standard  
and Particular Specifications**

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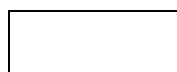
Contractor



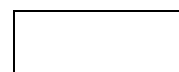
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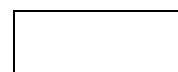
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Employer



Witness 1



Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**C3.4.2 VARIATIONS AND ADDITIONS TO STANDARD SPECIFICATIONS**

**C3.4.2.1 THE JBCC® GENERAL PRELIMINARIES (EDITION 6.2 - MAY 2018)**  
***(Applicable to schedule no. 1 in the bills of quantities/schedules)***

**Add the following new clauses:**

**11.12 Offices for the Principal Agent and Principal Agent Representative**

Offices for the Principal Agent and Principal Agent Representative will not be required. The existing site employer's site camp will be used which is located at the following co-ordinates 28°40'31.1"S 24°43'08.8"E.

The contractor however will be required to:

- provide additional services,
- maintain existing services,
- pay for service consumption

as defined in this tender/contract document.

**11.13 Laboratory Equipment**

The Contractor shall supply the following equipment for the duration of the Contract:

- A 1m long DCP complete with accessories and stored in a suitable transit case as supplied by the manufacturer.
- Three concrete cube moulds, 150mm nominal size.
- Three mortar cube moulds, 100mm nominal size.
- A 2m x 2m x 0,6m deep concrete curing bath complete with heating element capable of maintaining the required temperature range for curing concrete prior to testing.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

#### 11.14 **Survey Assistant**

One suitably educated Survey Assistant shall be made available for the sole use of the Principal Agent's Representative for the duration of the contract. The assistant may also be required to fulfil the function of and assistant Community Liaison Officer for the Contractor during the contract should the Principal Agent consider this arrangement to be in the interests of the Employer. The Survey Assistant will therefore have to be appointed from the local communities. Transport shall be supplied for the assistant Community Liaison Officer activities by the Contractor as and when required for the duration of the contract should he be requested to do so. In such event, payment for transport will be for the Contractor's own account.

#### 11.15 **Survey Equipment**

The survey equipment listed below shall be made available and be maintained in good condition for the exclusive use of the Principal Agent or his Representative for the duration of the contract.

- |   |          |
|---|----------|
| (a) Automatic surveyor's level complete with tripod and leather carry case such as Zeiss N1-2 or equivalent           | 1 No.    |
| (b) Nylon coated steel surveyor's tape 20m long and 10mm wide   | 1 No.    |
| (c) 10m long Stanley steel tape   | 1 No.    |
| (d) 5m long three piece telescopic levelling staves (metric double-face) complete with angle bracket level            | 1 No.    |
| (e) Survey books : level  | 5 No.    |
| (f) 2kg hammer with rubber handle   | 1 No.    |
| (g) Wooden pegs: 700mm long and 38mm square (painted with white PVA for 300mm from the top in order to write on same) | 2000 No. |
| (h) Thick black permanent marker pens   | 20 No.   |
| (i) 100m long 50kg strength building line   | 1 No.    |
| (j) 1m long spirit level  | 1 No.    |

#### 11.16 **Laboratory**

No laboratory buildings or fittings are required by the Principal Agent. The Agent will arrange separately with a commercial laboratory or designate specialists to carry out all acceptance quality assurance testing including block and concrete cube testing, but with the exception for density control tests. The Contractor shall

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

remain responsible for carrying out the process control testing that is required by the Standardised, Particular and Project Specifications.

11.17 **Main noticeboard**

The contractor shall erect in a position approved by the principal agent, maintain and remove on practical completion a notice board recommended by the South African Association of Consulting Engineers and as approved by the principal agent listing the names and logos of the employer, the contractor, and the professional consultants, as shown on drawing 2334.50.02.SUA.A004. No subcontractor or supplier notice boards may be erected unless permission is granted by the principal agent for such notice boards to be erected.

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

#### **C3.4.2.2 BUILDING WORK**

**(Applicable to Schedule No. 2 in the bills of quantities/schedules)**

No Changes.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

### **C3.4.2.3 ELECTRICAL WORKS**

**(Applicable to Schedule No. 3 in the bills of quantities/schedules)**

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



## LERATO PARK INTEGRATED HOUSING DEVELOPMENT

**CONTRACT NO: (2334-50-02/3)**

### REMEDIAL WORK TO 491 RDP HOUSES

DESIGN, MANUFACTURE, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF ELECTRICAL EQUIPMENT AND ASSOCIATED INSTALLATION WORKS FOR THE REMEDIAL WORK TO 491 RDP HOUSES

## C3.4 SPECIFICATIONS

### C3.4.3 Construction of Electrical Works

#### C3.4.2.3 PROJECT SPECIFICATIONS FOR ELECTRICAL WORKS

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## **C3.4.2 Project Specifications for Electrical Installation Works**

### **C3.4.2.3 VARIATIONS AND ADDITIONS TO PARTICULAR SPECIFICATIONS (PROJECT SPECIFICATIONS)**

#### **C3.4.2.3.1 STATUS OF SPECIFICATION**

Clauses under this Section C3.4.3.1 should be read in conjunction with Particular Specifications for Electrical and Electronic Engineering Works which are numbered by adding a "PS" prefix to the numbering of the Particular Specification.

Refer to Section C3.4.3.2 for the list of Particular Specifications as applicable to this project.

Additional project specifications not referring to particular specifications have been added at the end of the section. These will be number PSE1, PSE2 and PSE3 respectively if required.

The full extent of the Electrical Engineering Works are specified on the Drawings, the General Clauses provided under section C3.4.1 and the Project Specifications included under section C3.4.3.1... However, should there be any ambiguity in the requirements stated therein, the priority of documents shall be (a) General Clauses (section C3.4.1); (b) Variations and Additions to Standard and Particular Specifications; (c) Particular Specifications, (d) Drawings and (e) Standard Specifications (if applicable).

The following Variations and Additions to the Standard and Particular Specifications will be applicable to this Contract.

#### **C3.4.2.3.2 SCOPE OF CONTRACT**

This contract provides for the supply, delivery to site, installation, testing, commissioning, maintenance and/or repairs and handing over in good working order of the complete electrical installation as specified or implied herein and/or in the accompanying specifications and on the drawings.

The Tenderer shall allow in his Tender price for all material, labour, supervision, transport, tests, commission and all other items necessary to complete the contract in its entirety and to the satisfaction of the Engineer.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

In the event where the supply and/or installation of any item, material or equipment does not form part of this contract, it will be specifically indicated as such in this specification and/or on the accompanying drawings.

#### **C3.4.2.3.3 MATERIALS AND EQUIPMENT RECOVERED**

All materials and equipment recovered under this contract remains the property of the Employer and shall, unless expressly otherwise agreed, be handed to the Employer's Official in charge for storage and safekeeping.

#### **C3.4.2.3.4 EXISTING / PREVIOUS INSTALLED ELECTRICAL EQUIPMENT AND MATERIALS**

All previously installed equipment forming part of the installation shall be deemed fit for purpose unless investigation during construction reveals substandard conditions as a result either of defects, damage, vandalism as well as incomplete or substandard installations.

A thorough condition assessment was recently undertaken to determine the status quo of the previously installed installation, and whilst all necessary care was exercised in the identification of defects and outstanding works, it must be assumed that further unforeseen conditions will be uncovered during the execution of this contract.

#### **C3.4.2.3.5 ALTERNATIVE PROPOSALS**

Alternatives may be proposed for sections of the Works. These alternatives will be considered in the adjudication of the bids.

Acceptance of an alternative proposal or offer shall not relieve the Contractor of any of his obligations in terms of the Contract. The Contractor's cost of preparation and sub-mission of an alternative proposal shall be deemed to be included in the rates as quoted for the execution of the Work.

#### **C3.4.2.3.6 EQUIPMENT**

All equipment offered under this contract shall be selected to be equal and similar of make as the existing equipment installed on site as far as possible and the contractor shall do a site inspection prior to submission of the tender to ensure that they do comply with this requirement (if applicable to existing structure and buildings).

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

### **C3.4.2.3.7 ABBREVIATIONS**

• AFFL	Above Final Floor Level
• COC	Certificate of Compliance
• CPU	Central Processing Unit
• DB	Distribution Board
• GA	General Arrangement
• LV	Low Voltage
• MV	Medium Voltage
• O&M	Operations & Maintenance
• SABS	South African Bureau of Standards
• SANS	South African National Standards
• SLD	Single Line Diagram
• SOW	Scope of Work
• RDP	Reconstruction and Development Programme
• RCC	Regulatory Conformance Certificate
• MCB	Miniature/Moulded Circuit Breaker
• E/L	Earth Leakage Unit
• EMU	Energy Management Unit
• SP	Single Pole (1 Phase)
• DP	Double Pole (1 Phase + Neutral)
• TP	Triple Pole (3 phase)
• FAT	Factory Acceptance Test
• NRS	National Rationalisation Specification
• PLC	Programmable Logic Controller
• SPM	Sol Plaatje Municipality

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

### **C3.4.2.3.8 DETAILS OF CONTRACT – SCOPE OF WORK (SOW)**

#### Preamble

The Lerato Park Integrated Housing Development project consists of 491 RDP Houses situated in Lerato Park, Sol Plaatjie Municipality (Kimberley).

The houses are comprised of the following units;

- a) Duplex units: 135 off at 44m<sup>2</sup> size
- b) Semi-Detached units: 116 off at 40m<sup>2</sup> size
- c) Free Standing units: 240 off at 40,6m<sup>2</sup> size

A recent condition based assessment was conducted to determine the extent of defects and substandard conditions with regard to the electrical installation, the findings of which have assisted in the compilation of this scope of work and bills of materials.

This electrical contract will be primarily based on remedial work of previously completed structures' electrical installations, to make good, safe and in compliance with standards and SANS 10142-1

#### Electrical Scope of Works

The electrical installation works is comprised of the main component, namely internal electrical building installations;

#### ***Internal Building Installation***

- a) Supply and installation of domestic 8-way distribution boards in each unit as required, or alternatively the making good of previously installed DB's.
- b) Supply and installation of all lighting and small power wiring and appliances in each dwelling unit as required, or alternatively the making good of previously installed materials and equipment.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

- c) Supply and installation of all luminaires and lamps in each dwelling as required, or alternatively the making good of previously installed luminaires.
- d) Supply and Installation of all materials required to ensure a compliant earthing and bonding system, or alternatively the making good of previously installed materials and equipment.
- e) Investigation of all units' electrical installations and disconnection and removal of any illegal, hazardous or sub-standard electrical installations and/or wiring.
- f) Supply and Installation of electrical reticulation (meter kiosks, cabling and area lighting) for 40 off prefabricated housing units for decanting purposes
- g) Testing and commissioning as well as the issue of a Certificate of Compliance (CoC) for each dwelling unit.

#### **C3.4.2.3.9 ELECTRICAL PROJECT SPECIFICATIONS**

All materials and equipment supplied under this Contract must be new and of the best quality available. All materials must comply with the requirements of the latest editions of the relevant SABS and NRS Specifications.

##### **a) General**

The project specification must be read together with the particular specifications, bill of quantities, and applicable drawings.

All work shall be carried out strictly in accordance with:

- The Occupational Health and Safety Act and Regulations (Act no. 85 of 1993 as amended).
- The SANS code of Practice for Wiring of Premises, SANS 10142-1 & 2: 2017 as amended.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

- The project -, particular – and/or standard electrical specifications.
- Any municipal by-laws and regulations.
- The local authority requirements. (Sol Plaatje Municipality)
- All applicable SANS, BS & IEC equipment specifications.

#### **b) Standards, Inspections and Tests**

All material/equipment shall bare the SABS mark of approval. Where it is not practical and/or furnished on the material/equipment, full RCC's (Regulatory Conformance Certificates) will be provided to the Engineer. The contractor will note, on the Certificate of Compliance (CoC), the RCC's and exclude them accordingly from his responsibility. The aforementioned shall apply to any other material/equipment and COC's, which must be provided under this contract, but will not be directly supplied, installed etc. by the appointed subcontractor e.g. Lightning Protection System material/equipment and COC's.

As stated previously and further in this document, all equipment must comply with all relevant standards, specifications and requirements indicated respectively. In addition, there may be materials/equipment not specified in the project specification etc., which may have to be used in order to achieve the required outcome e.g. masts, flood lights etc. Alternatively, there may be certain equipment mentioned in the specification that will not be project specific and shall be ignored unless otherwise specified.

In instances where materials are not specified accordingly, it will be the responsibility of the Contractor to furnish the Engineer with the manufacturer's details, designs, recommendations, and instructions etc. of the specific product, for relevant approvals prior to order or installation. The aforementioned will be in conjunction with all other relevant clauses pertaining to information provision to the engineer for approval.

The manufacturer's details, designs, recommendations, instruction etc. shall complement all statutory regulations & standards. Where the manufacturer's details, designs, recommendations, instruction etc. are in conflict with the project specifications and requirements, the Contractor shall inform the Engineer accordingly as to which requirements to use in order to accomplish project requirements.

Where it is indicated in the Bill of Quantities, or any other part in this document, the information required for approval by the Engineer, it should be seen to form part of the specifications and requirements.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



The Contractor shall inform the Engineer of any equipment that is ready for dispatch, in which case the Engineer will arrange for an inspection at the factory of the manufacturer if deemed necessary. Such notification of the Engineer must be 10 days prior to dispatch.

Three copies of all equipment test reports, whether these tests have been carried out in the presence of the Engineer or not, shall immediately after they become available, be submitted to the Engineer.

#### **C3.4.2.3.10 DETAILS OF ELECTRICAL SCOPE OF WORKS**

##### **A) THE ELECTRICAL INSTALLATION SERVICES SCOPE OF WORK IS AS FOLLOWS;**

Items covered under the electrical Scope of Work include, but not restricted to the following;

- a) Supply, installation, and connection of electrical cables, control circuit, wiring, conductors and earthing systems.
- b) Supply, installation, and connection of all circuit equipment for small power and lighting installation, i.e. socket outlets, light switches, isolators, etc.
- c) Supply, installation, and connection of all luminaires.
- d) Investigation, testing, repairs and making good of all aspects of the previously installed materials and equipment. This will include the identification of any illegal, hazardous or sub-standard wiring systems and removal thereof.
- e) Supply and Installation of electrical reticulation (meter kiosks, cabling and area lighting) for 40 off prefabricated housing units for decanting purposes
- f) Testing, commissioning, and handing over of the complete electrical installation, in accordance with the requirements of the Electrical Contracting Board of South Africa and the issue of a Certificate of Compliance for each and every distribution board.

#### **C.3.4.2.3.10A PS-LIGHTNING PROTECTION, EARTHING AND BONDING SYSTEMS**

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

The contractor shall do all the bonding and earthing in accordance with the latest addition of the "Code of Practice for the Wiring of Premises" SABS 10142-1 and shall achieve an overall earthing resistance measurement of <10 Ohm.

All metallic structures (roofs, gutters, downpipes, exposed metallic parts of structures etc including the hot and cold water systems) must be continuously earthed and bonded and form part of the overall earthing and protection system.

Building earthing will be by means of structure connected copper electrode earth rods, with quantum and location to be determined by specialist sub-contractor, and connected via "kwena" or similar and equal theft resistant conductor where above ground exposure is unavoidable.

Earth electrodes and earthing methods shall be designed and installed according to the requirements of this Specification and the latest revision of the following:

The earthing of the entire electrical installation shall be installed by the Contractor and shall consist of electrical earthing.

The Contractor shall carry out all the earth resistance testing as specified in accordance with the Engineer's requirements. All additional earthing requirements resulting from the tests shall be installed by the Contractor.

All properly prepared cable glands shall provide an acceptable earth bond on cables. All equipment frames shall be bonded to the earthing system.

Down conductors shall be of a theft proof down conductor installation type, installed with the correct brackets and saddles for that specific conductor. The down conductor shall take a vertical path down from the conductor without any bends or kinks to the earth electrode. The conductor shall be supported at 1 m intervals by copper saddles and brass screws down the length of the building. The saddles shall be fixed by drilling the masonry and installing plastic plugs.

The earth electrode system shall have an earthing resistance of 10 ohms or less. The earth electrode system shall be connected to the main earth bar.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Wherever possible the lightning conductor shall be connected to all local earth points (e.g. metal roofs, gutters, etc.).

All down conductors shall be routed outside the building and away from flammable material.

#### C.3.4.2.3.10B

#### PS-DISTRIBUTION BOARDS

The scope for the distribution board sections shall include everything to provide a complete small power distribution and lighting system. The design of the distribution board will allow for single or three phase supplies to equipment on site.

Distribution Boards shall be installed in the positions indicated on the drawings and shall comply with SANS 1765. Electrical Contractors are advised to order their distribution boards from a reputable manufacturer, **as inferior boards and equipment will not be accepted**. It shall further be noted that late approval of drawings and distribution boards due to non-compliance with the specification will not relieve the Electrical Contractor from his obligations to complete the installation according to programme. No claims for delays or extension of time in this regard will be entertained.

All equipment offered under this contract shall be selected to **be equal and similar of make** as far as possible.

The following types of distribution boards have been installed or were to have been installed under the previous construction contract, such that new and repaired equipment must as far as practical be similar or equal to that installed provided that all SANS and other quality requirements are met;

---

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**Table 01: Distribution Board Specifications – Typical**



	DESCRIPTION	IDENTIFICATION
	<b>Domestic Distribution Board 1phase CRU's 2,5kA</b>	
1	40Amp continuous current rated DP MCB: Plus	Main
1	63Amp SP + N earth leakage without overload protection: Plus	Earth Leakage
1	20Amp continuous current rated SP MCB: Plus	Socket Circuit
1	10Amp continuous current rated SP MCB NB: All equipment rated 3kA	Lighting

**C.3.4.2.3.10C****PS-LIGHTING**

The supply and installation of new luminaires will be completed;

- 1) Supply and installation of new luminaires complete with all lamps, as per the specifications.

**Table 02: Luminaire Schedule (NEW)**

TYPE	DESCRIPTION & LOCATION	IDENTIFICATION
<b>A</b>	<b>UNITS - INDOOR</b>	
	CEILING MOUNTED BULKHEAD WITH ALUMINIUM TRIM AND WHITE DIFFUSER WITH 1xE27 LAMPHOLDER SIZE 300mm ROUND COMPLETE WITH 1x10 WATT LED LAMP >700 LUMEN, WARM WHITE 2700K SIMILAR OR EQUAL TO RADIANT JM60/MONTE	
<b>B</b>	<b>UNITS - OUTDOOR</b>	
	DIE CAST ALUMINIUM OUTDOOR BULKHEAD IP54 EYELID COLOUR BLACK WITH E27 LAMPHOLDER TO BE SUPPLIED WITH 10 WATT LED LAMP WARM WHITE 2700K, > 700 LUMEN, 15000HOURS SIMILAR OR EQUAL TO ACDC NB1014L-E27 BLACK	

Contractor



Witness 1

Witness 2

Employer

Witness 1

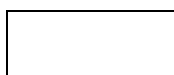
Witness 2

TYPE	DESCRIPTION & LOCATION	IDENTIFICATION
<b>C</b>	<b>UNITS - KITCHENS</b>	
	LED LUMINAIRE 1200mm WITH PRISMATIC DIFFUSER LED TUBES 2x18 WATT 3400 LUMEN, 6000K SIMILAR OR EQUAL TO ACDC LU-509-2x18W SURFACE MOUNT WHITE BODY 1238Lx164Wx60D	
<b>D</b>	<b>AREA LIGHTING - DECANTING</b>	
	METAL FLOODLIGHT 30W LED 2100 LUMEN 4000K COLOUR WHITE IP65 30W LED Floodlight IP65 Majortech or similar Cool White 360 degree rotation, 120 degree beam angle	

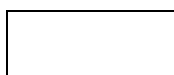
**C.3.4.2.3.10D****PS-SMALL POWER INSTALLATION**

As with other components of this contract, the small power installation will be comprised of two parts, namely;

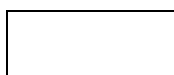
- 1) Supply and installation of new small power appliances, as per the specifications. This will include but not limited to;
  - 16Amp 3pin Switched socket outlets, single and double
  - 16Amp and 3pin Euro switched socket outlet combination
  - 16Amp light switch one lever one way
  - Single phase distribution boards (described elsewhere)
- 2) The supply, refurbishment (or replacement) and installation of all accessories to ensure correct operation of all previously installed appliances. Where such appliances are deemed unserviceable, they will be replaced with new.

**C.3.4.2.3.10E****PS-SUNDRY INVESTIGATION**

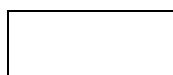
Contractor



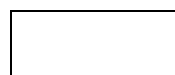
Witness 1



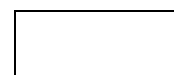
Witness 2



Employer



Witness 1



Witness 2

Due to the nature of the project, it will be unavoidable that additional activities MAY be required to be undertaken by the Contractor to prove integrity, suitability and existence of previously installed services and/or partially completed electrical installations.

As previously stated, a recent condition assessment of the facilities was undertaken to estimate the quantum and condition of previously installed electrical services.

However, whilst every care has been exercised to quantify the extent of the remaining works required taking into account subsequent damage, deterioration, vandalism and theft, a number of unforeseen complications are envisaged.

The above sundry investigations MAY include but not be limited to the following;

- Hand excavations to expose existing services including cables
- Testing of installed cables for suitability for use (insulation resistance etc)
- Labelling of all installed cables at end points using aluminium tags etc.
- Testing of installed luminaires and appliances for operation
- Repairs, Refurbishment and Replacement to previously installed materials and equipment as per the schedules of quantities.
- Identification of illegal, hazardous or sub-standard wiring systems and the removal or making good thereof.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

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**C.3.4.2.3.10F PS-LOW VOLTAGE METERING KIOSKS**

The previous contract specified the metering kiosk of Power Process Systems (PPS), similar or equal, including 12-way and 9-way units.

Each Kiosk will be equipped with 40A DP 3kA MCB's for the supply to each decanting unit DB

**Kiosk Equipment**

Main Kiosk	250A TP 15kA Circuit Breaker – Main Supply 125A TP 10kA Isolator – Kiosk Feeder (12) 100A TP 10kA Isolator – Kiosk Feeder (10) 175A TP 10kA Isolator – Kiosk Feeder (9) + (9) 20A DP Lighting Contactor, 10A Photocell, 10A SP MCB and 5A Bypass MCB
12-Way Kiosk (1)	125A TP 10kA Circuit Breaker 12 off 40A DP MCB's 3kA 12 off Split Prepaid Meter EMU 3+N 20kA Surge Arrestors
12-Way Kiosk (2)	100A TP 10kA Circuit Breaker 10 off 40A DP MCB's 3kA 10 off Split Prepaid Meter EMU 3+N 20kA Surge Arrestors
9-Way Kiosk (3)	175A TP 10kA Circuit Breaker 100A TP 10kA Isolator 9 off 40A DP MCB's 3kA 9 off Split Prepaid Meter EMU 3+N 20kA Surge Arrestors
9-Way Kiosk (4)	100A TP 10kA Circuit Breaker 9 off 40A DP MCB's 3kA 9 off Split Prepaid Meter EMU 3+N 20kA Surge Arrestors

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

The kiosks are to be equipped ready to install the split pre-paid metering system as specified and supplied by Sol Plaatje Municipality. The EMU will be installed on a standard STS base with the CUI unit to be installed in the tenant decanting unit.

All equipment to be installed in the metering kiosks shall be SABS approved and SANS compliant in all respects.

#### CONSTRUCTION

The kiosks shall be manufactured completely of 3CR12 plate, dip pickled and passivated after welding, and powder coated to 80 microns paint thickness (interior and exterior) in colour specified by the City Electrical Engineer. The kiosks shall be neat and of aesthetical design.

All steelwork shall be machine punched and drilled to suit with no modifications or alterations due to mis-alignment of equipment and panels

The units shall be properly ventilated against overheating and adequate measures taken to prevent condensation build-up.

The kiosks shall be completely weather proof, vermin and insect proofed (stainless steel grid) and designed in such a way that no dust will be collected on the switchgear

All kiosks will be equipped with a covered, tamper proof locking system as per Sol Plaatjes's specification. All kiosks will also be equipped with a covered tamper free lock system for padlock that cannot be cut by a bolt cutter.

Circuit breaker trays and racks on top of meter enclosures, if so designed shall be installed at an angle of 45° in order for the equipment to operate hydraulically and mechanically. All circuit breakers to be well protected against any flashover or arcing and all blank plates to be installed where required.

A Bus-Bar flash barrier (Polycarp) must be installed in all kiosks with back compartments of which the barrier must have its own sliding slot

Kiosks shall be designed to accommodate any type/size or domestic kWh meter (including pre-paid and split pre-paid units). Kiosks will be provided with threaded inserts for meter and relevant baseplate mounting including screws. It will be the responsibility of the contractor to obtain the details of the current split pre-paid meter

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



as supplied and used by Sol Plaatje municipality prior to kiosk supplier production. A provisional sum has been allowed for the supply and installation of pre-paid meters.

General arrangement and shop drawings of the proposed kiosks must be submitted for approval to the Engineer prior to commencement of manufacture of the Kiosks.

#### FINISH AND PAINTING

All metal work to be painted to be finish neatly and good workmanship. Corners are to be squared and or rounded, neatly bent and welding free of grain and sharp points.

Preparation and painting strictly in accordance with SANS 064.

All internal and indoor surfaces to be treated within 8 hours after cleaning with a prime coat of high grade zinc chromate and two layers of white baked enamel. No hole to be made in the material after the painting process has taken place.

Colour of metering kiosks to be as per Sol Plaatje Municipality requirements.

The contractor must allow in his costs for all factory acceptance testing (FAT) as may be required.

#### C.3.4.2.3.10D

#### PS-LOW VOLTAGE CABLE INSTALLATIONS

Schedules of cables associated with sections of works are listed below.

1. All earth wires shall be bare copper conductors, unless otherwise specified and cables shall be of the type as specified.
2. These cables are only a guide and Contractors must make due allowance for all cabling to complete the works in its entirety.
3. Before ordering cables the contractor shall obtain the correct cable lengths by measuring required cable lengths on site.

The cable length (UNIT m) indicated in the schedules of quantities are measured from scaled drawings estimated from one termination point to

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

another termination point per cable length. To determine the total length of cable, cables in parallel must be multiplied by the number of cables installed in parallel. The quantities estimated also take into account cables previously installed.

**Table 02: Low voltage cable schedule - typical**

CABLE SIZE	FROM	TO	PURPOSE
70mm <sup>2</sup> x4c Cu PVC/SWA/PVC +50BCEW	Main Kiosk	Kiosk 3	Kiosk Feeder
50mm <sup>2</sup> x4c Cu PVC/SWA/PVC +35BCEW	Main Kiosk	Kiosks 1&2	Kiosk Feeder
35mm <sup>2</sup> x4c CU PVC/SWA/PVC +25BCEW	Kiosk 3	Kiosk 4	Kiosk Feeder
6mm <sup>2</sup> x3c CU PVC/SWA/PVC +2,5BCEW	Main Kiosk	Lighting	Area Lighting
10mm <sup>2</sup> x2c CU PVC/PVC/SWA/PVC +6BCEW	Distribution Kiosks	Decanting Units	Service cable

#### C.3.4.2.3.10H

#### PS-EXCAVATIONS

Due to the proximity of existing cables, all cable excavations and exposure of as-installed services must be undertaken with machine or by hand as per risk assessment. No as-built drawings of existing services are available such that the Contractor must exercise due diligence and care not to damage any existing services. **The Contractor will be liable for any damage and will have to repair same at his own cost.**

Should it be required to install additional sleeves or excavate in the vicinity of roadways and paved areas, all such areas will require re-instatement to the satisfaction of the Engineer. Such excavations and re-instatements shall be liaised and integrated with the main civil contractor and civil Engineer representatives.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

#### **C.3.4.2.3.10J PS-TESTING AND COMMISSIONING**

The Contractor must make allowance for full and comprehensive testing and commissioning of both the previously installed works as well as the new works required with this tender to ensure the completed installation of all facilities as an integrated whole.

Testing and commissioning specified as per the requirements of includes but is not limited to the following;

- a) Certificates of Compliance (CoC's) required for each and every Distribution Board.
- b) Operational testing of all and any electrical appliances, systems and sub-systems
- c) Any other testing and making good of services to ensure the handing over of the fully completed works upon completion and sign off.

#### **C.3.4.2.3.11 DRAWINGS ISSUED WITH TENDER**

A drawing Number 2334.50.02.RET.U001 Decanting Decanting Reticulation Layout is made available for tender purposes only. No other electrical drawings are available. Other discipline drawings may be made available for tendering purposes if required.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**VOLUME 1  
PORTION 2: CONTRACT**

**Section C3.4.3  
Particular Specifications**

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Contractor

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PORTION 2: CONTRACT**

**Section C3.4.3.1  
Particular Specifications**

**PRELIMINARY & GENERAL  
(Applicable to Schedule no. 1 in the Bills of Quantities/Schedules)**

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**C3.4.3 PARTICULAR SPECIFICATIONS**

**C3.4.3.1 PRELIMINARY & GENERAL**

*(Applicable to Schedule No. 1 in the bills of quantities/schedules)*

**C3.4.3.1.1 Additional security on constructions site**

On the receipt of the sectional Practical Completion Certificate (Clause 19.0 & 20.0, JBCC Edition 6.2 (May 2018), Principal Building Agreement) for prescribed sections and on instruction from Principal Agent, the contractor shall be required to provide security for the prescribed section and shall be remunerated on a day rate (Dayworks). Payment per one day will be based on a 24 (twenty four) hour shift for the prescribed section. The security resources shall be sufficient/suitable for all prescribed sections to mitigate acts of crime/theft/vandalism and safe guard the units from illegal inhabitation. In the event of security resources being insufficient due to events of crime/theft/vandalism and illegal inhabitation, the contractor, at their own expense shall obtain additional resources to rectify the issue.

The unit rates for security shall be the net cost of security and shall cover overhead charges and profit, site supervision and site staff, insurances, holidays with pay, and use and maintenance of tools and equipment.

**C3.4.3.1.2 Dayworks**

The Principal Agent may schedule and require unit rates for estimated numbers of hours of daywork for various classes of labour, materials and plant likely to be ordered under daywork during the course of the contract.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

The unit rates for labour shall be the net cost of labour and shall cover overhead charges and profit, site supervision and site staff, insurances, holidays with pay, and use and maintenance of tools and equipment.

The rates for plant hire shall, in addition, cover the cost of plant operators, consumables, fuel and maintenance.

All rates or allowances shall also cover travelling allowances or travelling costs (transport of men by Contractor's transport or transport hired or paid for by the Contractor), lodging allowances and any other emoluments and allowances payable to the workmen.

Material cost shall be the net cost of the material purchased and delivered to site, less any discount. Profit and attendance will be added to the net cost of the material as tendered in the bill of quantities.

Daywork sheets shall be filled in daily and be submitted to the Principal Agent for approval each day. Daywork sheets not handed in daily for approval will be rejected for payment.

#### **C3.4.3.1.4 Acceptance control testing**

A Provisional Sum has been included in Schedule 1 - Bill 2 for acceptance control testing ordered by the Principal Agent to be undertaken by a commercial laboratory. Payment will be based on the actual invoicing by the laboratory to the Contractor. The Contractor shall remain responsible to perform own internal testing to ensure that all measures of quality are adhered to.

In addition to the abovementioned amount, provision is made in Schedule 1 - Bill 2 for a mark-up on any payments made by the Contractor in this regard. The mark-up shall be regarded as full compensation for overheads, charges and profits as provided for in the Conditions of Contract.

#### **C3.4.3.1.5 Materials for dayworks**

A Provisional Sum has been included in Schedule 1 - Bill 2 for materials to be used during the execution of dayworks.

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

In addition to the abovementioned amount, provision is made in Schedule 1 - Bill 2 for a mark-up on the materials used during the execution of the dayworks by the Contractor. Payment made shall be regarded as full compensation for overheads, charges and profit on the materials that are used when executing dayworks.

#### **C3.4.3.1.6 Salary for Labour Desk Officer and Community Liaison Officer**

A Provisional Sum has been included in Schedule 1 - Bill 2 for a salary to be paid to the Labour Desk Officer and Community Liaison Officer.

In addition to the abovementioned amount, provision is made in Schedule 1 - Bill 2 for a mark-up on the amount to be paid. The mark-up shall be regarded as full compensation for overheads, charges and profits as provided for in the Conditions of Contract.

#### **C3.4.3.1.7 Artisans and Skills Training**

A Provisional Sum has been included in Schedule 1 – Bill 2 for payments to be made to specialists for the training of unskilled or semi-skilled persons in industry accredited management and generic skills. Payment to the Contractor will be based on invoices certified by the Principal Agent and issued by training specialists to the Contractor for work undertaken in terms of this item. Training will only be made available for local employed labour and not any employee within the full time employment of the contractor. Prior to sending the selected employees on training, the employer will first approve the selected employees and courses.

In addition to the above amount, provision is made in Schedule 1 – Bill 2 for a mark-up on any payments made by the Contractor in this regard. The mark-up shall be regarded as full compensation for overheads, charges and profits as provided for in the Conditions of Contract.

#### **C3.4.3.1.8 Wages and salaries of local and other labourers employed during training**

A Provisional Sum has been included in Schedule 1 – Bill 2 for payments to be made to workers while receiving training. Payment to the Contractor will be based on proof of payment to such employees.

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2



In addition to the above amount, provision is made in Schedule 1 – Bill 2 for a mark-up on any payments made by the Contractor in this regard. The mark-up shall be regarded as full compensation for overheads, charges and profits as provided for in the Conditions of Contract.

#### **C3.4.3.1.9 Landscaping**

A Provisional Sum has been included in Schedule 1 – Bill 2 for payments to be made to landscape architects and landscaping subcontractors. Payment to the Contractor will be based on proof of payment to such landscape architects and landscaping subcontractors.

In addition to the above amount, provision is made in Schedule 1 – Bill 2 for a mark-up on any payments made by the Contractor in this regard. The mark-up shall be regarded as full compensation for overheads, charges and profits as provided for in the Conditions of Contract.

#### **C3.4.3.1.10 Communication facilities and equipment**

A Provisional Sum has been included in Schedule 1 – Bill 2 for payments to be made for Communication facilities and equipment for the Principal Agent and Agents to the Project. Payment to the Contractor will be based on proof of payment.

In addition to the above amount, provision is made in Schedule 1 – Bill 2 for a mark-up on any payments made by the Contractor in this regard. The mark-up shall be regarded as full compensation for overheads, charges and profits as provided for in the Conditions of Contract.

#### **C3.4.3.1.11 Upkeep of the existing Principal Agent/Engineer site camp**

A Provisional Sum has been included in Schedule 1 – Bill 2 for payments to be made for Upkeep of the existing Principal Agent/Engineer site camp. Payment to the Contractor will be based on proof of payment.

In addition to the above amount, provision is made in Schedule 1 – Bill 2 for a mark-up on any payments made by the Contractor in this regard. The mark-up

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

shall be regarded as full compensation for overheads, charges and profits as provided for in the Conditions of Contract.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

#### **C3.4.3.2 STRUCTURAL & FINISHES SPECIFICATION**

***(Applicable to Schedule No. 2 in the bills of quantities/schedules)***

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
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**Section C3.4.3.2  
Particular Specifications**

**STRUCTURAL & FINISHES SPECIFICATION  
(Applicable to Schedule no. 2 in the Bills of Quantities/Schedules)**

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## STRUCTURAL, FINISHES AND WET SERVICES SPECIFICATIONS

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Contractor

Witness 1

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Employer

Witness 1

Witness 2

## 1. Structural Specifications

### 1.1. Structural specifications as per drawings

#### 1.1.1. STANDARD NOTES AND DETAILS

- 2334.50.02.SUA.14.A001
- 2334.50.02.SUA.14.A002
- 2334.50.02.SUA.14.A003

#### 1.1.2. NEW HOUSES TO BE BUILT

- 2334.50.02.SUA.14.U001
- 2334.50.02.SUA.14.U002
- 2334.50.02.SUA.14.U003
- 2334.50.02.SUA.14.U004

## 2. Finishes Specifications

### 2.1. Masonry & paving

#### 2.1.1. 140mm BRICK WALLS - NEW

- a) New brick walls as per drawings **2334.50.02.SUA.14.U001 & U003**
- b) Brick Type: Stock concrete bricks with 7MPa compressive strength size 290 x 140 x 90, laid in class II mortar with expansion joints as per drawings, all according to SANS 10145, 10400
- c) Including galvanised brick force 2.8mm thick every third course and every course for four courses over openings

#### 2.1.2. 140mm BRICK WALLS - PATCHES

- a) Remove existing brick walls as per drawings **2334.50.02.SUA.14.U010 & U013** and build new
- b) Brick Type: Stock concrete bricks with 7MPa compressive strength size 290 x 140 x 90, laid in class II mortar with expansion joints as per drawings, all according to SANS 10145, 10400
- c) Including galvanised brick force 2.8mm thick every third course and every course for four courses over openings. Where brick force is not present in existing structure hoop irons to be fixed to existing structure and built into new brick work, placing as per above

### 2.2. Waterproofing

#### 2.2.1. SILICONE SEALANT TO BATHS, BASIN & KITCHEN WORKTOPS

- a) Carefully remove all previous applied silicone sealant where baths, basin or kitchen worktops are being replaced
- b) Apply Sanisil® silicone sealant with fungal inhibitors (colour White) applied in accordance with the manufacturer's instructions, with an approved caulking gun. Cut the nozzle off at an angle, with the hole opening matching the width of the sealed joint. Apply the silicone sealant evenly along the joint at an angle of 45 degrees. Remove any excess silicone, wet one or more fingers with water and run over the joint carefully and evenly. The silicone should reach maximum resilience within 24 hours, keep area free of dust during this time.

#### 2.2.2. DPC UNDER ALL NEW WALLS

- a) Gundle® API A.T Brickgrip DPC 375µm damp proof course in solid walls conforming to SANS 952-1:2011 laid with minimum 150mm overlaps.
- b) To be placed in brick wall at floor level

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

### 2.2.3. DPM UNDER ALL NEW FLOOR BEDDINGS

- a) Gundle® API A.T USB Green 250µm damp proof membrane under concrete surface beds and paving conforming to SANS 952-1:2011 laid with minimum 150mm overlaps and sealed with Gunplas pressure sensitive tape.
- b) To be laid underneath floor bedding and terminated before haunch

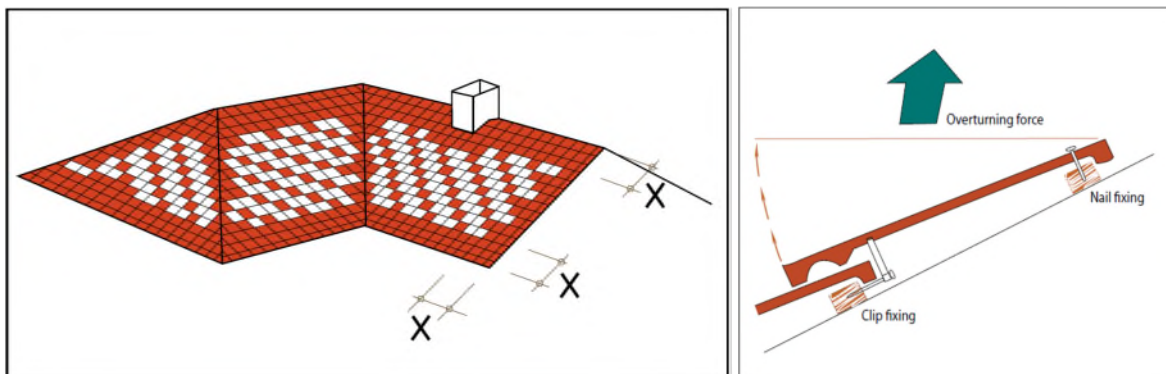
## 2.3. Roof coverings, cladding etc

### 2.3.1. REPLACING OF BROKEN TILES

- a) Concrete roof tiles to match exiting roof concrete roof tiles with an SABs or equivalent approval. All to manufacturers specifications
- b) To be fixed to light weight steel purlins as per fixing pattern

### 2.3.2. CONCRETE ROOF TILES

- a) Concrete roof tiles to Be fixed to light weight steel purlins on light weight steel trusses at 17.5° pitch, tile underlay as described below. Roof trusses to be secured to the brickwork by means of a double strand of 3.5mm galvanized wire ties at each truss. Wire ties to extend five brick courses into the brickwork and taken up on either side of the truss. (New wire ties only applicable for new structures)
- b) Underlay of multi-layered waterproof membrane in accordance with SANS 952 - 1985 or an Agreement certificate with a minimum thickness of 250 microns. Overlaps to be 150mm and a 600mm underlay strip under eaves. Underlay to be inspected and confirmed correctly installed and correct material used. New underlay to be installed for new houses and where underlay is found to be damaged, incorrectly installed or in correct underlay used
- c) Concrete roof tiles to be fixed to light weight steel purlins with approved non corrosive screw and bracket. Screws to be pozidrive screws with a minimum thickness of 3mm and installed to the correct torque setting to prevent over tightening. Fixing to be in the following pattern:
  - i) Single storey houses
    - First two courses at eaves and ridges
    - First two rows at rakes and valeys
    - Every second tile on the interior
  - ii) Double storey houses
    - All tiles to be fixed




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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2	

## 2.4. Carpentry & Joinery

### 2.4.1.EXTERNAL DOOR

- a) 40mm thick Full Meranti FL&B Flush door according to SANS 545 or similar approved, overall size 813 x 2032mm high
- b) Sand down timber surface to a fine smooth surface and apply quality timber sealant prior to installation (specified elsewhere), all in accordance with manufacturer`s recommendations

### 2.4.2.INTERNAL DOOR

- a) 40mm thick hollow core flush door with 3.2mm plain hardboard covering on both sides or similar approved, overall size 813 x 2032mm high
- b) Sand down timber surface to a fine smooth surface and apply quality timber sealant prior to installation (specified elsewhere), all in accordance with manufacturer`s recommendations

Heunis Steel ceiling access panel (code: CTDRDL533533) or similar approved comprising Matt White epoxy coated aluminium T-frame with 533 x 533mm White epoxy coated steel top hinged pan, fitted flush to flush plaster timber branded ceiling, screw fixed through stalk of T-profile frame into prepared ceiling structure material of 114x38 SA Pine timber frame, all in accordance with the manufacturer`s recommendations.

### 2.4.3.HANGER BRACKET

- a) Galvanized 90° x 38mm x 1.0mm (Long) with four bolt holes fixed to brick wall.
- b) SA Pine rafters cut plum with wall and fixed to bracket with 6 25x4 galvanised self-tapping screws.



---

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



## 2.5. Ceiling, Partitions & Flooring

### 2.5.1. 6.4mm GYPSUM "RHINO" BOARD CEILINGS

- a. 6.4mm Rhino M-Strip ceiling consisting of SABS approved SA Pine, Saligna or Steel branders fixed at 400mm centres in one direction onto which Rhinoboard is fixed, printed side up, at right angles to the branders, with 25mm streaker screws. Joints between boards to consist of Rhino M-Strip fitted over board edges with the narrow flange facing down and boards fixed onto branders to within 25mm from Rhino M-Strip. All nail or screw heads to be stopped and sanded level when dry

### 2.5.2. MERANTI TIMBER CORNICE

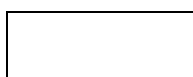
- a. Sliding cornice detail as per details on **2334.50.02.SUA.14.U001 & U003** and subsequent drawings.

### 2.5.3. ISOTHERM INSULATION

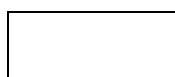
- a. Brits Insulation Systems Isotherm or similar approved 100mm thick polyester thermal insulation (Density: 10 kg/m<sup>3</sup>) laid over ceiling brandering closely fitted between rafters

### 2.5.4. TRAP DOORS

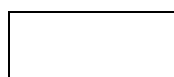
- a. Heunis Steel ceiling access panel (code: CTDRDL533533) or similar approved comprising Matt White epoxy coated aluminium T-frame with 533 x 533mm White epoxy coated steel top hinged pan, fitted flush to flush plaster timber branded ceiling, screw fixed through stalk of T-profile frame into prepared ceiling structure material of 114x38 SA Pine timber frame, all in accordance with the manufacturer's recommendations



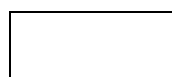
Contractor



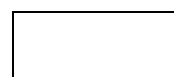
Witness 1



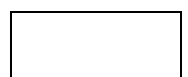
Witness 2



Employer



Witness 1



Witness 2

## 2.6. Ironmongery

### 2.6.1. EXTERNAL DOOR LOCKSET

- a. Esco or similar approved Contractor 3-lever lockset, chrome finish to be installed to external doors only, in strict accordance to manufacturers specification

### 2.6.2. STRIKER PLATES

- a. Sanlic (code: STRICLAM) or similar approved metal striker plate to be fixed with screw and nut in strict accordance to manufactures specifications

### 2.6.3. WINDOW SLIDERS

- a. Replace broken, damaged or missing clisco window sliders

### 2.6.4. FOAM STRIP TO WINDOWS

- a. Surface to be clean and dry
- b. Remove any oil, grease and other contaminants with a Degreaser working it well into affected areas with bristle broom or brush. Leave for 20 minutes to react, then rinse thoroughly with fresh water to remove all traces of Degreaser, using high pressure water jet or scrubbing with brush or broom. Allow to dry completely
- c. Install 5x12x5mm Perma window weather strip inside all opening windows

### 2.6.5. COVER STRIP

- a. 75 x 1,6mm galvanised pressed metal cover profile strip, screwed to one side of the expansion joint with 75x6mm nylon plug and screw (at 500mm centres), including one coat of galvanised primer all round, one coat of universal undercoat all round and 2 finishing coats as per surrounding wall (all paints to be pre-coated prior to fixing, final coat to be applied, when in place)

## 2.7. Metalwork

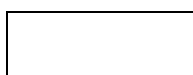
### 2.7.1. DOOR FRAMES INTERIOR & EXTERIOR

- a. Replace severely rusted and/ or damaged door frames
- b. 1.2mm Factory coated Grey/ Red Oxide Primer pressed steel non-screeded door frame (double rebated), to suit door size 813 x 2032mm high, for 230mm wall. Frame to be supplied with 4 metal strap lugs to be built into wall in strict accordance to manufacturer's specifications. Swing direction to be determined on site by building contractor, prior to ordering. Frames to be paint as per paint specifications

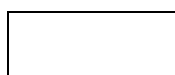
## 2.8. Plastering

### 2.8.1. FLOOR SCREEDS INTERIOR

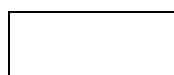
- a. Hack off loose screed and ensure a rough substrate to accommodate min 25mm thick cement screed
- b. Ensure a rough substrate is prepared by hammer chipping or any other suitable method to create a suitable bonding.
- c. Ensure entire surface free of any dust, and ensure the surface area is wet at least an hour prior to application of the screed.



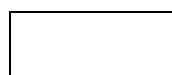
Contractor



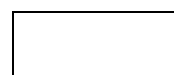
Witness 1



Witness 2



Employer



Witness 1



Witness 2

- d. Scrub apply a wet slurry bonding mix (2:5) with acrylic bonding agent to concrete substrate 15 minutes prior to application of screed. Screed mix to be 1 part cement and 4 parts clean coarse sand with sufficient water until a plastic consistence is achieved
- e. Steel float screed to form smooth surface with existing screed

#### 2.8.2. CEMENT PLASTER INTERIOR

- a. Hack off any loose or separating plaster, clean area of any loose material
- b. Lightly wet exposed raw brick (to reduce water extraction from plaster mix), and apply new plaster mix 1 part cement & 4 part plaster sand, with wood trowel smooth finish to match surround existing plaster finish
- c. Apply paint as per interior plaster walls specifications

#### 2.8.3. PLASTER BAND EXTERIOR

- a. Scrape off any loose or separating plaster and paint, clean area of any loose material.
- b. Utilize grinder with wire brush to clean +-90% of paint to raw brick and mortar surface.
- c. Lightly wet exposed raw brick (to reduce water extraction from plaster mix), and apply 12mm thick new plaster mix 1 part cement & 4 part plaster sand, with wood trowel smooth finish.
- d. Apply paint as per exterior plaster walls specifications

### 2.9. Painting

#### 2.9.1. PAINT TO NEW EXTERIOR PLASTER, EXTERIOR BRICK & INTERIOR PLASTER FINISH

- a. Remove any hollow and soft/underbound plaster and replaster
- b. Remove any oil, grease and other contaminants with a Degreaser working it well into affected areas with bristle broom or brush. Leave for 20 minutes to react, then rinse thoroughly with fresh water to remove all traces of Degreaser, using high pressure water jet or scrubbing with brush or broom. Allow to dry completely
- c. Fill cracks and other surface defects with the appropriate filler - refer Surface Preparation, Crack Repair
- d. Surface to be dry, sound and clean and cured for a minimum of 14 days, with a moisture content measured with a Doser Hygrometer (or equivalent), of BD 2 scale - 8% or less.
  - o Exterior walls:
    - Apply one coat Africote pigmented cementitious one coat PVA, all in accordance to manufacturers specifications.
  - o Interior walls:
    - Prime with one coat Plascon Plaster Primer with an overcoating time of 16 hours on exposed plaster
    - Finish with two coats Plascon professional low sheen with 1 hours drying time between coats, with a 5 year guarantee or equivalent approved

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

#### 2.9.2. REPAINT EXISTING PAINTED EXTERIOR AFRICOAT ONE COAT PVA & INTERIOR PLASTER FINISH

- a. Remove any hollow and soft/underbound plaster and replaster
- b. Remove loose and peeling paint back to a firm edge by scraping, sanding or other suitable means.
- e. Pressure wash with 9MPa pressure hose and clean all existing paint work ensuring that all loose paint work is removed.
- c. Feather the edges with 100 grit sandpaper and ensure surface is dust free. Remove surface contaminants using Sugar Soap solution - 500 g Sugar Soap Powder dissolved in 5 litres water, or Sugar Soap Liquid . For stubborn contaminants use hot water in the above mix and a bristle broom or scrubbing brush. Rinse with tap water to remove all traces of sugar soap and allow to dry.
- d. Remove any oil, grease and other contaminants with a Degreaser working it well into affected areas with bristle broom or brush. Leave for 20 minutes to react, then rinse thoroughly with fresh water to remove all traces of Degreaser, using high pressure water jet or scrubbing with brush or broom. Allow to dry completely
- e. Remove fungi and algae by scrubbing with a solution of household bleach (3,5% sodium hypochlorite) – 1 part bleach to 2 parts water by volume. Leave for 1 hour, then brush off with a bristle brush. Rinse thoroughly with tap water to remove all traces of bleach and allow to dry
- f. Fill cracks and other surface defects with the appropriate filler - refer Surface Preparation, Crack Repair
- g. Surface to be dry, sound and clean and cured for a minimum of 14 days, with a moisture content measured with a Doser Hygrometer (or equivalent), of BD 2 scale - 8% or less.
  - Exterior walls:
    - Prime raw brick and mortar areas with one coat Africote pigmented cementitious one coat PVA , all in accordance to manufacturers specifications.
    - Finish with one coat Africote pigmented cementitious one coat PVA, all in accordance to manufacturers specifications.
  - Interior walls:
    - Prime with one coat Profesional Plascon Plaster Primer with an overcoating time of 16 hours on exposed plaster
    - Finish with two coats Plascon professional low sheen with 1 hours drying time between coats, with a 5 year guarantee or equivalent approved

#### 2.9.3. PAINT TO NEW EXTERIOR & INTERIOR WINDOW & DOOR FRAMES

- d. Surface to be clean and dry
- e. Remove any oil, grease and other contaminants with a Degreaser working it well into affected areas with bristle broom or brush. Leave for 20 minutes to react, then rinse thoroughly with fresh water to remove all traces of Degreaser, using high pressure water jet or scrubbing with brush or broom. Allow to dry completely
- f. Remove rust and millscale by abrasive blasting or by hand/mechanical wire brushing to St3 of ISO 8501 - 01:1988 - Sa2½. Allow to dry completely
- g. Prime within 4 hours of cleaning. Prime with one coat Plascon prime 170 Primer (UC170) with an overcoating time of 16 hours and finish with two coats Plascon Professional Brilliant White Gloss Enamel (PSB 1000) with 16 hours drying time between coats, with a 3 year guarantee or equivalent approved

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

#### 2.9.4. REPAINT EXISTING PAINTED EXTERIOR & INTERIOR WINDOW & DOOR FRAMES

- a. Surface to be clean and dry
- b. Remove loose and peeling paint back to a firm edge by scraping, sanding or other suitable means. Feather the edges with 100 grit sandpaper and ensure surface is dust free. Remove surface contaminants using Sugar Soap solution - 500 g Sugar Soap Powder dissolved in 5 litres water, or Sugar Soap Liquid . For stubborn contaminants use hot water in the above mix and a bristle broom or scrubbing brush. Rinse with tap water to remove all traces of sugar soap and allow to dry.
- c. Remove any oil, grease and other contaminants with a Degreaser working it well into affected areas with bristle broom or brush. Leave for 20 minutes to react, then rinse thoroughly with fresh water to remove all traces of Degreaser, using high pressure water jet or scrubbing with brush or broom. Allow to dry completely
- d. Remove fungi and algae by scrubbing with a solution of household bleach (3,5% sodium hypochlorite) – 1 part bleach to 2 parts water by volume. Leave for 1 hour, then brush off with a bristle brush. Rinse thoroughly with tap water to remove all traces of bleach and allow to dry
- e. Remove rust and millscale by abrasive blasting or by hand/mechanical wire brushing to St3 of ISO 8501 - 01:1988 - Sa2½. Allow to dry completely
- f. Prime within 4 hours of cleaning. Prime with one coat Plascon prime 170 Primer (UC170) with an overcoating time of 16 hours and finish with one coat Plascon Professional Brilliant White Gloss Enamel (PSB 1000) with 16 hours drying time between coats, with a 3 year guarantee or equivalent approved

#### 2.9.5. PAINT TO NEW EXTERIOR TIMBER DOORS

- a. Surface to be clean and dry
- b. Wash knots and resinous areas with Lacquer Thinners (ILS 1) and coat with Woodcare Knot Seal (PK 2) and apply one coat of Plascon Woodcare Pretreatment (WWP 1), overcoated within 48 hours with a moisture content, measured with a Doser Hygrometer (or equivalent), of BD 2 scale (A1-A5) &lt; 14% or less
- c. Prime with one coat Woodcare Ultra Varnish (X33/X44) with an overcoating time of 6 hours
- d. finish with two coats Woodcare Ultra Varnish (X33/X44) with 6 hours drying time between coats, with a 4 year guarantee or equivalent approved

#### 2.9.6. REPAINT EXISTING PAINTED INTERIOR TIMBER DOORS

- a. Surface to be clean and dry
- b. Remove loose and peeling paint back to a firm edge by scraping, sanding or other suitable means. Feather the edges with 100 grit sandpaper and ensure surface is dust free. Remove surface contaminants using Sugar Soap solution - 500 g Sugar Soap Powder dissolved in 5 litres water, or Sugar Soap Liquid . For stubborn contaminants use hot water in the above mix and a bristle broom or scrubbing brush. Rinse with tap water to remove all traces of sugar soap and allow to dry.
- c. Remove any oil, grease and other contaminants with a Degreaser working it well into affected areas with bristle broom or brush. Leave for 20 minutes to react, then rinse thoroughly with fresh water to remove all traces of Degreaser, using high pressure water jet or scrubbing with brush or broom. Allow to dry completely
- d. Remove fungi and algae by scrubbing with a solution of household bleach (3,5% sodium hypochlorite) – 1 part bleach to 2 parts water by volume. Leave for 1 hour, then brush off with a bristle brush. Rinse thoroughly with tap water to remove all traces of bleach and allow to dry
- e. Prime with one coat Professional Wood Primer (PP800) with an overcoating time of 16 hours on exposed wood areas
- f. Finish with one coat Velvagio Water Based (VLW) with 4 hours drying time between coats, with a 12 year guarantee or equivalent approved

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**2.9.7. PAINT TO NEW FIBRE CEMENT BOARDS (FACIA & BARGE BOARDS)**

- a. Surface to be clean and dry
- b. Prime with one coat Bonding Liquid (CVI14) with an overcoating time of 4 hours
- c. Finish with two coats Nuroof Cool Acrylic Roof Paint (TRP) with 2 hours drying time between coats, with a 12 year guarantee or equivalent approved

**2.9.8. PAINT TO NEW GYPSUM CEILING BOARDS AND TIMBER CORNICE**

- a. Surface to be clean and dry
- b. Spot prime nail heads with Plascon metalcare mild steel primer (UC 501). Fill nail holes and other defects with Polyfilla interior. Spot prime with Plascon plaster primer (UC 56)
- c. Prime with one coat Plascon Plaster Primer with an overcoating time of 16 hours
- d. Finish with one coat Plascon one coat ceiling Paint or equivalent approved

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**C3.4.3.3 ELECTRICAL**  
**(Applicable to Schedule No. 4 in the bills of quantities/schedules)**

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**VOLUME 1  
PORTION 2: CONTRACT**

**Section C3.4.3.3  
Particular Specifications**

**ELECTRICAL SPECIFICATION**  
**(Applicable to Schedule no. 3 in the Bills of Quantities/Schedules)**

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



## LERATO PARK INTEGRATED HOUSING DEVELOPMENT

**CONTRACT NO: (2334-50-02/03)**

### REMEDIAL WORK TO 491 RDP HOUSES

DESIGN, MANUFACTURE, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF ELECTRICAL EQUIPMENT AND ASSOCIATED INSTALLATION WORKS FOR THE REMEDIAL WORK TO 491 RDP HOUSES

## C3.4 SPECIFICATIONS







### C3.4.3 Construction of Electrical Works

#### C.3.4.3.3 PARTICULAR SPECIFICATIONS FOR ELECTRICAL WORKS

The following particular specifications will form part of this Contract, as attached.

1. ESPL Particular Specifications for Small Power and Lighting Installations in buildings
2. EG&M Particular Specifications for General and Miscellaneous
3. EMCA Particular Specifications for Multicore Cables and Earth wires
4. EELP Particular Specifications for Earthing and Lightning Protection
5. ESLV Particular Specifications for Low Voltage Cable

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

## PARTICULAR SPECIFICATIONS:

### ESPL – ELECTRICAL/ELECTRONIC: SMALL POWER AND LIGHTING INSTALLATIONS

#### PRELUDE

This particular specification details the successful supply, manufacturing, factory inspection test at the contractor's premises, careful handling / transportation to the client's premises, safe storage as required and successful installation and commissioning for the above mentioned.

The contractor will furthermore responsible to uphold the electrical equipment during the Defects Liability Period.

This particular specification should be read in conjunction with the following;







- Section C3.4.3 of the tender document – Variation and additions to the Electrical / Electronic standard and particular specifications; and
- Associated drawings as issued with the Tender document; and
- Schedule of Quantities as per project specific.

Whereas conflicts in the above mentioned exists, this should be brought under the attention of the Engineer within a week before the Tender closes.

All materials and equipment to be supplied shall be new and of the best quality available.

All equipment shall bear the SABS mark.

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

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Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

Contract No: 2334-50-02/03

Portion 2: Contract

Part C3: Scope of Work

Section C3.4: Construction

Section C3.4.3.3 Particular Specifications

ESPL - Particular Specifications for Small Power and Lighting Installations in buildings

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Contractor

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Employer

Witness 1

Witness 2

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## **SPL SMALL POWER AND LIGHTING INSTALLATIONS ON BUILDINGS AND STRUCTURES**

### **SCOPE OF WORKS**

As specified in the Project Specifications.

### **STANDARDS**

The following standards, regulation and drawings, etc. shall be applicable to the electrical installations related to this particular specification, whereas the latest applicable South African Bureau of Standards Codes and Standards should be used;

**Table 1: Applicable Standards**

<b>Standard No.</b>	<b>Description</b>
BS 3676	Switches for household and similar fixed electrical installations. Specification for general requirements
SANS 156	Moulded-Case Circuit Breakers
SANS 164	Plug and socket-outlet systems for household and similar purposes for use in South Africa
SANS 201	Energy Efficiency in Buildings
SANS 474	Code of practice for electricity metering
SANS 475	Luminaires for interior lighting, street lighting and floodlighting - Performance requirements
SANS 890	Ballasts for fluorescent lamps
SANS 950	Un-plasticized polyvinyl chloride rigid conduit and fittings for use in electrical installations
SANS 1012	Electric light dimmers
SANS 1085	Wall boxes for the enclosure of electrical accessories
SANS 1091	National colour standard
SANS 1195	Bus bars
SANS 1213	Mechanical cable glands
SANS 1239	Plugs, socket-outlets and couplers for industrial purposes
SANS 1411	Materials of insulated electric cables and flexible cords
SANS 1619	Small power distribution units (ready boards) for single-phase 230V service connections
SANS 1765	Machine-made textile floor coverings - Determination of thickness
SANS 1777	Photoelectric control units for lighting (PECUs)
SANS 10142	Code of Practice for the wiring of Premises
SANS 10114-1	Interior lighting Part 1: Artificial lighting of interiors

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Standard No.	Description
SANS 10114-2	Interior lighting Part 2: Emergency lighting
SANS 60309-1	Plugs, socket-outlets and couplers for industrial purposes Part 1: General requirements
SANS 60309-2	Plugs, socket-outlets and couplers for industrial purposes Part 2: Dimensional interchangeability requirements for pin and contact-tube accessories
SANS 60570	Electrical supply track systems for luminaires
SANS 60669-1	Switches for household and similar fixed-electrical installations Part 1: General requirements
SANS 60669-2-1	Switches for household and similar fixed electrical installations Part 2-1: Particular requirements - Electronic switches
SANS 60669-2-2	Switches for household and similar fixed electrical installations Part 2-2: Particular requirements - Electromagnetic remote-control switches (RCS)
SANS 60669-2-3	Switches for household and similar fixed electrical installations Part 2-3: Particular requirements - Time-delay switches (TDS)
SANS 60669-2-4	Switches for household and similar fixed electrical installations Part 2-4: Particular requirements - Isolating switches
SANS 60669-2-5	Switches for household and similar fixed electrical installations Part 2-5: Particular requirements - Switches and related accessories for use in home and building electronic systems (HBES)
SANS 60906-3	IEC system of plugs and socket-outlets for household and similar purposes Part 3: SELV plugs and socket-outlets, 16 A 6 V, 12 V, 24 V, 48 V, a.c and d.c
SANS 60921	Ballasts for tubular fluorescent lamps - Performance requirements
SANS 60947-1	Low-voltage switchgear and control gear Part 1: General rules
SANS 60947-2	Low-voltage switchgear and control gear Part 2: Circuit-breakers
SANS 60947-3	Low-voltage switchgear and control gear Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units
SANS 61084-All	Cable trunking and ducting for electrical installations
SANS 61347-All	Lamp control gear Part
SANS 10292	Earthing of low-voltage (LV) distribution systems

**SPL CABLING AND ACCESSORIES****PVC INSULATED CONDUCTORS**

PVC insulated conductors shall be of high conductivity, stranded copper with Polyvinyl Chloride insulation of 600/1 000 volt grade.

The wiring of circuits shall be carried out on the "loop-in" system and no jointing of conductors in conduit runs or cutting away of wire strands will be permissible.

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Connectors for use in conduit boxes shall be of the heavy brass terminal type mounted in porcelain insulators.

All plug circuits shall consist of 2 x 4mm<sup>2</sup> PVC insulated conductors plus 1 x 2,5mm<sup>2</sup> bare copper earth wire in Ø20mm conduit.

All lighting circuits shall consist of 1,5mm<sup>2</sup> PVC insulated conductors in 20mm conduit. For fluorescent lights an additional 2,5mm<sup>2</sup> bare copper earth wire shall be provided and thoroughly bonded to each fitting.

Connections between lamp holders of incandescent fittings and the conduit boxes shall consist of asbestos insulated wire or other approved heat resistant conductors.

## CONDUIT AND CONDUIT ACCESSORIES

Conduit, conduit accessories and conduit fittings shall be hot-dip galvanized both on the inside and outside

Only brass bushes and bush nuts will be acceptable.

The conduit installation shall be carried out on the "loop-in" system and no conduit shall have a diameter of less than 20 mm. All conduits shall be built into walls, concrete ceilings etc, and no conduit will be allowed on the surface.

All conduit ends shall be remerged and all joints securely screwed together. No inspection bends or elbows will be allowed in the installation. Running joints may only be used where unavoidable and shall be provided with lock nuts. All screwed joints shall be thoroughly painted with "Red Lead" in order to prevent corrosion.

No conductor may be drawn into any conduit, unless all foreign materials, moisture and sharp edges have been removed.

In event of a conduit terminating in any sheet metal box, two lock nuts and a brass bush or one lock nut and a bush-nut shall be used.

Standard round conduit boxes shall be used for light points and draw boxes. Draw boxes shall be provided with enamelled metal cover plates with brass screws.

Standard 100 x 50 x 50 mm hot dipped galvanised pressed steel boxes shall be used for all switch boxes.

Standard 100 x 100 x 50 mm hot-dipped galvanised pressed steel boxes shall be used for all plug boxes and telephone outlets.

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Expansion boxes shall be provided at all expansion joints in the building. Such expansion box shall comprise a flush hot dipped galvanised sheet steel box with blank enamelled steel cover plate secured in position by means of brass screws. The conduit on the one side shall be securely fixed to the box, while the conduit on the other side shall be able to move freely in the box in order to provide for movement of the building. The conduit on the one side shall be bonded to that on the other side inside the box by means of flexible copper connections with clamps, bolts and nuts, in order to ensure earth continuity.

The conduit shall be installed in the concrete ceilings along the shortest possible routes, with the cover plates of draw boxes on the final ceiling surface. Conduit shall be installed as near as possible to the neutral axis of concrete beams, slabs and columns and deep conduit boxes shall be used.

All unwired conduits should be equipped with hot dipped galvanised draw wires with at least 200 mm ends on each end of the conduit. The ends of the draw wire shall be neatly coiled in the draw boxes.

#### **STANDARD 100 X 100 X 50 MM AND 100 X 50 X 50 MM BOXES**

The above mentioned boxes shall be heavy gauge, hot-dip galvanized, pressed steel boxes.

#### **COVER PLATES**

All cover plates (switch boxes, plug boxes and draw boxes) should be of baked enamelled steel.

The colour to be approval by the Engineer, with input for the Architect and Client.

#### **LIGHTING INSTALLATIONS**

##### **LIGHT SWITCHES**

Light switches shall comply with SANS 10142 and BS 3676.

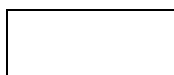
Standard mounting box for all light switches: 100 x 50 x 50mm, hot dip galvanized and neat rounded corners

Light switches current rating: >16Amp and suitable for the load it is connected to.

Flush mounted switches: micro type with white rocking lever



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Watertight switches to be installed in cast iron boxes, inclusive of watertight cover plates and clearly marked with "ON" and "OFF" positions.

The switch lever shall be protected where it protrudes through the cover plate.

## **LIGHT FITTINGS**

Light fittings shall be of the latest technology lamps and control equipment as prescribed. LED lights shall be installed as specified.

Fluorescent light fittings shall be equipped with electronic ballasts.

Fluorescent lamps colour temperature: 3 000°K unless otherwise specified.

Light fittings with filament lamps installations: wiring between the terminal box and the lamp holder shall have heat resisting insulation.

## **INSECT KILLERS**

As specified in the project specifications.

## **SMALL POWER INSTALLATIONS**

### **POWER OUTLETS**

Plug outlets shall be of the combined 3 pin, 13Amp or 16Amp socket and switch combination.

Type: flush mounted units, with a white rocking lever.

Mounting box: 100 mm x 100 mm x 50 mm and neat rounded corners.

The switch lever shall be protected where it protrudes through the cover plate.

### **THREE PHASE AND MULTI-PIN PLUG OUTLETS**

Three phase plug outlets shall be either;

- 63A, 400V, 5 pin units complete with plug and interlocked isolating switch; or
- 32A, 400V, 7 pin units complete with plug and interlocked isolating switch.



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## ISOLATOR INSTALLATION

Isolation installation: 100x50x50mm, IP 65 weatherproof wall box as indicated on the drawings, as required.

Isolators shall be one of the following and as specified;


- 20A double pole;
- 30A double pole;
- 60A double pole;
- 30A triple pole; or
- 60A triple pole.

Mounting height (kitchens and other areas where cupboards are fitted): 1050 mm AFFL


Mounting height (gate motors): 500mm AFFL

Isolator units to be installed in an accessible location and in close proximity to the particular equipment (ex. air-conditioning units, geysers, extractor fans, gate motors, etc.) and as indicated on the drawings.


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## DISTRIBUTION BOARDS

Each of the relevant distribution boards shall be built into walls or securely bolted down on the floor or plinth by means of the requisite number of foundation bolts grouted into the floor in the positions indicated on the drawings.

These positions shall be confirmed with the Engineer on site prior to installation as follows;

- a. Contractor shall install distribution board in accordance with manufacturer's instructions.
- b. Contractor shall tighten accessible bus connections and mechanical fasteners to the manufacturer's torque requirements.
- c. Contractor shall select and install fuses in fusible switches based upon field requirements.
- d. Contractor shall adjust circuit breaker settings based upon field requirements.
- e. Contractor shall adjust solid state overloads to match the installed motor characteristics.

## WALL SURFACE MOUNTED TYPE MOUNTED LV DB SPECIFICATIONS

DB board type:

- Surface mounted with doors, 1,6 mm sheet steel, with a bonding tray, chassis and removable panel.

Bonding trays:

- Adequately sized in order that all the relevant equipment is installed without cramping and adequately braced with suitable gaskets.

DB Doors:

- Secured with robust and rust proofed hinges. A single door shall not be wider than 600 mm.
- Rust proofed handles and latches. Ball type batches will not be acceptable.
- 

DB chassis:

- Rigid and facilities shall be provided on the chassis for mounting all the relevant equipment.

Mounted:

- Panels shall be mounted in order that all equipment are flush behind the panel with only operating handles and push buttons projecting through neat machine punched slots in the panel.
- Panels shall be provided with chromium plated brass handles to facilitate removal.
- The panel shall be rigid and readily removable without necessitating the disturbance of any of the equipment on the board.

Colouring:



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- Interior surfaces of the board shall be powder coated white .
  - Exterior surfaces (including panels) in colour B26, SANS 1091 (Electric orange).
  - Powder coating shall be of the best quality with high shock and scratch resistance.
  - Before powder coating, metal parts shall be thoroughly degreased and cleaned by shot blasting to be free of rust, mill-scale and other foreign materials.

Gland Plate:

- A 3CR12 steel gland
- Fitted to the bottom section of the board to facilitate termination of cables by means of cable glands.

Busbars:

- Shall consist of tinned solid high conductivity copper mounted on suitable busbar insulators.
- Connections to busbars shall be done with suitable lugs sweated or crimped to the conductor ends, and cadmium plated high tensile steel bolts, nuts and washers.

Copper multiway neutral and earth bars:

- Shall be equipped with cadmium plated high tensile steel bolts, nuts and washers for connection of the various conductors.
- The neutral bar shall be mounted on busbar insulators, but the earth bar shall be thoroughly bonded to the metalwork of the board.

The internal wiring of the boards:

- Done with PVC insulated conductors arranged neatly horizontally, vertically and at right angles in front of the chassis.
- The conductors shall be neatly bunched by means of cable ties. (String will not be acceptable.)

Labelling:

- An engraved plastic label of the black on white sandwich type shall be screwed to the panel below each item of equipment.
- For single pole equipment a number system shall be used.
- A neatly typed legend card behind clear "Perspex" in a metal frame should be provided. The frame shall be mounted on the inside of the switchboard doors.

Sundries:

- All bolts, nuts, washers and screws used on should be rustproof.
- The use of self-tapping screws will not be allowed.

## WALL FLUSH OR SEMI-FLUSH MOUNTED DB SPECIFICATIONS

Flush and semi-flush mounted distribution boards shall be manufactured as follows;



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- Constructed of 1,2mm sheet steel (minimum) and shall comply with SANS 1180 Part 1.
  - Including rust hot dipped galvanised wall tray.
  - Braced with of suitable gussets.
  - Suitable sized to accommodate equipment without cramping as specified in the schedules.
  - Expanded metal to be spot-welded at the rear of all wall trays for 110mm walls.
  - Formed with bevelled or flat edges and neatly mitred and shall accommodate the panel chassis and door/s.
  - The lip for the mounting of the circuit breaker carriers, and front panels shall form part of the architrave frame.

Panels Door specifications:

- Rigid and manufactured with a smooth flat finish.
- Suitably braced to ensure stiffness,
- Recessed flush in the architrave.
- Door catches shall be equal and similar to "Union" manufacture, as follows;
  - Cat No. 51741 (solid, no lock), or
  - Cat No. 5174 (with built-in lock),
- Single doors to be constructed of sheet steel and shall open at least 150 degrees.
- The distance between panel and inside of door(s) shall be not less than 40mm.

Circuit breaker carriers specifications;

- Rigid construction for mounting of equipment.
- Fixed to the architrave frame and provided with the necessary means for fixing of circuit breakers, isolators, etc.
- Width of carriers for compact circuit breakers shall be such that a distance of 10mm is maintained between the carriers.

Mounted:

- Panels shall be mounted in order that all equipment are flush behind the panel with only operating handles and push buttons projecting through neat machine punched slots in the panel.
- Panels shall be provided with chromium plated brass handles to facilitate removal.
- The panel shall be rigid and readily removable without necessitating the disturbance of any of the equipment on the board.
- Panels shall be attached to architrave by means of captive fasteners (with screw driver slots).
- Self-tapping screws are not acceptable.
- Panels can also be fitted by means of two guiding pins at the bottom or on the hinge side of the door.

Slots for equipment:

- Slots for equipment installed separately shall have the exact dimensions to accommodate only the specific equipment, as per example main switches, earth leakage relays, etc.

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- A maximum tolerance of approximately + 1mm shall be maintained on all sides between slots and equipment.

Power meters:

- Where required, power meters shall also be flush mounted behind the panels and Contractors are required to co-operate with the supply Authorities in this respect.

Busbars specifications:

- Consist of solid drawn high conductivity copper with a rectangular cross-section in accordance with SANS 1195 for each phase and neutral and are to be installed in a group in the top section of all distribution boards.
- Busbars to be installed either horizontally or vertically.
- Busbars must be so arranged that horizontal bars are placed one above the other and vertical bars placed side-by-side, with the flat surface facing front wards to facilitate connections and clear of all equipment.
- Where necessary, busbars shall either be twisted to a 45° angle or shall be stepped in the horizontal plane.
- 50mm spacing between bars to be provided.
- A set of busbars should be installed in each section of a distribution board feeding more than two three phase connections including future equipment.
- These busbars shall not be mounted directly onto the terminals of any triple pole circuit breakers, fuse-switches or isolators.
- Busbars shall be mounted on coloured "ceramic" or "paxalene" or similar insulators. Colour of insulators shall be in phase colours, red, white, blue and black for neutral.
- Busbars for single pole circuit breakers shall consist of solid copper with a minimum cross-section of 1,5mm x 19mm and shall be fixed directly to the terminals of the circuit breakers. Single pole circuit breakers should be grouped distinctly separate for the three phases, in horizontal rows (one above the other) in the following sequence, red, white and blue, starting with red on top.
- Connections to busbars shall be done with lugs, sweated or crimped to cable ends and bolted to busbars with cadmium plated 6mm diameter steel bolts (machined bolts) and nuts. Bolts shall be of the hexagonal head type, with 6mm thread and must be provided with washers, spring washers and hexagonal nuts.
- Busbars are to be drilled and tapped and bolts must be screwed into the busbars from the rear. Connection facilities to busbars shall make provision for the number of three phase connections as well as spare connections specified.
- Spare bolts, complete with washers and nuts, are to be screwed into each busbar, to allow for future extensions.
- Busbars shall be mounted on a rigid chassis and the use of two chassis for the mounting of a busbar will not be permitted. Only similar metals shall be used for busbars and connections thereto.
- Each busbar shall be provided with one large terminal for the main conductor. All busbars must be accessible from the front.

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Wiring specifications;

- Wiring is to be carried out from the sides and in front of the chassis with conductors neatly arranged in horizontal, vertical and at right angles rows and bound together by means of perforated plastic tape (string will not be acceptable).
- Each conductor within the harness shall be kept parallel to the others without twisting or spiralling and shall be free of links.
- Only one conductor per connection point will be permitted
- All wiring is to be kept free and away from any exposed terminals, or other non-insulated current carrying parts.
- Looping from terminals of main switch, circuit breakers, or isolators will be limited to a maximum of only two outgoing circuits per DB, more than two circuits shall be connected to the busbars.
- Only copper conductors will be permitted.
- Internal wiring in the DBs, shall consist of stranded conductors and shall be in the colours of the relevant phases being red, white, blue and black for neutral.
- Colour taped conductors will not be permitted
- Switch boards shall be supplied completely wired and ready for connection.

DB powder coated finish specifications:

- All metal parts shall be degreased, rinsed, pickled, rinsed, phosphate, neutralized and then to be thoroughly dried.
- The above process is to be followed by the following powder coating process, before distribution boards are delivered for installation.
- Powder coating finishing shall be colour B26, SANS 1091 (Electric orange) or a colour as described by the Architect. Care to be taken that all edges are properly covered with powder coating.

Labelling:

- Screwed-on, engraved labels, of the white-on-black type, shall be provided on the front of the DB to identify the equipment and instruments as indicated on the proposed layout.
- Inscriptions shall be 6mm high lettering on Ivorene labels. Fixing screws shall be chrome or brass 6BA roundhead.
- **Note:** All grouped SP circuit-breakers on distribution boards and cubicles must be numbered with suitable engraved printed plastic or Ivorene plates indicating numbers of circuit controlled.
- A neatly typed legend card behind clear "Perspex in a metal frame shall be provided for this purpose.
- The frame shall be spot welded on the inside of the switchboards doors.

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## ACCESSORIES FOR SWITCHBOARDS

### MAINS SURGE ARRESTORS

When a surge arrestor is installed in systems with a main breaker with 250Amps or 5kA fault current, the surge arrestor shall be pre-fused to prevent the units creating a danger when subjected to high fault currents. Surge arrestors shall be pre-fused to the manufactures requirements. All surge arrestors shall be **connection type 2** as per the latest addition of the SANS 10142.

### BUILDING WITH EXTERNAL LIGHTNING PROTECTION

The main distribution board surge arrestors shall be combined type 1 & 2 and voltage compatible to the relevant installation and shall be able to withstand a lightning impulse current wave form 10/350µs at a maximum discharge current of 100kA.

Any distribution board feeding from the main distribution board shall have surge arrestors and shall be type 2 and voltage compatible to the relevant installation and shall be able to withstand a lightning impulse current wave form 8/20µs at a maximum discharge current of 40kA.

Each distribution board shall be equipped with mains surge arrestors.

### BUILDING WITH NO LIGHTNING PROTECTION

The surge arrestors shall be type 2 and voltage compatible to the relevant installation and shall be able to withstand a lightning impulse current wave form 8/20µs at a maximum discharge current of 40kA.

Each distribution board shall be equipped with mains surge arrestors.

### MOULDED CASE CIRCUIT BREAKERS

All moulded case circuit breakers shall be as specified in the schedules of equipment for distribution boards and shall comply with SANS 156.

The required frame sizes or rupturing capacities required are specified in the schedules for each board.

Each circuit breaker shall be provided with non-adjustable time-delayed trips.

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## CURRENT LIMITING CIRCUIT BREAKERS

The current limiting circuit breakers shall be capable of remaining in service and of carrying their normal rated current after having interrupted the maximum short circuit current of 200 kA RMS at least three times.

## CONTACTORS

All contactors shall be of the totally enclosed, three pole, double air break per pole, automatic magnetic type complying with the requirements of BS 775 for "CLASS UR" contactors of the **"CLASS II MECHANICAL DUTY CLASS"** and **"A3 Make and Break Category"**.

All contactors shall be provided with arc extinguishers, and readily replaceable silver or silver-alloy contacts rated for at least 2-million "on" and "off" switching operations at rated current.

Each contactor shall be provided with an AC, closing coil suitable for continuous operating and at least 15 closing operations per hour at system voltage. The contactor may not hum or chatter in service and the contacts may not bounce on closing.

## TIME SWITCHES

The time switches shall be suitable for use on a 230 volt, 50 cycle per second AC supply and shall be of the microprocessor type.

The time switches shall be digital timers suitable for rail or surface mounting and shall be programmable with daily and weekly programs, switching intervals of 1 minute and switching accuracy precise to the second.

The time base shall be of the quartz type with LED display for time, weekday, holiday program, switching position and manual override and shall have a power reserve of 250 hours at full operation. The time switches shall have a switching capacity of 16 A at 230V.

## EARTH LEAKAGE UNITS

The earth leakage units shall consist of a combination of a earth leakage relay and a moulded case circuit breaker and shall have a sensitivity as specified, it shall conform to SANS 767.

## EARTHING

The contractor shall do all the bonding and earthing in accordance with the latest addition of the "Code of Practice for the Wiring of Premises" SABS 10142.

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Earth resistivity measurements of **less than 1 ohm** will be acceptable at motor control centers and distribution boards.

## DANGER SIGNS

Danger signs on aluminum plates shall be supplied on each door of an outdoor motor control center or distribution board and shall be in accordance with the Occupational Health and Safety Act, Act 85 of 1993.

## INSPECTIONS AND TESTS

All equipment will be inspected by the Engineer and tested in his presence both in the factory during manufacturing and on site during installation. The Engineer will do all inspections accompanied by the Contractor and the Contractor will do all tests with the Engineer as witness.

The Engineer will require seven (7) days notification to avail himself for any test or inspection and the Contractor must arrange for the maximum number of inspections and tests to be done on the same day. The Contractor must provide all testing facilities and instruments, all equipment required for a test or inspection.

The cost of all tests must be included in the tender price.

## TESTING OF DISTRIBUTION/MOTOR CONTROL BOARDS

Each distribution/motor control board shall be subjected to the following tests in the manufacturer's works after manufacture:

- a. A thorough inspection shall be carried out to ensure compliance with the specification and approved drawings and wiring diagrams and to ascertain that all connections are properly made.
- b. A high voltage test on all primary connections to check the insulation between phases mutually and between each phase and earth.
- c. The polarities and ratios of all potential and current transformers shall be checked.
- d. Primary and secondary injection tests shall be carried out on all switching, protection, metering interlocking and indication circuits.

The manufacturer shall submit three copies of test certificates giving details of conditions and results of tests carried out to the Engineer.

## OPERATING AND MAINTENANCE INSTRUCTIONS

Before completion of the testing of the plant, the Contractor shall provide the Employer with adequate and complete working, operating and maintenance instructions in triplicate, with the

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necessary drawings and diagrams clarifying the instructions. The Contractor will also provide 3 x "soft copies" of the complete manual in PDF format on a Suitable sized USB Flash Drive (Memory Stick)

Instructions are to be made up in book form and particular reference is to be made to:

- Maintenance of equipment;
- Precautions to be taken in running the plant;
- All instruments and components must be fully described in data sheets supplied by the relevant suppliers;
- Wiring diagrams of the complete electrical installation.

The manual must be specific for the plant supplied and all extraneous material not connected with the relevant plant shall be deleted, leaving the manual as a comprehensive coherent document, bound in a professional way such that this may be used frequently without falling apart. Standard pamphlets may be supplied as addendums, bound separately in a good quality file to serve as reference but will not be allowed as part of the main manual.

## SUPPORTING DOCUMENTATION

### INFORMATION TO BE SUBMITTED WITH TENDERS: 400V DB

Before manufacturing, the following information shall be submitted with each Tender in respect of all boards offered;

- a. Full technical details and descriptive literature regarding all equipment and instruments offered;
- b. Three paper prints of an outline drawing of each motor control centre and distribution board indicating the main overall dimensions and general lay-out of the boards; and
- c. Three paper prints of an outline drawing of the front end processor cabinet indicating the main overall dimensions, general layout and type of material employed on the face of the panel.

### INFORMATION REQUIRED WITH TENDER SUBMISSION

The following information regarding the switch- and distribution boards shall be submitted with each tender.

- a. The name and address of the switchboard manufacture.
- b. Descriptive literature and technical information of all equipment and instruments offered with the boards.
- c. Wiring diagrams of all distribution boards.
- d. Schematic single line diagrams of all distribution boards.

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- e. Elevations showing dimensional information including details such as, but not limited to, the following:
- Distribution boards height (less any removable lifting angles or eyes)
  - Distribution boards width
  - Distribution boards depth
  - Location of shipping splits
- f. Structure descriptions showing the following:
- Bus ratings
  - Enclosure ratings
  - Short-circuit withstand ratings
  - Other information as required for approval
- g. Conduit locations
- h. Required bus splices
- i. Unit descriptions including information such as, starter sizes, circuit breaker frame sizes, circuit-breaker continuous ampere ratings, and pilot devices
- j. Nameplate information
- k. Manufacturer drawings shall be provided in PDF format
- l. Data sheets and publications on all major components including, but not limited to, the following:
- Motor starters
  - Overload relays
  - Circuit breaker and fuse information including time current characteristics
  - Control power transformers
  - Pilot devices
  - Relays
  - All clarifications and exceptions must be clearly identified

After completion of the work, the contractor shall submit three final copies of each of the above-mentioned drawings showing the final layout and wiring diagram of the boards.

## AS BUILT INFORMATION

On completion of the works, but before the certificate of completion will be issued, the contractor shall submit to the Engineer, as built information in electronic format indicating in a satisfactory manner:

- a) The exact position of all electrical installation equipment in the buildings
- b) Distribution board as built wiring diagrams
- c) Certificate of Compliance for all building installations

Electronic copies of the various plans for the marking up of the information required will be supplied to the contractor on request.

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## MEASUREMENT AND PAYMENT

Measurement and payment will be done in accordance with the methods stated below:

### DESIGN, DRAWING AND GENERAL

The rate tendered shall include for the provision of the necessary design information for all items measured under the respective schedule. For distribution board's installation, design information shall include, but limited to as listed in this Particular Specifications.

<u>Pay Item</u>	<u>Unit</u>
(a) Provide design drawings and wiring diagrams ("as-built" drawings) as specified	Sum
(b) Provide operating and maintenance manuals as specified	Sum
(c) Allowance for short circuit analysis and coordination study and protection setting calculations	Sum

### SUPPLY AND DELIVERY TO SITE

<u>Pay Item</u>	<u>Unit</u>
(a) Supply and delivery to site of complete electrical installation equipment as specified	Sum

### INSTALLATION

<u>Pay Item</u>	<u>Unit</u>
(a) Installation of complete electrical installation as specified	Sum

### COMMISSIONING

<u>Pay Item</u>	<u>Unit</u>
(a) Commissioning of complete electrical installation as specified	Sum

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**PARTICULAR SPECIFICATIONS:  
EG&M: ELECTRICAL/ELECTICAL – GENERAL AND MISCELLANEOUS**

**PRELUDE**

This particular specification details the successful supply, manufacturing, factory inspection test at the contractors premises, careful handling / transportation to the clients premises, safe storage as required and successful installation and commissioning for the above mentioned.

The contractor will furthermore responsible to uphold the electrical equipment during the Defects Liability Period.

This particular specification should be read in conjunction with the following;

- Section C3.4.3 of the tender document – Variation and additions to the Electrical / Electronic standard and particular specifications; and
- Associated drawings as issued with the Tender document; and
- Schedule of Quantities as per project specific.

Whereas conflicts in the above mentioned exists, this should be brought under the attention of the Engineer within a week before the Tender closes.

All materials and equipment to be supplied shall be new and of the best quality available.

All equipment shall bear the SABS mark.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## EG&M ELECTRICAL DISTRIBUTION SYSTEM

### EG&M 1 STANDARDS

The following standards, regulation and drawings, etc. shall be applicable to the electrical installations related to this particular specification, whereas the latest applicable South African Bureau of Standards Codes and Standards should be used;

Standard No.	Description
SANS 1507	Electrical cables with extruded solid dielectric insulation for fixed installations (300/500 V to 1900/3300V)
SANS 1063	Earth rods and couplers
SANS 1213	Mechanical cable glands
SANS 1433-1	Electrical terminals and connectors Part 1: Terminal blocks having screw and screwless terminals
SANS 1433-2	Electrical terminals and connectors Part 2: Flat push-on connectors
SANS 10142	Code of Practice for the wiring of Premises
SANS 10199	The design and installation of an earth electrode
SANS 10292	Earthing of low-voltage distribution systems
SANS 10313	Protection against lightning - Physical damage to structures and life hazard
SANS 60947-5-2	Low-voltage switchgear and control gear Part 5-2: Control circuit devices and switching elements - Proximity switches

### EG&M 2 GENERAL REQUIREMENTS

#### EG&M 2.1 LAWS, REGULATIONS AND CODES OF PRACTICE TO BE OBSERVED

The work shall be carried out strictly in accordance with the following laws and regulations where applicable;

- The latest edition of "Code of Practice for the Wiring of Premises", SANS 10142, as amended;
- Occupational Health and Safety Act (Act No. 85 of 1993);
- The "Electricity Supply By-Laws and Regulations" of the Local Supply Authority;

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Contractor

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Employer

Witness 1

Witness 2



- d) The local Fire-Office Regulations;
- e) The Requirements of the Department of Communications;
- f) The Acts and Regulations applicable to the use of explosives;
- g) "The Code of Practice for the Installation and Maintenance of Electrical Equipment used in Explosive Atmospheres"

The Contractor will be responsible for serving all notices and paying all fees due in terms of the above laws and regulations.

#### **EG&M 2.2 RADIO AND TV INTERFERENCE**

All equipment installed under this Contract shall comply with the Government Notice No. R.2246 and any other applicable rules and regulations in respect of radio and TV interference. Any equipment found producing interference subsequent to commissioning, shall be suppressed or replaced to the satisfaction of the Engineer without any additional cost.

#### **EG&M 2.3 INTERCHANGEABILITY**

All equipment must be manufactured to such close tolerances that all similar components and spares must be fully interchangeable without any further alterations or adjustment being necessary.

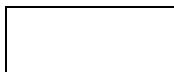
#### **EG&M 2.4 WATER AND DEBRIS ACCUMULATION**

All outdoor equipment shall be designed so that water and debris will not readily accumulate to cause deterioration of equipment or an electrical discharge hazard. Where this cannot be avoided, such places shall be easily accessible for cleaning.

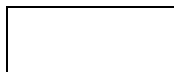
#### **EG&M 2.5 COLOUR AND FINISHING**

All metal parts of equipment shall either be finished in baked enamel or powder coating or galvanized (depending on the circumstances) after manufacture and treatment to SANS 064.

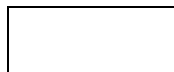
Colours of paint to be used shall be confirmed with the Engineer prior to application.



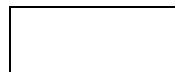
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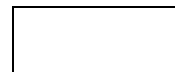
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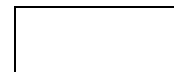
Witness 2



Employer



Witness 1



Witness 2

All steel areas subjected to corrosive atmospheres must be hot dip galvanized. The galvanizing must be clean, smooth, of uniform thickness and unblemished. The galvanizing must not affect the mechanical properties of the covered metal.

All drilling, welding, cutting and bending must be complete and the metal must be cleaned of any machining blemishes, mill scale, rust and lubricants before galvanizing. If site trimming, drilling and cutting cannot be avoided then all such denuded surfaces must be dressed with a cold galvanizing paint.

The Engineer must approve any other proposed corrosion protection before it is applied.

Galvanized areas must be kept free of lubricants.

Wire must be galvanized.

## EG&M 2.6 INSPECTIONS AND TESTS

All equipment will be inspected by the Engineer and tested in his presence both in the factory during manufacturing and on site during installation. The Engineer will do all inspections accompanied by the Contractor and the Contractor will do all tests with the Engineer as witness.

The Engineer will require seven (7) days notification to avail himself for any test or inspection and the Contractor must arrange for the maximum number of inspections and tests to be done on the same day. The Contractor must provide all testing facilities and instruments, all equipment required for a test or inspection and all safety clothing prescribed by the Engineer.

The instruments must have valid test certificates issued by an accepted testing authority and the results of the test done must be recorded on a test certificate, of which the Engineer must receive two copies. The Engineer reserves the right to call for a calibration test on any instruments used during the test.

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Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

The cost of all tests must be included in the tender price.

## **EG&M 2.7 PERFORMANCE TESTS**

On completion of erection and installation the Contractor must carry out the following tests, where applicable, in addition to any other tests, which may be specified elsewhere:

Before commissioning

- Cable Insulation test.
- Earth continuity test.
- Tests for correct direction of rotation of motors and reverse if necessary.
- Test for correct operation of control gear, setting of overload protection equipment, etc.
- The Contractor must obtain SABS test certificates for samples of insulating oil in HT switchgear and transformers. These certificates must be submitted to the Engineer.

On completion of installation and putting into proper operation all the plant and equipment, the Contractor will be required to make suitable arrangements for the testing of all plant and equipment supplied under this Contract and running the plant for at least one week, during which time he shall also train all the operators in the correct running of the plant. He shall also explain the maintenance manuals to the operator during this time.

The entire cost of testing, including supply of test equipment, must be borne by the Contractor and an adequate allowance for such tests must be made in the Tendered price.

## **EG&M 2.8 OPERATING AND MAINTENANCE INSTRUCTIONS**

Before completion of the testing of the plant, the Contractor shall provide the Employer with adequate and complete working, operating and maintenance instructions in triplicate, with the necessary drawings and diagrams clarifying the instructions.

Instructions are to be made up in book form and particular reference is to be made to:

- Maintenance of equipment;

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

- Precautions to be taken in running the plant;
- All instruments and components must be fully described in data sheets supplied by the relevant suppliers;
- Wiring diagrams of the complete electrical installation.

The manual must be specific for the plant supplied and all extraneous material not connected with the relevant plant shall be deleted, leaving the manual as a comprehensive coherent document, bound in a professional way such that this may be used frequently without falling apart. Standard pamphlets may be supplied as addendums, bound separately in a good quality file to serve as reference but will not be allowed as part of the main manual.

The format for the operating and maintenance manual is described in detail elsewhere in this document.

N.B. The prices Tendered in the Schedule of Prices will be held to include for the supply of these operating and maintenance instructions.

## **EG&M 2.9 SPARES**

Tenderers shall submit on the appropriate Schedule in this document a list of spare parts and special tools, which is recommended and should be kept by the Employer for maintenance of the plant. Spares, which the Employer decides to order, must be manufactured simultaneously with the rest of the equipment and be subjected to the same tests for dimensions, tolerances, strength, etc. All spares and special tools must be packed separately and the cases appropriately marked. All spares and special tools must be new and unused and where possible should be standard to all sections of the plant.

## **EG&M 2.10 LABELS AND INSCRIPTIONS**

The standard labels on equipment regarding the manufacturer, type, class, rating etc., shall be accepted unchanged.

Engraved laminated plastic labels shall however be provided to indicate a numbering system for relays, fuses, links, lights and selector and control switches and shall

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

correspond to the wiring diagram numbering system. These labels shall be fixed with screws, bolts or rivets.

## EG&M 2.11 NAME TAGS

Identification tags shall be attached to all equipment, sub-assemblies, components such as instruments, fuses etc., cable ends etc. The tags shall be screwed on with brass or plated steel screws (no self-tapping screws will be permitted). Where it is not possible to use screws such as on the cables, other means of attachment must be submitted for approval to the Engineer.

Cables shall be tagged at either end, whether the end terminates in a distribution board or an end box.

All cable cores and internal panel wiring shall be identified at both ends by means of durable colour coded wire marking ferrules in accordance with numbering systems in cable and wiring diagrams. Only closed ring interlocking type identification ferrules shall be used.

Outdoor tags shall be of stainless steel or brass type.

Tags mounted indoors or protected by an enclosure shall be made of Ivorene or similar sandwich material with black letters on a white background.

All lettering and text shall be approved by the Engineer.

Letter sizes must be compatible with the application, e.g.

For fuses, terminals, relays etc	3 to 5 mm
For panels or cubicles	12 to 20 mm
For switchboard or MCC board names	about 50 mm
For building or structure names	about 80 mm

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

### **EG&M 3      EMERGENCY STOP PUSH BUTTONS AND WEATHERPROOF ISOLATORS**

Not Applicable

### **EG&M 4      CONDUCTOR ENDS**

#### **EG&M 4.1      NUMBERING OF CONDUCTOR ENDS**

Every conductor end whatsoever, with the exception of AC power cables at any terminal shall be numbered.

These numbers shall correspond with those on the circuit diagram and shall consist of the slip on type numbering system (clipped on numbering system will not be accepted). It shall not be possible to remove the number holder without damaging it or cutting off the lug.

#### **EG&M 4.2      CONNECTION OF CONDUCTOR ENDS**

All conductors whatsoever shall be connected at terminals by means of lugs and/or ferrules suitable for the specific conductor and terminal.

### **EG&M 5      EARTHING**

The contractor shall do all the bonding and earthing in accordance with the latest addition of the "Code of Practice for the Wiring of Premises" SABS 10142.

### **EG&M 6      LIGHTNING PROTECTION**

#### **EG&M 6.1      PLANT**

The lightning protection of the lighting structures, poles and plant of the works, including all the buildings and handrails on the new plant, form part of this contract.

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Contractor

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Witness 2

Employer

Witness 1

Witness 2

The lightning protection must be a SABS approved scheme and SABS approved drawings of the scheme must be submitted to the Engineer.

## **EG&M 7 SURGE PROTECTION**

Tenderers shall allow in their Tender prices for adequate protection of the equipment supplied and installed under this contract against direct as well as induced voltage surges and spikes which may be experienced on the system.

Surge arrestors shall be provided on each phase as well as neutral on the incoming power supply terminals of each board.

All arrestors shall be connected directly to earth along the shortest possible route and only conductors of adequate rating for the discharge currents catered for shall be used for connections to arrestors.

Tenderers shall submit full particulars of the arrestors offered as well as written confirmation that it will provide adequate protection for the relevant equipment against possible voltage surges and spikes on the system.

### **EG&M 7.1 SURGE PROTECTION UNITS**

The following surge arrestors shall be supplied and installed for surge protection complete with base element.

#### **EG&M 7.1.1 MAIN SUPPLY PROTECTION.**

Single Din rail mounted mains surge arrestors shall be supplied and installed for each phase and neutral conductor of an electrical board. The surge arrestors shall be of

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

sufficient voltage rating and shall withstand a max discharge current of 8/20 magnitude and 40kA rating

## **EG&M 8 NOTICES AND DANGER PLATES**

### **EG&M 8.1 SCOPE**

This specification deals with the provision of Notices and Danger Plates as required in terms of the Occupational Health and Safety Act No. 85 of 1993, as well as any other notices that may be required by law or by the nature of the finished Works.

The following standard specifications are referred to in this specification: -

- SANS 10140; Parts I to IV : Identification colour marking.
- SANS 1186: Symbolic safety signs.
- Occupational Health and Safety Act No 85 of 1993

### **EG&M 8.2 MATERIALS AND FINISH**

Outdoor signs shall be either of vitreous enamelled type or of cast aluminium with raised or embossed letters.

Indoor notices shall be of non-deteriorating plastic, Perspex or fiberglass.

The colours and sizes of letters and colours of background shall be in accordance with requirements of SANS 0140 and as approved by the Engineer.

Symbolic signs shall conform to the requirements of SANS 1186.

Signs shall be pre-drilled for fixing.



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2



All fixing accessories shall be of non-corrosive material.

### **EG&M 8.3    INSTALLATION AND ERECTION**

The Contractor shall supply and fix permanently in position the signs and notices required by law for all the relevant working areas of the Works. The Engineer shall as prescribed by the relevant Regulations and as agree positions of signs.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## PARTICULAR SPECIFICATIONS:

### EMCA – ELECTRICAL/ELECTRONIC: MULTICORE CABLES AND EARTH WIRES

#### PRELUDE

This particular specification details the successful supply, manufacturing, factory inspection test at the contractors premises, careful handling / transportation to the clients premises, safe storage as required and successful installation and commissioning for the above mentioned.

The contractor will furthermore responsible to uphold the electrical equipment during the Defects Liability Period.

This particular specification should be read in conjunction with the following;

- Section C3.4.3 of the tender document – Variation and additions to the Electrical / Electronic standard and particular specifications; and
- Associated drawings as issued with the Tender document; and
- Schedule of Quantities as per project specific.

Whereas conflicts in the above mentioned exists, this should be brought under the attention of the Engineer within a week before the Tender closes.

All materials and equipment to be supplied shall be new and of the best quality available.

All equipment shall bear the SABS mark.

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Contractor

Witness 1

Witness 2

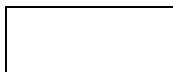
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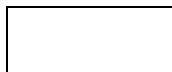
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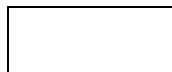
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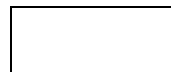
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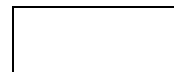
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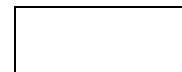
Witness 2



Employer



Witness 1



Witness 2

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Contractor

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Witness 2

Employer

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## PCA MULTICORE CABLES AND EARTHWIRES

### SCOPE OF WORKS

As specified in project specifications

### STANDARDS AND TESTS

Cables shall conform to and be in accordance with the latest applicable South African Bureau of Standards Codes and Standards:

The following Standard Specifications and drawings shall apply:

Standard No.	Description
SANS 97	Electric cables - Impregnated paper-insulated metal-sheathed cables for rated voltages 3,3/3,3 kV to 19/33 kV
SANS 1339	Electric cables - Cross-linked polyethylene (XLPE) insulated cables for rated voltages 3,8/6,6 kV to 19/33 kV
SANS 1507	Electrical cables with extruded solid dielectric insulation for fixed installations (300/500 V to 1900/3300V)
SANS 1713	Electric cables - Medium-voltage aerial bundled conductors for voltages from 3,8/6,6 kV to 19/33 kV
SANS 10142	Code of Practice for the wiring of Premises

### CONSTRUCTION DETAILS

#### LOW VOLTAGE CABLES

All multi core cables shall be stranded metal annealed copper conductor, PVC insulated, PVC bedded, single wire armoured and PVC sheathed in accordance with SANS 1507 as amended to date for cables with copper conductors and insulated for 500/3300 volt grade.

Cables for status and analogue signals shall consist of the requisite size and number of copper twisted pairs, individually and overall screened, PVC sheathed, steel wire armoured and PVC covered, complying with the requirements of SANS 1507 where applicable.

Cables and earth wires for a specific application shall be selected strictly in accordance with the requirements laid down in SANS 10142 in respect of current rating and voltage drop. Where practicable the earth continuity conductor shall form an integral part of the cable.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## MEDIUM VOLTAGE CABLES

These cables shall be manufactured in accordance with NRS. 013-1991 and comply with SANS 97 - 1991. All the 11 kV cables shall have copper conductors and shall be suitable for use on an unearthed system.

Three core cables shall be of the fully impregnated belted type. The cable shall have a helical fibrous bedding, lead alloy E sheath, single wire armour and a PVC serving as laid down in the Variations and Additions to the Standard and Particular Specifications, all in accordance with SANS 97 - Table 18. Single core cable shall be fully impregnated, screened general purpose cable with copper conductors suitable for an earthed system. The cables shall be in accordance with Table 11 of SANS 97, shall have a lead alloy E sheath and a PVC anti-electrolytic over sheath. (Type PEC)

## FIBRE OPTIC CABLES

The cables shall have a GRP centre strengthening member, colour coded fibres in gel filled loose tubes, surrounded by interstitial water blocking gel, aramid strengthening member, paper binder, polyethylene bedding sheath, plastic coated corrugated steel type armour and polyethylene water resistant outer sheath.

The steel armour shall be polymer coated and bonded to the sheath.

The fibre shall be manufactured from pure silica cladding, minimally doped with Phosphorous and Fluorine to achieve a matched cladding and a graded Germanium doped silica core. The primary coating shall consist of two layers of UV curable acryline resin.

Attenuation uniformity shall be checked at both 850nm and 1300nm with a pulse width not exceeding 1 micro s. Fibres with points or steps of discontinuity greater than 0,3dB shall be rejected. For fibre lengths in excess of 1km the attenuation coefficient over the length of fibre shall not vary by more than 0,3dB/km.

The fibre shall withstand a mechanical strain of at least 8N for 1 second and shall have an attenuation increase of less than 0.005dB/turn under a bend resistance test using 100 turns around a 75mm diameter mandrel.

The fibre optic cable shall be of the multi mode type with fibre size of 50/125 for multi mode operation. Single mode cables shall be acceptable for longer distance communication paths

Work includes the furnishing of all labour, material, equipment, services and the performance of all operations necessary for designing, fabrication, testing and delivery

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

All materials and equipment to be supplied and installed under this contract shall be new and of the best quality available.

All materials and equipment shall comply with the requirements laid down in the latest editions of the BS, SABS and IEC specifications and their amendments (if any) as well as those laid down in this specification. Where items bearing the SABS mark, are available for any of the materials and equipment specified, only materials bearing the said mark, will be acceptable.

## JOINTING OF CABLES

### LOW VOLTAGE CABLES

Joints will only be allowed where more than one full drum length of cable is necessary to complete a specific circuit and must be restricted to the absolute minimum. All joints shall be made to the best practice by competent cable jointers using first class material. The contractor shall maintain the electrical continuity of the armouring in an approved manner at all straight through joints.

Heat shrinkable cable joint kits that will suit the relevant cable size shall be used for all low voltage cable joints

### MEDIUM VOLTAGE CABLES

On 11 kV cables, straight joints shall be made by means of heat-shrinkable straight through joints for unearthed paper insulated cables up to 11 kV. All cable joint kits shall comply with NRS 053 Specifications

The joints shall be made to the manufacturer's instructions and with materials stipulated in such instructions.

The cores of the cable shall be joined colour to colour or number to number.

### FIBRE OPTIC CABLES

Joints in fibre optic cable must be avoided as far as possible due to losses in signal strength when jointed.

The joints shall be made to the manufacturer's instructions and with materials stipulated in such instructions.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## TERMINATION OF CABLES

### LOW VOLTAGE CABLES

Low voltage cables shall be terminated with cable glands manufactured of bronze and comprising a barrel with sealing washer and bush nut screwed into one end and a compression nipple with wire clamping ring screwed onto the other end. The opposite end of the compression nipple must have a male electrical thread with locknut. The glands shall be suitably sized for the relevant cables, be of the adjustable type complete with armour clamps and with watertight neoprene shrouds.

Cable terminating glands for outdoor use shall be IP68 rated and provided with waterproofing double inner seals as well as waterproofing seals on nipples. Cable termination glands for high humidity and possible temporary water submerged conditions as for instance in filter lower gallery areas at water treatment plants shall also be IP68 rated with waterproofing double inner seals as well as waterproofing seals on nipples.

Cable armouring shall be earthed at each end but may not be used as earth continuity conductor.

### MEDIUM VOLTAGE CABLES

Medium voltage cable terminations shall be heat shrinkable termination kits and shall comply with NRS 053 Specifications.

The cable terminations shall be made to the manufacturer's instructions and with materials stipulated in such instructions.

### FIBRE OPTIC CABLES

Fibre optic cables shall be terminated by means of suitable glands, ST connections and bus terminals capable of direct connection to the bus interfaces on the bus stations. These bus stations will be housed in separate panels of various motor control centres.

### CONCRETE CABLE SLABS

The cable slabs supplied and installed under this Contract shall be formed solidly out of concrete with steel reinforcing and shall have dimensions of 1 000 x 350 x 100 mm. Alternative block sizes will be considered. The following concrete mixture is desired:

- 1.Portland cement (dry) - 1 part per volume
- 2.Clean dry river sand - 3 parts per volume

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2



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3. Crushed stone (size 10 mm) - 6 parts per volume

## CABLE TRAYS AND CABLE LADDERS

Heavy duty cable trays and cable ladders manufactured from hot dipped galvanised steel or grade 304 stainless steel, as specified in the Variations and Additions to the Standard and Particular Specifications, shall be supplied and installed as indicated on the drawings. The height of the cable ladder sides shall be 76 mm with the width to suit the number and size of cables to be installed.

## INSTALLATION OF CABLES

### CABLE TRENCHES

The contractor will be responsible for the excavation, bedding, back-filling, consolidating and making good of all cable trenches along the routes indicated on the drawings, with the exception of those sections of the cable routes where it is specifically indicated on the accompanying drawings that open cable ducts will be provided by others. The Contractor however will be responsible for the bedding and filling soil in cable ducts where necessary. A sealing screed to cover the cable duct shall be provided by others unless otherwise stated in the Variations and Additions to the Standard and Particular Specifications and relevant drawings.

NOTE: Tenderers shall acquaint themselves fully with the nature and formation of the ground in which the cables are to be laid, before submitting a Tender. No subsequent claim for extras due to lack of knowledge in this respect will be entertained by the Employer.

Cable trenches for L.T. power and lighting cables shall be deep enough to facilitate the laying of these cables at a depth of 750 mm below final ground level.

Trenches for H.T. power cables shall be deep enough to facilitate the laying of these cables at a depth of 1 m below ground level. The floors of all cable trenches shall be smooth and free from boulders and sharp rock projections.

Plastic danger tape shall be installed in all cable trenches 300 mm above the cables for cable protection during future excavations.

Each cable shall be laid in a bedding of river sand or sifted soil 75 mm over and 75 mm below the cable. Clayey soil will not be accepted as bedding.

No cable trench shall be back-filled before the cable(s) in the trench has been inspected and approved by the Engineer.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## UNDER GROUND CABLE PIPES

Cable pipes will be supplied and installed by others unless indicated otherwise on the drawings.

Each cable pipe shall be sealed by the Contractor under this Contract at both ends by means of bitumen impregnated jute bags or similar material, after the cable has been installed.

## CABLE SLABS

Where electrical cables cross above other services such as water pipes, sewerage pipes, other electrical cables, pilot cables and telephone cables or where danger exists that cables may be damaged due to excavations by others cables shall be protected by means of reinforced concrete slabs. The concrete slabs shall protect the cable for at least 0,5 m in both directions of the crossing.

Where electrical cables cross underneath other services such as water pipes, sewerage pipes, post office cables etc. a concrete slab shall be placed above and axial with the other service and should the free space between the two services be less than 300 mm an additional slab shall be placed axial with the electrical cable between the two services.

Where cables are laid down a grading and a possibility exist that the cables might be washed open due to rain, then cable slabs shall be placed on top of the cables for the entire length of the grading.

The concrete slabs shall be supplied and installed under this Contract.

## CABLE CROSSING WITH OTHER SERVICES

### GENERAL

Where a cable is laid above another service it shall not be less than 750 mm below ground level, and if this is not possible, the cable shall be laid underneath the other service and shall be protected by means of concrete slabs in the manner prescribed. The deeper or shallower positions of the cable shall only apply for a distance of 1 m on both directions of the crossing.

If not possible to cross underneath the other service the matter shall be referred to the Engineer for a decision.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## CLEARANCES

The following minimum clearances shall be maintained between electrical cables and other services:

	VERTICAL	HORIZONTAL
Telkom cables	0,3m	0,3m
Other water pipes	0,3m	0,3m
Sewerage pipes	0,3m	0,8m
Storm water pipes	0,3m	0,6m
Other Electrical cables	150mm	150mm

## CABLES MUST BE LAID WITHOUT DELAY

The cables shall be laid with the minimum of delay in order to backfill the trenches as soon as possible.

The Contractor shall, however not backfill the trench until each length of cable has been tested, inspected and approved by the Engineer.

Only one cable shall be laid at a time and the Contractor shall ensure that cables already laid are not damaged.

## METHOD

All cables shall be handled with the utmost care and shall be laid in accordance with the best methods observed in good modern practice. All cables shall be run out on rollers in order to prevent abrasion and no cable shall be dragged along the ground. No cable shall be bent to a radius of less than 12 times its overall diameter.

### a) In Concrete Ducts

Cables shall be laid neat parallel with each other on the floor of the duct with the maximum spacing. Any other cables shall be installed on cable ladders secured to the vertical sections of the cable ducts.

### b) On cable ladders

Cable shall be installed neat and parallel with each other with the maximum spacing. On Horizontal sections the cables shall be secured to the cable ladders with intervals of not more than 2m. On vertical sections or where the cable ladders are installed at an angle the cables shall be secured to the cable ladders with intervals of not less than 500mm with suitable strapping material approved by the Engineer.



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

Either stainless steel or hot dipped galvanized steel cable strapping material shall be used on outdoor cable installations depending on the cable rack or ladder material.

Sections of the cable ladders shall be electrically connected and provision shall be made for crimping and expansion of the racks.

c) In Trenches

Two or more L.T. cables in the same trench shall be laid in a straight line and in parallel and not less than 75mm apart between cable route turning points, except where otherwise approved. Cable routes shall always follow routes parallel to permanent structures to facilitate as built information.

H.T. cables in the same trench shall be laid parallel and not less than 150mm apart, except where otherwise approved.

All L.T. power cables shall be laid 750mm below final ground level and H.T. power cables shall be laid 1 m below final ground level.

The contractor shall provide 3m slack at each end in each run of power cable and its associated earth wire and bury the same in the ground as near to the relevant end as possible. Where the cables and earth wires are to be installed in open ducts outside buildings, the slack shall be coiled in the ducts.

The separation between any signal cable and the nearest parallel power cable shall not be less than 150mm.

d) Against Walls

Cables and earth wires to be installed on walls, where approved by the Engineer, shall be neatly installed on heavy-duty hot dipped galvanised steel cable racks. Cables and earth wires on outside walls shall be installed in a similar manner or in suitably sized hot dipped galvanised conduit from 300 mm below up to 2,4 m above final ground level or as required. These conduits shall be secured to the walls by means of hot dipped galvanised steel bat holders at intervals not exceeding 600 mm. (Hospital Saddles).

Saddles shall only be secured by means of round-headed hot dipped galvanized screws and plugs of an approved type. (Wood will not be accepted as plugging material.) Plugs will not be allowed in joints between bricks.

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Contractor

Witness 1

Witness 2

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e) On Poles

Cables and earth wires to be installed on poles shall be secured to the poles at intervals not exceeding 600 mm by means of 25 mm x 1,5 mm adjustable Grade 304 Stainless Steel straps. Each cable together with its associated earth wire shall be installed in a suitably sized stainless steel pipe or channel from 300 mm below up to 2,4 m above ground level. This pipe or channel shall be secured to the pole by means of 25 mm x 1,5 mm adjustable stainless steel straps at intervals not exceeding 600 mm. To avoid metallic action between different materials Neoprene rubber strip shall be installed between the pole and the strap.

(a) Cable Channels on Structures and in Buildings

Where cable channels have been provided on structures and in buildings these must be backfilled with river sand by the contractor.

(b) Cables connected to motors and other equipment

Cables and earth wires connected to motors and other equipment shall be secured between the cable channels, cable rack or cable tray to the point of termination by means of a heavy-duty hot dipped galvanised type of cable support. The cable shall be secured to the cable support by means of steel straps or other acceptable strapping material.

## INSPECTION OF CABLES AND CABLE TRENCHES

After the cables have been installed and spaced on top of the 75mm thick layer of sand in the trenches, the installation shall first be inspected and approved by the Engineer before the trenches may be refilled. Should the Contractor not meet with the requirement, or if he fails to give the Engineer sufficient notice of an inspection, portions of the trenches or the complete trench shall have to be re-excavated by the Contractor at his own expense for inspection by the Engineer.

A logbook with three copies per page shall be kept by the Contractor on the site, in which each part of the installation that has been inspected can be recorded after inspection and approval.

## BACKFILLING OF TRENCHES

Once the cable has been laid, straightened, inspected, approved and covered with the top layer of bedding soil, the trenches shall be backfilled with soil which does not contain more than 40 % rock or shale and will pass through a sieve with 100 mm diameter holes that has been approved by the Engineer.

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Contractor

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Witness 1

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Back filling of cable trenches shall be done in layers of 150 mm and shall be compacted and consolidated to 95 % modified AASHTO. Test shall be carried out to ensure the required compaction at the cost of Contractor.

The Contractor shall maintain the closed up sections of the cable trenches in a proper, safe condition for the duration of the contract. Where the soil in the trenches subsides it shall be refilled and compacted to the satisfaction of the Engineer.

## INSTALLATION OF CABLE TRAYS AND CABLE LADDERS

The cable ladders shall be secured on suitable lengths which shall be suspended from the roof slab by means of suitable lengths 8 mm dia threaded hot dipped galvanized steel rods or secured to the walls with suitable sized hot dipped galvanized steel Rawl type bolts and shall be secured to the channel sections by means of two hot dipped galvanized nuts and washers.

The different parts of the trays and ladders must be thoroughly bonded electrically and mechanically to each other.

The cable trays and ladders shall be installed neatly, level and square/parallel to walls.

Cable straps suitable for the specific cable shall be employed to secure the cable onto the tray. Outdoor cable straps shall be stainless steel and cables shall be secured on intervals not exceeding 600mm. Cables on cable trays or ladders in outdoor environments shall be covered with removable cable tray or ladder covers of similar material.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

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## CABLE SUPPORTS TO MOTORS AND OTHER EQUIPMENT

Cables to motors and other electrical equipment shall be supported by means of hot dipped galvanized cantilever brackets and cable supports. Cables shall be strapped to these supports by means of acceptable strapping material.

## WIRE TRUNKING

Heavy duty hot dipped galvanised wire trunking of sufficient dimensions shall be installed against all large capacity pump set concrete plinths for installation of pump set protection sensor monitoring cables. The monitoring cables shall be installed in hot dipped galvanised conduit from the trunking to the sensor position.

## SENSOR TERMINATION CUBICLE

All large capacity pump set sensor cables shall be terminated in a powder coated mild steel frame mounted termination cubicle with lockable front door secured against the pump set plinth. DIN rail mounted cable conductor termination blocks shall be installed inside the termination cubicle for cable conductor termination.

## CABLE MARKERS

Cable ends shall be properly labelled with reference to equipment, section of plant and other requirements specified by the client at both cable ends.

Cable markers with lead labels cast into the top of the cable markers shall be supplied and installed along the cable routes under this Contract as follows:

Along straight runs of the route, not further than 25 m apart;

At turns - one on each side of the turning point, 900 mm from such turning points;

At each branch, 3 markers - i.e. one on each side of the branch, 900 mm from the branch.

The cable markers shall be installed deep enough to ensure that the top of the marker will protrude 50 mm above final ground level.

## NAME TAGS

Identification tags shall be attached to all cable ends. The tags shall be secured to cables by means of cable ties to the approval to the Engineer.

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Contractor

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Cables shall be tagged at either end, whether the end terminates in a distribution board or an end box.

All cable cores and internal panel wiring shall be identified at both ends by means of durable colour coded wire marking ferrules in accordance with numbering systems in cable and wiring diagrams. Only closed ring interlocking type identification ferrules shall be used.

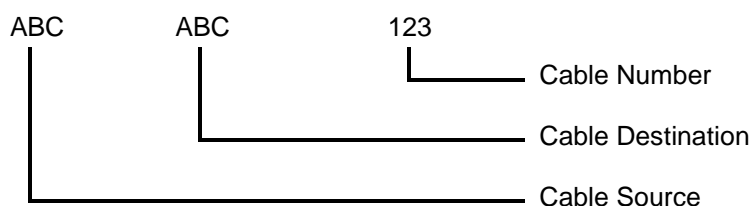
Outdoor tags shall be of stainless steel or brass type and shall be secured by means of similar strapping material.

Tags mounted indoors or protected by an enclosure shall be made of Ivorene or similar sandwich material with black letters on a white background.

All lettering and text shall be approved by the Engineer.

Letter sizes must be compatible with the application and shall not be smaller than 8mm.

a) Cable Naming Convention



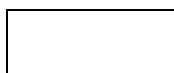
b) Table of Areas

Example of area abbreviations:

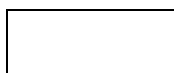
ILW	-	Inlet works
IMC	-	Inlet motor control centre

c) Example of cable schedule;

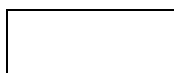
Cable Number	From	To	Grade (V)	Size mm <sup>2</sup>	No. of cores	Length (m)
ILW-IMC-001	Inlet works	Inlet motor control centre	400	185	4	55
IMC-SCR-001	Inlet works MCC	Screen 01	400	10	4	25



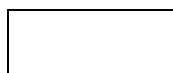
Contractor



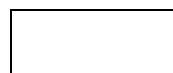
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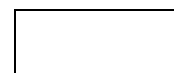
Witness 2



Employer



Witness 1



Witness 2



## **WARNING TAPES**

Warning tape shall be installed along all trench excavated cable routes 300mm above the cables.

Warning tape shall have a minimum width of 300mm and have a bright orange colour with the wording "Danger". The minimum thickness shall be 800 gauge.

## **EARTH WIRES**

Earth wires shall be installed with L.T. cables as and where indicated on the drawings or specified herein and shall consist of bare hard-drawn copper wire.

These earth wires shall be installed at the same depth as the relevant cables, with at least 75 mm clearance between any earth wire and the nearest cable, unless specifically approved otherwise.

No joint will be allowed in any run of earth wire.

Each earth wire shall be terminated at each end by means of a suitably sized bolted lug either sweated or crimped onto the wire. The lugs shall be bolted onto the relevant earth bars or earthing terminals.

## **TESTING OF CABLES**

### **LOW VOLTAGE CABLES**

On each completed section of laid and jointed cable, the insulation shall be tested to approval with an approved "Megger"-type instrument of not less than 500 V.

### **MEDIUM VOLTAGE CABLES**

On each completed section of laid and jointed high tension cable a high voltage test shall be carried out. The test shall be performed according to SABS 97 of 1991. Alternating or direct current may be used.

A certificate shall be submitted confirming the successful testing of the relevant cable.

## **ROUTE PLANS TO BE SUBMITTED BY THE CONTRACTOR**

On completion of the works, but before the certificate of completion will be issued, the contractor shall submit to the Engineer, route plans in electronic format indicating in a satisfactory manner:

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Contractor

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- (a) The exact cable routes with reference to fixed points (e.g. buildings);
- (b) The exact lengths of cable (HT and LT) installed between terminating points and between joints where relevant; and
- (c) With reference to fixed points the exact positions of cable joints (e.g. buildings).

Electronic copies of the various plans for the marking up of the information required will be supplied to the contractor on request.

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Contractor

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**MEASUREMENT AND PAYMENT**

The bidder must obtain an electronic Cable Schedule and Schedule of Rates for cables. in Microsoft Excel from the engineer. The bidder must complete the Schedule of Rates for cables, this will automatically transfer the Supply, Install and Terminations values for the Cables. From this a total value for each cable will be calculated. A hard copy of the Schedule of Rates must be signed by a person duly authorized to sign and submitted with the returnable schedules. A hard copy of the Cable Schedule must also be signed by a person duly authorized to sign and submitted with the bid. A electronic copy that corresponds with the hard copies must also be submitted to the engineer by the successful bidder.

Measurement and payment will be done in accordance with the methods stated below:

**SUPPLY AND DELIVERY TO SITE**

<u>Pay Item</u>	<u>Unit</u>
a). Supply and delivery to site of cables, jointing, terminating materials, all earth wires and cable name tags as per the cables schedule supplied electronically	Sum/m
b). Supply and delivery to site of cable route markers	Each
c). Supply, delivery to site of concrete cable slabs	Each
d). Supply, delivery to site of cable trays, ladders and wire trunking	Sum
e). Supply, delivery to site of cable supports to motors and other electrical equipment	Sum
f). Supply, delivery to site of pump set sensor termination cubicles	Sum
g). Supply, delivery to site of cable sleeves	m
h). Supply, delivery to site of danger tape	m

**INSTALLATION**

<u>Pay Item</u>	<u>Unit</u>
( a ) Installation of cables, jointing, terminating materials, all earth wires and cable name tags as per the cables schedule supplied electronically	Sum/m
i). Installation of cable route markers	Each
j). Installation of concrete cable slabs	Each
k). Installation of cable trays, ladders and wire trunking	Sum
l). Installation of cable supports to motors and other electrical equipment	Sum
m). Installation of pump set sensor termination cubicles	Sum
n). Installation of cable sleeves	m

Contractor

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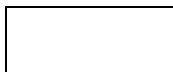
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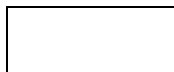
o).	Installation of danger tape	m
p).	Excavating, back filling, consolidation, importation of soil and dumping of all rock and stone removed during excavations including cleaning of cable routes all according to particular specification (including hand excavations where necessary along existing cable routes.	
q).	Drilling for sleeves under road surfaces (6m Sleeves)	m

## COMMISSIONING

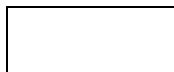
<u>Pay Item</u>	<u>Unit</u>
( a ) Testing and commissioning of cables	Sum
r). Updating, verifying and submission of Electronic Cable schedules with Tag numbers and final agreed lengths	Sum
s). Drawing up of as built cable route plans	Sum



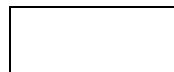
Contractor



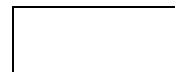
Witness 1



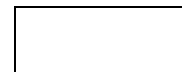
Witness 2



Employer



Witness 1



Witness 2

**PARTICULAR SPECIFICATIONS:  
EELP – ELECTRICAL/ELECTRONIC: EARTHING AND LIGHTNING PROTECTION**

**PRELUDE**

This particular specification details the successful supply, manufacturing, factory inspection test at the contractors premises, careful handling / transportation to the clients premises, safe storage as required and successful installation and commissioning for the above mentioned.

The contractor will furthermore responsible to uphold the electrical equipment during the Defects Liability Period.

This particular specification should be read in conjunction with the following;

- Section C3.4.3 of the tender document – Variation and additions to the Electrical / Electronic standard and particular specifications; and
- Associated drawings as issued with the Tender document; and
- Schedule of Quantities as per project specific.

Whereas conflicts in the above mentioned exists, this should be brought under the attention of the Engineer within a week before the Tender closes.

All materials and equipment to be supplied shall be new and of the best quality available.

All equipment shall bear the SABS mark.

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Contractor

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## **EELP      EARTHING AND LIGHTNING PROTECTION**

### **EELP 1      SCOPE OF WORKS**

As specified in the project specifications.

### **EELP 2      STANDARDS AND TESTS**

The earthing and lightning protection shall conform to and be in accordance with the latest applicable South African Bureau of Standards Codes and Standards:

The following Standard Specifications and drawings shall apply;

**Table 1: Applicable Standards**

<b>Standard No.</b>	<b>Description</b>
OHSA	Occupational Health and Safety Act
SANS 10089-1	Electrical Code for Petroleum Industry
SANS 10121	Cathodic Protection of Buried and Submerged Structures
SANS 10123	The Control of Undesirable Static Electricity
SANS 10142	Code of Practice for the wiring of Premises
SANS 10198-12	Installation of Earthing System
SANS 10199	Design and installation of an Earth Electrode
SANS 10199	The Design and Installation of an Earth Electrode
SANS 10200	Neutral Earthing in Medium Voltage Industrial Power Systems
SANS 10292	Earthing of Low Voltage (LV) distribution systems
SANS 10313	The protection of structures against lightning
SANS 1063	Earth rods and Couplers
SANS 1063	Earth Rods and Couplers
SANS IEC 61000-5-2	Electromagnetic Compatibility (EMC) Part 5: Installation and mitigation guidelines Section 2: Earthing and Cabling
SANS IEC 61024-1	Protection of Structures against Lightning Part 1: General principles
SANS IEC 61024-2	Protection of Structures against Lightning Part 2: Risk Management
SANS IEC 61024-3	Protection of Structures against Lightning Part 3: Physical damage to structures and life hazard

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Contractor

Witness 1

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Employer

Witness 1

Witness 2



SANS IEC 61024-4	Protection of Structures against Lightning Part 4: Electrical and electronic systems within structures
SANS IEC 61312-1	Protection against Lightning Electromagnetic Impulse Part 1: General principles
SANS IEC 61312-4	Protection against Lightning Electromagnetic Impulse Part 4: Protection of Equipment in existing structures
SANS IEC 61643-1	Surge Protective Devices Connected to Low Voltage Power Distribution Systems Part 1: Performance requirements and testing methods
SANS IEC TS 61312-2	Protection against Lightning Electromagnetic Impulse (LEMP) Part 2: Shielding of structures, bonding inside structures and earthing
SANS IEC TS 61312-2	Protection against Lightning Electromagnetic Impulse (LEMP) Part 2: Shielding of structures, bonding inside structures and earthing

The lightning protection system shall be designed to protect lives and property from the destructive effects of lightning. The lightning designer shall assess corrosion effects of the lightning protection system and design accordingly.

The installation shall satisfy the requirements of all relevant South African Statutory Regulations.

Where applicable, equipment items shall carry the SABS mark to demonstrate compliance with the regulations.

### EELP 3 GENERAL REQUIREMENTS

Equipment and materials to be used, shall be of high quality, and shall comply with all relevant specifications, codes as mentioned in this particular specification as well as the Occupational Health and Safety Act of 1993(Act 85 of 1993).

Where equipment and material does not comply with the relevant particular specifications it shall be submitted to Engineer for approval before installation.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

All materials used for the earthing and lightning protection system shall withstand the electric and electromagnetic effects of lightning current and predictable stresses without being damaged.

Materials and sizes shall be chosen bearing in mind the possibility of corrosion of either the earthing and lightning protection system or the structure to be protected.

The installation shall be in accordance with SANS 10313: Code of Practice for the protection of structures against lightning and the requirements of this specification.

All equipment and material shall comply with the relevant National and International standard standards as listed in the specification. Where equipment does not comply it shall be submitted to the Engineer for approval.

The system of protection will be finials/air terminals, down conductors and earth spike or roof conductors, down conductors and earth spike.

#### **EELP 4 OPERATING CONDITIONS**

All material and equipment supplied and fitted must be designed and manufactured for successful operation under the prevailing environmental conditions.

#### **EELP 5 GENERAL PRINCIPLES**

Evaluation of Risk: The risk of lightning strike shall be evaluated as described in SANS 10313 and SANS IEC 61024-2.

Effective height of a structure: The effective height of the highest point shall be determined by considering the average height of building, trees and structures and land profile of the surrounding area.

Ground flash density (Ng): The ground flash density (Ng) for general buildings, structures and installations shall be estimated from the average ground flash density given in Annexure C of SANS 10313 as a general guide.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## **EELP 6      AIR-TERMINATION SYSTEM**

The air-termination system should be composed of any combination of the following elements:

- Rods;
- Stretched wires;
- Meshed conductors.

For the design of the air-termination system the following methods should be used:

- Protective angle method
- Rolling sphere method
- Mesh size method

The air-termination system shall be designed and installed in accordance with all the relevant SABS / SANS / IEC standards as mentioned in this document.

## **EELP 7      LIGHTING PROTECTION SYSTEM**

The requirement of the SANS 62305-3 shall comply for the system. The lighting protection system earthing shall be bonded to the fixed electrical installation protective earthing in accordance with the requirements of SANS 10142-1.

## **EELP 8      EXTERNAL LIGHTNING PROTECTION SYSTEM**

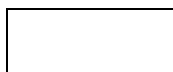
The requirement of the SANS 62305-3 and SANS 10313 shall comply for the system. Earth electrodes shall be designed in accordance with SANS 10199.



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

## **EELP 8.1 GENERAL**

External down-conductors shall be installed between the air-termination system and the earth termination system.

The average distance between the down-conductors shall comply with SANS IEC 62305-3.

Down-conductors shall be uniformly placed along the perimeter of the structure and with a symmetric configuration. Down-conductors shall be arranged in such a way that from the point of strike to earth several parallel current paths exist and the length of the current paths is kept to a minimum. The formation of loops shall be avoided.

In order to reduce the probability of damage due to lightning current flowing in the lightning protection system, the down-conductors shall be arranged in such a way that from the point of strike to earth:

- a) several parallel current paths exist;
- b) the length of the current paths is kept to a minimum;
- c) equipotential bonding to conducting parts of the structure is performed according to the requirements

The down-conductor system shall be designed and installed in accordance with all the relevant SABS standards as mentioned in this document.

## **EELP 8.2 CONSTRUCTION**

The down-conductors shall be installed so that, as far as practicable, they form a direct continuation of the air-termination conductors. Down-conductors shall be installed straight and vertical such that they provide the shortest and most direct path to earth.

Down-conductors shall not be installed in gutters or down-spouts even if they are covered by insulating material.

Down-conductors of an lightning protection system not isolated from the structure to be protected may be installed as follows:

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

- a) wall is made of non-combustible material, the down-conductors may be positioned on the surface or in the wall;
- b) wall is made of readily-combustible material the down-conductors may be positioned on the surface of the wall, provided that their temperature rise due to the passage of lightning current is not dangerous for the material of the wall;
- c) wall is made of readily-combustible material and the temperature rise of down conductors is dangerous, the down-conductors shall be placed in such a way that the distance between them and the wall is always greater than 0,1 m. Mounting brackets may be in contact with the wall.

When the distance from down-conductor to a combustible material cannot be assured, the cross-section of the conductor shall be not less than 100mm<sup>2</sup>.

### **EELP 8.3 NATURAL COMPONENTS**

The following parts of the structure should be considered as natural down-conductors:

- a) The metal installations provided that:

The electrical continuity between the various parts is made durable in accordance with SANS 62305-3.

Their dimensions are at least equal to that specified in SANS 62305-3 for standard down conductors.

- b) the metal of the electrically-continuous reinforced concrete framework of the structure;
- c) the interconnected steel framework of the structure;
- d) the facade elements, profile rails and metallic sub-constructions of facades, provided that

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Dimensions conform to the requirements for down-conductors shall be as SANS 62305-3 and that for metal sheets or metal pipes thicknesses shall be not less than 0,5mm.

Electrical continuity in a vertical direction conforms to the requirements of the SANS 62305-3.

#### **EELP 8.4 TEST JOINTS**

At the connection of the earth termination, a test joint should be fitted on each down conductor, except in the case of natural down-conductors combined with foundation earth electrodes. For measuring purposes, the joint shall be capable of being opened with the aid of a tool. In normal use it shall remain closed.

The joint should be capable of being opened with the aid of a tool for measuring purposes, but normally it should be closed.

#### **EELP 9 INTERNAL & EXTERNAL LIGHTNING PROTECTION SYSTEM**

The SANS 62305-3 shall apply. For the protection against over-voltages of internal systems, see SANS 62305-4.

#### **EELP 10 EARTH-TERMINATION SYSTEM**

The design shall cater for the dispersion of the lightning current into the ground, whilst minimizing any potentially dangerous over-voltages, the shape and dimensions of the earth-termination system are the important criteria.

The lightning protection system earthing shall be bonded to the fixed electrical installation protective earthing in accordance with the requirements of SANS 10142-1.

**ALL EARTHING AND BONDING ABOVE GROUND SHALL BE DONE WITH KWENA-ANTI THEFT CABLE.**

The requirements of SANS 62305-3 apply with the additions given in 10.2 and 10.3. Earth rods shall comply with the requirements of SANS 1063, and earth electrodes

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

shall be installed in accordance with the requirements of SANS 10199. Specific attention is drawn to the requirements for explosive manufacturing and storage areas.

ALL EARTHING AND BONDING ABOVE GROUND SHALL BE KWENA ANTI-All earthing and Bonding may it be above ground

#### **EELP 10.1 EARTH RESISTIVITY AND ELECTRODE**

Necessary earth resistivity tests on site, and invite to the Engineer for inspections must be arranged. Tests will be in accordance with the requirements of BS 1013.

After all earth electrodes/trench earth's have been installed, an earth megger shall be used to test the earth resistance at the earth bar or connection point to the main station earth and the results recorded. Note that all ECC connections, and any other bonding material shall be disconnected from the earth connection point whilst the earth is being tested.

The following are the maximum acceptable earth electrode resistances: Electrical Earth

- a) Main substation - 1 ohm
- b) Buildings Ring Earth - 1 ohm
- c) Transformer Yard - - 1 ohm
- d) Miniature substations and kiosks - 1 ohm
- e) High masts - 5 ohms
- f) Instrument Earth - < 1 ohm

#### **EELP 10.2 TYPE B ARRANGEMENT**

Type B arrangement as per SANS IEC 62305-3 shall be used.

Ring conductor external to the structure which will be in contact with the soil for at least 100% of its total length, or a foundation earth electrode. Earth electrodes may also be meshed.

The number of electrodes shall not less than the number of the down-conductors, with a minimum of two.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## **EELP 10.3 INSTALLATION OF EARTH ELECTRODES**

The embedded depth and the type of earth electrodes shall be such as to minimize the effects of corrosion, soil drying and freezing and thereby stabilize the conventional earth resistance.

The requirements of SANS 62305-3 apply with the additions given in 10.2 and 10.3.

Earth rods shall comply with the requirements of SANS 1063, and earth electrodes shall be installed in accordance with the requirements of SANS 10199.

## **EELP 11 COMPONENTS**

Components of an lightning protection system shall be manufactured from the materials listed in SANS IEC 62305-3 or from other materials with equivalent mechanical, electrical and chemical (corrosion) performance characteristics.

Earth electrodes shall be designed in accordance with SANS 10199.

### **EELP 11.1 FIXING**

Air-terminations and down-conductors shall be firmly fixed so that the electrodynamic or accidental mechanical forces will not cause conductors to break or loosen as per SANS IEC 62305-1.

### **EELP 11.2 CONNECTIONS**

The number of connections along the conductors shall be kept to a minimum. Connections shall be made secure by such means as brazing, welding, clamping, crimping, seaming, screwing or bolting. Connections of steelwork within reinforced concrete structures shall conform to SANS IEC 62305-3.

## **EELP 12 EQUIPOTENTIAL BONDING**

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

C:\pw\_workdir\pta\_41776\dms46879\2334-50-02.04) 17-Part C3.4.3.3.4 EELP Particular Specification Earthing & Lightning Pr....docx



Equipotentialization shall be achieved by interconnecting the lightning protection with all structural metal parts, all below indicated but limited to the following:

- a) metal installations,
- b) internal systems,
- c) external conductive parts and lines connected to the structure.

Have a nominal cross-sectional area of at least 2,5 mm<sup>2</sup> copper or equivalent for indoor, and outdoor shall be aluminium, the conductors will be either cast in to the concrete or shall be so arranged that it cannot be tampered with.

#### **EELP 12.1 LIGHTNING EQUIPOTENTIAL BONDING FOR EXTERNAL CONDUCTIVE PARTS**

For external conductive parts, lightning equipotential bonding shall be established as near as possible to the point of entry into the structure to be protected.

Bonding conductors shall be capable of withstanding the lightning current flowing through them evaluated in accordance SANS IEC 62305-1 and SANS 10142.

The requirements of SANS 62305-3 and SANS 10142 shall apply. For the protection against over-voltages of internal systems, see SANS 62305-4.

#### **EELP 12.2 LIGHTNING EQUIPOTENTIAL BONDING FOR INTERNAL SYSTEMS**

Lightning equipotential bonding shall be installed strictly according to SANS 10313, SANS 10142 and SANS IEC 62305-3.

#### **EELP 12.3 LIGHTNING EQUIPOTENTIAL BONDING FOR LINES CONNECTED TO THE STRUCTURE TO BE PROTECTED**

Lightning equipotential bonding for electrical and telecommunication lines shall be installed in accordance with 6.2.3 of SANS IEC 62305-3.

#### **EELP 13 TOUCH AND STEP VOLTAGES**

The requirements of SANS 62305-3 apply.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

## **EELP 14 RISK MANAGEMENT**

The requirements of SANS 62305-2 apply. The Contractor shall allow for the purchase of the spreadsheet-based risk calculator which has been developed by IEC TC 81 (see annex E in SANS 62305-2:2011). The software program can be purchased directly from the IEC and shall be submitted as proof of design.

## **EELP 15 MAST PROTECTION FOR THATCHED ROOFS**

The requirements of SANS 62305-3 shall apply with the additions given in 11.2 to 11.7. Metals used in the construction of a thatched roof shall be bonded and earthed. Water pipes, vent pipes, tanks, gas pipes, antennas, telephone and bell wires, burglar alarms and electrical wiring and conduit within 1 000 mm of the thatch shall be shielded, bonded and earthed as per SANS 10142-1.

### **EELP 15.1 DANGEROUS SPARKING**

Dangerous sparking between an lightning protection system and a metal, an electrical or a telecommunication installation can be mitigated which is detailed SANS 62305-3.

### **EELP 15.2 AGEING OF THATCH**

Ageing of the thatch, flammable gases could evolve within the thatch and the thatch could ignite.

### **EELP 15.3 METALS IN OR ON THE THATCH**

The requirements of SANS 62305-3 shall apply.

### **EELP 15.4 PROTECTION BY MASTS**

At least lightning protection level III (see SANS 62305-3) shall apply in the case of thatched structures.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

#### **EELP 15.5 EARTHING OF MASTS**

All free-standing masts shall be earthed in accordance SANS 10199, and shall comply with SANS 62305-3.

#### **EELP 16 STRUCTURES WITH EXPLOSIVE OR FLAMMABLE SUBSTANCES**

The requirements of SANS 62305-3 apply with the additions given in 12.2 and 12.3.

#### **EELP 17 DESIGN REQUIREMENTS**

The requirements of SANS 62305-3 and SANS 10313 shall apply.

#### **EELP 18 INSPECTION OF LIGHTING PROTECTION SYSTEM**

The requirements of SANS 62305-3 apply and all required forms shall be in place for Engineers inspection. An Installation safety report see annex A of SANS 10313 shall be issued in respect of an inspected and compliant lighting protection system by the lighting protection system designer and installer.

#### **EELP 19 DANGER SIGNS**

Danger signs on aluminium plates shall be supplied on each door and shall be in accordance with the Occupational Health and Safety Act, Act 85 of 1993.

#### **EELP 20 EARTH BAR**

A copper earth bar shall be provided and mounted not less than 40mm from the wall or fixed structure approximately 1000mm above the final floor level and final position will be confirmed with Engineer in the position as indicated on the drawings and agreed on site. The mounting shall be electrically insulated from the wall.

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

A solid 200 mm x 30 mm x 5mm copper earth bar shall be provided. The earth bar shall be provided with 6 x 6mm holes evenly spaced along the entire length. 6 mm  $\phi$  cadmium plated high tensile steel bolts complete with nuts and lock-washers shall be provided for each hole. Serrated washers shall not be used between the copper earth bar and the lug.

The earth bar shall be connected with a 70mm<sup>2</sup> Kwena Anti-Theft conductor to the building earth-termination system (system earth mat) and the tenderer shall allow for 100m of Kwena Conductor to the earth bar for tender purpose.

## **EELP 21 INFORMATION TO BE SUBMITTED BY THE SUCCESSFUL TENDERER**

The successful Tenderer /Contractor shall submit three prints of the under mentioned drawings to the engineer for approval, before manufacturing.

- a) Earthing and Lightning Protection drawings.
- b) Multiview Projections including elevations showing dimensional information including details such as, but not limited to, the following:
  - Front views
  - Side views
  - Rear view
  - Floor plan view
  - Roof view

All drawings will be obtainable from the Engineer.

- c) Structure descriptions which will be indicated on Multiview protections and elevations showing the following:
  - All Bonding
  - All Earthing and Lightning Protection equipment.
  - Earth Mat locations
  - Conductor Network
  - Fixings
  - Air terminals
  - Conductor Joint clamps



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

- Earth Electrode Positions
- Earth Inspection Pits
- Other information as required for approval

d) Conduit locations

e) Unit descriptions including information such as, clamps, conductor sizes, earth electrode depth, earth inspection pits all as mentioned above (item c).

f) Design and manufacturer Engineers approved drawings shall be provided to the Engineer in PDF format.

g) Data sheets and publications on all major components including, but not limited to, the following:

- Aluminium Conductor
- KWENA Bonding Conductors
- Clamps
- Control power transformers
- Pilot devices
- Relays
- All clarifications and exceptions must be clearly identified

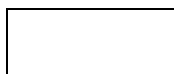
After completion of the work, the contractor shall submit three final copies of each of the above-mentioned drawings showing the final layout / as built.

## **EELP 22 MEASUREMENT AND PAYMENT**

Measurement and payment will be done in accordance with the methods stated below:

### **EELP 22.1 DESIGN, DRAWINGS AND GENERAL**

The rate tendered shall include for the provision of the necessary design information for all items measured under the respective schedule. Earthing and Lightning Protection System installation, design information shall include, but limited to, the following:



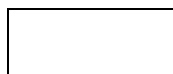
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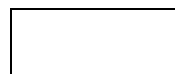
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Witness 2



Employer



Witness 1



Witness 2

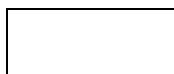
- Manufacturer's product data of lightning protection and earthing and all related components.
- Dimensioned and Professional Engineer signed drawings of lightning and earthing system showing accurately scaled basic units including, but not necessarily limited to, auxiliary compartments, unit components and combination units all as specified under PEL 20.

<b><u>Pay Item</u></b>	<b><u>Unit</u></b>
(a) Provide design drawings and design information for Earthing and Lightning Protection System	Sum
(b) Provide operating and maintenance manuals and "as built" drawings as specified	Sum
(c) Provide risk management calculations and IEC Program as specified	Sum

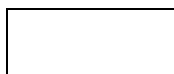
## **EELP 22.2 SUPPLY AND DELIVERY TO SITE**

Rate tendered to include for all material, equipment, plant, testing apparatus, labour, manufacturing, factory applied corrosion protection, factory acceptance testing, transport, import duties, handling and possibly double handling, delivery to and off-loading at Site as well as temporary storage prior to installation. For miniature substation, the rate tendered shall be for the complete miniature substation and shall include, but not limited to, the detailed in this particular specification. Any special devices shall be listed separately in Variations and Additions to the Standard and Particular Specifications Section C3.4.2.

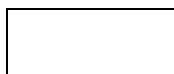
<b><u>Pay Item</u></b>	<b><u>Unit</u></b>
(a) Supply and delivery to site of lightning protection / down conductor system complete as specified, inclusive of all connection points, terminals, interconnections, bonding points and test points for the entire system, including for "natural components.	Sum
(b) Supply and delivery suitable earth-termination system /earth mat as specified	Sum



Contractor



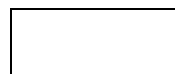
Witness 1



Witness 2



Employer



Witness 1



Witness 2

(c)	Supply and delivery suitable earth bar as specified	Each
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## EELP 22.3 INSTALLATION

Rate tendered to include for all plant, tools, labour, rigging, handling, placing into position, aligning, fixing, grouting, but not limited to and getting ready for testing and commissioning

Install of earthing and lightning protection system shall be accordance with the manufacturer's written instructions and recognized industry practices, to ensure that the earthing and lightning protection system complies with the requirements and serves the intended purposes. Comply with the requirements of SABS and IEC standards and applicable portions of "Standard of Installation", for installation of earthing and lightning protection system but not limited to.

<u>Pay Item</u>	<u>Unit</u>
(a) Site installation of lightning protection / down conductor system complete as specified, inclusive of all connection points, terminals, interconnections, bonding points and test points for the entire system, including for "natural components.	Sum
(b) Site installation of suitable earth-termination system / earth mat as specified	Sum
(c) Site installation of suitable earth bar as specified	Each
(d) Earthing resistance survey upon completion of the excavations and test report	Sum

## EELP 22.4 COMMISSIONING

Rate tendered to include for the drafting of the necessary testing and commissioning plans, attendance of required local and/or overseas specialists, testing apparatus, instruments and equipment, any/all equipment required for testing purposes and to

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prove performance, any/all temporary works, and compilation of final commissioning report.

Contractor shall submit three copies to the Engineer. Contractor shall notify the Engineer one week in advance of the test so that the Engineer may be present.

<b><u>Pay Item</u></b>	<b>Unit</b>
(a) Commissioning of complete lightning protection system, inclusive of down conductor, earth-mat and earth spikes, etc.	Sum
(b) Certificate of compliance of lightning protection system	Sum

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



## PARTICULAR SPECIFICATIONS:

### **SECTION ES LV: LOW VOLTAGE CABLE NETWORK**

#### CONTENTS

LV.1	SCOPE
LV.2	MATERIALS
LV.3	EXCAVATIONS
LV.4	INSTALLATION OF CABLES
LV.5	JOINTING AND TERMINATION OF LOW VOLTAGE CABLES
LV.6	TEST BEFORE ACCEPTANCE
LV.7	INFORMATION REGARDING THE COMPLETED NETWORK
LV.8	CLEARING OF SITE
LV.9	MEASUREMENT AND PAYMENT



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

## LV.1 SCOPE

This section covers the manufacture, supply, delivery and installations of the low voltage cables.

## LV.2 MATERIALS

### (a) Low voltage cable

Low voltage cables shall be in accordance with SANS 1507, SANS 101198; Part6, SANS 1411: Part 1-6 and shall be PVC insulated, with either stranded or solid copper or aluminium conductors as specified in the Project Specification, PVC bedded, steel wire armoured and PVC sheathed.

The armouring shall consist of one layer of round galvanized steel wire.

### (b) Cable drums

The cable drums shall be capable of taking a round spindle and be lagged with strong, closely fitted battens, at the inner and outer circumference so as to prevent damage to the cables. Contractor to use a timber spreader with lifting slings and the correct size spindle to off-load the cable. The spindle bearing plates shall be steel. The dimensions of the drum shall not exceed 1 100 mm width, 2 000 mm diameter and the spindle bearing plate shall not be less than 9 mm thick. Each drum shall be clearly marked on both sides with the following particulars:

- (a) Voltage
- (b) Actual cable length
- (c) Conductor size (cross-sectional area and stranding)
- (d) Number of cores
- (e) Finish.
- (f) Drum number
- (g) Gross mass
- (h) Nett mass
- (l) Direction of rotation
- (j) Manufacturers project or job number

The ends of the PVC sheathed cable shall be sealed to avoid penetration of moisture.

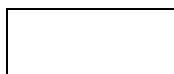
The end protruding from the drum shall be protected against mechanical damage. The requirement of Section 7 of SANS 97 shall be adhered to.

### (c) Low voltage cable joints and terminations

Low voltage joints shall be of the epoxy-resin type.

Cable glands shall be of the adjustable type, equal or similar to the Pratley type gland and shall be suitable for use with PVC, PVC, SWA, PVC cable complying with SABS 150 of 1970. All glands shall be installed with non-deteriorating neoprene shrouds.

Bi-metallic aluminium-copper lugs, equal or similar to SIMEL type ACX, shall be used according



Contractor



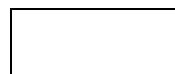
Witness 1



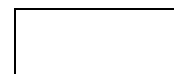
Witness 2



Employer



Witness 1



Witness 2

to the manufacturer's specifications, where solid aluminium conductors are terminated onto copper bus bars or circuit breakers.

All cables shall be delivered to site with the correct type and size of heat shrink cable end-cap, all cut cable stored shall be heat shrink capped to prevent moist entry. The contract shall replace any uncapped cable at his cost with new cable if found onsite by the Engineer.

(d) Earth continuity conductors

Earth continuity conductors shall comprise of stranded copper conductors of cross-section indicated in the Project Specification.

A single earth conductor may be used where two or more cables run together, providing the earth conductor cross-sectional area is based on the largest size cable in the run.

All earth conductors shall be terminated using correct size crimped cable lugs.

Only cadmium plated bolts, nuts and spring washers shall be used for fixing earth conductors to earth bars.

Joining of earth conductors shall be done using the Cad-weld process.

(e) Cable route markers

Cable route markers shall be constructed of reinforced concrete and shall be of dimensions indicated on the tender drawings.

(f) Concrete protective slabs

Concrete protective slabs shall have the following dimensions:

Length	1 000 mm
Width	350 mm
Thickness	50 mm

The slabs shall be constructed of 20 MPa concrete and each slab shall be reinforced with one longitudinal and three transverse mild steel rod of minimum diameter 8 mm. The slabs shall be manufactured in such a way that the slabs interlock with each other thus avoiding shifting of the slabs after installation.

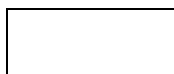
(g) Cable sleeves

Cable sleeves shall be manufactured from PVC the standard size to be used is 110 and 160 mm diameter. Refer to cable sleeve specification. All sleeves shall protrude 1000mm from the road surface crossed at both sides.

### LV.3 EXCAVATIONS

(a) General

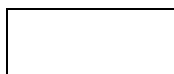
The contractor shall preserve the site as far as possible. Only the minimum of trees, shrubs, rocks, etc. shall be removed and cleared for the cable routes.



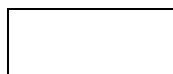
Contractor



Witness 1



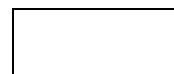
Witness 2



Employer



Witness 1



Witness 2

Where surplus material has to be disposed of the Contractor shall dump the material in the area provided by the Employer for stockpiling his material, in 25 km radius from the site.

The contractor shall at his own cost load and transport to the abovementioned site all surplus material, unsuitable material for backfilling, etc.

(b) Trench routes

The cable trench shall be excavated along the routes indicated on the plan.

The trench shall be absolutely straight and shall comply with all requirements. The Engineer shall determine the length of the trench to be excavated, which shall not exceed 400 m, before the cable is installed and the trench backfilled. If any obstacle or interference should be encountered which may require alterations to the trench or routes, such alterations shall receive prior written approval of the Engineer.

Contractor shall make provision for cross over's at car gate entrances, etc, if required.

(c) Cable trench

The trench shall be excavated to a depth below final ground level as specified:

- Cable sleeves 1000 mm
- MV-feeder cables 1000 mm
- House connections - bus routes 1000 mm
- House connections - non bus routes 600 mm (Including pavements)
- House connections - inside stands 500 mm

The excavation of all trenches for the low voltage cables in the road reserves shall be undertaken by the Contractor.

The bottom of the trench shall be level and shall follow the contours of the final road level. Where the excavation is in excess of the required depth, the excavation shall be backfilled and compacted with suitable material to the required depth.

The contractor shall trim the trenches and clean up the bottom of the trenches after he has completed the required excavation. Bedding and cables shall not be laid until the trench has been approved by the Engineer. Where bedding has already been laid the Engineer may instruct the contractor to demonstrate that the minimum thickness of bedding has been provided for before authorizing cable laying to proceed.

The contractor shall remove all sharp projections which could damage the cable where the trench is excavated through rocky formations, and shall remove all loose rocks, material, etc. from the bottom of the trench.

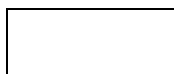
(d) Excavated material

No excavated material shall be left closer than 300 mm from the side of the excavation. The excavated material which is considered by the Engineer to be suitable for bedding material for the cable shall be placed separately on one side of the trench so that it is available when required. The excavated material shall take up as small an area as possible with the safety of the workmen and Works taken into consideration.

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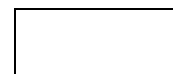
  
Contractor

  
Witness 1

  
Witness 2

  
Employer

  
Witness 1

  
Witness 2

(e) Inspection and measurement of excavations

Once the excavations for cable trenches and jointing pits have been completed, the Contractor shall give the Engineer 24 hours notice to inspect the trench and to be present when the measurements are made. No inspections shall be undertaken on Saturdays, Sundays and public holidays and after 14:00 in the afternoon.

(f) Maintenance of excavations

The contractor shall maintain the excavation in a good condition, free of water, mud, loose ground, rocks, stones, gravel and other strange material until the cables are installed and the excavation is backfilled and compacted.

#### LV.4 INSTALLATION OF CABLES

Unless otherwise specified the installation depth of LV-cables shall be as follows:

- LV-Feeder Cables to be 600mm below finished ground level.
- House connection cables to be 600mm on sidewalk and 450mm inside stand boundary.
- All road crossings shall be in sleeves at 1100mm below road surface.

(a) Sand bed for cables

A sand bed layer of soft soil shall be installed and levelled at the bottom of each trench after the trench has been approved by the Engineer, and prior to cable laying.  
A minimum thickness of the sand bed layer is 50 mm.

If the material that has been excavated is not suitable for the sand bed layer then suitable soil shall be imported for this purpose. The cost thereof shall be included in the unit price for the excavation unless otherwise specified.

An adequate quantity of soil similar to the sand bed material shall be available next to the excavation for the sand bed cover before an inspection of the cables is called for. The sand bed cover shall be a minimum of 100 mm thick and shall be placed directly after the cable has been inspected.

If the soil for the sand bed and sand cover has to be sifted, a sieve with holes not larger than 10 mm shall be used.

(b) Cables shall be laid without delay

The cable shall, after the completion of the trench, be laid with the minimum of delay so that the trench can be backfilled. The contractor shall, however, not backfill the trench until each length of cable has been inspected and approved by the Engineer.

Only one cable shall be laid at a time and the contractor shall take precautions that the cables which are already installed are not damaged.

(c) Laying of cables

The method to be used for laying cables shall be approved by the Engineer prior to the commencement of the laying of the cables.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

If the contractor intends using a winch to draw the cable into the trench, a cable stocking shall be used or the draw wires shall be soldered to the cable so that the tension is exerted on all the cores and steel wire armouring at the same time.

The maximum tension on a cable during laying operations shall not exceed the value specified by the manufacturer. The tension force shall not be more than the force needed to pull 50m of the applicable cable, but if this value is more than that is specified by the manufacturer, the manufacturer's value will apply.

Should the Engineer not be satisfied with the manner or method employed to lay the cable he shall have the authority to instruct the contractor to lay the cable by hand or in accordance with approved standards.

1,5 Metre extra lengths of cable shall be left at the beginning and end of the cable routes to allow for the termination of the cables. Where necessary the Engineer shall decide on what length of cable is to be left. The contractor shall take the necessary precautions to protect the cable ends until they are terminated. The cable ends shall be sealed by means of lead sealing caps to ensure that the cable is waterproof. No PVC sealing caps to be used.

Where cables are drawn through sleeves, care shall be taken that they are not kinked or excessively bend. No bend in a cable shall have a radius less than the minimum bending radius specified by the cable manufacturer.

The contractor shall keep accurate records of each length of cable laid. The following information shall be recorded:

- Cable drum number
- Size of cable
- Laid from where to where
- Length of cable
- Date laid

The contractor shall be liable for the repair of the cable due to the faulty manufacture of the cable, should this information not be recorded directly after the cable has been laid.

Every cable shall be marked by means of a lead label on which the size of cable and its source or destination is punched. The label shall be installed around the inner PVC sheath immediately above the cable gland.

(d) Road crossings

The cable sleeves shall be installed 1.0 m below ground level to avoid damage when the roads are constructed.

Unless otherwise specified, two additional sleeves shall be installed for future use at each road crossing.

Sleeves used for crossings shall be straight and undamaged. Bends shall not be allowed in road crossings.

The sleeves shall be meticulously backfilled so that no air pockets are left. The trench shall thereafter be backfilled in layers of 150 mm and compacted with mechanical vibrators to 95% modified AASHTO density.

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

The contractor shall lay and join the cable sleeves and compact the trench to the satisfaction of the Engineer. The sleeves shall be meticulously backfilled so that no air pockets are left. The trench shall thereafter be backfilled in layers of 150 mm and compacted with mechanical vibrators to 95% modified AASHTO density. After installation, the sleeves shall be cleaned and a galvanized steel draw wire installed in the sleeve prior to the sleeve ends being sealed by means of plastic plugs.

Where specified cable route markers shall be installed to indicate the cable sleeves. The markers shall be buried in the ground directly over the sleeve with the top protruding 50 mm above the finished ground level.

(e) Crossing of other services

Where a cable crosses over other services, the cable shall not be installed at a depth less than 500 mm below ground level and if this is not possible the cable shall be installed underneath the other service and shall be protected by means of concrete slabs. The depth of the cable shall be maintained for one metre on either side of the crossing.

If it is not possible to cross over or underneath a service in the prescribed manner, the matter shall be referred to the Engineer for a decision.

The following minimum clearances shall be maintained between electrical cables and other services:

	<u>Horizontal</u>	<u>Vertical</u>
GPO Cables	0,3 m	0,3 m
Water pipes	0,3 m	0,3 m
Sewer pipes	0,3 m	0,8 m
Storm water pipes	0,3 m	0,6 m
Other electrical cables	0,15 m	0,15 m

(f) Backfilling of trenches

When the cable has been laid, inspected and approved and the sand bed cover has been installed, the trench shall be backfilled with soil containing not more than 40% rock or shale which shall be able to pass through a 75 mm sieve and which is approved by the Engineer.

Where more than 40%, but less than 70% rock occurs, the Contractor shall replace the rock with imported soil. However, should more than 70% rock occur then all the backfilling material shall be imported.

- The contractor may import further stone-free material to the site or sieve the excavated material for sand bedding and cover but payment shall only be compensated for the actual quantity of imported material required as determined by the Engineer. The quantity of imported material required shall be calculated from the nominal trench width.
- The excavated material shall be backfilled in layers of 300 mm and shall be well compacted and consolidated. Where necessary the Engineer may require that a mechanical vibrator be used for compacting the trench.
- The contractor shall maintain the completed sections of the cable trench in a proper safe condition for the duration of the contract. The contractor shall refill and compact the trench where subsidence occurs.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

- After completion of the work the route of the cable shall be neatly finished off and cleared. All stones bigger than 25 mm as well as and rubble shall be removed.

#### LV.5 JOINTING AND TERMINATION OF LOW-VOLTAGE CABLES

No joints shall be allowed in the new low-voltage cables without the prior approval of the Engineer.

The main low-voltage cables shall be terminated on the same side of the distribution kiosk from where the cable feeds from or supplies to.

The termination of low-voltage cables to overhead line or bundle conductor systems will be done by bi-metal (AL/CU) groove or IPC clamps and cable ties, and for main low-voltage feeder cables double clamps shall be used to insure good termination.

Armouring shall be property installed into the steel gland and where K-clams are specified then shall at least 8 strands be terminated to the earthbar of the distribution kiosk or board.

#### LV.6 TESTS BEFORE ACCEPTANCE

After the completion of the electrical installation, the contractor shall test the installation in accordance with the SANS1507.

The Engineer shall have the right to call for or to carry out any additional tests which may be necessary to prove that the requirements of the specification have been met. The contractor shall assist with the conducting of these tests without delay. All tests shall be conducted in the presence of the Engineer.

##### (a) General

The tests hereinafter described comprise only the site tests and tests before acceptance or handing over of the installation. Where cables and other material are supplied by the contractor the factory and manufacturing tests shall be as specified in the specification.

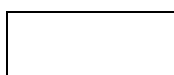
After the installing and completion of the installation, before the service is taken over, the following tests shall be undertaken. These tests shall form an integral part of the erection, construction or installation of the various items and the costs thereof shall be included in the unit rates for the erection, construction or installation of the various items.

##### (b) Tests on low-voltage cables

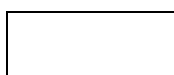
###### (i) Phase and continuity tests

The phasing and continuity of each circuit shall be determined by meggering between each phase and earth while the phase is short circuited to earth at the far end of the cable route.

###### (ii) Voltage insulation tests



Contractor



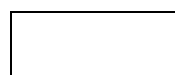
Witness 1



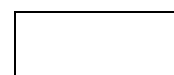
Witness 2



Employer



Witness 1



Witness 2



The insulation resistance shall be determined by imposing a 1 000 volt DC test voltage between each individual phase and earth at the miniature substations. The insulation resistance shall not be less than 50 mega ohm.

#### LV.7 INFORMATION REGARDING THE COMPLETED NETWORK

The contractor shall submit the "as built" drawings on which complete information of the installation, as installed, is indicated after the completion of the installation and before the installation is handed over to the Engineer.

#### LV.8 CLEARING OF SITE

The contractor shall remove everything that he brought onto the site or handled on the site in the execution of the contract as well as all excess excavated material and rubble so as to leave the site in a neat and clean condition to the satisfaction of the Engineer after the completion of the contract and after the Engineer's approval has been obtained.

#### LV.9 MEASUREMENT AND PAYMENT

##### LV.9.1 Excavation

<u>Item</u>	<u>Unit</u>
LV.9.1.1      Excavate in all materials for trenches, backfill, compact and dispose of surplus material	m <sup>3</sup>

The unit of measurement shall be the cubic metre of material excavated for by hand or excavation equipment trenches, classified according to the depth and width specified listed. The width classification shall be in accordance with the authorized dimensions and the depth classification in accordance with the total depth of the trench and not with the depth range in which the material is situated before excavation. The depth of excavation shall be measured to the underside of the bedding.

The tendered rate shall include full compensation for clearing and grubbing the trench areas and the temporary removal of improvements from the line of the trench, for excavating the trench, preparing the bottom of the trench, separating material unsuitable for backfill, keeping the excavations safe, dealing with any surface or subsurface water, and for separating topsoil and selected backfill material where necessary.

The rate shall furthermore cover the costs of installing the sand bed and sand cover, backfilling, compacting and disposing of the surplus material.

When the tender calls for a labour intensive tender, all excavation work shall be by hand, the Contractor shall obtain written approval from the Engineer before any excavation shall be made with confessional excavator equipment, i.e. Hogger, Back-actor or Ditch-switch.

<u>Item</u>	<u>Unit</u>
LV.9.1.2      Extra over for excavating in hard material	m <sup>3</sup>

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

The unit of measurement shall be the cubic metre of material excavated and classified as hard, in accordance with the classification set out hereunder.

The tendered rate shall be paid over and above the rate tendered for excavation in respect of items LV.9.1.1 in full compensation for the additional cost of excavating in hard material instead of soft.

The tendered rate shall include full compensation for any over break as well as the additional backfilling required, reinstating the trench bottom, and for any other incidentals resulting from over break.

The materials excavated shall be classified as follows for payment purposes:

a) Hard rock:

Material classified as hard rock shall mean such as granite, quartzite, sand stone, solid shale, slate and rock of similar or greater hardness and boulders exceeding 0,15 cubic metre in volume, but more than 70% of the excavation encountered per cubic metre must comply to size (smaller than 0,15 cubic metre), excavated with the blasting.

b) Soft rock:

Material classified as soft rock shall mean rock can be loosened by use of pneumatic tools, or hand pick, crowbar wedging or splitting, material such as hard shale, compact "ou klip", stone or material of similar hardness and boulders exceeding 75mm in diameter but not exceeding 0,15 cubic metre, but more than 70 % of the excavations encountered per cubic metre must comply to size (bigger than 0,15 cubic metre).

The decision of the Engineer as to the classification of the material shall be final and binding and any objection as to the classification shall be made before the excavation has been backfilled.

<u>Item</u>	<u>Unit</u>
LV.9.1.3      Excavate by hand in all materials	m <sup>3</sup>

The unit of measurement shall be the cubic metre of trench material excavated by means of hand tools as instructed or authorized in writing by the Engineer where the use of conventional excavating equipment is either impractical or likely to cause damage to services, trees or property or where the Contractor has to excavate by hand where he cannot excavate by machine.

The volumes of the trench excavation will be computed from the length and the depth to the bottom of the specified bedding layer and the minimum base widths specified in the Detail Specifications. The rate shall cover the cost of complying with the safety and protection requirements specified except where particular items are scheduled to cover particular costs for the excavation.

The tendered rate shall be paid extra over the rates tendered for item LV.9.1 in full compensation for the additional expense of excavating by means of hand labour instead of conventional trenching equipment. This rate shall only apply if a site instruction was issued by Employer prior to commencement of the work.

<u>Item</u>	<u>Unit</u>
LV.9.1.4      Extra over item LV.9.1.1 for using backfill material obtained from (a)      Borrow areas	m <sup>3</sup>

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

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(b) Sources provided by the Contractor m<sup>3</sup>

The unit of measurement shall be the cubic metre of imported backfill material.

The tendered rate for item LV.9.1.4(a) paid extra over item LV.9.1.1 shall be in full compensation for the additional cost of excavating and selecting of suitable material and the moving of the material to the backfilling site.

Items LV.9.1.4(a) and (b) above will not be measured for payment unless importation has been ordered in writing. The volume will be computed from the trench width and the depth from ground level to the top of the sand bed cover as shown on the tender drawings. The rate for material from designated borrow pits shall cover the cost of excavation and selection of suitable material, the moving of the material to the backfilling site, and the disposal of the material that becomes surplus as a result of the importation, all within 25 km.

The tendered rate for item LV.9.1.4(b) paid extra over item LV.9.1.1 shall cover the cost of the acquisition of the material and of the disposal of the surplus material resulting from the importation together with all the costs of transporting the material to the site regardless of distance.

<u>Item</u>	<u>Unit</u>
LV.9.2            Supply LV cable	m

The tendered rate shall include full compensation for the supply, off-loading and delivery to site of the specified cable. Cables shall be measured linearly over all lengths laid. Separate items shall be scheduled for each size and each type of cable laid.

<u>Item</u>	<u>Unit</u>
LV.9.3            Lay LV cable	m

The tendered rate shall include full compensation for the handling, inspecting, laying, cutting and testing the cable. Cables shall be measured linearly over all lengths laid. Separate items shall be scheduled for each size and each type of cable laid.

<u>Item</u>	<u>Unit</u>
LV.9.4            Termination of LV cables	No

The tendered rate shall include full compensation for providing the cable glands, shrouds and lugs and the costs of handling, fitting and cutting the cable. Separate items shall be scheduled for each size and type of cable.

<u>Item</u>	<u>Unit</u>
LV.9.5            Jointing of LV cable	No

The tendered rate shall include full compensation for the cost of providing the joint kits complete with ferrules and the cost of cutting the cable, handling and fitting the kits and the costs of testing the joints. Separate items shall be scheduled for each size and type of cable.

<u>Item</u>	<u>Unit</u>
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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

LV.9.6	Supply and lay earth continuity conductor	m
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The tendered rate shall include full compensation for procuring, furnishing and laying the specified earth continuity conductor. Separate items shall be scheduled for each size of cable laid.

<u>Item</u>		<u>Unit</u>
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LV.9.7	Terminate and connect earth continuity conductor	No
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The tendered rate shall include full compensation for supplying all the material required such as brass clamps, lugs, etc, to terminate and connect the earth continuity conductors and the connecting thereof to the earth bars in the miniature substations, distribution kiosks, meter board or earth spike.

<u>Item</u>		<u>Unit</u>
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LV.9.8	Supply cable markers	No
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The tendered rate shall include full compensation for the supply, off-loading and delivery of the cable markers to site and the cost of handling.

<u>Item</u>		<u>Unit</u>
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LV.9.9	Erect cable markers	No
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The tendered rate shall include full compensation for the handling and erection of cable markers as specified and punching the correct approved inscription on the maker label.

<u>Item</u>		<u>Unit</u>
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LV.9.10	Supply protective slabs or covers	No
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The tendered rate shall include full compensation for the supplying, handling and delivery of the concrete protective slabs or fibre covers to site.

<u>Item</u>		<u>Unit</u>
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LV.9.11	Install protective slabs or covers	No
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The tendered rate shall include full compensation for the handling and installing of the concrete slabs or Fibre tiles.

<u>Item</u>		<u>Unit</u>
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LV.9.12	Supply cable sleeves	m
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The tendered rate shall include full compensation for the supply and delivery of the cable sleeves including the joints, steel draw wires and plugs and the cost of handling and delivery of the cable sleeves to site. Separate items shall be scheduled for each sleeve size.

<u>Item</u>		<u>Unit</u>
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LV.9.13	Install cable sleeves	m
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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

The tendered rate shall include full compensation for the handling and installing of the complete cable sleeve and draw wires. Separate items shall be scheduled for each type or size.

<u>Item</u>	<u>Unit</u>
LV.9.14            "As built" drawings	sum

The tendered rate shall cover the cost of preparing and furnishing the "As built" drawings in electronic format on drawings as provided by the Engineer.

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**VOLUME 1  
PORTION 2: CONTRACT**

**Section C3.5  
Management**

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

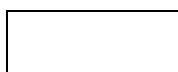
**Remedial work to 491 RDP Houses**

**VOLUME 1  
PORTION 2: CONTRACT**

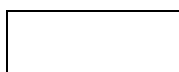
**Section C3.5**

**Management  
Annexure A: Index to Site Forms**

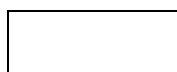
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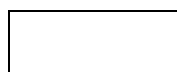
Contractor



Witness 1



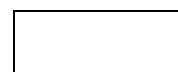
Witness 2



Employer



Witness 1



Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**VOLUME 1  
PORTION 2: CONTRACT**

**Section C3.5**

**Management  
Annexure B: Record of Decision**

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

**VOLUME 1  
PORTION 2: CONTRACT**

**Section C3.5**

**Management  
Annexure C: Health and Safety Specification**

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

**Remedial work to 491 RDP Houses**

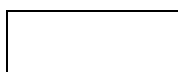
**VOLUME 1  
PORTION 2: CONTRACT**

**Section C3.5**

**Management**

**Annexure D: Environmental Management Plan**

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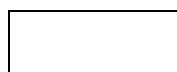
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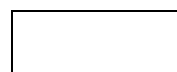
Witness 1



Witness 2



Employer



Witness 1



Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

LERATO PARK INTEGRATED HOUSING DEVELOPMENT

**CONTRACT 2334-50-02/03**

Remedial work to 491 RDP Houses

**VOLUME 1  
PORTION 2: CONTRACT**

**Part C4  
Site Information**

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**


**Remedial work to 491 RDP Houses**

**VOLUME 1  
PORTION 2: CONTRACT**


**Part C4  
Site Information**

**Annexure A: Geotechnical Report**


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Contractor




Witness 1




Witness 2



Employer



Witness 1



Witness 2

**DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN  
SETTLEMENT & TRADITIONAL AFFAIRS**

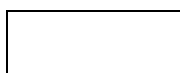
**LERATO PARK INTEGRATED HOUSING DEVELOPMENT**

**CONTRACT 2334-50-02/03**

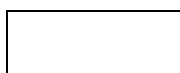
**Remedial work to 491 RDP Houses**

**VOLUME 2  
Section 1**

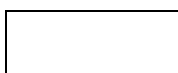
**Structural & Finishes Drawings**



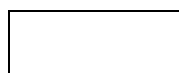
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Witness 1



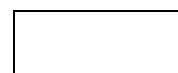
Witness 2



Employer



Witness 1



Witness 2